

2019 ANNUAL REPORT
Lockwood Ash Disposal Site
Facility No. 62N01
Town of Torrey, Yates County, New York

Prepared on behalf of:

Lockwood Hills LLC
590 Plant Road
P.O. Box 187
Dresden, New York 14441

Prepared by:



2620 Grand Island Blvd.
Grand Island, New York 14072-2131

February 2020

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1 INTRODUCTION

Lockwood Hills LLC (Lockwood Hills) manages the Lockwood Ash Disposal Site (Lockwood or the Landfill), a primarily coal ash monofill in the Town of Torrey, Yates County, New York. Lockwood is located on Swarthout Road, across NYS Route 14. The Landfill was placed in protective layup in the spring of 2011 in general accordance with the Layup Plan prepared by Daigler Engineering, PC (DE) and submitted to the New York State Department of Environmental Conservation (NYSDEC) in May 2011.

Lockwood Hills agreed to execute a Consent Order (Case No. R8-20140710-47) with the NYSDEC to, in part, segregate stormwater from leachate and treat and dispose of the leachate onsite or at an appropriate offsite facility. The effective date of the Consent Order was February 18, 2015, an amendment to the schedule was issued by the NYSDEC on February 24, 2016. As part of the Consent Order amendment, leachate flow monitoring and stormwater separation construction activities took place at the Lockwood Ash Disposal Site during 2016. Construction of the site's stormwater management system was completed in 2017. During 2018, the design for the onsite leachate treatment system was completed with submission of the Engineering Report, Revision 2: Leachate Management and Pond Remediation Plan, dated December 20, 2018 and all work was completed during 2019 as described in Section 2.

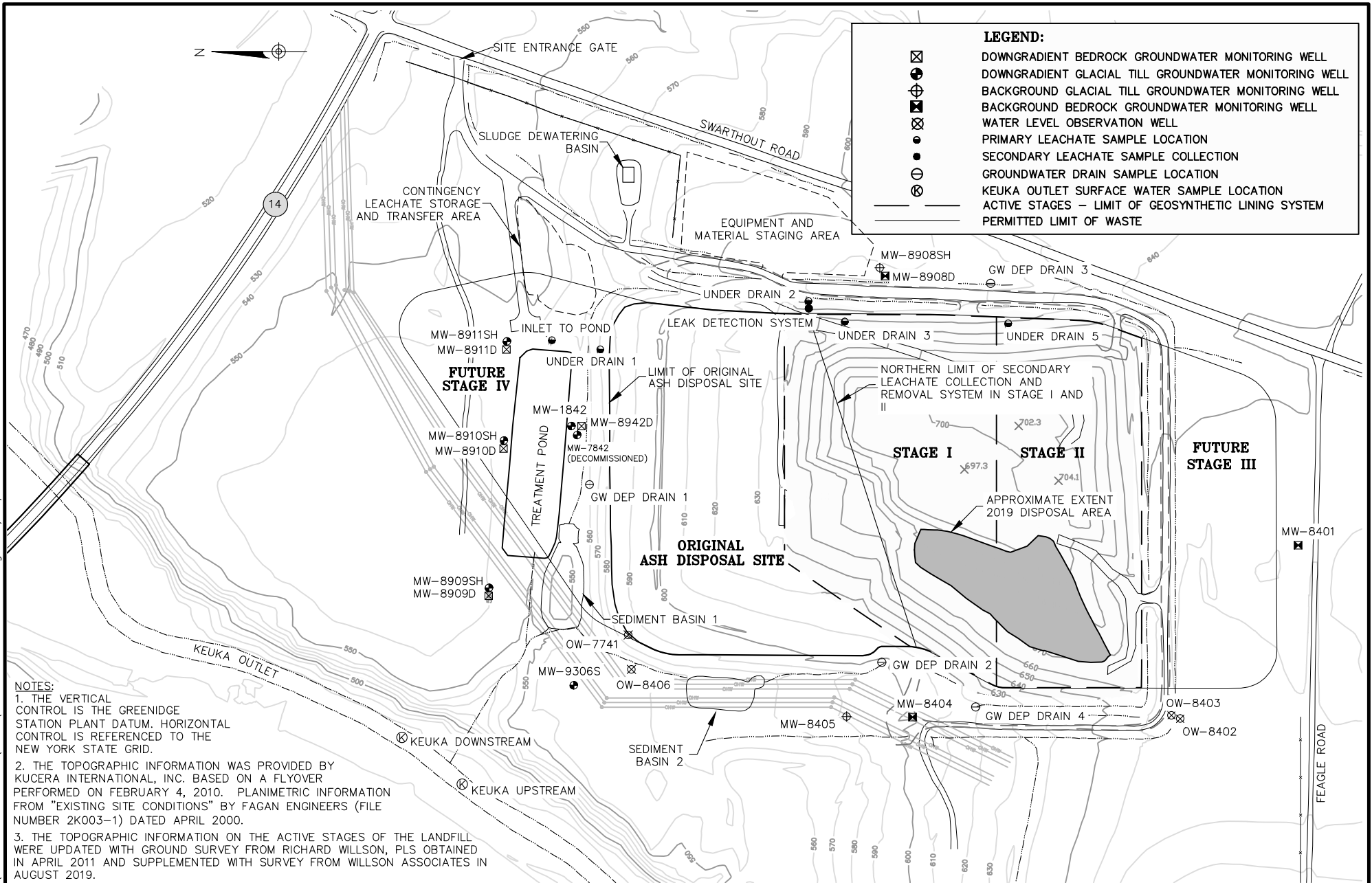
This Annual Report has been prepared in accordance with the requirements of 6 NYCRR Part 360 regulations and the facility's current NYSDEC Solid Waste Management Facility Permit No. 8-5736-00005/00003-0. Lockwood is approved by the NYSDEC for the disposal of fly ash, bottom ash, water/wastewater sludge, and mill rejects. The permitted 44.2-acre landfill, as shown in Figure 1-1, consists of the original soil-lined ash disposal site, and a four-staged, lined expansion of this original footprint. To date, ash has been placed within about 29.83 acres of the permitted acreage, including the Original Ash Disposal Site (OADS), Stage I, and Stage II. The OADS is closed with final cover and the majority of the Landfill Stages I and II have been covered with intermediate cover as defined by Lockwood's Operations & Maintenance Manual.

The regulations and the permit require Lockwood Hills to submit an annual report no later than 60 days after the first day of January of each year of operation. This report must summarize:

- The quantity and types of solid waste disposed;
- The remaining site life and capacity as allowed by the permit;
- An estimate of the actual in situ waste density for the reporting year;
- A review of water and leachate quality data;
- Total amounts of leachate managed;
- The amount of leachate collected in the secondary leachate collection and removal system;
- Changes from the approved report, plans, and specifications or permit conditions;
- Tipping fee and cost information;
- Amount of solid waste recovered from disposal; and,
- Updated closure and post-closure care cost estimates.

The following sections of this report provide the remaining required information. The 2019 NYSDEC Annual Report form has been completed and is included in Attachment 1.

Q:\Lockwood Hills LLC\ACAD\SCHEMATIC SITE PLAN.dwg 2/25/2020 9:02 AM



NOTES:
 1. THE VERTICAL CONTROL IS THE GREENIDGE STATION PLANT DATUM. HORIZONTAL CONTROL IS REFERENCED TO THE NEW YORK STATE GRID.
 2. THE TOPOGRAPHIC INFORMATION WAS PROVIDED BY KUCERA INTERNATIONAL, INC. BASED ON A FLYOVER PERFORMED ON FEBRUARY 4, 2010. PLANIMETRIC INFORMATION FROM "EXISTING SITE CONDITIONS" BY FAGAN ENGINEERS (FILE NUMBER 2K003-1) DATED APRIL 2000.
 3. THE TOPOGRAPHIC INFORMATION ON THE ACTIVE STAGES OF THE LANDFILL WERE UPDATED WITH GROUND SURVEY FROM RICHARD WILLSON, PLS OBTAINED IN APRIL 2011 AND SUPPLEMENTED WITH SURVEY FROM WILLSON ASSOCIATES IN AUGUST 2019.

LEGEND:

- ☒ DOWNGRADIENT BEDROCK GROUNDWATER MONITORING WELL
- ⊕ DOWNGRADIENT GLACIAL TILL GROUNDWATER MONITORING WELL
- ⊕ BACKGROUND GLACIAL TILL GROUNDWATER MONITORING WELL
- ⊕ BACKGROUND BEDROCK GROUNDWATER MONITORING WELL
- ⊕ WATER LEVEL OBSERVATION WELL
- PRIMARY LEACHATE SAMPLE LOCATION
- SECONDARY LEACHATE SAMPLE COLLECTION
- ⊕ GROUNDWATER DRAIN SAMPLE LOCATION
- ⊕ KEUKA OUTLET SURFACE WATER SAMPLE LOCATION
- ACTIVE STAGES – LIMIT OF GEOSYNTHETIC LINING SYSTEM
- PERMITTED LIMIT OF WASTE

DAIGLER ENGINEERING, P.C.
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LOCKWOOD HILLS LLC		SCHEMATIC SITE PLAN			FIGURE 1-1
SCALE:	1"=350'	REVISION #	0 LOCKWOOD ASH DISPOSAL SITE		
February 2020		TOWN OF TORREY	YATES COUNTY	NEW YORK	

2 OPERATIONS

2.1 GENERAL

Monthly site inspections were conducted during January, February, March, and April of 2019. Beginning the week of May 29th, 2019, Lockwood personnel began conducting weekly inspections, which shall replace monthly site inspections going forward. According to site inspection records, mowing of the landfill slopes occurred during June, July, and August 2019. All mowing was performed by Lockwood Hills personnel. According to the April 2019 monthly inspection report the casing of MW-8911SH was broken. The inspection form indicates that the well was repaired following discovery of the damage. The April 2019 inspection form also notes that soil from an access road was used for additional cover in the active area of the landfill. Through communications with the inspector, it was clarified that soft material from a small area of the dirt site access road in the roundabout near MW-9306 was removed and replaced with a more suitable road base after the field sampling crew repeatedly got stuck in that location. The quantity of soft soils placed on the landfill was minimal.

During 2019, work required by Consent Order Case No. R8-20140710-47 and detailed in the Engineering Plans and Specifications (Daigler Engineering, revised May 2019) approved by the NYSDEC on June 5, 2019 was completed by the Consent Order deadline of November 1, 2019. This included construction of a Leachate Storage and Transfer Area, temporary diversion of leachate to the Leachate Storage and Transfer Area, removal and proper disposal of sediment, installation of the Treatment Pond including a geomembrane containment liner system, and a cascade aerator inlet structure.

Beginning on August 5, 2019, leachate was temporarily diverted to the Leachate Storage and Transfer Area (LSTA), where leachate was stored in three interconnected 21,000-gallon mobile, steel, fixed-axle tanks that were staged in the LSTA for the duration of the project. A 4,200-gallon vacuum truck was utilized to transfer leachate offsite for treatment. Leachate flow was restored to the Treatment Pond on September 23, 2019.

The perimeter fence surrounding the Treatment Pond was replaced late during the fall of 2019.

Due to excessive turbidity, slow recovery, and atypical results obtained for MW-1842 throughout 2018, well redevelopment was conducted on March 21st and 22nd, 2019, which included over 20 hours of surging and pumping. Surging was accomplished using an inertial pump equipped with a surge block. When the well ran dry, reverse osmosis water from the nearby Greenidge Power Generating Station was introduced. This water was sampled for the Lockwood monitoring parameters to confirm no contaminants were being introduced into the well. Over the course of well development, conductivity, pH, turbidity, and temperature were measured at regular intervals. While variability decreased by the end of well redevelopment efforts, the target level of stabilization was not achieved for any of the parameters. It was also noted that the pH was steadily increasing over this time. Increase in pH may be attributable to the decommissioned MW-7842 which is adjacent and immediately upgradient of MW-1842. Redevelopment efforts were considered successful due to initial improvement in recovery and turbidity.

2.2 QUANTITY AND TYPES OF SOLID WASTE DISPOSED

The landfill is approved for the disposal of fly ash, bottom ash, water/wastewater treatment sludge and mill rejects from various, specified locations. During the 2019 calendar year, 7,055 tons of ash laden sludge from the Pond dredging were disposed in a confined disposal area constructed in the southwest portion of the Landfill at the boundary of Stage I and Stage II as shown on Figure 1-1. Cover soil was stripped and used to construct the containment berms of, or stockpiled adjacent to, the confined disposal area prior to the ash laden sludge being disposed in the Landfill. Disposal activity took place during August and September. After drying and stabilization of the waste by mixing in with the existing in-place ash, the stockpiled cover soil, supplemented with 140 cubic yard of imported cover material was replaced, graded, and seeded in late October 2019. Waste quantities were estimated based on truck counts and a historic waste density.

2.3 ASH DENSITY, CAPACITY, AND SITE LIFE

No field testing of ash density was completed during calendar year 2019. Historic in-place ash density testing at Lockwood indicates a typical density of 96 pounds per cubic foot (pcf), equivalent to 1.3 tons per cubic yard.

The remaining capacity for the currently constructed, synthetically-lined area has been updated based on the estimated waste disposed in 2019. As of December 31, 2019, the remaining airspace

is approximately 416,294 cubic yards. Conservatively assuming a waste disposal rate of 100,000 tons per year (or 86,957 cubic yards per year, assuming an effective waste density of 1.15 tons per cubic yard that accounts for cover soils and other materials placed in the landfill) the projected life of the remaining lined area is approximately four years and ten months.

Beyond the capacity of the currently constructed landfill, an additional 2.45 million cubic yards of permitted, but not yet constructed capacity still remains on the site.

2.4 LEACHATE MANAGEMENT

2.4.1 Primary Leachate

Leachate is collected from two separate and distinct base areas of the landfill, including the soil-lined OADS, and the synthetic-lined areas of Stage I and II. The total landfilled area at this time is approximately 29.83 acres, including the OADS which is closed. The portion of the landfill without final cover, but under protective layup, Stage I and II, has a synthetic liner system that encompasses an approximate 19.3-acre area.

As certified, the Treatment Pond is 155 feet wide by 576 feet long by 6 feet deep, including the one-foot burial depth of the containment liner system. Actual working depth, or the elevation difference between the invert of the pond drain and the top of the containment system is only 3.8 feet. The 2.025-acre Pond will have an operating capacity of 1,116,000 gallons with 1.5 feet of freeboard. The Treatment Pond has an inlet structure consisting of a four by four-foot prefabricated concrete structure with an internal cascade aerator formed inside on the east bank, and an outlet structure consisting of a two by two-foot prefabricated HDPE lower drain structure and a four-foot diameter prefabricated weir structure on the west bank. Discharges are controlled with a gate valve.

A time-series plot illustrating daily average flow rates between July 1, 2016, when the leachate flow monitoring system was brought online, through December 31, 2019 is presented in Attachment 3. Precipitation data presented in this chart were obtained from the National Oceanic and Atmospheric Administration (NOAA) 5.1 NNW station until December 4th, 2019. No weather data were reported for this station after this date. Precipitation data from December 5th until December 31st, 2019 were obtained from Weather Underground Station KNYPENNY16, located

approximately 1.78 miles north of Lockwood. The precipitation data from the KNYPENNY16 station does not distinguish between rain or snowfall, so any precipitation data reported after December 4th, 2019 was reported as rainfall.

Maximum flow rates recorded on July 1st, 5th, and 6th of 2016 are likely due to maintenance and calibration efforts carried out during the first week of operation. Following the initial period of historically low leachate flow corresponding with a regional historic drought condition which ended in November 2016, the recorded leachate flow rates appear to have steadily increased with typical seasonal lows in the summer months. A sharp decrease occurred in November 2018 which was associated with a maintenance cleaning event that removed accumulated sediments from the leachate flow monitoring flume. The accumulation of sediment in the flume may have caused the recorded flow meter readings in 2018 to be bias high. The daily average flow in 2019 was lower than in 2018. High flows associated with the annual leachate line cleaning on June 24, 26, 27, and 28th 2019 were excluded when evaluating the maximum daily flow.

During the third quarter of 2019, leachate flows were diverted to the temporary leachate storage and transfer area from August 5th, 2019 through September 23rd, 2019 to accommodate construction activities involving the Treatment Pond. Flow readings between August 2nd and September 23rd, 2019 were influenced by construction activities and the readings taken on these dates are not representative. The 53 days influenced by construction are excluded from data evaluations below.

The recorded average daily leachate flow rate for 2019 was 16.5 gallons per minute (± 4.1 std. dev.; $n = 312$ days) with a daily maximum and daily minimum of 109.8 and 2.4 gallons per minute, respectively. The daily minimum flow rate was recorded on August 1, 2019 and likely was influenced by construction activities. A total of 7.4 million gallons of leachate was discharged to the Treatment Pond during 2019 based on the recorded flow meter readings.

All leachate is held within the Treatment Pond until the water surface reaches a depth of approximately 3.0 feet on the staff gauge. Once this level is reached, a pre-discharge sample of the stored water is analyzed to confirm SPDES effluent limitations will not be exceeded during

pond discharge. Treated water from the Pond is directed to the Keuka Outlet via an approximate 600-foot long natural channel.

Four discharge events were authorized during 2019, beginning on February 21st, May 1st, July 1st, and July 27th. Documentation of the Pond discharge events are included with their respective months in Attachment 2. These events lasted 13, 22, 17, and 10 days, respectively. The average volume of treated leachate released during each event was 1.55 million gallons.

The volumes of primary leachate treated onsite as reported in Section 3 of the NYSDEC Annual Report Form (Attachment 1) were calculated from the total leachate per month as recorded by the leachate flow metering equipment, minus the secondary leachate volume. The volume of secondary leachate was estimated from instantaneous manual measurements of the flow rate from the Leak Detection System (LDS) as described below in Section 4.2.4.

In August and September leachate flow was diverted away from the Pond upstream of the leachate flow meter to allow for sediment removal and the construction of improvements to the pond including the installation of a step aerator inlet structure and a geosynthetic containment liner system. During this time, temporary leachate storage was accommodated using three interconnected 21,000-gallon mobile, steel, fixed-axle tanks staged within a newly constructed leachate transfer and storage area. Leachate was transferred from the tanks to a 4,200-gallon vacuum truck and hauled to the Greenidge Generation Wastewater Treatment Plant. The volumes of total leachate treated offsite were calculated using vacuum truck counts. The instantaneous manual measurements from the LDS were used to estimate the portion of the total volume that was secondary leachate. The primary leachate volume collected, approximately 8.4 million gallons in 2019, is the sum of the volume treated onsite and the volume treated offsite.

National Vacuum Environmental Services Corporation of Sanborn, New York, was hired to perform the annual primary leachate pipe cleaning which was completed in June 2019. Collection lines for all stages/locations were reported as being flushed. The daily line cleaning record can be found in Attachment 2 with the Inspection Forms for June.

2.4.2 Secondary Leachate

The Stage I and II liner system includes a secondary leachate collection and removal system or a LDS to monitor the performance of the primary geomembrane liner. The quantity of liquid removed from the LDS has historically been determined by quarterly measurement of the flow rate by the field crew from Adirondack Environmental Services, Inc. (ADK) of Albany, New York during the quarterly groundwater sampling event. Quarterly instantaneous flow measurements reported in gallons per day (gpd) were taken from the LDS as reported in the quarterly laboratory reports (see Attachment 4). These instantaneous flow rates are used to compute a secondary leakage rate by dividing by the total acreage of the double liner system. The leakage rates computed in this fashion during the first, second, third and fourth quarters of this year were 6.6, 6.0, 4.2, and 2.4 gpad, respectively.

Starting in 2015, following an unusually high quarterly measurement, instantaneous flow measurements from the LDS have been taken monthly by Lockwood personnel. This practice continued during 2019. The monthly and quarterly flow measurements were all well below the 20 gpad allowed by the regulations. The monthly and quarterly instantaneous flow measurements and water quality analysis for the LDS is discussed in more detail in Section 4.4. The monthly flow measurements were used to calculate monthly secondary leachate volumes for the year as reported in Section 4 of the NYSDEC Annual Report Form (Attachment 1). The resulting volume of secondary leachate for 2019 is approximately 28,090 gallons.

3 UPDATED CLOSURE/POST-CLOSURE COST ESTIMATE

3.1 CLOSURE COST

The site closure cost consists of the cost to install a final cover system over the largest active portion of the landfill. The final cover system incorporates various geosynthetic and overlying soil layers, as well as drainage features. The final cover system consists of the following layers in descending order:

- Six-inch topsoil layer with vegetation;
- 24-inch barrier protection layer;
- Geocomposite drainage layer;
- Geomembrane liner;
- Geosynthetic clay liner on slopes less than 25%;
- Six-inch minimum soil cover; and,
- Prepared subgrade surface.

Assuming closure of the OADS has been previously accepted by the NYSDEC, 19.3 acres of active landfill area will require final cover at this time. This area was increased by 5% for items placed on 3H:1V slopes to account for slope area adjustments. The volume of soil cover required for site closure was adjusted for areas already at final grade which received the minimum six inches of soil.

Drainage feature quantities include the construction of approximately 2,620 linear feet of geocomposite infiltration outlet drains that lead to nearly 6,100 linear feet of compacted stormwater diversion sideslope swales, which finally drain to 2,268 linear feet of rip-rap lined downchutes.

The cost of extending 44 cleanout pipes around the perimeter of the disposal site to match the final cover also is estimated, as well as third party construction quality assurance and quality control (QA/QC). General administrative costs were assumed to be 3% of the total closure cost prior to third party QA/QC.

Purchase and installation pricing on a per square foot unit basis for the geosynthetic materials was confirmed with the manufacturer in January 2018. All other unit prices including soils, subgrade preparation, extension of the cleanout risers, installation of drainage features, and establishing vegetation are from pricing received from City Hill Construction in February 2018. Third party QA/QC was also confirmed using RSMeans Site Work & Landscape Cost Data, 36th Annual Edition (2017). It was assumed that three QA/QC laborers would be required consistent with typical landfill operations, and construction of the 20.2-acre final cover system would require approximately one construction season, or five months.

The prices were adjusted to 2020 dollars using the historical cost index method for time adjustment described by RSMeans (<https://www.rsmeansonline.com/references/unit/refpdf/hci.pdf>). Based on the above, the total final cover closure cost was estimated as \$3,054,163 in 2020 dollars.

3.2 POST-CLOSURE COST

A model was developed to calculate the required funding to account for post-closure costs. The model assumes 30 years of the following post-closure costs; environmental monitoring, leachate management, repair and maintenance, and labor or personnel. The model assumes a 3% inflation rate on all of the post-closure costs and a 5% annual interest rate on allocated funds. The required funding to account for the full 30-year post-closure period was calculated as \$1,872,555 in 2020 dollars. The initial costs for each post-closure item in 2020 dollars are summarized in Table 3-1 and the rationale for the estimates is discussed below.

TABLE 3-1: POST-CLOSURE COST ITEMS

Item	Annual Cost in 2020
Environmental Monitoring	\$71,230
Leachate Management	\$18,838
Repair and Maintenance	\$9,007
Monthly Inspections	\$8,085
TOTAL	\$107,160

Post-closure environmental monitoring costs include costs associated with quarterly sampling, laboratory analysis and data validation, and reporting. Currently, sampling activities and laboratory analysis are completed by ADK. The annual cost of sampling and laboratory work, provided by ADK via e-mail on January 23, 2018, is approximately \$48,271 after adjusting to 2020 dollars using RSMMeans historical cost indexes. Data validation and quarterly environmental reporting are currently provided by DE for approximately \$22,959. The total annual cost for environmental monitoring is therefore \$71,230 in 2020. For the post-closure cost estimate, it was assumed that Contingency Monitoring will not be required, and that quarterly monitoring will be reduced to semi-annual monitoring five years after the landfill closes. Semi-annual monitoring is assumed to reduce the environmental monitoring costs by half.

The cost estimate for leachate management includes SPDES permit reporting, field services and laboratory analytical costs for batch discharge events, onsite personnel costs, an annualized cost for occasional Treatment Pond dredging events, and the cost of maintenance and occasional replacement of mechanical/electrical equipment or parts for major leachate system components. The estimated cost of operating the proposed leachate management system is \$18,838 in 2020 dollars.

Post-closure repair and maintenance costs for the disposal site include annual pipe jetting of the leachate collection system, keeping the stormwater drainage system clear of debris, erosion repair, vegetation replacement, leachate and stormwater collection system repairs, occasional replacement of mechanical/electrical equipment or parts associated with the onsite leachate treatment system, and minor unforeseen problems. Maintenance and repair of landfill structures was estimated, assuming ten percent of the leachate management and environmental monitoring costs, at \$9,007 per year in 2020 dollars.

Post-closure monthly inspection costs assume a one day per month visit by a qualified individual to inspect all features of the 44.2-acre disposal site plus supporting facilities, such as the Treatment Pond, for verification of proper performance and to prepare and file a site inspection log. Labor is valued at 2019 DE technician rates. Travel costs are also included. If any features are not functioning properly the inspector must coordinate with the owner to remediate the problem. The current cost for this program is estimated at \$674 per month, or \$8,085 per year in 2020 dollars.

3.3 FINANCIAL SURETY

According to discussion above, the calculations indicate a combined closure and post-closure cost for the Lockwood Ash Disposal Site of \$4,926,718 in 2020 dollars. According to the requirements of 6 NYCRR Part 360-2.19, financial surety must be established to cover closure and post-closure costs. The parent company of Lockwood Hills possesses an active Letter of Credit issued by Silicon Valley Bank of Santa Clara, California with the Region 8, Regional Director of the NYSDEC as the beneficiary. Proof of the Letter of Credit is included at the end of Attachment 1. The current available credit is \$4,937,750, which exceeds the estimated closure and post-closure costs.

4 LEACHATE AND WATER QUALITY DATA ASSESSMENT

4.1 GENERAL

The Lockwood Ash Disposal Site’s Environmental Monitoring Plan (EMP) defines the monitoring points of compliance and outlines the sampling and analysis requirements. During 2019, sampling and laboratory analysis of the environmental samples was completed by ADK.

Sampling for environmental monitoring is typically performed on a quarterly basis for site specific routine (three times per year), and baseline (annually, rotating quarter) water quality analyses. The measured parameters are summarized in Table 4-1.

TABLE 4-1: WATER QUALITY PARAMETERS ESTABLISHED FOR LOCKWOOD ASH DISPOSAL SITE’S ENVIRONMENTAL MONITORING PROGRAM

Field Parameters	Wet Chemical	Metals	
pH	Alkalinity	Aluminum	Iron
Turbidity	Ammonia	Antimony*	Magnesium
Static Water Level	Chloride	Arsenic	Manganese
Specific Conductivity	Color*	Barium*	Mercury
Dissolved Oxygen**	Hardness	Boron	Nickel*
	Total Dissolved Solids	Cadmium	Potassium
	Total Organic Carbon*	Calcium	Selenium
	Sulfate	Chromium*	Sodium
		Copper	Zinc*

*Baseline sampling only.

**For surface water samples only.

Baseline sampling occurred during the third quarter in 2019. This baseline event was third-party validated as required by the Lockwood EMP, Section 3.3.8. No data were rejected during data validation. Routine sampling was performed during the first, second, and fourth quarters. Data from all quarterly sampling events along with their case narratives are provided in Attachment 4. The Data Validation Report for the third quarter’s event is included in Attachment 4, as well.

4.2 FOURTH QUARTER SAMPLING

Results from the fourth quarter sampling event are presented herein rather than in a separate report. ADK completed sampling activities for the fourth quarter on November 20th and 21st, 2019. The locations of the facility's sampling points are illustrated on Figure 1-1. Fourth quarter samples were analyzed for the routine parameter set.

Groundwater suppression system monitoring points, Groundwater Depression Drains 2 and 4, were not sampled during the fourth quarter event; both drains were reported dry. MW-8405 and Under Drain 5 were not sampled this quarter. Each were reportedly dry as is typical for these locations. Further, no sample was taken from MW-8910SH due to poor recovery as is generally reported for this location in recent years.

As required by the Site's EMP, Section 3.3.8, the data package for this routine sampling event was reviewed internally by the laboratory. The matrix spike measurements for MW-8404 for arsenic, chloride, and selenium were below the acceptable limits. This data was still considered usable and was included in evaluating the groundwater quality in MW-8404. All other data was reported as acceptable without qualification. For simplicity, data evaluation of the fourth quarter results has been incorporated into the annual review of leachate, groundwater, and surface water data presented in the following sections.

4.3 PRIMARY LEACHATE

Primary leachate is sampled or observed at five separate locations, as follows:

- Discharge from leachate collection system under the OADS (Under Drain 1);
- Discharge from the northern overfill liner in Stage I (Under Drain 2);
- Discharge from the at grade liner system in Stage I (Under Drain 3);
- Discharge from Stage II (Under Drain 5); and,
- Treatment Pond influent, combined leachate from all Stages of the Landfill including the OADS (Inlet to Pond).

The locations of the leachate sampling points are illustrated on Figure 1-1. Parameters analyzed are the same as those for the groundwater samples, as described above with the exception that flow rate replaces static water level.

For the purpose of highlighting those compounds that can act as leachate indicators, and as a measure of leachate quality and strength, Table 4-2 through Table 4-5 summarize the leachate sample results that exceed the corresponding Part 703 GA groundwater quality standards or TOGS 1.1.1 Guidance Values. As shown on those summary tables, primary leachate consistently exceeds the standard for boron, magnesium, sodium, sulfate, and total dissolved solids (TDS) for all monitoring points. Iron, manganese, and turbidity concentrations also routinely exceed their GA Standard or TOGS 1.1.1 Guidance Value at most leachate monitoring points. Exceedances of the chloride standard occurred during all four quarters in Under Drains 2 and 3. Less frequent and/or less widespread exceedances of the arsenic and selenium standards were observed during the majority of sampling events. Under Drain 5 was not able to be sampled again in 2019 as it was reportedly dry during all four quarters.

Time-series plots for all monitored parameters in the leachate are presented in Attachment 5. Changes in the leachate sewer to accommodate the flow meter in 2016 replaced the historic 21” Inlet to Pond sampling point, which used to discharge leachate from only Stages I and II, including the overflow liner, with a single discharge including leachate from all stages of the landfill. Due to the change in composition, the Inlet to Pond data is distinguished from historic 21” Inlet to Pond data in the time-series plots by a change in the symbol. A sufficient number of data points have been collected to make intralocation statistics robust enough to exclude the historic dataset. Beginning with the fourth quarter of 2018, data for this location will only be compared to the data collected after the changes to the leachate sewer were made.

Upon review of the time-series plots for the leachate data a few observations can be made. With the exception of the third quarter, a relatively small number of intralocation maxima and minima were observed during 2019. The intralocation maxima and minima that do not appear to be associated with any trending are as follows:

Table 4-2
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2019 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (3/18-19/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT					
		Leak Detection System	Under Drain 1	Under Drain 2	Under Drain 3	Inlet to Pond	Under Drain 5 **
Color*	< 15 C.U.						
pH	6.5 < pH < 8.5						
Turbidity	< 5 NTU	6	31	10	7	16	
Total Dissolved Solids, TDS	500 mg/L	1,940	1,140	3,160	3,940	2,500	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		52.0				
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L		3,380	32,500	17,100	17,300	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			440,000	746,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		4,550	2,570	698	2,140	
Magnesium, Mg	(35,000 ug/L)	138,000	66,200	65,500	77,100	66,500	
Manganese, Mn	300 ug/L		734	824	387	490	
Fe + Mn	500 ug/L		5,284	3,394	1,085	2,630	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L						
Sodium, Na	20,000 ug/L	71,100	38,600	232,000	231,000	183,000	
Sulfate, SO ₄	250,000 ug/L	1,040,000	408,000	1,480,000	1,400,000	1,050,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only; routine parameters were analyzed for during this quarter's sampling event.

** Reported as dry this quarter.

Table 4-3
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2019 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (6/19-20/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT					
		Leak Detection System	Under Drain 1	Under Drain 2	Under Drain 3	Inlet to Pond	Under Drain 5 **
Color*	< 15 C.U.						
pH	6.5 < pH < 8.5						
Turbidity	< 5 NTU	22	152	28	8	73	
Total Dissolved Solids, TDS	500 mg/L	2,320	1,350	3,400	4,230	2,660	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L						
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L		3,120	40,600	28,000	21,900	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			443,000	700,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		2,240	1,050		2,310	
Magnesium, Mg	(35,000 ug/L)	155,000	66,300	71,600	88,700	70,100	
Manganese, Mn	300 ug/L		695	952	389	551	
Fe + Mn	500 ug/L		2,935	2,002		2,861	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L		21	23	16	38	
Sodium, Na	20,000 ug/L	71,900	29,100	166,000	166,000	182,000	
Sulfate, SO ₄	250,000 ug/L	1,240,000	454,000	1,530,000	1,660,000	1,190,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only; routine parameters were analyzed for during this quarter's sampling event.

** Reported as dry this quarter.

Table 4-4
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2019 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (9/19-20/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT					
		Leak Detection System	Under Drain 1	Under Drain 2	Under Drain 3	Inlet to Pond	Under Drain 5 **
Color*	< 15 C.U.						
pH	6.5 < pH < 8.5						
Turbidity	< 5 NTU		77	20	7	8	
Total Dissolved Solids, TDS	500 mg/L	2,240	1,330	3,520	4,020	3,000	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		78.9			27	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L		4,500	54,000	39,500	35,100	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			413,000	534,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		6,400	2,180		2,400	
Magnesium, Mg	(35,000 ug/L)	186,000	89,700	107,000	142,000	99,300	
Manganese, Mn	300 ug/L		791	1,280	453	603	
Fe + Mn	500 ug/L		7,191	3,460	641	3,003	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L					24	
Sodium, Na	20,000 ug/L	90,400	44,500	281,000	360,000	270,000	
Sulfate, SO ₄	250,000 ug/L	1,150,000	446,000	1,650,000	1,660,000	1,380,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only; baseline parameters were analyzed for during this quarter's sampling event.

** Reported as dry this quarter.

Table 4-5
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2019 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (11/20-21/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT					
		Leak Detection System	Under Drain 1	Under Drain 2	Under Drain 3	Inlet to Pond	Under Drain 5 **
Color*	< 15 C.U.						
pH	6.5 < pH < 8.5						
Turbidity	< 5 NTU	24	541	152	31	610	
Total Dissolved Solids, TDS	500 mg/L	2,110	1,190	3,540	4,050	2,880	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		55			51	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	1,020	4,270	49,600	33,400	24,500	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			407,000	534,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		4,890	1,820		5,010	
Magnesium, Mg	(35,000 ug/L)	181,000	81,900	104,000	135,000	96,000	
Manganese, Mn	300 ug/L		625	1,210	343	599	
Fe + Mn	500 ug/L		5,515	3,030		5,609	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L					22	
Sodium, Na	20,000 ug/L	100,000	45,400	249,000	299,000	224,000	
Sulfate, SO ₄	250,000 ug/L	1,150,000	429,000	1,660,000	1,720,000	1,410,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only; routine parameters were analyzed for during this quarter's sampling event.

** Reported as dry this quarter.

- Selenium in Inlet to Pond – An intralocation minimum was observed during the first quarter;
- Sulfate in Inlet to Pond – An intralocation minimum was observed during the first quarter;
- Alkalinity in Inlet to Pond and Under Drain 3 – Intralocation maxima were observed during the second quarter and third quarter, respectively;
- Turbidity in Inlet to Pond and Under Drain 1 – An intralocation minimum was observed in the Inlet to Pond during the third quarter, followed by intralocation maxima in the fourth quarter in Under Drain 1 and the Inlet to Pond;
- Magnesium in Under Drain 2, Under Drain 3, and Inlet to Pond – Intralocation maxima were observed during the third quarter in all three locations;
- Hardness in Under Drain 1 and Under Drain 2– Intralocation maxima were observed during the third quarter;
- Sodium in Under Drain 3 – An intralocation maximum was observed during the third quarter;
- Conductivity in Inlet to Pond – An intralocation maximum was observed in the fourth quarter; and
- pH in Inlet to Pond – All leachate samples had unusually low pH during the fourth quarter, resulting in an intralocation minimum in the Inlet to Pond.

The upwards trend noted for chloride in Under Drain 2 in 2018 continued for at least the first half of 2019 with consecutive intralocation maxima observed during the first and second quarters but appears to have weakened during the last quarter or two 2019. Under Drain 2 was also noted for an upward trend in potassium in 2018. This trend is also still apparent, with five consecutive intralocation maxima starting in the third quarter of 2018 finally breaking in the fourth quarter of 2019. Still the fourth quarter concentration remains elevated.

An upward trend in calcium appears to be emerging in Under Drain 2 which is supported by an intralocation maximum was observed during the third quarter of 2019, which was superseded by the fourth quarter measurement. Concentrations are highly variable, but the gradual upward trend

appears to be persistent since monitoring began. Conversely, iron in Under Drain 2 has been under a long-term downward trend that began after the first quarter of 2009. An intralocation minimum associated with this trend was observed during the second quarter of 2019. Overall, recent iron concentrations have been consistent with those measured between 2005 and 2008.

The upward trend reported in 2018 for potassium in Under Drain 3 also continued through 2019. An intralocation maximum was observed during the second quarter, which was superseded by the fourth quarter measurement. The measured concentration in the fourth quarter remained elevated at the third highest concentration of potassium measured in Under Drain 3.

Increasing trends for conductivity and TDS reported for Under Drain 3 in 2018 appear to have stagnated. There are now two years without any notable concentrations, however both parameters remain elevated. On the other hand, upward trending in conductivity and TDS in Under Drain 2 continue to be apparent. The fourth quarter concentration was the second highest value recorded for conductivity at this location.

Slight, but steady downward trends continue to be observed in Under Drain 1 for chloride, conductivity, manganese, sulfate, and TDS. Downward trends for boron, calcium, and sodium previously reported in Under Drain 1 appears to have stagnated, especially for calcium with highly variable recent concentrations including a near intralocation maximum recorded in the third quarter of 2019.

Arsenic in Under Drain 1 has been consistently elevated with respect to the leachate from other Stages of the landfill. Reflective of the fact that the Inlet to Pond includes Under Drain 1, the concentration in this monitoring location is has also been elevated recently culminating in an intralocation maximum in the fourth quarter of 2019. This is notable because arsenic concentrations at both locations typically exceed the Part 703 GA standard.

Although concentrations are highly variable within a year, concentrations of boron in Under Drain 2 and 3, have been increasing since at least the second quarter of 2014. Similarly, the Inlet to Pond location has been trending upwards since the first quarter of 2017. An intralocation maximum for boron in Under Drain 2 measured during the third quarter of 2019 is associated with this upward trend.

4.4 SECONDARY LEACHATE

The LDS sample is representative of the liquid found in the SLCRS. Flow rates in the secondary system are generally over an order of magnitude less than that of the primary system.

Secondary leachate sampling data are included in Table 4-2 through Table 4-5, as well as in the leachate quality time-series graphs presented in Attachment 5. Compared to the standards in Table 4-2 through Table 4-5, secondary leachate quality in calendar year 2019 continued to be characterized by elevated levels of TDS, magnesium, sodium, and sulfate throughout the year, as well as, turbidity and boron which were detected above their respective Part 703 GA standards for at least one quarter this year. Typically, the concentrations of these parameters are low relative to the primary leachate associated with Stages I and II of the landfill. An exception to this is magnesium which is generally higher in the secondary leachate than all other leachate sampling locations.

One intralocation maximum and one intralocation minimum were observed in the LDS this year. These included an alkalinity maximum in the second quarter and a pH minimum in quarter four. Alkalinity appears to be increasing since the fourth quarter of 2010, but pH in the LDS has been relatively constant. The minimum pH in the fourth quarter of 2019 corresponds with a depression in pH in the leachate site-wide and is unlikely to be part of a trend. While there were no notable concentrations in 2019, calcium appears to be continuing to trend downward since approximately 2014.

4.5 GROUNDWATER

4.5.1 Samples

As described by the EMP, two water bearing units identified at the site comprise the critical stratigraphic section; including a water table in the unconsolidated glacial deposits; and groundwater in the fractures of the underlying bedrock. Typically, bedrock and overburden wells that are part of a couplet are distinguished by the letters D and SH for deep and shallow, respectively. Groundwater quality monitoring at the Lockwood Ash Disposal Site is carried out through quarterly sampling of five upgradient/background and nine downgradient monitoring wells. If water is present, groundwater samples are also collected from groundwater depression

drains installed below the liner systems in the OADS and the lined Stage I and Stage II areas. The locations of the groundwater monitoring points are illustrated in Figure 1-1.

4.5.2 Exceedances of Part 703 GA Standards

Table 4-6 through Table 4-9 summarize the sample results that exceed the corresponding Part 703 GA groundwater quality standards. As shown on those summary tables, background and downgradient wells in both the overburden and bedrock routinely exceed the standards for turbidity, total dissolved solids, iron, magnesium, sodium, and sulfate. The natural groundwater at this site can be characterized as very hard (generally > 300 mg/L as CaCO₃). In addition to the high concentrations of calcium and magnesium, hard waters are typically found to have high concentrations of iron, aluminum, manganese, and sulfates. Thus, these concentrations are considered indicative of natural water quality and are consistent with previous results for groundwater monitoring activities at the site. Exceedances of the Fe + Mn Part 703 GA standard occurred in multiple wells during each quarter and are attributed to iron concentrations at these wells. No well that exceeded the Fe + Mn standard exceeded the manganese standard, but all the wells exceeded the iron standard for the quarters they exceeded the Fe + Mn standard.

Other less widespread exceedances of the groundwater standards during the 2019 calendar year include:

- pH in MW-8909D – This parameter is historically elevated in MW-8909D, as it was for each quarter this year. The pH at this well averages around 9.0 S.U.;
- pH in MW-8908SH and MW-1842 – pH exceeded the Part 703 GA standard in MW-8908SH and MW-1842 for the first time in quarters three and one, respectively.
- Boron in MW-8909D, MW-8910D, and MW-8911D – Exceedances of the Part 703 GA standard for boron in these three downgradient bedrock wells are noteworthy since boron is a leachate indicator, but typical of the water quality normally observed at MW-8910D and MW-8911D. The concentration of boron in MW-8909D exceeded the standard during the last two quarters of 2019. The exceedances in MW-8909D are rarer.

Table 4-6
 LOCKWOOD ASH DISPOSAL SITE
 GROUNDWATER QUALITY SUMMARY
 2019 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (3/18-19/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT														GW Dep Drain 1	GW Dep Drain 3
		Background Wells						Downgradient Wells									
		8401	8404	8405**	8908D	8908S	1842**	8909D	8909S	8910D	8910S*	8911D	8911S	8942	9306		
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5	6.5					8.8	9.0									
Turbidity	< 5 NTU				9	17	43	>999	9		14		8	26	16		
Total Dissolved Solids, TDS	500 mg/L				680	690		885			510			500			1,500
Ammonia, NH ₃	2,000 ug/l																
Antimony*, Sb	3 ug/L																
Arsenic, As	25 ug/L																
Barium*, Ba	1,000 ug/L																
Boron, B	1,000 ug/L									2,820		1,330					2,610
Cadmium, Cd	5 ug/L																
Chloride, Cl ₂	250,000 ug/L																
Chromium*, Cr	50 ug/L																
Copper, Cu	200 ug/L																
Iron, Fe	300 ug/L				1,030		314	3,590				814	1,030				
Magnesium, Mg	(35,000 ug/L)				68,600	65,700							68,200	59,900			90,500
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L				1,135			3,773				902	1,233				
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	62,500			34,600	26,400		161,000	61,700	105,000		94,300	71,800	38,800	20,500		36,500
Sulfate, SO ₄	250,000 ug/L				316,000					332,000							716,000
Zinc*, Zn	(5,000 ug/L)																

*Baseline only; routine parameters were analyzed for during this quarter's sampling event.

**Dry

+Poor Recovery; no sample

++ Replacement well for 7842

Table 4-7
 LOCKWOOD ASH DISPOSAL SITE
 GROUNDWATER QUALITY SUMMARY
 2019 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (6/19-20/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT														GW Dep Drain 1	GW Dep Drain 3
		Background Wells						Downgradient Wells									
		8401	8404	8405**	8908D	8908S	1842**	8909D	8909S	8910D	8910S*	8911D	8911S	8942	9306		
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5																
Turbidity	< 5 NTU	13	18		7	650	41	>999		7		510		6	12		
Total Dissolved Solids, TDS	500 mg/L				700			715		15				575			1,590
Ammonia, NH ₃	2,000 ug/l																
Antimony*, Sb	3 ug/L																
Arsenic, As	25 ug/L																
Barium*, Ba	1,000 ug/L																
Boron, B	1,000 ug/L									2,620		1,130					2,690
Cadmium, Cd	5 ug/L																
Chloride, Cl ₂	250,000 ug/L																
Chromium*, Cr	50 ug/L																
Copper, Cu	200 ug/L																
Iron, Fe	300 ug/L				1,100			2,320									
Magnesium, Mg	(35,000 ug/L)				62,100	59,100								63,600	55,600		98,600
Manganese, Mn	300 ug/L																39,700
Fe + Mn	500 ug/L				1,201			2,398									
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	65,600			25,300		47,800	165,000	47,000	82,400		86,900	67,600	29,900			31,500
Sulfate, SO ₄	250,000 ug/L				298,000		256,000			291,000							746,000
Zinc*, Zn	(5,000 ug/L)																250000

*Baseline only; routine parameters were analyzed for during this quarter's sampling event.

**Dry

+Poor Recovery; no sample

++ Replacement well for 7842

Table 4-8
 LOCKWOOD ASH DISPOSAL SITE
 GROUNDWATER QUALITY SUMMARY
 2019 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (9/18-19/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT													GW Dep Drain 1	GW Dep Drain 3	
		Background Wells						Downgradient Wells									
		8401	8404	8405**	8908D	8908S	1842**	8909D	8909S	8910D	8910S*	8911D	8911S	8942			9306
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5					8.8											
Turbidity	< 5 NTU	6					142	9.6 >999	8				12				
Total Dissolved Solids, TDS	500 mg/L				910	990		695		710				600			1,700 1,070
Ammonia, NH ₃	2,000 ug/l																
Antimony*, Sb	3 ug/L																
Arsenic, As	25 ug/L																
Barium*, Ba	1,000 ug/L																
Boron, B	1,000 ug/L							1,060		3,760		1,360					3,320
Cadmium, Cd	5 ug/L																
Chloride, Cl ₂	250,000 ug/L																
Chromium*, Cr	50 ug/L																
Copper, Cu	200 ug/L																
Iron, Fe	300 ug/L		518		1,090		3,190	4,870					979	589	770		
Magnesium, Mg	(35,000 ug/L)				70,400	74,100	56,200							71,600	63,000	119,000	66,300
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L		741				3,432	4,997					1,082	821	822		
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	65,500	22,100		34,400			155,000	52,600	107,000		94,100	65,800	40,500	20,600	830,000	29,400
Sulfate, SO ₄	250,000 ug/L				298,000	396,000				361,000							446,000
Zinc*, Zn	(5,000 ug/L)																

*Baseline only; baseline parameters were analyzed for during this quarter's sampling event.
 **Dry, no sample
 +Poor Recovery; no sample
 ++ Replacement well for 7842

Table 4-9
 LOCKWOOD ASH DISPOSAL SITE
 GROUNDWATER QUALITY SUMMARY
 2019 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (11/20-21/2019)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT													GW Dep Drain 1	GW Dep Drain 3	
		Background Wells						Downgradient Wells									
		8401	8404	8405**	8908D	8908S	1842**	8909D	8909S	8910D	8910S*	8911D	8911S	8942			9306
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5																
Turbidity	< 5 NTU	8					>999	9.3 >999						18	7	6.4 20	43
Total Dissolved Solids, TDS	500 mg/L	560			825	905	535	675		530		535		615		1,700	800
Ammonia, NH ₃	2,000 ug/l																
Antimony*, Sb	3 ug/L																
Arsenic, As	25 ug/L																
Barium*, Ba	1,000 ug/L																
Boron, B	1,000 ug/L							1,050		2,780		1,180					3,300
Cadmium, Cd	5 ug/L																
Chloride, Cl ₂	250,000 ug/L																
Chromium*, Cr	50 ug/L																
Copper, Cu	200 ug/L																
Iron, Fe	300 ug/L																
Magnesium, Mg	(35,000 ug/L)				72,000	71,800	54,900	3,590					736	469	71,800	60,800	46900
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L				1,209		3,878	3,706					808	649			
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	81,700			35,200	28,000	53,900	186,000	60,300	99,700		101,000	68,400	39,800	20,500	46,900	20300
Sulfate, SO ₄	250,000 ug/L				321,000	378,000				308,000						828,000	319000
Zinc*, Zn	(5,000 ug/L)																

*Baseline only; routine parameters were analyzed for during this quarter's sampling event.
 **Dry
 +Poor Recovery; no sample
 ++ Replacement well for 7842

Parameters in two wells were measured at the corresponding Part 703 GA standard. Although these measurements did not exceed standards they are noted below.

- pH in MW-8401 – pH was measured at the lower standard of 6.5 S.U. during the first quarter of 2019, which is atypical for this well. Average pH in this well is 7.4 S.U.
- TDS in MW-8942D – TDS was measured at the standard of 500 mg/L during the first quarter of 2019, but concentrations typically exceed the standard at this location.

4.5.3 Time-Series Plots

Time-series plots are used as a visual aid in evaluating trends in the data and can be found in Attachment 5. The time-series plots are updated through the end of the fourth quarter 2019. The trends are discussed below.

Groundwater quality during 2019 was mostly typical with the exception of several wells which exhibited unusual concentrations generally not associated with any trending. The most notable exception is the atypical results observed in downgradient well MW-1842, which replaced MW-7842.

Due to the excessive turbidity, slow recovery, and other atypical results found during the first four sample events from MW-1842, redevelopment was performed on March 21st and 22nd, 2019. The redevelopment was considered successful due to an improvement in recovery and turbidity which continued into the second quarter of 2019. This improvement in turbidity is likely the cause of the very low concentrations during the first quarter of 2019 for most parameters, including alkalinity, boron, calcium, conductivity, hardness, magnesium, manganese, potassium, sodium, sulfate, and TDS. Alkalinity, calcium, hardness, and conductivity measurements from the first quarter were even glacial till interwell minima. A number of these parameters remained lower in the second quarter as well, including hardness, magnesium, and manganese.

During the third quarter, turbidity increased to 142 nephelometric turbidity units (NTUs), which is lower than values recorded during the first four sample events, but greater than the quarter one and two values in 2019. In the fourth quarter turbidity was once again greater than the maximum measurable value of 999 NTUs. Despite the high turbidity, the concentrations of most other

parameters appeared to stabilize during the second half of 2019. This suggests that additional well redevelopment may not be necessary.

Two parameters in MW-1842 did not fit the pattern described above. An intrawell maximum was observed for pH in quarter one. The pH value observed, 8.8 SU exceeded the Part 703 GA standard and was a glacial till interwell maximum. Even through the pH dropped below the standard for the remainder of the year, it continues to be elevated relative to the other glacial till wells and its 2019 average fell just shy of the 8.5 SU standard at 8.4 SU. Finally, while sulfate concentrations in MW-1842 returned to typical glacial till levels in the second and third quarter similar to the other parameters, they dropped even lower in the fourth quarter.

A summary of the intrawell maxima and minima recorded in all other monitoring wells during the 2019 calendar year are as follows:

- Iron in MW-8401 – An intrawell minimum was observed in the fourth quarter and was part of gradual downward trend
- pH in MW-8401 – An intrawell minimum was observed during the first quarter and an intrawell maximum was observed in the third quarter. There are no apparent trends at this time.
- pH in MW-8908SH – An intrawell maximum occurred in the third quarter with no apparent trend. This is the only time this well has exceeded the Part 703 GA standard for pH. This value tied the glacial till interwell maximum observed in MW-1842 in the first quarter of 2019. In the fourth quarter, pH in MW-8908SH returned to its normal, near-neutral range.
- Alkalinity in MW-8908D – An intrawell maximum occurred in the fourth quarter and the concentration in the second quarter tied the 2018 fourth quarter as the second highest concentration. These data are associated with apparent upward trending that became more pronounced after 2017.
- Potassium in MW-8908D – An intrawell maximum occurred during the first quarter, which was then superseded by that of the fourth quarter and are associated with slight upward trending.

- pH in MW-8909D – A value that tied the intrawell maximum for pH was observed during the third quarter. The previous intrawell maximum was recorded on April 5th, 1993. This value was not associated with any trending. This value, 9.6 SU, is the current interwell maximum for pH in the bedrock groundwater.
- pH in MW-8910D – An intrawell minimum was observed during the first quarter and was not associated with any trend.
- Conductivity in MW-8911SH – An intrawell maximum was observed during the third quarter and is associated with upward trending discussed below.
- Hardness in MW-8911SH – The highest value, since the peak value measured on April 7th, 1992, was observed during the third quarter and was associated with upward trending discussed below.
- Chloride in MW-8911D – An intrawell minimum occurred during the fourth quarter and may be associated with a downward trend beginning in the second quarter of 2017; however, overall, the concentration is not significant as it is within two standard deviations from the mean.
- pH in MW-8942D – An intrawell minimum occurred during the second quarter. The minimum pH of 7.0 SU has been measured in this well on five separate occasions in the past and is not thought to be associated with any trending.

In MW-8401, the downward trend for chloride observed during 2018 reversed course in 2019, with the observed concentration increasing each quarter following quarter one. However, the 2019 average chloride concentration is still less than half the average from 2015 when chloride concentration in MW-8401 were at their peak. The alkalinity in this well was elevated during the second and third quarters of 2019. The intrawell maximum of 640 mg/L recorded in 2013 appears to be an outlier. The alkalinity concentrations measured in the second and third quarters represent the second and third highest values in MW-8401, but alkalinity returned to a more typical level during the fourth quarter.

Alkalinity in the MW-8908 well couplet remains elevated and appears to be associated with upward trending and an intrawell maximum in MW-8908D in the fourth quarter. Alkalinity in

MW-8908SH was measured at its second highest level in the third quarter of 2019 and in the first, second, and fourth quarters of 2019 the measured alkalinity was tied for the third highest value.

The decreasing trend for sulfate in MW-8908SH reported during 2018 continued in the beginning of 2019, with a relatively low sulfate concentrations, below the Part 703 GA standard in the first two quarters, but its strength waned with higher values in the third and fourth quarters. Similar to a pattern observed in 2018, concentrations of calcium, hardness, sulfate, and TDS in MW-8908SH were elevated in the third quarter and decreased the following quarter.

Potassium in MW-8909SH continues to trend upwards, as noted in during the third quarter. Slight upwards trends in potassium are also present in most other background and downgradient wells, in the glacial till and bedrock alike, with the trend more pronounced in some wells (e.g., MW-8908SH) than others (MW-8401). These trends appear to have begun around 2006. The possible upward trends noted for alkalinity, calcium, and TDS in MW-8909D during 2018 were not present in 2019. TDS concentration in this well decreased during each quarter of 2019.

The upward trends for calcium, hardness, iron, magnesium, and manganese reported for MW-8911SH in 2018 are still present and were associated with the second highest hardness value observed at this well, which occurred during the third quarter. After over two decades of upward trending, the sulfate concentrations in this well appear to be trending downward since the second quarter of 2017. Magnesium concentrations in MW-8942D and MW-8908D have generally increased for the duration of monitoring, with increases being more gradual in MW-8908D. While magnesium concentrations were initially higher in the upgradient well, MW-8908D, they have been similar between the two wells since around 2006, with both exceeding the applicable groundwater guidance value.

Boron in MW-8909D appears to be creeping upward since approximately the third quarter of 2017. This slight upward trending is associated with the third and fourth quarter exceedances of the Part 703 GA standard, which represent only the third and fourth times that the standard for boron has been exceeded in this well.

4.6 SURFACE WATER

Surface water samples are collected from points in the Keuka Outlet 100 feet upstream (Keuka Upstream) and downstream (Keuka Downstream) of the Treatment Pond discharge location. Table 4-10 summarizes the surface water quality in the Keuka Outlet for the four quarters of 2019. Most parameters showed similar concentrations between the upstream and downstream during all four sampling events.

The most significant differences (greater than 25%) in the water quality between upstream and downstream samples include increases in turbidity during the first quarter, as well as color, manganese, and TDS in the third quarter. Significant decreases between up and downstream samples occurred during the second quarter for TDS and boron. Other notable differences (greater than 10%) between upstream and downstream samples during the 2019 sampling events include increases in TDS in the first quarter, alkalinity and iron in the second quarter, and alkalinity in the third quarter. Notable decreases between the upstream and downstream samples include turbidity in the second quarter, arsenic and boron in the third quarter, and TDS in the fourth quarter.

It is worth noting that the upstream TDS result from the third quarter was flagged as estimated in the data validation report. The surface water field duplicate, collected from the upstream location, resulted in a significantly higher TDS of 265 mg/L. If this result was used in place of the 145 mg/L Keuka Upstream result, the percent increase between up and downstream samples would drop to 18.9%.

Decreases in arsenic and boron during the third quarter are based on estimated values because these parameters were detected below the quantitation limit, but above the method detection limit.

The Treatment Pond was not actively discharging during any sampling event for the 2019 calendar year.

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2019 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

Parameter	Units	First Quarter (3/18/2019)				Second Quarter (6/19/2019)			
		Keuka Upstream	Keuka Downstream	Difference	% Increase	Keuka Upstream	Keuka Downstream	Difference	% Increase
Alkalinity	mg/l	210	230	20	9.5%	130	150	20	15.4%
Aluminum	ug/l	<100	<100			<100	<100		
Ammonia	mg/l	<0.1	<0.1			<0.1	<0.1		
Antimony	ug/l	NM	NM			NM	NM		
Arsenic	ug/l	<5	<5			<5	<5		
Barium	ug/l	NM	NM			NM	NM		
Boron	ug/l	60	57	-3	-5.0%	67.5	<50	-18	-35.0%
Cadmium	ug/l	<5	<5			<5	<5		
Calcium	ug/l	62,600	64,700	2,100	3.4%	39,800	41,500	1,700	4.3%
Chloride	mg/l	58.7	57.5	-1.2	-2.0%	37.0	35.4	-1.6	-4.3%
Chromium	ug/l	NM	NM			NM	NM		
Color	C.U.	NM	NM			NM	NM		
Conductivity	µmhos/cm	625	634	9	1.4%	403	400	-3	-0.7%
Copper	ug/l	<5	<5			<5	<5		
DO	mg/l	8.9	9.3	0.4	4.5%	3.85	4	0.2	3.9%
Hardness	mg/l	230	237	7	3.0%	148	153	5	3.4%
Iron	ug/l	85.8	93.7	8	9.2%	83.4	102	19	22.3%
Magnesium	ug/l	17,800	18,400	600	3.4%	11,800	12,000	200	1.7%
Manganese	ug/l	<20	<20			<20	<20		
Mercury	ug/l	<0.2	<0.2			<0.2	<0.2		
Nickel	ug/l	NM	NM			NM	NM		
pH	SU	8.6	8.6			8.4	8.2	-0.2	-2.4%
Potassium	ug/l	3,980	3,970	-10	-0.3%	3,100	2,970	-130.0	-4.2%
Selenium	ug/l	<5	<5			<5	<5		
Sodium	ug/l	31,500	30,500	-1000	-3.2%	16,700	16,000	-700	-4.2%
Sulfate	mg/l	35.0	35.3	0.3	0.9%	24.1	23.5	-0.6	-2.5%
TDS	mg/l	350	425	75	21.4%	285	105	-180	-63.2%
TOC	mg/l	NM	NM			NM	NM		
Turbidity	NTU	4	9	5	125.0%	47	37	-10.0	-21.3%
Zinc	ug/l	NM	NM			NM	NM		

NM = Not Measured, baseline only, routine parameters measured this quarter.

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2019 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

Parameter	Units	Third Quarter (9/19/2019)				Fourth Quarter (11/20/2019)			
		Keuka Upstream	Keuka Downstream	Difference	% Increase	Keuka Upstream	Keuka Downstream	Difference	% Increase
Alkalinity	mg/l	116	130	14	12.1%	120	120		
Aluminum	ug/l	<29.4	<29.4			<100	<100		
Ammonia	mg/l	<0.1	<0.1			<0.1	<0.1		
Antimony	ug/l	<7.6	<7.6			NM	NM		
Arsenic	ug/l	6.7*	5.6*	-1.1	-16.4%	<5	<5		
Barium	ug/l	26.5*	28.8*	2.3	8.7%	NM	NM		
Boron	ug/l	40.4*	36.3*	-4.1	-10.1%	<50	<50		
Cadmium	ug/l	<1	<1			<5	<5		
Calcium	ug/l	39,300	41,700	2,400	6.1%	36,000	35,900	-100	-0.3%
Chloride	mg/l	43.1	45.7	2.6	6.0%	34.6	34.4	-0.2	-0.6%
Chromium	ug/l	<4	<4			NM	NM		
Color	C.U.	7	10	3	42.9%	NM	NM		
Conductivity	µmhos/cm	404	423	19	4.7%	361	361		
Copper	ug/l	2.19*	<2.1	-0.1	-4.8%	<5	<5		
DO	mg/l	5.20	5.21	0.01	0.2%	7.15	7.34	0.2	2.7%
Hardness	mg/l	153	161	8	5.2%	135	135		
Iron	ug/l	53.4*	49.9*	-3.5	-6.6%	53.4	56.5	3	5.8%
Magnesium	ug/l	13,300	13,700	400	3.0%	11,000	11,000		
Manganese	ug/l	<3	7.5*	4.5	150.0%	<20	<20		
Mercury	ug/l	<0.1	<0.1			<0.2	<0.2		
Nickel	ug/l	<2.7	<2.7			NM	NM		
pH	SU	8.5	8.2	-0.3	-3.5%	6.3	6.4	0.1	1.6%
Potassium	ug/l	3,220	3,420	200	6.8%	2,440	2,410	-30	-1.2%
Selenium	ug/l	<3.5	<3.5			<5	<5		
Sodium	ug/l	28,400	30,400	2,000	7.0%	19,500	19,400	-100	-0.5%
Sulfate	mg/l	26.3	27.5	1.2	4.6%	22.3	22.1	-0.2	-0.9%
TDS	mg/l	145	315	170	117.2%	175	140	-35	-20.0%
TOC	mg/l	3.2	3.1	-0.1	-3.1%	NM	NM		
Turbidity	NTU	5	5			35	37	2	5.7%
Zinc	ug/l	<4.6	4.9*	0.3	6.5%	NM	NM		

NM = Not Measured, baseline only, routine parameters measured these quarters.

* Estimated value between the RPQL and MDL

4.7 STATIC GROUNDWATER LEVEL MEASUREMENTS

Static groundwater levels are taken on a quarterly basis as directed by the Site's EMP, Section 3.3.6.1. Water level data has been analyzed since the first quarter of 2003. Time-series of the depth to water measurements and their corresponding groundwater elevation data are included at the end of Attachment 5. The potentiometric surfaces of representative minimum and maximum groundwater elevations and the fourth quarter measurements are shown on Figure 4-1 and Figure 4-2 for the bedrock and glacial till water bearing units, respectively.

The groundwater elevation in MW-1842 during the first quarter of 2019 was the lowest value observed since the well was installed. This measurement was excluded from groundwater elevation analysis. The atypical groundwater elevation was believed to be due to slow recovery in the well following well redevelopment completed days before the water level was measured on March 28th, 2019. The water level returned to a more typical level during the second quarter and has since been included in the analysis. The water level in glacial till well MW-8910SH returned to a more typical level in the fourth quarter after four consecutive quarters at record high levels including an intrawell maximum during the first quarter of 2019 (elev. 552.95 feet). Conversely, the water elevation in the neighboring glacial till well, MW-8911SH, was unusually low during the same four quarters, and also returned to a typical level during the fourth quarter in 2019.

An intrawell maximum groundwater elevation was recorded in the downgradient, glacial till observation well OW-7741 during the second quarter but returned to more a normal level during the last two quarters of 2019. Upgradient of the landfill, the groundwater elevation in the glacial till observation well OW-8402 was depressed during the second half of 2019, albeit not at record levels. During the fourth quarter of 2019, its bedrock counterpart, the observation well OW-8403, was at an intrawell minimum groundwater elevation.

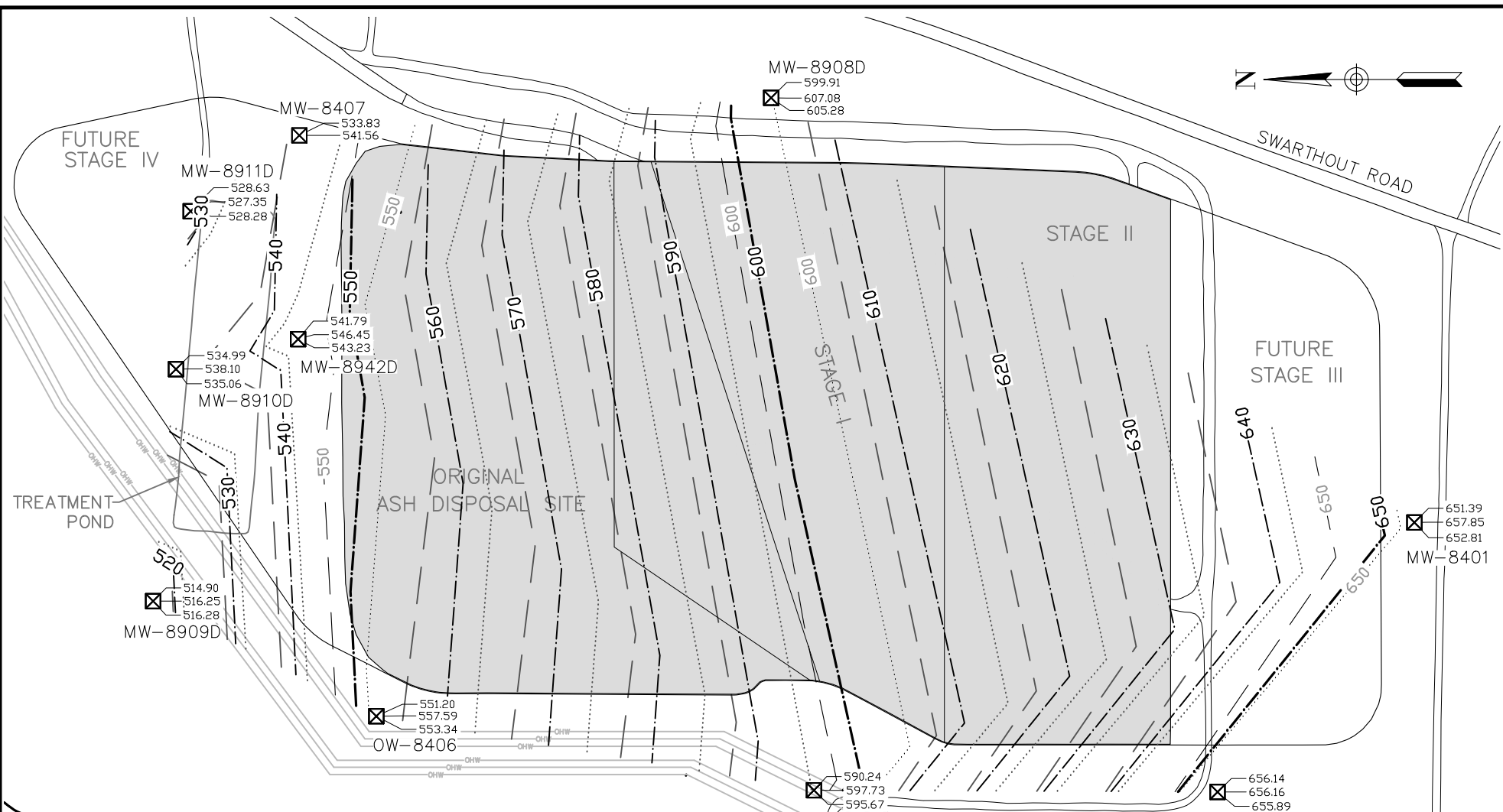
Figure 4-3 is a comparison between current bedrock and glacial till potentiometric surfaces. Groundwater flow appears to be predominately southeast to northwest in the southern half of the site. In the northern half of the site, groundwater flow takes on a stronger downward gradient and typically shows a distinct angle towards the Keuka Outlet in the northwestern corner, especially in the glacial till. Vertical gradients for the fourth quarter 2019 were generally typical for the site. This follows some notable exceptions in the MW-8908, MW-8910, and MW-8911 couplets which

were starkly different than normal for four quarters starting with the fourth quarter of 2018. The MW-8908 couplet gradient is typically slightly downwards (average = 0.03 prior to the 2018 fourth quarter) but was upwards from the fourth quarter of 2018 through the third quarter of 2019, with an intralocation extreme of -0.13¹. Groundwater at the MW-8910 couplet typically has a moderately strong downward gradient of 0.23 (average prior to the 2018 fourth quarter), but the gradient was strongly downward during the four questionable quarters (average = 0.59) with an intralocation extreme of 0.64 in the third quarter of 2019. Immediately adjacent to MW-8910, the MW-8911 couplet was at an unusually low, nearly neutral gradient when it also typically has a moderately downward gradient (average of Q4 2018 to Q3 2019 = 0.05 as compared to the average prior to the fourth quarter of 2018 of 0.32). There is no clear explanation for this period of unusual water levels.

The vertical gradient for the OW-8402/8403 couplet is typically downwards but has been upwards for two consecutive quarters due to significantly lower water levels in the deep bedrock well of the couplet. This reversal does not appear to be part of a trend. Water levels in this couplet will be monitored to determine if the vertical gradient remains reversed.

¹ The negative gradient denotes an upward direction.

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LEGEND

- BEDROCK OBSERVATION/MONITORING WELL**
- ☒ Representative Minimum Groundwater Elevation (Measurements taken on 9/14/16)
 - ☒ Representative Maximum Groundwater Elevation (Measurements taken on 4/7/14)
 - Current Quarter's Groundwater Elevation (Measurements taken on 11/20/19)

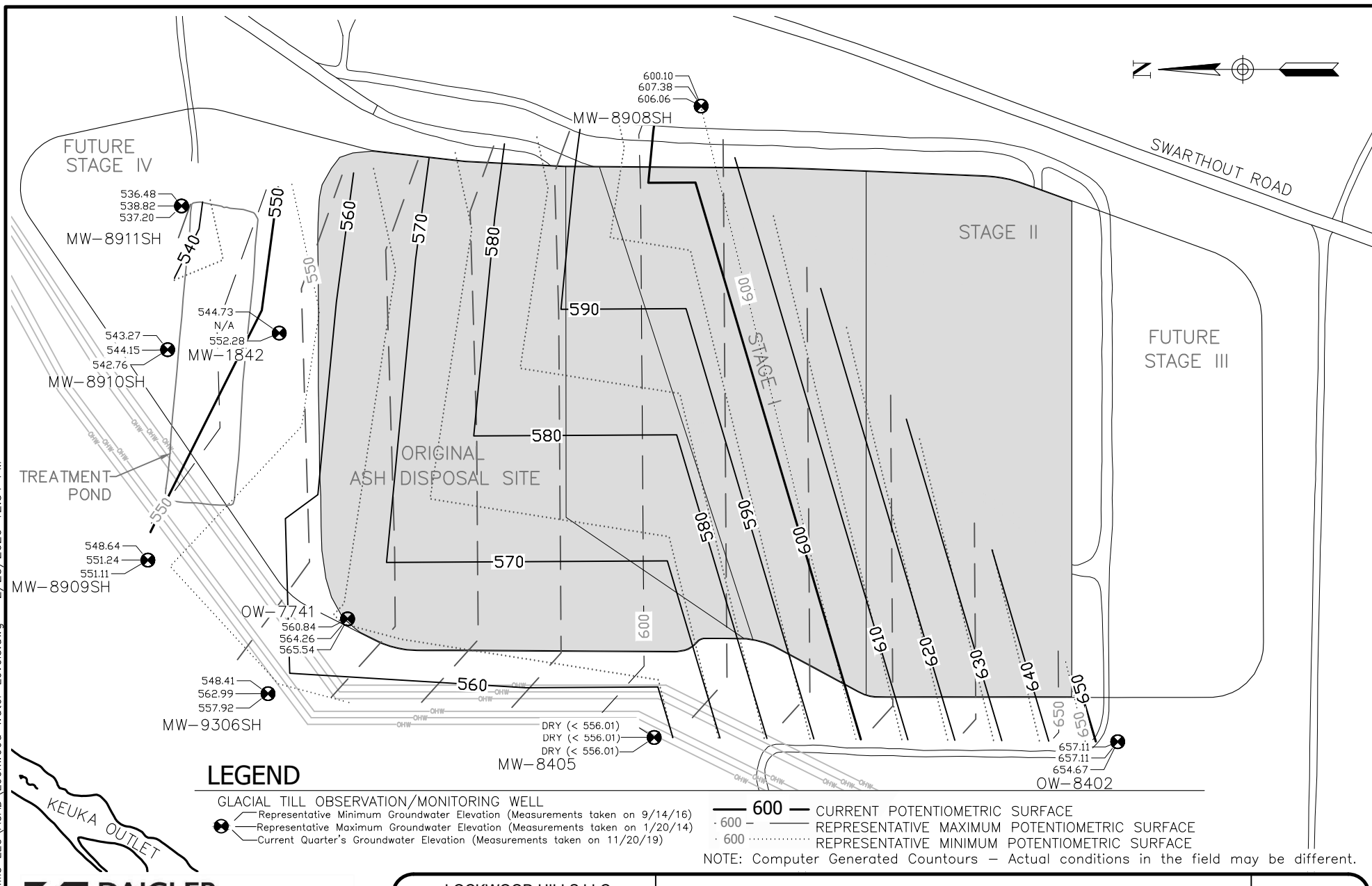
- 600 — CURRENT POTENTIOMETRIC SURFACE
- 600 - REPRESENTATIVE MAXIMUM POTENTIOMETRIC SURFACE
- 600 · REPRESENTATIVE MINIMUM POTENTIOMETRIC SURFACE

NOTE: Computer Generated Countours - Actual conditions in the field may be different.

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LOCKWOOD HILLS LLC		BEDROCK GROUNDWATER POTENTIOMETRIC SURFACE			FIGURE 6-1
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE			
February 2020		TOWN OF TORREY	YATES COUNTY	NEW YORK	

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LEGEND

- GLACIAL TILL OBSERVATION/MONITORING WELL**
- ⊗ Representative Minimum Groundwater Elevation (Measurements taken on 9/14/16)
 - ⊗ Representative Maximum Groundwater Elevation (Measurements taken on 1/20/14)
 - ⊗ Current Quarter's Groundwater Elevation (Measurements taken on 11/20/19)

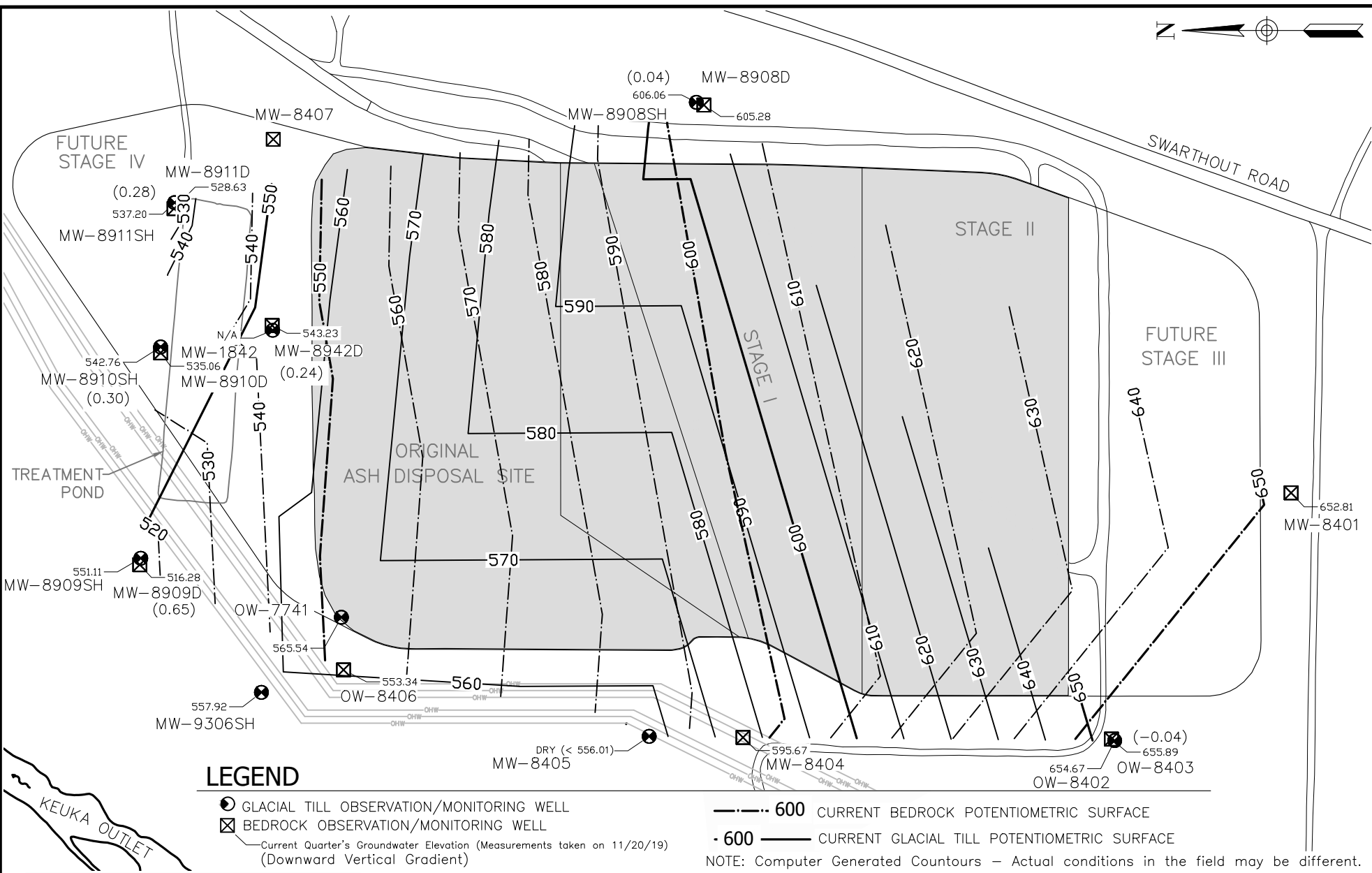
- 600 — CURRENT POTENTIOMETRIC SURFACE
- - - 600 - REPRESENTATIVE MAXIMUM POTENTIOMETRIC SURFACE
- · · 600 · · · REPRESENTATIVE MINIMUM POTENTIOMETRIC SURFACE

NOTE: Computer Generated Countours - Actual conditions in the field may be different.

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LOCKWOOD HILLS LLC		GLACIAL TILL GROUNDWATER POTENTIOMETRIC SURFACE		FIGURE 6-2
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE		
February 2020	TOWN OF TORREY	YATES COUNTY	NEW YORK	

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LEGEND

- GLACIAL TILL OBSERVATION/MONITORING WELL
- ⊠ BEDROCK OBSERVATION/MONITORING WELL
- Current Quarter's Groundwater Elevation (Measurements taken on 11/20/19)
(Downward Vertical Gradient)

- - - 600 CURRENT BEDROCK POTENTIOMETRIC SURFACE
- 600 - CURRENT GLACIAL TILL POTENTIOMETRIC SURFACE

NOTE: Computer Generated Contours - Actual conditions in the field may be different.

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LOCKWOOD HILLS LLC		POTENTIOMETRIC SURFACES FOR FOURTH QUARTER 2019			FIGURE 6-3
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE			
February 2020		TOWN OF TORREY	YATES COUNTY	NEW YORK	

ATTACHMENT 1
NYSDEC 2019 Annual Report Form

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2020.

- A. This annual/quarterly report is for the year of operation from January 01, 2019 to December 31, 2019
 B. Quarterly Report for: ___ Quarter 1 ___ Quarter 2 ___ Quarter 3 ___ Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION			
FACILITY NAME:			
FACILITY LOCATION ADDRESS:	FACILITY CITY:	STATE:	ZIP CODE:
FACILITY TOWN:	FACILITY COUNTY:	FACILITY PHONE NUMBER:	
FACILITY NYS PLANNING UNIT: <i>(A list of NYS Planning Units can be found at the end of this report).</i>			NYSDEC REGION #:
OWNER INFORMATION			
360 PERMIT #:	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:
FACILITY CONTACT:	<input type="checkbox"/> public <input type="checkbox"/> private	CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
CONTACT EMAIL ADDRESS:			
OPERATOR INFORMATION			
OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:	
OWNER ADDRESS:	OWNER CITY:	STATE:	ZIP CODE:
OWNER CONTACT:	OWNER CONTACT EMAIL ADDRESS:		
PREFERENCES			
Preferred address to receive correspondence: <input type="checkbox"/> Other (provide):	<input type="checkbox"/> Facility location address	<input type="checkbox"/> Owner address	
Preferred email address: <input type="checkbox"/> Other (provide):	<input type="checkbox"/> Facility Contact	<input type="checkbox"/> Owner Contact	
Preferred individual to receive correspondence: <input type="checkbox"/> Other (provide):	<input type="checkbox"/> Facility Contact	<input type="checkbox"/> Owner Contact	

Did you operate in 2019? Yes; Complete this form.

No; Complete and submit Sections 1 and 23. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: <http://www.dec.ny.gov/chemical/52706.html>.

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

- a. What is the estimated landfill capacity that was utilized during the reporting year?

_____ Cubic Yards of Airspace

- b. What is the estimated in-situ waste density for the reporting year?

_____ Tons/Cubic Yard

Please do not report units as pounds per cubic yard.

2. Remaining Constructed Capacity

- a. What is the remaining capacity of the landfill that is already constructed?

_____ Cubic Yards of Airspace

- b. What is the estimated remaining life of the constructed capacity?

_____ Years _____ Months

at _____ Tons/Year.*

* Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

- c. The tonnage rate reported under 2.b. is based on (select one):

_____ The amount of materials placed in the landfill in the reporting year

_____ Estimated future disposal

_____ Permit limit

Other (explain): _____

3. Permitted Capacity Still to be Constructed

- a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

_____ Cubic Yards of Airspace

- b. What is the projected life of capacity reported in 3.a?

_____ Years _____ Months

at _____ Tons/Year.*

* Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

- c. The tonnage rate reported under 3.b. is based on (select one):

_____ The amount of materials placed in the landfill in the reporting year

_____ Estimated future disposal

_____ Permit limit

Other (explain): _____

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4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

_____ Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

_____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: _____

Does the landfill have a constructed liner and a leachate collection system? ____ Yes ____ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

For **each cell**, please report the **acreage** and the **primary leachate** amount.

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
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November												
December												
ANNUAL												

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? _____ Yes _____ No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: \$ _____

Total quantity treated: _____ gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS AND ALTERNATIVE OPERATING COVER MATERIALS

For each type of waste material that the Department has approved for use as alternative operating cover (AOC), intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., operating cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) Refer to the list of NYS Planning Units that can be found at the end of this report.

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete						
Contaminated Soil						
Foundry Sand						
Glass						
Industrial Waste (specify)						
MSW Ash						
Wood Ash						
Paper Mill Sludge						
Processed C&D						
Waste Tire-Derived Aggregate /						
Waste Tires						
Other (specify)						
Total AOC						
Total Beneficial Use Determination Materials						

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = _____

Please note the calculation **is**: Tons AOC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons AOC / (Tons Solid Waste + AOC) x 100

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

_____ % Scale Weight

_____ % Estimated

_____ % Truck Count

_____ % Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)							
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)							
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)							
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge							
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed							

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee (\$/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)								
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)								
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge								
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)*								
* Ash laden sludge from Treatment Pond dredging								
Total Tons Disposed								

** Facility is a captive landfill; no tipping fees.

***Daily Average (tons) reflects the 15 days of active waste disposal between 8/8/2019 and 8/22/2019.

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 6 (Solid Waste Disposed).
DO NOT REPORT IN CUBIC YARDS!

- If the waste **WAS** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste **WAS NOT** received from another solid waste management facility, please write in “**Direct Haul**” along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

_____% Road ____% Rail ____% Water ____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR “Direct Haul”	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT <small>(See Attached List of NYS Planning Units)</small>	TONS RECEIVED
Asbestos					
Ash (Coal)					
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)					

SERVICE AREA OF SOLID WASTE RECEIVED

TYPE OF SOLID WASTE	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)					
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge					
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
TOTAL RECEIVED (tons): _____					

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

- Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: <http://www.dec.ny.gov/chemical/52706.html> .
- No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Please identify where the recyclable materials are coming from. DO NOT REPORT IN CUBIC YARDS!

- If the materials **WERE** received from another solid waste management facility, please write in the name and address of the facility along with the appropriate state, county and planning unit/municipality.
- If the materials **WERE NOT** received from another solid waste management facility, please write in "**Direct Haul**" along with the appropriate state, county and planning unit/municipality where the recyclables were generated.

Specify transport method, list type of material(s) and percentages of total waste transported by each:

_____ % Road: Waste Type(s): _____ _____ % Rail: Waste Type(s): _____
 _____ % Water: Waste Type(s): _____ _____ % Other (specify: _____): Waste Type(s): _____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED					
MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Commingled Containers <small>(metal, glass, plastic)</small>					
Commingled Paper <small>(all grades)</small>					
Single Stream <small>(total)</small>					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste <small>(curbside)</small>					
Other <small>(specify)</small>					
TOTAL RECEIVED (tons):					_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

_____% Road ____% Rail ____% Water ____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED					
RECOVERED MATERIAL	DESTINATION <small>(Name & Address)</small>	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT <small>(See Attached List of NYS Planning Units)</small>	TONS RECOVERED <small>(out of facility)</small>
Commingled Paper <small>(all grades)</small>					
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper <small>(specify)</small>					
TOTAL PAPER RECOVERED (tons):					_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
TOTAL GLASS RECOVERED (tons):					
METAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal (from MSW)					
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
TOTAL METAL RECOVERED (tons):					

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)					
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
TOTAL PLASTIC RECOVERED (tons):					_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	DESTINATION <i>(Name & Address)</i>	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT <i>(See Attached List of NYS Planning Units)</i>	TONS RECOVERED <i>(out of facility)</i>
Commingled Containers <i>(metal, glass, plastic)</i>					
Commingled Paper & Containers					
Single Stream <i>(total)</i>					
Other <i>(specify)</i>					
TOTAL MIXED MATERIAL RECOVERED (tons):					_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics					
Textiles					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons): _____					

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

Yes No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? ____ Yes ____ No

Identify Manufacturer _____ and Model _____ of fixed unit.

Does your facility use a portable radiation monitor? ____ Yes ____ No

Identify Manufacturer _____ and Model _____ of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: _____

Original* section used (years) from _____ to _____

Next* section used (years) from _____ to _____

Section Footprint _____ acres

Section Footprint _____ acres

Capped with approved final cover system Yes _____ No _____

Capped with approved final cover system Yes _____ No _____

Percent capped _____

Percent capped _____

Waste in Place: _____ Tons _____ Cubic Yards, if known

Waste in Place: _____ Tons _____ Cubic Yards, if known

* If there are additional landfill sections, phases or cells, please provide the same waste in place information on additional sheets and attach to form.

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?

Yes _____ No _____

If Yes: Active ___ Passive ___

Number of gas wells: _____

Total landfill footprint acreage _____

Total landfill acreage from which gas is collected _____

Landfill sections from which gas is collected _____

Landfill acreage from which gas is collected for energy recovery _____

Measured Methane Generation Rate*, k _____

Measured Potential Methane Generation Capacity*, Lo _____ m³/Mg

NMOC Concentration* _____ ppmv as hexane

Does the landfill require a Title V Permit? Yes _____ No _____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: _____

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: _____

Type of Flare: Opened Flare _____ Enclosed Flare _____

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually _____ cubic feet

Flare Hours of Operation per Year _____ hours/year

Methane Percentage in Landfill Gas before flaring _____ %

Methane Destruction efficiency _____ %

Candlestick Flares:

Number of Candlestick Flares _____

Estimate of Gas Flared Candlestick Flare _____ cubic feet

Gas To Energy

Number of Internal Combustion Engines: _____

Please report units in cubic feet

Quantity of Gas collected for Internal Combustion Engine Annually _____ cubic feet

Methane Destruction efficiency _____ %

Methane Percentage in Landfill Gas before combustion _____ %

Utility Company Receiving Electricity _____

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing _____ cubic feet

Methane Percentage in Landfill Gas before processing _____ %

On-site or Off-site User of Gas _____

Landfill Gas Recovery Facility/Landfill Data

Facility Contact _____ Phone # (____)____-_____

Contact e-mail address _____ Fax # (____)____-_____

Operation and maintenance cost for calendar year: \$_____

Does the LGRF experience shut downs: _____ Yes _____ No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

Year landfill opened: _____ Anticipated landfill closure date: _____

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Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
ANNUAL TOTAL						

* Provide where applicable.

Normal Weekdays of Operation _____ Normal Hours of Operation _____

Electricity Generated and used/marketed offsite _____ KWH

Electricity Generated and used onsite _____ KWH

Gas Processed and used/marketed offsite _____ cubic feet

Gas Processed and used onsite _____ cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

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SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

- Yes No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan? See 2019 Annual Report, Section 3 and attached letter of credit.

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

- Yes No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

- Yes No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 11 – LANDFILL OPERATOR TRAINING

Name of trained landfill operator: _____

Name and location of training course: _____

Date completed: _____

SECTION 16 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

SECTION 17 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

SECTION 18 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

SECTION 19 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

SECTION 20 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

SECTION 21 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

Yes No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

SECTION 22 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

Yes No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 23 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

**New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov**

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

<u>DALE IRWIN</u> Signature	_____ Date
_____ Name (Print or Type)	_____ Title (Print or Type)
_____ Email (Print or Type)	
_____ Address	_____ City
_____ State and Zip	(____)____-____ Phone Number

ATTACHMENTS: ____ YES ____ NO
(Please check appropriate line)

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Silicon Valley Bank

ADVICE OF CREDIT

DATE: DECEMBER 26, 2019

LETTER OF CREDIT NO.: SVBSF009520
 APPLICANT: ATLAS CAPITAL RESOURCES LP
 BENEFICIARY: REGIONAL DIRECTOR, REGION 8, NEW YORK
 STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 ISSUING BANK: SILICON VALLEY BANK
 AMOUNT: USD 4,937,750.00

LADIES AND GENTLEMEN:

WE CREDITED YOUR ACCOUNT NUMBER XXXXXX9561 WITH US IN THE AMOUNT OF USD 8,401.03.

DETAILS ARE AS FOLLOWS:

COMMITMENT FEE REFUND	USD	8,401.03
TOTAL	USD	8,401.03

NOTE: PLEASE BE ADVISED THAT USD54,891.32 WAS CHARGED FOR Q4-19 COMMITMENT FEE AT 4.35%. THE REVISED FEE OF USD46,490.29 WAS CALCULATED AT 3.85% FOR PERIOD 9/30/19-10/31/19 AND 3.60% FOR PERIOD 10/31/19-12/31/19.

IF YOU HAVE ANY QUESTIONS REGARDING THIS TRANSACTION, PLEASE CONTACT THERESA GARCIA AT 408-654-5088, ALWAYS QUOTING OUR LETTER OF CREDIT NO. SVBSF009520.

THIS DOCUMENT IS COMPUTER GENERATED AND REQUIRES NO SIGNATURE.

ATTACHMENT 2

Inspection Logs

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Sexton

Date of Inspection 1/24/19 Time 2:45 P.m

Weather Conditions Windy/cloudy

OK = Condition Met NO = Not Observed CA = Corrective Action Required

NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK NO CA FACILITY MANAGEMENT

- | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, stormwater permit, compaction tests and monthly inspection records). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Dust is effectively controlled and does not constitute an off-site nuisance. (If water from sedimentation pond is used for dust control, note in comment section including quantity). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife. |

WATER

- | | | | |
|-------------------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Solid waste is prevented from entering surface waters and/or groundwater. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife. |

ACCESS

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Access roads are passable. |

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).
12. Only authorized material generated at Greenidge Station has been placed at the site. **Note:** If authorized or permitted waste from any other source has been placed, notification to FSG and lab must be made to ensure analysis for arsenic and selenium. Please also note source and quantity in comment section.

MONITORING

13. Monitoring wells are intact.

OTHER

14. All required equipment is on-site and operational.
15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
16. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:

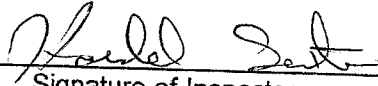
(Note Item #'s)

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

(Include compaction test dates and results, any known complaints, incidents or violations)

Pond at 4.6'
Flow at 20.2 gpm
Will take predischage sample
Ph 6.8


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Sexton

Date of Inspection 2/21/19 Time 9:50

Weather Conditions Snow

OK = Condition Met NO = Not Observed CA = Corrective Action Required

NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK	NO	CA	FACILITY MANAGEMENT
-----------	-----------	-----------	----------------------------

- | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, stormwater permit, compaction tests and monthly inspection records). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Dust is effectively controlled and does not constitute an off-site nuisance. (If water from sedimentation pond is used for dust control, note in comment section including quantity). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife. |

WATER

- | | | | |
|-------------------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Solid waste is prevented from entering surface waters and/or groundwater. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife. |

ACCESS

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Access roads are passable. |

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

- ___ ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).
- ___ ___ 12. Only authorized material generated at Greenidge Station has been placed at the site. **Note:** If authorized or permitted waste from any other source has been placed, notification to FSG and lab must be made to ensure analysis for arsenic and selenium. Please also note source and quantity in comment section.

MONITORING

- ___ ___ 13. Monitoring wells are intact.

OTHER

- ___ ___ 14. All required equipment is on-site and operational.
- ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
- ___ ___ 16. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
- ___ ___ 17. There are no apparent unsafe site or operational conditions.

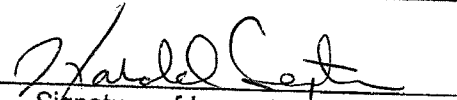
CORRECTIVE ACTIONS:
(Note Item #'s)

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

(Include compaction test dates and results, any known complaints, incidents or violations)

Started discharge - level at 5.4'
Flow rate 21 gpm.


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

LOCKWOOD ASH LANDFILL
LEACHATE COLLECTION POND
DISCHARGE REPORT FORM



PRE-DISCHARGE POND WATER QUALITY

SAMPLE DATE: 2/14/19 SAMPLE TYPE: Grab SAMPLING COMPANY: Adirondack Environmental
NAME OF SAMPLER: Kevin Ambra
FIELD pH: (6-9) 7.4 Tot Fe: (<4.0) .326 Tot Mn: (<3.0) .154 Tot Zn: (<2.0) ND
NH3: Tot As: (<0.1) ND TSS: (<50.0) 6.3 Tot Se: (<0.07) .013

POND DRAINAGE AUTHORIZATION

NAME: Harold Sexton DATE: 2/21/19
SIGNATURE: Harold Sexton OTHER/NOTES:

POND DISCHARGE DATA

START OF DISCHARGE					
DATE:	2/21/2019			TIME:	9:45
POND LEVEL (FT):	5.4			POND VOLUME (GAL):	2,900,000
FIELD pH:	7.0				
END OF DISCHARGE					
DATE:	3/6/19			TIME:	2:15 P.M.
POND LEVEL (FT):	1.4 Ft.			POND VOLUME (GAL):	600,000
FIELD pH	7.1				

COMPOSITE SAMPLE START DATE: 2/21/19
COMPOSITE SAMPLE END DATE: 2/22/19

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL):	2,300,000	0	WEEKLY pH SUMMARY	
# OF DISCHARGE DAYS	13		Date	pH
MAX GAL/DAY:	177,000		2/21	7.0
AVG GAL/DAY:	177,000	#DIV/O!	2/25	7.3
AVG CUFT/DAY DISCHARGE:	23,645	#DIV/O!	3/4	7.2
FLOW RATE OF KEUKA OUTLET (CFS)	388,000			

6" = 250,000 gal.

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Sexton

Date of Inspection 3/18/19 Time 11:30

Weather Conditions Cloudy.

OK = Condition Met NO = Not Observed CA = Corrective Action Required

NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK NO CA FACILITY MANAGEMENT

- | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, stormwater permit, compaction tests and monthly inspection records). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Dust is effectively controlled and does not constitute an off-site nuisance. (If water from sedimentation pond is used for dust control, note in comment section including quantity). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife. |

WATER

- | | | | |
|-------------------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Solid waste is prevented from entering surface waters and/or groundwater. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife. |

ACCESS

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Access roads are passable. |

WASTE HANDLING

- ___ ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).
- ___ ___ 12. Only authorized material generated at Greenidge Station has been placed at the site. **Note:** If authorized or permitted waste from any other source has been placed, notification to FSG and lab must be made to ensure analysis for arsenic and selenium. Please also note source and quantity in comment section.

MONITORING

- ___ ___ 13. Monitoring wells are intact.

OTHER

- ___ ___ 14. All required equipment is on-site and operational.
- ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
- ~~___~~ ___ 16. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
- ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

(Include compaction test dates and results, any known complaints, incidents or violations)

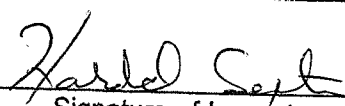
Took flow rate 1000 ml @ 180 sec.

Chris Coill Assisted.

Sediment Pond discharge completed

on 3/6/19. PH 7.1 at discharge

3/21 & 3/22 - Developing new well.


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Sinton / Chris Gill

Date of Inspection 4/17/19 Time 2:10

Weather Conditions Sunny

OK = Condition Met NO = Not Observed CA = Corrective Action Required

NOTE: For any item marked CA, a description of the problem and its proposed or implemented resolution should be noted in the corrective action section of this form.

OK NO CA FACILITY MANAGEMENT

- | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Required permits and operational records are filed on-site (Part 360 permits to operate/construct, SPDES permit, Part 364 transport permits, stormwater permit, compaction tests and monthly inspection records). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Dust is effectively controlled and does not constitute an off-site nuisance. (If water from sedimentation pond is used for dust control, note in comment section including quantity). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife. |

WATER

- | | | | |
|-------------------------------------|--------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Solid waste is prevented from entering surface waters and/or groundwater. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife. |

ACCESS

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Access roads are passable. |

WASTE HANDLING

11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).
12. Only authorized material generated at Greenidge Station has been placed at the site. **Note:** If authorized or permitted waste from any other source has been placed, notification to FSG and lab must be made to ensure analysis for arsenic and selenium. Please also note source and quantity in comment section.

MONITORING

13. Monitoring wells are intact.

OTHER

14. All required equipment is on-site and operational.
15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
16. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates and results should be listed in comment section.
17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

Top removed from access roads
added to active area to be
used for cover

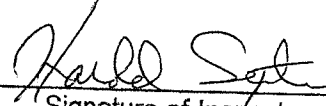
* Well # 89-115 casing broken, Repair
4/12/19.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

(Include compaction test dates and results, any known complaints, incidents or violations)

Pond at 4.3' Pre discharge sample
taken on 4/18/19


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

LOCKWOOD ASH LANDFILL
LEACHATE COLLECTION POND
DISCHARGE REPORT FORM



PRE-DISCHARGE POND WATER QUALITY

SAMPLE DATE: 4/18/19 SAMPLE TYPE: GRAB SAMPLING COMPANY: ADIRONDACK ENVIRONMENTAL SERVICES
NAME OF SAMPLER: KEVIN AMBRA

FIELD pH: (6-9) 8.0⁵ Tot Fe: (<4.0) .126 Tot Mn: (<3.0) .022 Tot Zn: (<2.0) ND
NH3: Tot As: (<0.1) ND TSS: (<50.0) ND Tot Se: (<0.07) .008

POND DRAINAGE AUTHORIZATION

NAME: CHRISTOPHER GILL DATE: 5/1/19
SIGNATURE: *[Signature]* OTHER/NOTES:

POND DISCHARGE DATA

START OF DISCHARGE						
DATE:	5/1/19			TIME:	9:30	
POND LEVEL (FT):	4.85			POND VOLUME (GAL):	2,550,000	
FIELD pH:	7.74					
END OF DISCHARGE						
DATE:	5/23/19			TIME:	11:10	
POND LEVEL (FT):	1.0'			POND VOLUME (GAL):	580,000	
FIELD pH	6.79					

COMPOSITE SAMPLE START DATE: 5/1/19 - 5/15/19
COMPOSITE SAMPLE END DATE: 5/2/19 - 5/16/19

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL):	2,056,000	0	WEEKLY pH SUMMARY	
# OF DISCHARGE DAYS	22		Date	pH
MAX GAL/DAY:	190,000		SEE SAMPLING PLAN SHEETS ATTACHED	
AVG GAL/DAY:	93,181	#DIV/0!		
AVG CUFT/DAY DISCHARGE:		#DIV/0!		
FLOW RATE OF KEUKA OUTLET (CFS)	50 CFS			

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 5/29/19
 Time: 1135AM
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
--	---

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 6/5/19
 Time: 11:00
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows: OK = Condition Met NA = Not Applicable (at this time) CA = Corrective Action Required	NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
---	--

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 6/12/19
 Time: 9:00AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any Item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
---	--

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 6/19/19
 Time: 1:00 PM
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
---	--

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY

Equipment: Flusher

Date: 6/24/19

Client: Lockwood Hills LLC

Nozzle Type: Key

Weather: SUNNY

Pressure: 3000 GPM: 65

Company: NATIONAL VACUUM

Daily Total Gallons Water Used: _____

Technicians: MARK KAEGER

Location Stage	Line Segment		Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned*	No. of Passes	Comments
Stage II	CO-0A		6"	PVC	962	962	1	500
	CO-0		6"	PVC	969	969	2	700
	CO-1		6"	PVC	970	970	2	1000
	CO-2		6"	PVC	972	972	1	500
	CO-3		6"	PVC	973	973	1	500
	CO-4		6"	PVC	975	975	1	500
	CO-5		6"	PVC	973	973	1	500
	CO-38**	~CO-36	6" CO/21" Header	PVC	100	100	1	200
	CO-36**	~CO-31	6" CO/ 21" Header	PVC	250	250	1	200
	CO-31**	MH I/II-1	6" CO/ 21" Header	PVC	400	400	1	300

**CO-38, 36, & 31 are saddled to the header pipe with two 45° wye angled in the downstream direction. Visually verify flow/hose by observing in MH II-1 for CO-38, MH II-2 for CO-36 and MH II-3 for CO-31.

Notes: _____

*Record approximate length if partially jetted; record "Flushed" if simply flushed with water without entering the line.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY Equipment: Flusher Date: 6/25/19
 Client: Lockwood Hills LLC Nozzle Type: Key Weather: SUNNY
 Pressure: 3000 GPM: 65 Company: National Vacuum
 Daily Total Gallons Water Used: _____ Technicians: MARK PAROLE

Location Stage	Line Segment		Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned*	No. of Passes	Water Used Total Gallons	Total Gallons Leachate Vac.
Stage I	CO-6		6"	PVC	973	973	1	500	
	CO-7		6"	PVC	953	953	2	200	
	CO-8		6"	PVC	958	958	1	500	6650
	CO-9		6"	PVC	987	987	2	1000	
	CO-30	MH I/II-1	6" CO/ 6" Header	PVC	200	200	1	200	
	MH II-3	MH I/II-1	21"	PVC	678	678	1	1760	
	MH I/II-1	MH I/II-2	21"	PVC	72	72	1	200	
	MH I/II-2	MH I/II-3	21"	PVC	45	45	1	100	

6/27/19

Notes: _____

*Record approximate length if partially jetted; record "Flushed" if simply flushed with water without entering the line.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY **Equipment:** Flasher **Date:** 8/25/19
Client: Lockwood Hills LLC **Nozzle Type:** Key **Weather:** SUNNY
Pressure: 3000 **GPM:** 65 **Company:** NATIONAL VACUUM
Daily Total Gallons Water Used: _____ **Technicians:** MARIL PAUL

Location Stage	Line Segment	Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned*	No. of Passes	Comments
Stage I Overfill Liner	CO-10	6"	PVC	962	962	2	700
	CO-11	6"	PVC	63	63	2	100
	CO-12	6"	PVC	103	103	2	100
	CO-13	6"	PVC	146	146	2	200
	CO-14	6"	PVC	190	190	2	200
	CO-15	6"	PVC	233	233	1	200
	CO-17	6"	PVC	317	317	1	200
	CO-18	6"	PVC	361	361	1	250
	CO-19	6"	PVC	326	326	1	200
	CO-20	6"	PVC	279	279	1	200
	CO-21	6"	PVC	233	233	1	200
	CO-22	6"	PVC	186	186	1	200
	CO-23	6"	PVC	141	141	1	200

6/29/19

Notes: _____

*Record approximate length if partially jetted; record "Flushed" if simply flushed with water without entering the line.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY

Equipment: Flisher

Date: 6/28/19

Client: Lockwood Hills LLC

Nozzle Type: Key

Weather: SUNNY

Pressure: 300 GPM: 65

Company: NATIONAL VAULT

Daily Total Gallons Water Used: _____

Technicians: MARK PARDUE

Location Stage	Line Segment		Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned*	No. of Passes	Comments
OADS	MH OADS-1	MH OADS-2	12"	PVC	299	299		600
	MH OADS-2	MH OADS-3	12"	PVC	205	205		300
	CO-44	MH OADS-3	8"	PVC	81	81		100

Notes: _____

*Record approximate length if partially jetted; record "Flushed" if simply flushed with water without entering the line.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY

Equipment: Flusher

Date: 6/28/19

Client: Lockwood Hills LLC

Nozzle Type: Key

Weather: SUNNY

Pressure: 7000 GPM: 65

Company: NATURAL VACUUM

Daily Total Gallons Water Used: _____

Technicians: MARK PARDEE

Location Stage	Line Segment		Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned*	No. of Passes	Comments
	Upstream	Downstream						
Downstream Sewer System	MH I/II-3	MH I/II-4	21"	PVC	35	35		100
	MH I/II-4	MH I/II-5	21"	PVC	280	280		300
	MH I/II-5	MH I/II/S-1	21"	PVC	292	292		300
	CO-45	MH I/II/S-1	8"	PVC	157	157		250
	MH COM-1**	Inlet to Pond	8"	PVC	34 + 6' flume	34		150

**This line segment includes the 6' meter pit and Large 60-Degree V-Trapezoidal Flume. Care needs to be taken not to damage the flume. Visual observation of the cleaning effectiveness should be made in the meter pit. Access through the meter pit itself could be added if necessary.

Notes: _____

*Record approximate length if partially jetted; record "Flushed" if simply flushed with water without entering the line.

Lockwood Ash Disposal Site Daily Line Cleaning Record

Site Location: Dresden, NY

Client: Lockwood Hills LLC

Equipment: 1154 Floster

Nozzle Type: Key

Pressure: 3000 GPM: 65

Daily Total Gallons Water Used: _____

Date: 6/28/19

Weather: SUNNY

Company: National Vacuum

Technicians: MARK PAROZZE

Manhole	Manhole Diameter	Total Gallons Leachate/Sediment Vacuumed	Comments
<u>All</u>	<u>—</u>	<u>100 Gallons Leachate water Sediment material 55 Gram.</u>	

Notes: _____

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER W. GILL
 Date: 6/26/19
 Time: 1000am
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
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CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH LANDFILL
LEACHATE COLLECTION POND
DISCHARGE REPORT FORM



PRE-DISCHARGE POND WATER QUALITY

SAMPLE DATE: 6/19/19 SAMPLE TYPE: GRAB SAMPLING COMPANY: ADIRONDACK ENVIRONMENTAL SERVICES
NAME OF SAMPLER: KEVIN AMBRA

FIELD pH: (6-9) 8.2 Tot Fe: (<4.0) 0.178 Tot Mn: (<3.0) 0.028 Tot Zn: (<2.0) ND
NH3: Tot As: (<0.1) ND TSS: (<50.0) 3.4 Tot Se: (<0.07) ND

POND DRAINAGE AUTHORIZATION

NAME: CHRISTOPHER GILL DATE: 7/1/19
SIGNATURE: *[Signature]* OTHER/NOTES: SUNNY WEATHER
25°C WATER

POND DISCHARGE DATA

START OF DISCHARGE					
DATE:	7/1/19			TIME:	10:50AM
POND LEVEL (FT):	3.5ft			POND VOLUME (GAL):	1.9 1,900,000
FIELD pH:	8.0				
END OF DISCHARGE					
DATE:	7/18/19			TIME:	10:38AM
POND LEVEL (FT):	1.3'			POND VOLUME (GAL):	600,000
FIELD pH	7.5				

COMPOSITE SAMPLE START DATE: 7/1/19 - 7/10/19
COMPOSITE SAMPLE END DATE: 7/2/19 - 7/11/19

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): 1,300,000 # OF DISCHARGE DAYS 17 MAX GAL/DAY: 76,471 gal/day AVG GAL/DAY: 76,471 gal/day AVG CUFT/DAY DISCHARGE: 10,223 ft ³ /day FLOW RATE OF KEUKA OUTLET (CFS) 175 CFS	0	WEEKLY pH SUMMARY	
		Date	pH
		7/3/19	8.1
		7/8/19	8.0
		7/17/19	7.7

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 7/3/19
 Time: 1000AM
 Weather Conditions: SCATTERED CLOUDS

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 7/10/19
 Time: 10:00 AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
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6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 7/17/19
 Time: 10:00 AM
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows: OK = Condition Met NA = Not Applicable (at this time) CA = Corrective Action Required	NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
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CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 7/24/19
 Time: 9:00AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH LANDFILL
LEACHATE COLLECTION POND
DISCHARGE REPORT FORM



PRE-DISCHARGE POND WATER QUALITY

SAMPLE DATE: 7/18/19 SAMPLE TYPE: GRAB SAMPLING COMPANY: ADIRONDACK ENVIRONMENTAL SERVICES
NAME OF SAMPLER: KEVIN AMBRO
FIELD pH: (6-9) 7.6 Tot Fe: (<4.0) 0.429 Tot Mn: (<3.0) 0.081 Tot Zn: (<2.0) ND
NH3: NA Tot As: (<0.1) ND TSS: (<50.0) 5.1 Tot Se: (<0.07) ND

POND DRAINAGE AUTHORIZATION

NAME: CHRISTOPHER GILL DATE: 7/29/19
SIGNATURE: *Chris Gill* OTHER/NOTES: SUNNY 30°C WATER

POND DISCHARGE DATA

START OF DISCHARGE						
DATE:	7/29/19			TIME:	11:23AM	
POND LEVEL (FT):	1.8'			POND VOLUME (GAL):	800,000	GALLONS
FIELD pH:	7.6					
END OF DISCHARGE						
DATE:	8/7/19			TIME:	3:25pm	
POND LEVEL (FT):	.7			POND VOLUME (GAL):	250,000	GALLONS
FIELD pH	7.6					

COMPOSITE SAMPLE START DATE: 7/29/19
COMPOSITE SAMPLE END DATE: 7/30/19

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): 550,000 GAL	0	WEEKLY pH SUMMARY	
# OF DISCHARGE DAYS 10 DAYS		Date	pH
MAX GAL/DAY: 55,000		7/30/19	7.8
AVG GAL/DAY: 55,000	#DIV/0!	8/7/19	7.6
AVG CUFT/DAY DISCHARGE: 7352.43	#DIV/0!		
FLOW RATE OF KEUKA OUTLET (CFS) 13			

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 7/31/19
 Time: 10:00AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
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6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 8/7/19
 Time: 10:00AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system *
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
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6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any Item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
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CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

SMALL QUANTITY OF LEACHATE REMAINS IN POND.
LEACHATE FLOW DIVERTED TO STORAGE TANKS
AS OF 8/2/19 FOR CONSTRUCTION PROJECT.
DEWATERING POND

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 8/14/19
 Time: 11:00 AM
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

X		
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
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6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

SEDIMENT IS BEING HAULED TO CONFINED STORAGE
AREA ON TOP OF LANDFILL FROM SETTLING POND.
DUST FROM HAUL TRUCKS IS BEING CONTROLLED BY
SPRAYING WATER ON DIRT ROADS UP LANDFILL. LEACHATE
IS STILL BEING HAULRD FROM FRAC TANKS TO
GREENIDGE WWTP.

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 8/21/19
 Time: 9:00 AM
 Weather Conditions: OVERCAST / LIGHT RAIN

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

X		
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
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6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

SIMILAR TO PREVIOUS WEEKLY INSPECTION REPORT,
SEDIMENT FROM POND IS STILL BEING HAULED TO
TOP OF LANDFILL IN CONFINED STORAGE AREA. THE LAST
TRUCKLOADS WILL BE BROUGHT UP TODAY. LEACHATE IS
STILL BEING HAULED FROM FRAC TANKS TO GREENIDGE
WWTP. DIAS LANES ARE WATERED TO PREVENT DUST

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 8/28/19
 Time: 9:00 AM
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
---	--	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
--	---

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

WASTE IS NO LONGER BEING HAULED FROM SETTLING POND UP TO THE CONFINED STORAGE AREA ON TOP OF LANDFILL. SETTLING POND IS BEING GRADED AND ROLLED FLAT IN PREPARATION FOR LINER INSTALLATION. LEACHATE IS STILL BEING HAULED FROM STORAGE TANKS TO GREENIDGE WWTTP.

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 9/4/19
 Time: 9:00 AM
 Weather Conditions: MOSTLY SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
---	--	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
---	--

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

LINER INSTALLATION TAKING PLACE IN SETTLING POND
TODAY AND TOMORROW. SEDIMENT FROM SETTLING POND
CONTINUES TO DRY UP IN THE CONFINED STORAGE
AREA ON TOP OF LANDFILL. LEACHATE CONTINUES TO
BE HAULLED FROM STORAGE TANKS TO GREENIDGE
WWTP UNTIL PROJECT IS COMPLETE.

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 9/11/19
 Time: 0900
 Weather Conditions: CLOUDY / RAINY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
---	--	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
---	--

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

SETTLING POND PROJECT CONTINUES. LINER INSTALLED
AND PASSED INSPECTION. FILL / GRADING NOW.
POND TO BE RE-OPENED SOON

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 9/18/19
 Time: 9:00AM
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

	X	
	X	

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
X		

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

X		
---	--	--

6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

SETTLING POND PROJECT CONTINUES. FILL / GRADING
ALMOST COMPLETE. WAITING ON FINAL SURVEYS,
STRUCTURES WORK, AND SMALL COMPONENTS OF
PROJECT

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 9/25/19
 Time: 9:00AM
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

POND CONSTRUCTION IS COMPLETE. LEACHATE HAS BEEN PERMITTED TO FLOW BACK TO NEWLY CONSTRUCTED POND AS OF TUESDAY EVENING. SEDIMENT REMOVED FROM POND IS STILL DRYING UP IN CONFINED STORAGE AREA.

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: Harold Selt
 Date: 10/2/19
 Time: 0900 AM
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE: For any item marked CA , a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
OK = Condition Met	
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 10/9/19
 Time: 0900
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any Item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 10/16/19
 Time: 0900
 Weather Conditions: RAINY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 10/23/19
 Time: 0900
 Weather Conditions: SUNNY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

<p>Mark form as follows:</p> <p>OK = Condition Met</p> <p>NA = Not Applicable (at this time)</p> <p>CA = Corrective Action Required</p>	<p>NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.</p>
--	---

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 10/30/19
 Time: 1:30PM
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 11/6/19
 Time: 10:00AM
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:

- OK = Condition Met
- NA = Not Applicable (at this time)
- CA = Corrective Action Required

NOTE:

For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 11/13/19
 Time: 0900
 Weather Conditions: PARTLY CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 11/20/19
 Time: 0930
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows: **NOTE:** For any Item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

OK = Condition Met

NA = Not Applicable (at this time)

CA = Corrective Action Required

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: CHRISTOPHER GILL
 Date: 11/27/19
 Time: 11:00AM
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
OK = Condition Met	
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: C. GILL
 Date: 12/4/19
 Time: 0900
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

OK	NA	CA
X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

OK	NA	CA
X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

OK	NA	CA
X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

OK	NA	CA
	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

OK	NA	CA
	X	

6 Dust is effectively being controlled on site

Mark form as follows:
 OK = Condition Met
 NA = Not Applicable (at this time)
 CA = Corrective Action Required

NOTE: For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE

Weekly* Qualified Person Facility Inspection Form

(pursuant to 40CFR Part 257.84)

Inspector: C. GILL
 Date: 12/11/19
 Time: 6900
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: C. GILL
 Date: 12/18/19
 Time: 0930
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

LOCKWOOD ASH DISPOSAL SITE
Weekly* Qualified Person Facility Inspection Form
 (pursuant to 40CFR Part 257.84)

Inspector: C. GILL
 Date: 12/25/19
 Time: 0800
 Weather Conditions: CLOUDY

INSPECTION ITEMS

OK	NA	CA
X		
X		
X		

1 Landfill Cover Condition

- a No sloughing of cover soils / No Leachate Breakouts
- b No erosion rills/gullies
- c No surface water ponding on cover

X		
X		
X		

2 Stormwater Controls

- a Water flows without obstruction through ditches
- b Drainage ditches do not show signs of erosion
- c Stormwater Ponds in satisfactory condition

X		
X		

3 Leachate Collection System

- a Confirm presence of leachate in system
- b Confirm proper function of system

X		
X		

4 Environmental Monitoring

- a Confirm monitoring well seals and casings are in good condition
- b Confirm no ponding of surface water around wells

	X	
	X	

5 Waste Placement

- a Waste placed in designated operating area
- b Non-contact surface water is diverted away from active area

	X	
--	---	--

6 Dust is effectively being controlled on site

Mark form as follows:	NOTE:
OK = Condition Met	For any item marked CA, a description of the issue and its proposed or implemented solution must be noted on the Current Corrective Actions portion of this form.
NA = Not Applicable (at this time)	
CA = Corrective Action Required	

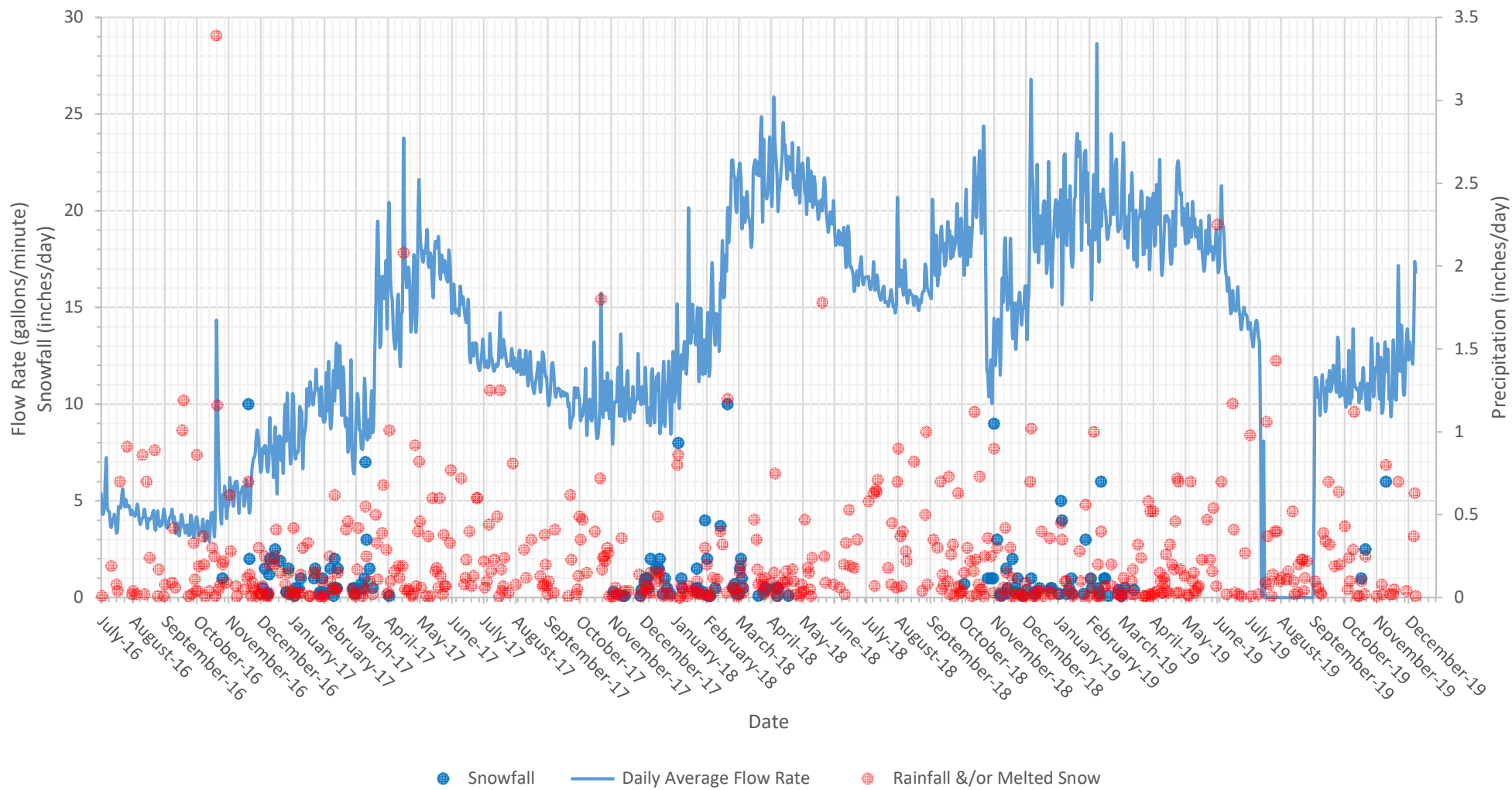
CURRENT CORRECTIVE ACTIONS (Note Date, Item Number and Action To Be Taken)

* Weekly inspections must occur no more than seven (7) days apart.

ATTACHMENT 3

**Leachate Flow Metering
Time-Series Plot**

Daily Average Leachate Flow Rate



ATTACHMENT 4

**Analytical Results & Water Quality
Laboratory Analysis, Usability, and
Validation Reports**

FIRST QUARTER



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

April 03, 2019

Dale Irwin
Lockwood Hills LLC
590 Plant Road, PO Box 187
Dresden, NY 14441

Work Order No: 190319048

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 30 samples on 3/19/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Tara Daniels".

Tara Daniels
Laboratory Director

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 190319048

Date: 03-Apr-19

The sampling was performed in accordance with the AES field sampling procedures and/or the client specified sampling procedures. Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 3/18/2019 4:00:00 PM
Lab Sample ID: 190319048-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.2			S.U.		3/18/2019 4:00:00 PM
Temperature (E170.1)	8			deg C		3/18/2019 4:00:00 PM
Turbidity (E180.1)	4	1.0		NTU		3/18/2019 4:00:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 2:36:00 PM
Arsenic	5.89	5.00		µg/L	1	4/1/2019 2:36:00 PM
Boron	93.7	50.0		µg/L	1	4/1/2019 2:36:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 2:36:00 PM
Calcium	112000	50.0		µg/L	1	4/1/2019 2:36:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 2:36:00 PM
Iron	51.0	50.0		µg/L	1	4/1/2019 2:36:00 PM
Magnesium	22900	50.0		µg/L	1	4/1/2019 2:36:00 PM
Manganese	ND	20.0		µg/L	1	4/1/2019 2:36:00 PM
Potassium	885	50.0		µg/L	1	4/1/2019 2:36:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 2:36:00 PM
Sodium	8540	500		µg/L	1	4/1/2019 2:36:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	374	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:08:48 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	2.62	2.00		mg/L	2	4/1/2019
Sulfate	87.6	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:10:44 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 3/18/2019 4:00:00 PM
Lab Sample ID: 190319048-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	722	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	365	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 3/18/2019 1:45:00 PM
Lab Sample ID: 190319048-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	6.9			S.U.		3/18/2019 1:45:00 PM
Temperature (E170.1)	9			deg C		3/18/2019 1:45:00 PM
Turbidity (E180.1)	9	1.0		NTU		3/18/2019 1:45:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 2:47:00 PM
Arsenic	ND	5.00		µg/L	1	4/1/2019 2:47:00 PM
Boron	236	50.0		µg/L	1	4/1/2019 2:47:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 2:47:00 PM
Calcium	153000	50.0		µg/L	1	4/1/2019 2:47:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 2:47:00 PM
Iron	1030	50.0		µg/L	1	4/1/2019 2:47:00 PM
Magnesium	68600	50.0		µg/L	1	4/1/2019 2:47:00 PM
Manganese	105	20.0		µg/L	1	4/1/2019 2:47:00 PM
Potassium	3220	50.0		µg/L	1	4/1/2019 2:47:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 2:47:00 PM
Sodium	34600	500		µg/L	1	4/1/2019 2:47:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	663	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:10:30 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	16.5	5.00		mg/L	5	4/2/2019
Sulfate	316	5.00		mg/L	5	4/2/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	400	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	3/27/2019 12:12:21 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 3/18/2019 1:45:00 PM
Lab Sample ID: 190319048-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	1230	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	680	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 3/18/2019 2:40:00 PM
Lab Sample ID: 190319048-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	6.8			S.U.		3/18/2019 2:40:00 PM
Temperature (E170.1)	7			deg C		3/18/2019 2:40:00 PM
Turbidity (E180.1)	17	1.0		NTU		3/18/2019 2:40:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 2:51:00 PM
Arsenic	5.79	5.00		µg/L	1	4/1/2019 2:51:00 PM
Boron	132	50.0		µg/L	1	4/1/2019 2:51:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 2:51:00 PM
Calcium	170000	50.0		µg/L	1	4/1/2019 2:51:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 2:51:00 PM
Iron	92.4	50.0		µg/L	1	4/1/2019 2:51:00 PM
Magnesium	65700	50.0		µg/L	1	4/1/2019 2:51:00 PM
Manganese	34.8	20.0		µg/L	1	4/1/2019 2:51:00 PM
Potassium	2490	50.0		µg/L	1	4/1/2019 2:51:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 2:51:00 PM
Sodium	26400	500		µg/L	1	4/1/2019 2:51:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	695	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:12:12 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	13.5	5.00		mg/L	5	4/2/2019
Sulfate	240	5.00		mg/L	5	4/2/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	430	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:13:58 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 3/18/2019 2:40:00 PM
Lab Sample ID: 190319048-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	1220	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	690	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 3/18/2019 11:59:00 AM
Lab Sample ID: 190319048-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	9.0			S.U.		3/18/2019 11:59:00 AM
Temperature (E170.1)	10			deg C		3/18/2019 11:59:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		3/18/2019 11:59:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	713	100		µg/L	1	4/1/2019 2:55:00 PM
Arsenic	ND	5.00		µg/L	1	4/1/2019 2:55:00 PM
Boron	960	50.0		µg/L	1	4/1/2019 2:55:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 2:55:00 PM
Calcium	26300	50.0		µg/L	1	4/1/2019 2:55:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 2:55:00 PM
Iron	3590	50.0		µg/L	1	4/1/2019 2:55:00 PM
Magnesium	5380	50.0		µg/L	1	4/1/2019 2:55:00 PM
Manganese	183	20.0		µg/L	1	4/1/2019 2:55:00 PM
Potassium	1500	50.0		µg/L	1	4/1/2019 2:55:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 2:55:00 PM
Sodium	161000	5000		µg/L	10	4/1/2019 3:04:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	88	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:13:54 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	4.59	2.00		mg/L	2	4/1/2019
Sulfate	91.1	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	330	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	3/27/2019 12:15:36 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 3/18/2019 11:59:00 AM
Lab Sample ID: 190319048-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	779	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	885	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 3/18/2019 11:35:00 AM
Lab Sample ID: 190319048-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	8.0			S.U.		3/18/2019 11:35:00 AM
Temperature (E170.1)	11			deg C		3/18/2019 11:35:00 AM
Turbidity (E180.1)	9	1.0		NTU		3/18/2019 11:35:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:19:00 PM
Arsenic	8.84	5.00		µg/L	1	4/1/2019 3:19:00 PM
Boron	244	50.0		µg/L	1	4/1/2019 3:19:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:19:00 PM
Calcium	29400	50.0		µg/L	1	4/1/2019 3:19:00 PM
Copper	7.33	5.00		µg/L	1	4/1/2019 3:19:00 PM
Iron	51.8	50.0		µg/L	1	4/1/2019 3:19:00 PM
Magnesium	18700	50.0		µg/L	1	4/1/2019 3:19:00 PM
Manganese	ND	20.0		µg/L	1	4/1/2019 3:19:00 PM
Potassium	2300	50.0		µg/L	1	4/1/2019 3:19:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:19:00 PM
Sodium	61700	5000		µg/L	10	4/1/2019 3:22:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	151	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:15:35 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	ND	2.00		mg/L	2	4/1/2019
Sulfate	110	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	170	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:20:29 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 3/18/2019 11:35:00 AM
Lab Sample ID: 190319048-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	546	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	205	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 3/18/2019 12:45:00 PM
Lab Sample ID: 190319048-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.0			S.U.		3/18/2019 12:45:00 PM
Temperature (E170.1)	11			deg C		3/18/2019 12:45:00 PM
Turbidity (E180.1)	14	1.0		NTU		3/18/2019 12:45:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:26:00 PM
Arsenic	5.01	5.00		µg/L	1	4/1/2019 3:26:00 PM
Boron	2820	50.0		µg/L	1	4/1/2019 3:26:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:26:00 PM
Calcium	77700	50.0		µg/L	1	4/1/2019 3:26:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 3:26:00 PM
Iron	ND	50.0		µg/L	1	4/1/2019 3:26:00 PM
Magnesium	25600	50.0		µg/L	1	4/1/2019 3:26:00 PM
Manganese	ND	20.0		µg/L	1	4/1/2019 3:26:00 PM
Potassium	3500	50.0		µg/L	1	4/1/2019 3:26:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:26:00 PM
Sodium	105000	5000		µg/L	10	4/1/2019 3:31:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	299	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:17:17 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	27.8	5.00		mg/L	5	4/2/2019
Sulfate	332	5.00		mg/L	5	4/2/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	150	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:22:06 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 3/18/2019 12:45:00 PM
Lab Sample ID: 190319048-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	1020	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	510	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 3/18/2019 4:00:00 PM
Lab Sample ID: 190319048-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.2			S.U.		3/18/2019 4:00:00 PM
Temperature (E170.1)	9			deg C		3/18/2019 4:00:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/18/2019 4:00:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:34:00 PM
Arsenic	ND	5.00		µg/L	1	4/1/2019 3:34:00 PM
Boron	1330	50.0		µg/L	1	4/1/2019 3:34:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:34:00 PM
Calcium	59500	50.0		µg/L	1	4/1/2019 3:34:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 3:34:00 PM
Iron	69.2	50.0		µg/L	1	4/1/2019 3:34:00 PM
Magnesium	20800	50.0		µg/L	1	4/1/2019 3:34:00 PM
Manganese	40.9	20.0		µg/L	1	4/1/2019 3:34:00 PM
Potassium	3520	50.0		µg/L	1	4/1/2019 3:34:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:34:00 PM
Sodium	94300	5000		µg/L	10	4/1/2019 3:38:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	234	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:18:59 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	11.0	5.00		mg/L	5	4/1/2019
Sulfate	240	5.00		mg/L	5	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	210	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	3/27/2019 12:23:44 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 3/18/2019 4:00:00 PM
Lab Sample ID: 190319048-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	884	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	480	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 3/19/2019 4:15:00 PM
Lab Sample ID: 190319048-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.7			S.U.		3/19/2019 4:15:00 PM
Temperature (E170.1)	10			deg C		3/19/2019 4:15:00 PM
Turbidity (E180.1)	8	1.0		NTU		3/19/2019 4:15:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:41:00 PM
Arsenic	16.0	5.00		µg/L	1	4/1/2019 3:41:00 PM
Boron	294	50.0		µg/L	1	4/1/2019 3:41:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:41:00 PM
Calcium	52300	50.0		µg/L	1	4/1/2019 3:41:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 3:41:00 PM
Iron	814	50.0		µg/L	1	4/1/2019 3:41:00 PM
Magnesium	16400	50.0		µg/L	1	4/1/2019 3:41:00 PM
Manganese	88.1	20.0		µg/L	1	4/1/2019 3:41:00 PM
Potassium	2020	50.0		µg/L	1	4/1/2019 3:41:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:41:00 PM
Sodium	71800	5000		µg/L	10	4/1/2019 3:45:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	198	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:20:41 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	9.70	5.00		mg/L	5	4/1/2019
Sulfate	217	5.00		mg/L	5	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	104	4		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.3	0.1		mg/L	1	3/27/2019 12:25:25 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 3/19/2019 4:15:00 PM
Lab Sample ID: 190319048-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	670	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	395	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 3/19/2019 8:20:00 AM
Lab Sample ID: 190319048-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.3			S.U.		3/19/2019 8:20:00 AM
Temperature (E170.1)	7			deg C		3/19/2019 8:20:00 AM
Turbidity (E180.1)	26	1.0		NTU		3/19/2019 8:20:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:48:00 PM
Arsenic	15.0	5.00		µg/L	1	4/1/2019 3:48:00 PM
Boron	290	50.0		µg/L	1	4/1/2019 3:48:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:48:00 PM
Calcium	76400	50.0		µg/L	1	4/1/2019 3:48:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 3:48:00 PM
Iron	1030	50.0		µg/L	1	4/1/2019 3:48:00 PM
Magnesium	68200	50.0		µg/L	1	4/1/2019 3:48:00 PM
Manganese	203	20.0		µg/L	1	4/1/2019 3:48:00 PM
Potassium	3000	50.0		µg/L	1	4/1/2019 3:48:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:48:00 PM
Sodium	38800	500		µg/L	1	4/1/2019 3:48:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	471	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:22:24 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	ND	5.00		mg/L	5	4/1/2019
Sulfate	240	5.00		mg/L	5	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.4	0.1		mg/L	1	3/27/2019 12:27:04 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 3/19/2019 8:20:00 AM
Lab Sample ID: 190319048-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	948	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	500	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 3/19/2019 7:00:00 AM
Lab Sample ID: 190319048-010
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	6.8			S.U.		3/19/2019 7:00:00 AM
Temperature (E170.1)	8			deg C		3/19/2019 7:00:00 AM
Turbidity (E180.1)	16	1.0		NTU		3/19/2019 7:00:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 3:52:00 PM
Arsenic	10.6	5.00		µg/L	1	4/1/2019 3:52:00 PM
Boron	85.6	50.0		µg/L	1	4/1/2019 3:52:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 3:52:00 PM
Calcium	56400	50.0		µg/L	1	4/1/2019 3:52:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 3:52:00 PM
Iron	137	50.0		µg/L	1	4/1/2019 3:52:00 PM
Magnesium	59900	50.0		µg/L	1	4/1/2019 3:52:00 PM
Manganese	ND	20.0		µg/L	1	4/1/2019 3:52:00 PM
Potassium	2980	50.0		µg/L	1	4/1/2019 3:52:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 3:52:00 PM
Sodium	20500	500		µg/L	1	4/1/2019 3:52:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	387	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:24:07 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	ND	2.00		mg/L	2	4/1/2019
Sulfate	77.1	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	340	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:28:42 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 3/19/2019 7:00:00 AM
Lab Sample ID: 190319048-010
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	731	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	390	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW-DUP 8909D
Collection Date: 3/18/2019 11:59:00 AM
Lab Sample ID: 190319048-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	9.0			S.U.		3/18/2019 11:59:00 AM
Temperature (E170.1)	10			deg C		3/18/2019 11:59:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		3/18/2019 11:59:00 AM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	738	100		µg/L	1	4/1/2019 4:09:00 PM
Arsenic	ND	5.00		µg/L	1	4/1/2019 4:09:00 PM
Boron	959	50.0		µg/L	1	4/1/2019 4:09:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 4:09:00 PM
Calcium	26300	50.0		µg/L	1	4/1/2019 4:09:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 4:09:00 PM
Iron	3800	50.0		µg/L	1	4/1/2019 4:09:00 PM
Magnesium	5420	50.0		µg/L	1	4/1/2019 4:09:00 PM
Manganese	186	20.0		µg/L	1	4/1/2019 4:09:00 PM
Potassium	1480	50.0		µg/L	1	4/1/2019 4:09:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 4:09:00 PM
Sodium	126000	5000		µg/L	10	4/1/2019 4:13:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	88	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:29:12 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	4.57	2.00		mg/L	2	4/1/2019
Sulfate	92.2	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	310	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.6	0.1		mg/L	1	3/27/2019 12:30:20 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW-DUP 8909D
Collection Date: 3/18/2019 11:59:00 AM
Lab Sample ID: 190319048-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	772	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	865	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 3/18/2019 3:45:00 PM
Lab Sample ID: 190319048-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	6.5			S.U.		3/18/2019 3:45:00 PM
Temperature (E170.1)	9			deg C		3/18/2019 3:45:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/18/2019 3:45:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 4:16:00 PM
Arsenic	6.11	5.00		µg/L	1	4/1/2019 4:16:00 PM
Boron	761	50.0		µg/L	1	4/1/2019 4:16:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 4:16:00 PM
Calcium	78400	50.0		µg/L	1	4/1/2019 4:16:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 4:16:00 PM
Iron	244	50.0		µg/L	1	4/1/2019 4:16:00 PM
Magnesium	22800	50.0		µg/L	1	4/1/2019 4:16:00 PM
Manganese	64.3	20.0		µg/L	1	4/1/2019 4:16:00 PM
Potassium	2440	50.0		µg/L	1	4/1/2019 4:16:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 4:16:00 PM
Sodium	62500	5000		µg/L	10	4/1/2019 4:20:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	290	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:30:54 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	25.4	2.00		mg/L	2	4/1/2019
Sulfate	57.0	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	360	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.9	0.1		mg/L	1	3/27/2019 12:31:58 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 3/18/2019 3:45:00 PM
Lab Sample ID: 190319048-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **KB**

Specific Conductance	819	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

TDS (Residue, Filterable)	345	5		mg/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 3/18/2019 10:55:00 AM
Lab Sample ID: 190319048-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.6	0.10		mg/L		3/18/2019 10:55:00 AM
Flow, GPD	105			gal/day		3/18/2019 10:55:00 AM
pH (E150.1)	7.8			S.U.		3/18/2019 10:55:00 AM
Temperature (E170.1)	9			deg C		3/18/2019 10:55:00 AM
Turbidity (E180.1)	6	1.0		NTU		3/18/2019 10:55:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	802	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	335000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	78.5	50.0		µg/L	1	3/29/2019
Magnesium	138000	500		µg/L	10	3/29/2019
Manganese	ND	20.0		µg/L	1	3/29/2019
Potassium	5100	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	71100	5000		µg/L	10	3/29/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1129	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:32:36 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	34.9	20.0		mg/L	20	4/1/2019
Sulfate	1040	20.0		mg/L	20	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	460	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 3/18/2019 10:55:00 AM
Lab Sample ID: 190319048-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:33:36 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2320	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1940	5		mg/L	1	3/22/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 3/18/2019 12:18:00 PM
Lab Sample ID: 190319048-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.6	0.10		mg/L		3/18/2019 12:18:00 PM
Flow, GPD	11,404			gal/day		3/18/2019 12:18:00 PM
pH (E150.1)	7.9			S.U.		3/18/2019 12:18:00 PM
Temperature (E170.1)	10			deg C		3/18/2019 12:18:00 PM
Turbidity (E180.1)	31	1.0		NTU		3/18/2019 12:18:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	52.0	5.00		µg/L	1	3/29/2019
Boron	3380	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	281000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	4550	50.0		µg/L	1	3/29/2019
Magnesium	66200	50.0		µg/L	1	3/29/2019
Manganese	734	20.0		µg/L	1	3/29/2019
Potassium	15500	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	38600	500		µg/L	1	3/29/2019

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 3/21/2019)

Mercury	ND	0.5		ng/L	1	3/22/2019
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	974	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:34:19 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	21.8	5.00		mg/L	5	4/1/2019
Sulfate	408	5.00		mg/L	5	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 3/18/2019 12:18:00 PM
Lab Sample ID: 190319048-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	670	10		mgCaCO3/L	1	3/28/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	3/27/2019 12:35:14 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1780	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1140	5		mg/L	1	3/22/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 3/18/2019 11:18:00 AM
Lab Sample ID: 190319048-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	7.1	0.10		mg/L		3/18/2019 11:18:00 AM
Flow, GPD	6,077			gal/day		3/18/2019 11:18:00 AM
pH (E150.1)	7.7			S.U.		3/18/2019 11:18:00 AM
Temperature (E170.1)	11			deg C		3/18/2019 11:18:00 AM
Turbidity (E180.1)	10	1.0		NTU		3/18/2019 11:18:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	9.95	5.00		µg/L	1	3/29/2019
Boron	32500	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	549000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	2570	50.0		µg/L	1	3/29/2019
Magnesium	65500	50.0		µg/L	1	3/29/2019
Manganese	824	20.0		µg/L	1	3/29/2019
Potassium	118000	500		µg/L	10	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	232000	5000		µg/L	10	3/29/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1640	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:36:01 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	440	200		mg/L	200	4/1/2019
Sulfate	1480	200		mg/L	200	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	340	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 3/18/2019 11:18:00 AM
Lab Sample ID: 190319048-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	1.8	0.1		mg/L	1	3/27/2019 12:43:22 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3950	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3160	5		mg/L	1	3/22/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 3/18/2019 9:44:00 AM
Lab Sample ID: 190319048-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.6	0.10		mg/L		3/18/2019 9:44:00 AM
Flow, GPD	418			gal/day		3/18/2019 9:44:00 AM
pH (E150.1)	7.3			S.U.		3/18/2019 9:44:00 AM
Temperature (E170.1)	11			deg C		3/18/2019 9:44:00 AM
Turbidity (E180.1)	7	1.0		NTU		3/18/2019 9:44:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	17100	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	595000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	698	50.0		µg/L	1	3/29/2019
Magnesium	77100	50.0		µg/L	1	3/29/2019
Manganese	387	20.0		µg/L	1	3/29/2019
Potassium	118000	500		µg/L	10	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	231000	5000		µg/L	10	3/29/2019

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	1803	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:37:43 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	746	200		mg/L	200	4/1/2019
Sulfate	1400	200		mg/L	200	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	260	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 3/18/2019 9:44:00 AM
Lab Sample ID: 190319048-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	3/27/2019 12:45:03 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4870	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3940	5		mg/L	1	3/25/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Inlet To Pond
Collection Date: 3/18/2019 12:40:00 PM
Lab Sample ID: 190319048-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.3	0.10		mg/L		3/18/2019 12:40:00 PM
Flow, GPD	15,206			gal/day		3/18/2019 12:40:00 PM
pH (E150.1)	8.0			S.U.		3/18/2019 12:40:00 PM
Temperature (E170.1)	10			deg C		3/18/2019 12:40:00 PM
Turbidity (E180.1)	16	1.0		NTU		3/18/2019 12:40:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	23.2	5.00		µg/L	1	3/29/2019
Boron	17300	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	426000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	2140	50.0		µg/L	1	3/29/2019
Magnesium	66500	50.0		µg/L	1	3/29/2019
Manganese	490	20.0		µg/L	1	3/29/2019
Potassium	73900	500		µg/L	10	3/29/2019
Selenium	6.89	5.00		µg/L	1	3/29/2019
Sodium	183000	5000		µg/L	10	3/29/2019

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 3/21/2019)

Mercury	ND	0.5		ng/L	1	3/22/2019
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1337	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:39:26 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	238	20.0		mg/L	20	4/1/2019
Sulfate	1050	20.0		mg/L	20	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Inlet To Pond
Collection Date: 3/18/2019 12:40:00 PM
Lab Sample ID: 190319048-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	450	10		mgCaCO3/L	1	3/28/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.3	0.1		mg/L	1	3/27/2019 12:46:42 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3190	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2500	5		mg/L	1	3/25/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 3/18/2019 2:05:00 PM
Lab Sample ID: 190319048-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	8.9	0.10		mg/L		3/18/2019 2:05:00 PM
pH (E150.1)	8.6			S.U.		3/18/2019 2:05:00 PM
Temperature (E170.1)	3			deg C		3/18/2019 2:05:00 PM
Turbidity (E180.1)	4	1.0		NTU		3/18/2019 2:05:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	59.7	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	62600	50.0		µg/L	1	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	85.8	50.0		µg/L	1	3/29/2019
Magnesium	17800	50.0		µg/L	1	3/29/2019
Manganese	ND	20.0		µg/L	1	3/29/2019
Potassium	3980	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	31500	500		µg/L	1	3/29/2019

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	230	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:41:08 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	58.7	2.00		mg/L	2	4/1/2019
Sulfate	35.0	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	210	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:48:19 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 3/18/2019 2:05:00 PM
Lab Sample ID: 190319048-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **KB**

Specific Conductance	625	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

TDS (Residue, Filterable)	350	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 3/18/2019 1:33:00 PM
Lab Sample ID: 190319048-019
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	9.3	0.10		mg/L		3/18/2019 1:33:00 PM
pH (E150.1)	8.6			S.U.		3/18/2019 1:33:00 PM
Temperature (E170.1)	3			deg C		3/18/2019 1:33:00 PM
Turbidity (E180.1)	9	1.0		NTU		3/18/2019 1:33:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	56.7	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	64700	50.0		µg/L	1	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	93.7	50.0		µg/L	1	3/29/2019
Magnesium	18400	50.0		µg/L	1	3/29/2019
Manganese	ND	20.0		µg/L	1	3/29/2019
Potassium	3970	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	30500	500		µg/L	1	3/29/2019

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	237	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:42:50 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	57.5	2.00		mg/L	2	4/1/2019
Sulfate	35.3	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	230	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:49:56 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 3/18/2019 1:33:00 PM
Lab Sample ID: 190319048-019
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	634	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	425	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 3/18/2019 2:05:00 PM
Lab Sample ID: 190319048-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	8.9	0.10		mg/L		3/18/2019 2:05:00 PM
pH (E150.1)	8.6			S.U.		3/18/2019 2:05:00 PM
Temperature (E170.1)	3			deg C		3/18/2019 2:05:00 PM
Turbidity (E180.1)	4	1.0		NTU		3/18/2019 2:05:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	54.3	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	62600	50.0		µg/L	1	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	78.7	50.0		µg/L	1	3/29/2019
Magnesium	18100	50.0		µg/L	1	3/29/2019
Manganese	ND	20.0		µg/L	1	3/29/2019
Potassium	4120	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	30500	500		µg/L	1	3/29/2019

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	231	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:51:20 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **SMD**

Chloride	58.9	2.00		mg/L	2	4/1/2019
Sulfate	34.6	2.00		mg/L	2	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	200	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:51:33 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 3/18/2019 2:05:00 PM
Lab Sample ID: 190319048-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	615	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	395	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 3/18/2019 12:52:00 PM
Lab Sample ID: 190319048-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.5	0.10		mg/L		3/18/2019 12:52:00 PM
pH (E150.1)	8.0			S.U.		3/18/2019 12:52:00 PM
Temperature (E170.1)	4			deg C		3/18/2019 12:52:00 PM
Turbidity (E180.1)	5	1.0		NTU		3/18/2019 12:52:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	7720	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	227000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	428	50.0		µg/L	1	3/29/2019
Magnesium	32000	50.0		µg/L	1	3/29/2019
Manganese	116	20.0		µg/L	1	3/29/2019
Potassium	31100	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	81500	5000		µg/L	10	3/29/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1067	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:53:03 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **SMD**

Chloride	92.9	20.0		mg/L	20	4/1/2019
Sulfate	440	20.0		mg/L	20	4/1/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	220	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:53:10 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 3/18/2019 12:52:00 PM
Lab Sample ID: 190319048-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	1430	1		µmhos/cm	1	3/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	1020	5		mg/L	1	3/25/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 3/18/2019 12:15:00 PM
Lab Sample ID: 190319048-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.6	0.10		mg/L		3/18/2019 12:15:00 PM
pH (E150.1)	7.1			S.U.		3/18/2019 12:15:00 PM
Temperature (E170.1)	5			deg C		3/18/2019 12:15:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/18/2019 12:15:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	4/1/2019 4:23:00 PM
Arsenic	ND	5.00		µg/L	1	4/1/2019 4:23:00 PM
Boron	ND	50.0		µg/L	1	4/1/2019 4:23:00 PM
Cadmium	ND	5.00		µg/L	1	4/1/2019 4:23:00 PM
Calcium	ND	50.0		µg/L	1	4/1/2019 4:23:00 PM
Copper	ND	5.00		µg/L	1	4/1/2019 4:23:00 PM
Iron	ND	50.0		µg/L	1	4/1/2019 4:23:00 PM
Magnesium	ND	50.0		µg/L	1	4/1/2019 4:23:00 PM
Manganese	ND	20.0		µg/L	1	4/1/2019 4:23:00 PM
Potassium	ND	50.0		µg/L	1	4/1/2019 4:23:00 PM
Selenium	ND	5.00		µg/L	1	4/1/2019 4:23:00 PM
Sodium	ND	500		µg/L	1	4/1/2019 4:23:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	4/1/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:54:45 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	4/2/2019
Sulfate	ND	2.00		mg/L	2	4/2/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	1	1		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:54:47 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 3/18/2019 12:15:00 PM
Lab Sample ID: 190319048-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **KB**

Specific Conductance	2430	1		µmhos/cm	1	3/21/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LL Hg Field Blank
Collection Date: 3/18/2019 3:00:00 PM
Lab Sample ID: 190319048-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 3/21/2019)

Mercury	ND	0.5		ng/L	1	3/22/2019
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 3/18/2019 9:12:00 AM
Lab Sample ID: 190319048-024
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.6	0.10		mg/L		3/18/2019 9:12:00 AM
Flow, GPD	988			gal/day		3/18/2019 9:12:00 AM
pH (E150.1)	6.7			S.U.		3/18/2019 9:12:00 AM
Temperature (E170.1)	4			deg C		3/18/2019 9:12:00 AM
Turbidity (E180.1)	2	1.0		NTU		3/18/2019 9:12:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	141	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	182000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	ND	50.0		µg/L	1	3/29/2019
Magnesium	27500	50.0		µg/L	1	3/29/2019
Manganese	20.2	20.0		µg/L	1	3/29/2019
Potassium	2980	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	8780	500		µg/L	1	3/29/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	568	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:56:28 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	5.00		mg/L	5	4/2/2019
Sulfate	165	5.00		mg/L	5	4/2/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	290	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 3/18/2019 9:12:00 AM
Lab Sample ID: 190319048-024
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 12:59:39 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	795	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	605	5		mg/L	1	3/25/2019

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	GW Dep Drain 2
Work Order:	190319048	Collection Date:	3/18/2019 9:01:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	190319048-025
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: FLD

Observation

Dry

NA

3/18/2019 9:01:00 AM

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 3/18/2019 9:04:00 AM
Lab Sample ID: 190319048-026
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Observation

Dry

NA

3/18/2019 9:04:00 AM

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 5
Collection Date: 3/18/2019 9:10:00 AM
Lab Sample ID: 190319048-027
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	Dry			NA		3/18/2019 9:10:00 AM

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8910-SH
Work Order:	190319048	Collection Date:	3/18/2019 12:08:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	190319048-028
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Poor Recovery			NA		3/18/2019 12:08:00 PM
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Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC

Client Sample ID: 8405

Work Order: 190319048

Collection Date: 3/18/2019 3:30:00 PM

Reference: Lockwood Ash Landfill / Quarterly

Lab Sample ID: 190319048-029

PO#:

Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Observation

Dry

NA

3/18/2019 3:30:00 PM

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 3/18/2019 12:00:00 PM
Lab Sample ID: 190319048-030
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.4	0.10		mg/L		3/18/2019 12:00:00 PM
Flow, GPD	513			gal/day		3/18/2019 12:00:00 PM
pH (E150.1)	7.4			S.U.		3/18/2019 12:00:00 PM
Temperature (E170.1)	8			deg C		3/18/2019 12:00:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/18/2019 12:00:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 3/20/2019)

Aluminum	ND	100		µg/L	1	3/29/2019
Arsenic	ND	5.00		µg/L	1	3/29/2019
Boron	2610	50.0		µg/L	1	3/29/2019
Cadmium	ND	5.00		µg/L	1	3/29/2019
Calcium	332000	500		µg/L	10	3/29/2019
Copper	ND	5.00		µg/L	1	3/29/2019
Iron	ND	50.0		µg/L	1	3/29/2019
Magnesium	90500	50.0		µg/L	1	3/29/2019
Manganese	ND	20.0		µg/L	1	3/29/2019
Potassium	6910	50.0		µg/L	1	3/29/2019
Selenium	ND	5.00		µg/L	1	3/29/2019
Sodium	36500	500		µg/L	1	3/29/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1740	5		mg/L CaCO3	1	3/28/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 3/20/2019)

Mercury	ND	0.0002		mg/L	1	3/20/2019 3:58:11 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	68.8	2.00		mg/L	2	4/3/2019
Sulfate	716	20.0		mg/L	20	4/3/2019

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	360	10		mgCaCO3/L	1	3/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 03-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190319048
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 3/18/2019 12:00:00 PM
Lab Sample ID: 190319048-030
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	3/27/2019 1:01:16 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1890	1		µmhos/cm	1	3/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1500	5		mg/L	1	3/25/2019



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 190319048

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly				Samplers Name: <i>Ryan Bausky / Kevin Ambrey</i>			
Client Phone No:		PO #:				Samplers Signature:			
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
	1842 <i>RS</i>			A P	GW		G	4	Lockwood Ash LF Quarterly
<i>001</i>	8404	<i>3/18/19</i>	<i>1600</i>	A P	GW		G	4	Field pH, Temp, Turbidity
<i>002</i>	8908-D	<i>3/18/19</i>	<i>1345</i>	A P	GW		G	4	
<i>003</i>	8908-SH	<i>3/18/19</i>	<i>1440</i>	A P	GW		G	4	
<i>004</i>	8909-D	<i>3/18/19</i>	<i>1159</i>	A P	GW		G	4	
<i>005</i>	8909-SH	<i>3/18/19</i>	<i>1135</i>	A P	GW		G	4	
<i>006</i>	8910-D	<i>3/18/19</i>	<i>1245</i>	A P	GW		G	4	
<i>007</i>	8911-D	<i>3/18/19</i>	<i>1600</i>	A P	GW		G	4	
<i>008</i>	8911-SH	<i>3/19/19</i>	<i>1615</i>	A P	GW		G	4	
<i>009</i>	8942-D	<i>3/19/19</i>	<i>0820</i>	A P	GW		G	4	
<i>010</i>	9306-SH	<i>3/19/19</i>	<i>0700</i>	A P	GW		G	4	
<i>011</i>	GW Dup 8909-D	<i>3/18/19</i>	<i>1159</i>	A P	GW		G	4	
Shipment Arrived Via: FedEx UPS Client <u>AES</u> Other: _____				Special Instructions/Remarks: Page 1 of 3					
Turnaround Time Requested: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)				Date	Time		
Relinquished by: (Signature)		Received by: (Signature)				Date	Time		
Relinquished by: (Signature)		Received for Laboratory by:				Date	Time		
Sample Temperature Ambient <input type="checkbox"/> Chilled <input checked="" type="checkbox"/> Chilling Process begun		Properly Preserved <u>Y</u> N				Received Within Holding Times <u>Y</u> N			
Notes: <u>4°C</u>		Notes: _____				Notes: _____			



190319048



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

190319048

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: Ryan Baisley / Kevin Ambrey				
Client Phone No:		PO #:			Samplers Signature:				
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
012	8401	3/18/19	1545	A P	GW		G	4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
013	Leak Detection Syst.	3/18/19	1055	A P	GW		G	4	+ Field Flow Reading, DO
014	Under Drain 1	3/18/19	1218	A P	GW		G	5	+ Field Flow Reading, DO
015	Under Drain 2	3/18/19	1118	A P	GW		G	4	+ Field Flow Reading, DO
016	Under Drain 3	3/18/19	0944	A P	GW		G	4	+ Field Flow Reading, DO
017	Inlet to Pond	3/18/19	1240	A P	GW		G	5	+ Field Flow Reading, DO
018	Keuka Upstream	3/18/19	1405	A P	GW		G	4	Lockwood Quarterly +DO
019	Keuka Downstream	3/18/19	1333	A P	SF		G	4	Lockwood Quarterly +DO
020	Surface Water Dup	3/18/19	1405	A P	SF		G	4	Lockwood Quarterly +DO
021	Pond Grab	3/18/19	1252	A P	SF		G	4	Lockwood Quarterly +DO
022	Field Blank	3/18/19	1215	A P	GW		G	4	Lockwood Quarterly +DO
023	LLHg Field Blank	3/18/19	1500	A P	GW		G	1	EPA 1631
Shipment Arrived Via: FedEx UPS Client <u>AES</u> Other: _____				Special Instructions/Remarks: Page 2 of 3					
Turnaround Time Requested: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
Sample Temperature Ambient Chilled Chilling Process begun Notes: 4°C		Properly Preserved Y N			Received Within Holding Times Y N				
Notes: _____		Notes: _____			Notes: _____				



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 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 190319048

EXPERIENCE IS THE SOLUTION

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Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly				Samplers Name: <i>Ryan Bousley/Rek</i>			
Client Phone No:		PO #:				Samplers Signature: <i>[Signature]</i>			
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
<i>024</i>	GW Dep Drain 3	<i>3/18/19</i>	<i>0912</i>	(A) P	GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity + Field Flow Reading, DO	
<i>025</i>	GW Dep Drain 2	<i>3/18/19</i>	<i>0901</i>	(A) P	GW		0	Observation Only	
<i>026</i>	GW Dep Drain 4	<i>3/18/19</i>	<i>0904</i>	(A) P	GW		0	Observation Only	
<i>027</i>	Under Drain 5	<i>3/18/19</i>	<i>0910</i>	(A) P	GW		0	Observation Only	
<i>028</i>	8910-SH	<i>3/18/19</i>	<i>1208</i>	A (P)	GW		0	Observation Only	
<i>029</i>	8405	<i>3/18/19</i>	<i>1530</i>	A (P)	GW		0	Observation Only	
<i>030</i>	GW Dep Drain 1	<i>3/18/19</i>	<i>1200</i>	A (P)	GW		0	Observation Only	
				P				<i>4 Lockwood Ash LF Quarterly Field pH, Temp, Turb + Field Flow Reading, DO</i>	
				A					
				P					
				A					
				P					
				A					
				P					
Shipment Arrived Via: FedEx UPS Client <u>(AES)</u> Other: _____				Special Instructions/Remarks: Page 3 of 3					
Turnaround Time Requested: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
<i>[Signature]</i>		<i>[Signature]</i>			<i>3/19/19</i>	<i>3:36pm</i>			
Sample Temperature Ambient Chilled Chilling Process begun <i>4°C</i>		Properly Preserved <u>(Y)</u> N			Received Within Holding Times <u>(Y)</u> N				
Notes: _____		Notes: _____			Notes: _____				



Experience is the solution

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

April 19, 2019

Dale Irwin
Lockwood Hills LLC
590 Plant Road, PO Box 187
Dresden, NY 14441

Work Order No: 190329054

TEL: (315) 536-2359

RE: EPA-CCR
Lockwood Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 1 sample on 3/29/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Tara Daniels".

Tara Daniels
Laboratory Director

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: EPA-CCR
Lab Order: 190329054

Date: 19-Apr-19

The sampling was performed in accordance with the AES field sampling procedures and/or the client specified sampling procedures. Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: 19-Apr-19

CLIENT: Lockwood Hills LLC
Work Order: 190329054
Reference: EPA-CCR / Lockwood Quarterly
PO#:

Client Sample ID: MW-1842
Collection Date: 3/28/2019
Lab Sample ID: 190329054-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	8.8			S.U.		3/28/2019
Temperature (E170.1)	11			deg C		3/28/2019
Turbidity (E180.1)	43	1.0		NTU		3/28/2019

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

(Prep: - 4/1/2019)

Total Hardness (As CaCO3)	72	5		mg/L CaCO3	1	4/9/2019
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ICP METALS - EPA 200.7 REV 4.4

Analyst: **SM**

(Prep: - 4/1/2019)

Aluminum	0.241	0.100		mg/L	1	4/9/2019 3:57:58 PM
Arsenic	ND	0.005		mg/L	1	4/9/2019 3:57:58 PM
Boron	ND	0.050		mg/L	1	4/9/2019 3:57:58 PM
Cadmium	ND	0.005		mg/L	1	4/9/2019 3:57:58 PM
Calcium	16.7	0.050		mg/L	1	4/9/2019 3:57:58 PM
Chromium	ND	0.005		mg/L	1	4/9/2019 3:57:58 PM
Copper	ND	0.005		mg/L	1	4/9/2019 3:57:58 PM
Iron	0.314	0.050		mg/L	1	4/9/2019 3:57:58 PM
Magnesium	7.22	0.050		mg/L	1	4/9/2019 3:57:58 PM
Manganese	0.021	0.020		mg/L	1	4/9/2019 3:57:58 PM
Potassium	5.75	0.050		mg/L	1	4/9/2019 3:57:58 PM
Selenium	ND	0.005		mg/L	1	4/9/2019 3:57:58 PM
Sodium	8.38	0.050		mg/L	1	4/9/2019 3:57:58 PM

MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 4/1/2019)

Mercury	ND	0.0002		mg/L	1	4/1/2019 12:09:22 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	4/10/2019 5:55:17 AM
Sulfate	36.3	2.00		mg/L	2	4/10/2019 5:55:17 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **JW**

Alkalinity, Total (As CaCO3)	100	4		mgCaCO3/L	1	4/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	4/5/2019 2:05:25 PM
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Adirondack Environmental Services, Inc

Date: 19-Apr-19

CLIENT: Lockwood Hills LLC**Client Sample ID:** MW-1842**Work Order:** 190329054**Collection Date:** 3/28/2019**Reference:** EPA-CCR / Lockwood Quarterly**Lab Sample ID:** 190329054-001**PO#:****Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	156	1		µmhos/cm	1	4/16/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	60	5		mg/L	1	4/2/2019
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Lockwood Ash Disposal Site First Quarter 2018

Collection Date	Sample ID	Depth	Elevation	Units
3/18/2019	8908-D	6.59	606.38	feet
3/18/2019	8909-D	45.10	516.80	feet
3/18/2019	8910-D	20.08	538.26	feet
3/18/2019	8911-D	27.18	529.73	feet
3/18/2019	8942-D	14.68	544.27	feet
3/18/2019	8908-SH	7.98	604.79	feet
3/18/2019	8909-SH	10.82	550.81	feet
3/18/2019	8910-SH	5.60	552.95	feet
3/18/2019	8911-SH	25.84	531.08	feet
3/18/2019	9306-SH	4.48	561.74	feet
3/18/2019	7741	22.69	565.36	feet
3/28/2019	1842	20.27	539.93	feet
3/18/2019	8406	14.15	555.40	feet
3/18/2019	8407	13.68	551.99	feet
3/18/2019	8401	5.36	654.93	feet
3/18/2019	8402	7.04	657.05	feet
3/18/2019	8403	8.00	656.07	feet
3/18/2019	8404	6.24	596.49	feet
3/18/2019	8405	DRY	DRY	feet

SECOND QUARTER



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 11, 2019

Dale Irwin
Lockwood Hills LLC
590 Plant Road, PO Box 187
Dresden, NY 14441

Work Order No: 190621004

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 6/21/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Tara Daniels".

Tara Daniels
Laboratory Director

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 190621004

Date: 11-Jul-19

The sampling was performed in accordance with the AES field sampling procedures and/or the client specified sampling procedures. Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 6/20/2019 7:15:00 AM
Lab Sample ID: 190621004-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	8.4			S.U.		6/20/2019 7:15:00 AM
Temperature (E170.1)	12			deg C		6/20/2019 7:15:00 AM
Turbidity (E180.1)	41	1.0		NTU		6/20/2019 7:15:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	132	100		µg/L	1	7/2/2019 2:50:46 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 2:50:46 PM
Boron	161	50.0		µg/L	1	7/2/2019 2:50:46 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 2:50:46 PM
Calcium	32800	50.0		µg/L	1	7/2/2019 2:50:46 PM
Copper	5.08	5.00		µg/L	1	7/2/2019 2:50:46 PM
Iron	280	50.0		µg/L	1	7/2/2019 2:50:46 PM
Magnesium	31400	50.0		µg/L	1	7/2/2019 2:50:46 PM
Manganese	35.9	20.0		µg/L	1	7/2/2019 2:50:46 PM
Potassium	31500	50.0		µg/L	1	7/2/2019 2:50:46 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 2:50:46 PM
Sodium	47800	500		µg/L	1	7/2/2019 2:50:46 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	211	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:10:15 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	2.21	2.00		mg/L	2	7/10/2019 7:31:06 AM
Sulfate	256	10.0		mg/L	10	7/10/2019 7:50:19 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	150	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	6/25/2019 10:02:33 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 6/20/2019 7:15:00 AM
Lab Sample ID: 190621004-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	758	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	435	5		mg/L	1	6/27/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 6/19/2019 5:00:00 PM
Lab Sample ID: 190621004-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	8.1			S.U.		6/19/2019 5:00:00 PM
Temperature (E170.1)	12			deg C		6/19/2019 5:00:00 PM
Turbidity (E180.1)	18	1.0		NTU		6/19/2019 5:00:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 3:01:01 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 3:01:01 PM
Boron	124	50.0		µg/L	1	7/2/2019 3:01:01 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 3:01:01 PM
Calcium	109000	500		µg/L	10	7/2/2019 3:06:04 PM
Copper	7.92	5.00		µg/L	1	7/2/2019 3:01:01 PM
Iron	65.5	50.0		µg/L	1	7/2/2019 3:01:01 PM
Magnesium	23100	50.0		µg/L	1	7/2/2019 3:01:01 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 3:01:01 PM
Potassium	1370	50.0		µg/L	1	7/2/2019 3:01:01 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 3:01:01 PM
Sodium	8730	500		µg/L	1	7/2/2019 3:01:01 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	368	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:11:54 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	7/10/2019 8:09:22 AM
Sulfate	99.5	2.00		mg/L	2	7/10/2019 8:09:22 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	330	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:07:30 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 6/19/2019 5:00:00 PM
Lab Sample ID: 190621004-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	732	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	395	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 6/19/2019 2:30:00 PM
Lab Sample ID: 190621004-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.2			S.U.		6/19/2019 2:30:00 PM
Temperature (E170.1)	18			deg C		6/19/2019 2:30:00 PM
Turbidity (E180.1)	7	1.0		NTU		6/19/2019 2:30:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 3:11:04 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 3:11:04 PM
Boron	210	50.0		µg/L	1	7/2/2019 3:11:04 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 3:11:04 PM
Calcium	165000	500		µg/L	10	7/2/2019 3:16:14 PM
Copper	ND	5.00		µg/L	1	7/2/2019 3:11:04 PM
Iron	1100	50.0		µg/L	1	7/2/2019 3:11:04 PM
Magnesium	62100	50.0		µg/L	1	7/2/2019 3:11:04 PM
Manganese	101	20.0		µg/L	1	7/2/2019 3:11:04 PM
Potassium	3190	50.0		µg/L	1	7/2/2019 3:11:04 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 3:11:04 PM
Sodium	25300	500		µg/L	1	7/2/2019 3:11:04 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	668	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:13:35 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	16.3	2.00		mg/L	2	7/9/2019 6:32:57 PM
Sulfate	298	10.0		mg/L	10	7/9/2019 6:51:58 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	410	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.4	0.1		mg/L	1	6/25/2019 10:09:08 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 6/19/2019 2:30:00 PM
Lab Sample ID: 190621004-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1200	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	700	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 6/19/2019 2:45:00 PM
Lab Sample ID: 190621004-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.8			S.U.		6/19/2019 2:45:00 PM
Temperature (E170.1)	12			deg C		6/19/2019 2:45:00 PM
Turbidity (E180.1)	4	1.0		NTU		6/19/2019 2:45:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 3:21:20 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 3:21:20 PM
Boron	115	50.0		µg/L	1	7/2/2019 3:21:20 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 3:21:20 PM
Calcium	191000	500		µg/L	10	7/2/2019 3:26:34 PM
Copper	19.4	5.00		µg/L	1	7/2/2019 3:21:20 PM
Iron	98.9	50.0		µg/L	1	7/2/2019 3:21:20 PM
Magnesium	59100	50.0		µg/L	1	7/2/2019 3:21:20 PM
Manganese	22.6	20.0		µg/L	1	7/2/2019 3:21:20 PM
Potassium	2810	50.0		µg/L	1	7/2/2019 3:21:20 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 3:21:20 PM
Sodium	18800	500		µg/L	1	7/2/2019 3:21:20 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	721	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:15:15 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	9.27	2.00		mg/L	2	7/9/2019 7:11:00 PM
Sulfate	188	10.0		mg/L	10	7/9/2019 7:30:02 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	430	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:10:46 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 6/19/2019 2:45:00 PM
Lab Sample ID: 190621004-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	1030	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	650	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 6/19/2019 4:20:00 PM
Lab Sample ID: 190621004-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	9.0			S.U.		6/19/2019 4:20:00 PM
Temperature (E170.1)	13			deg C		6/19/2019 4:20:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		6/19/2019 4:20:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	703	100		µg/L	1	7/2/2019 3:47:25 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 3:47:25 PM
Boron	896	50.0		µg/L	1	7/2/2019 3:47:25 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 3:47:25 PM
Calcium	10500	50.0		µg/L	1	7/2/2019 3:47:25 PM
Copper	ND	5.00		µg/L	1	7/2/2019 3:47:25 PM
Iron	2320	50.0		µg/L	1	7/2/2019 3:47:25 PM
Magnesium	2230	50.0		µg/L	1	7/2/2019 3:47:25 PM
Manganese	78.2	20.0		µg/L	1	7/2/2019 3:47:25 PM
Potassium	1340	50.0		µg/L	1	7/2/2019 3:47:25 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 3:47:25 PM
Sodium	165000	5000		µg/L	10	7/2/2019 3:52:38 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	35	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:20:20 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	4.18	2.00		mg/L	2	7/9/2019 7:49:04 PM
Sulfate	84.4	2.00		mg/L	2	7/9/2019 7:49:04 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	310	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.4	0.1		mg/L	1	6/25/2019 10:12:23 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 6/19/2019 4:20:00 PM
Lab Sample ID: 190621004-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	751	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	715	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 6/19/2019 11:35:00 AM
Lab Sample ID: 190621004-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.7			S.U.		6/19/2019 11:35:00 AM
Temperature (E170.1)	21			deg C		6/19/2019 11:35:00 AM
Turbidity (E180.1)	5	1.0		NTU		6/19/2019 11:35:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 3:57:34 PM
Arsenic	6.38	5.00		µg/L	1	7/2/2019 3:57:34 PM
Boron	224	50.0		µg/L	1	7/2/2019 3:57:34 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 3:57:34 PM
Calcium	26100	50.0		µg/L	1	7/2/2019 3:57:34 PM
Copper	ND	5.00		µg/L	1	7/2/2019 3:57:34 PM
Iron	112	50.0		µg/L	1	7/2/2019 3:57:34 PM
Magnesium	18200	50.0		µg/L	1	7/2/2019 3:57:34 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 3:57:34 PM
Potassium	2440	50.0		µg/L	1	7/2/2019 3:57:34 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 3:57:34 PM
Sodium	47000	500		µg/L	1	7/2/2019 3:57:34 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	140	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:22:00 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	7/9/2019 9:25:02 PM
Sulfate	105	2.00		mg/L	2	7/9/2019 9:25:02 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	170	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:14:01 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 6/19/2019 11:35:00 AM
Lab Sample ID: 190621004-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	532	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	285	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 6/19/2019 12:40:00 PM
Lab Sample ID: 190621004-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	8.0			S.U.		6/19/2019 12:40:00 PM
Temperature (E170.1)	15			deg C		6/19/2019 12:40:00 PM
Turbidity (E180.1)	7	1.0		NTU		6/19/2019 12:40:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 4:07:46 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 4:07:46 PM
Boron	2620	50.0		µg/L	1	7/2/2019 4:07:46 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 4:07:46 PM
Calcium	67000	50.0		µg/L	1	7/2/2019 4:07:46 PM
Copper	ND	5.00		µg/L	1	7/2/2019 4:07:46 PM
Iron	ND	50.0		µg/L	1	7/2/2019 4:07:46 PM
Magnesium	22200	50.0		µg/L	1	7/2/2019 4:07:46 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 4:07:46 PM
Potassium	3550	50.0		µg/L	1	7/2/2019 4:07:46 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 4:07:46 PM
Sodium	82400	5000		µg/L	10	7/2/2019 4:12:58 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	259	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:23:40 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	24.8	2.00		mg/L	2	7/9/2019 10:03:08 PM
Sulfate	291	10.0		mg/L	10	7/9/2019 10:22:10 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	170	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:15:39 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 6/19/2019 12:40:00 PM
Lab Sample ID: 190621004-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	939	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	515	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 6/19/2019 1:50:00 PM
Lab Sample ID: 190621004-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.6			S.U.		6/19/2019 1:50:00 PM
Temperature (E170.1)	14			deg C		6/19/2019 1:50:00 PM
Turbidity (E180.1)	4	1.0		NTU		6/19/2019 1:50:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 4:18:03 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 4:18:03 PM
Boron	1130	50.0		µg/L	1	7/2/2019 4:18:03 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 4:18:03 PM
Calcium	52000	50.0		µg/L	1	7/2/2019 4:18:03 PM
Copper	ND	5.00		µg/L	1	7/2/2019 4:18:03 PM
Iron	84.2	50.0		µg/L	1	7/2/2019 4:18:03 PM
Magnesium	17800	50.0		µg/L	1	7/2/2019 4:18:03 PM
Manganese	41.4	20.0		µg/L	1	7/2/2019 4:18:03 PM
Potassium	3890	50.0		µg/L	1	7/2/2019 4:18:03 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 4:18:03 PM
Sodium	86900	5000		µg/L	10	7/2/2019 4:23:12 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	203	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:25:22 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	9.44	2.00		mg/L	2	7/9/2019 10:41:11 PM
Sulfate	226	10.0		mg/L	10	7/9/2019 11:00:13 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	210	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:20:34 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 6/19/2019 1:50:00 PM
Lab Sample ID: 190621004-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	857	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	510	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 6/20/2019 7:40:00 AM
Lab Sample ID: 190621004-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.5			S.U.		6/20/2019 7:40:00 AM
Temperature (E170.1)	12			deg C		6/20/2019 7:40:00 AM
Turbidity (E180.1)	5	1.0		NTU		6/20/2019 7:40:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 4:28:18 PM
Arsenic	11.2	5.00		µg/L	1	7/2/2019 4:28:18 PM
Boron	282	50.0		µg/L	1	7/2/2019 4:28:18 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 4:28:18 PM
Calcium	43900	50.0		µg/L	1	7/2/2019 4:28:18 PM
Copper	ND	5.00		µg/L	1	7/2/2019 4:28:18 PM
Iron	360	50.0		µg/L	1	7/2/2019 4:28:18 PM
Magnesium	14300	50.0		µg/L	1	7/2/2019 4:28:18 PM
Manganese	57.3	20.0		µg/L	1	7/2/2019 4:28:18 PM
Potassium	2090	50.0		µg/L	1	7/2/2019 4:28:18 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 4:28:18 PM
Sodium	67600	5000		µg/L	10	7/2/2019 4:33:30 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	169	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:27:03 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	10.0	2.00		mg/L	2	7/9/2019 11:19:15 PM
Sulfate	226	10.0		mg/L	10	7/9/2019 11:38:17 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	100	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	6/25/2019 10:22:11 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 6/20/2019 7:40:00 AM
Lab Sample ID: 190621004-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	691	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	480	5		mg/L	1	6/27/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 6/20/2019 7:25:00 AM
Lab Sample ID: 190621004-010
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.6			S.U.		6/20/2019 7:25:00 AM
Temperature (E170.1)	14			deg C		6/20/2019 7:25:00 AM
Turbidity (E180.1)	6	1.0		NTU		6/20/2019 7:25:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 4:54:29 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 4:54:29 PM
Boron	263	50.0		µg/L	1	7/2/2019 4:54:29 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 4:54:29 PM
Calcium	69400	50.0		µg/L	1	7/2/2019 4:54:29 PM
Copper	ND	5.00		µg/L	1	7/2/2019 4:54:29 PM
Iron	180	50.0		µg/L	1	7/2/2019 4:54:29 PM
Magnesium	63300	50.0		µg/L	1	7/2/2019 4:54:29 PM
Manganese	176	20.0		µg/L	1	7/2/2019 4:54:29 PM
Potassium	3240	50.0		µg/L	1	7/2/2019 4:54:29 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 4:54:29 PM
Sodium	29900	500		µg/L	1	7/2/2019 4:54:29 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	434	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:28:45 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	3.34	2.00		mg/L	2	7/10/2019 1:15:05 AM
Sulfate	230	10.0		mg/L	10	7/10/2019 1:34:18 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	6/25/2019 10:23:49 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 6/20/2019 7:25:00 AM
Lab Sample ID: 190621004-010
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	946	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	575	5		mg/L	1	6/27/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 6/20/2019 7:00:00 AM
Lab Sample ID: 190621004-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.5			S.U.		6/20/2019 7:00:00 AM
Temperature (E170.1)	13			deg C		6/20/2019 7:00:00 AM
Turbidity (E180.1)	12	1.0		NTU		6/20/2019 7:00:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 5:04:51 PM
Arsenic	10.3	5.00		µg/L	1	7/2/2019 5:04:51 PM
Boron	78.9	50.0		µg/L	1	7/2/2019 5:04:51 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 5:04:51 PM
Calcium	48300	50.0		µg/L	1	7/2/2019 5:04:51 PM
Copper	ND	5.00		µg/L	1	7/2/2019 5:04:51 PM
Iron	148	50.0		µg/L	1	7/2/2019 5:04:51 PM
Magnesium	55600	50.0		µg/L	1	7/2/2019 5:04:51 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 5:04:51 PM
Potassium	3000	50.0		µg/L	1	7/2/2019 5:04:51 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 5:04:51 PM
Sodium	15100	500		µg/L	1	7/2/2019 5:04:51 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	350	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:30:26 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	7/10/2019 1:53:21 AM
Sulfate	69.3	2.00		mg/L	2	7/10/2019 1:53:21 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	340	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:25:30 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 6/20/2019 7:00:00 AM
Lab Sample ID: 190621004-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	707	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	275	5		mg/L	1	6/27/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909D
Collection Date: 6/19/2019 4:20:00 PM
Lab Sample ID: 190621004-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	9.0			S.U.		6/19/2019 4:20:00 PM
Temperature (E170.1)	13			deg C		6/19/2019 4:20:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		6/19/2019 4:20:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	674	100		µg/L	1	7/2/2019 5:15:15 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 5:15:15 PM
Boron	904	50.0		µg/L	1	7/2/2019 5:15:15 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 5:15:15 PM
Calcium	10900	50.0		µg/L	1	7/2/2019 5:15:15 PM
Copper	ND	5.00		µg/L	1	7/2/2019 5:15:15 PM
Iron	2260	50.0		µg/L	1	7/2/2019 5:15:15 PM
Magnesium	2290	50.0		µg/L	1	7/2/2019 5:15:15 PM
Manganese	79.6	20.0		µg/L	1	7/2/2019 5:15:15 PM
Potassium	1320	50.0		µg/L	1	7/2/2019 5:15:15 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 5:15:15 PM
Sodium	144000	5000		µg/L	10	7/2/2019 5:20:27 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	37	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:32:08 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	4.19	2.00		mg/L	2	7/10/2019 2:12:23 AM
Sulfate	87.6	2.00		mg/L	2	7/10/2019 2:12:23 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	310	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.4	0.1		mg/L	1	6/25/2019 10:27:09 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909D
Collection Date: 6/19/2019 4:20:00 PM
Lab Sample ID: 190621004-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	743	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	745	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 6/19/2019 3:10:00 PM
Lab Sample ID: 190621004-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.4			S.U.		6/19/2019 3:10:00 PM
Temperature (E170.1)	14			deg C		6/19/2019 3:10:00 PM
Turbidity (E180.1)	5	1.0		NTU		6/19/2019 3:10:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 5:25:22 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 5:25:22 PM
Boron	739	50.0		µg/L	1	7/2/2019 5:25:22 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 5:25:22 PM
Calcium	74400	50.0		µg/L	1	7/2/2019 5:25:22 PM
Copper	ND	5.00		µg/L	1	7/2/2019 5:25:22 PM
Iron	252	50.0		µg/L	1	7/2/2019 5:25:22 PM
Magnesium	21800	50.0		µg/L	1	7/2/2019 5:25:22 PM
Manganese	65.4	20.0		µg/L	1	7/2/2019 5:25:22 PM
Potassium	2630	50.0		µg/L	1	7/2/2019 5:25:22 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 5:25:22 PM
Sodium	65600	5000		µg/L	10	7/2/2019 5:30:31 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	276	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:33:50 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	31.7	2.00		mg/L	2	7/10/2019 2:50:26 AM
Sulfate	72.0	2.00		mg/L	2	7/10/2019 2:50:26 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	410	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.7	0.1		mg/L	1	6/25/2019 10:28:47 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8401
Work Order:	190621004	Collection Date:	6/19/2019 3:10:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	190621004-013
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	889	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	480	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 6/19/2019 12:40:00 PM
Lab Sample ID: 190621004-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.10	0.10		mg/L		6/19/2019 12:40:00 PM
Flow, GPD	95			gal/day		6/19/2019 12:40:00 PM
pH (E150.1)	7.6			S.U.		6/19/2019 12:40:00 PM
Temperature (E170.1)	14			deg C		6/19/2019 12:40:00 PM
Turbidity (E180.1)	22	1.0		NTU		6/19/2019 12:40:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 5:35:38 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 5:35:38 PM
Boron	623	50.0		µg/L	1	7/2/2019 5:35:38 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 5:35:38 PM
Calcium	338000	500		µg/L	10	7/2/2019 5:40:53 PM
Copper	ND	5.00		µg/L	1	7/2/2019 5:35:38 PM
Iron	ND	50.0		µg/L	1	7/2/2019 5:35:38 PM
Magnesium	155000	500		µg/L	10	7/2/2019 5:40:53 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 5:35:38 PM
Potassium	5540	50.0		µg/L	1	7/2/2019 5:35:38 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 5:35:38 PM
Sodium	71900	5000		µg/L	10	7/2/2019 5:40:53 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1483	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:35:31 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	29.4	2.00		mg/L	2	7/10/2019 4:19:49 PM
Sulfate	1240	50.0		mg/L	50	7/10/2019 4:38:52 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	580	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 6/19/2019 12:40:00 PM
Lab Sample ID: 190621004-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:30:24 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2610	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2320	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 6/19/2019 1:37:00 PM
Lab Sample ID: 190621004-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.10	0.10		mg/L		6/19/2019 1:37:00 PM
Flow, GPD	9511			gal/day		6/19/2019 1:37:00 PM
pH (E150.1)	7.7			S.U.		6/19/2019 1:37:00 PM
Temperature (E170.1)	14			deg C		6/19/2019 1:37:00 PM
Turbidity (E180.1)	152	1.0		NTU		6/19/2019 1:37:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 6:01:51 PM
Arsenic	22.8	5.00		µg/L	1	7/2/2019 6:01:51 PM
Boron	3210	50.0		µg/L	1	7/2/2019 6:01:51 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 6:01:51 PM
Calcium	334000	500		µg/L	10	7/2/2019 6:07:03 PM
Copper	ND	5.00		µg/L	1	7/2/2019 6:01:51 PM
Iron	2240	50.0		µg/L	1	7/2/2019 6:01:51 PM
Magnesium	66300	50.0		µg/L	1	7/2/2019 6:01:51 PM
Manganese	695	20.0		µg/L	1	7/2/2019 6:01:51 PM
Potassium	15000	50.0		µg/L	1	7/2/2019 6:01:51 PM
Selenium	20.9	5.00		µg/L	1	7/2/2019 6:01:51 PM
Sodium	29100	500		µg/L	1	7/2/2019 6:01:51 PM

LOW LEVEL MERCURY - EPA 1631E Analyst: **SM**
 (Prep: 1631E - 6/21/2019)

Mercury	ND	0.5		ng/L	1	6/24/2019
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HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	1108	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:40:33 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	23.2	2.00		mg/L	2	7/10/2019 4:57:54 PM
Sulfate	454	50.0		mg/L	50	7/10/2019 5:16:57 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA A**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 6/19/2019 1:37:00 PM
Lab Sample ID: 190621004-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	690	10		mgCaCO3/L	1	6/26/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:32:02 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1800	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1350	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 6/19/2019 1:08:00 PM
Lab Sample ID: 190621004-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.80	0.10		mg/L		6/19/2019 1:08:00 PM
Flow, GPD	5707			gal/day		6/19/2019 1:08:00 PM
pH (E150.1)	7.6			S.U.		6/19/2019 1:08:00 PM
Temperature (E170.1)	14			deg C		6/19/2019 1:08:00 PM
Turbidity (E180.1)	28	1.0		NTU		6/19/2019 1:08:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 6:12:11 PM
Arsenic	6.13	5.00		µg/L	1	7/2/2019 6:12:11 PM
Boron	40600	500		µg/L	10	7/2/2019 6:17:32 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 6:12:11 PM
Calcium	570000	500		µg/L	10	7/2/2019 6:17:32 PM
Copper	ND	5.00		µg/L	1	7/2/2019 6:12:11 PM
Iron	1050	50.0		µg/L	1	7/2/2019 6:12:11 PM
Magnesium	71600	50.0		µg/L	1	7/2/2019 6:12:11 PM
Manganese	952	20.0		µg/L	1	7/2/2019 6:12:11 PM
Potassium	120000	500		µg/L	10	7/2/2019 6:17:32 PM
Selenium	22.6	5.00		µg/L	1	7/2/2019 6:12:11 PM
Sodium	166000	5000		µg/L	10	7/2/2019 6:17:32 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1720	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:42:14 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	443	50.0		mg/L	50	7/10/2019 5:35:58 PM
Sulfate	1530	50.0		mg/L	50	7/10/2019 5:35:58 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	360	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 6/19/2019 1:08:00 PM
Lab Sample ID: 190621004-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	1.8	0.1		mg/L	1	6/25/2019 10:33:39 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4020	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3400	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 6/19/2019 12:20:00 PM
Lab Sample ID: 190621004-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	4.29	0.10		mg/L		6/19/2019 12:20:00 PM
Flow, GPD	608			gal/day		6/19/2019 12:20:00 PM
pH (E150.1)	6.9			S.U.		6/19/2019 12:20:00 PM
Temperature (E170.1)	16			deg C		6/19/2019 12:20:00 PM
Turbidity (E180.1)	8	1.0		NTU		6/19/2019 12:20:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 6:22:45 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 6:22:45 PM
Boron	28000	500		µg/L	10	7/2/2019 6:28:06 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 6:22:45 PM
Calcium	626000	500		µg/L	10	7/2/2019 6:28:06 PM
Copper	ND	5.00		µg/L	1	7/2/2019 6:22:45 PM
Iron	63.6	50.0		µg/L	1	7/2/2019 6:22:45 PM
Magnesium	88700	50.0		µg/L	1	7/2/2019 6:22:45 PM
Manganese	389	20.0		µg/L	1	7/2/2019 6:22:45 PM
Potassium	137000	500		µg/L	10	7/2/2019 6:28:06 PM
Selenium	16.0	5.00		µg/L	1	7/2/2019 6:22:45 PM
Sodium	267000	5000		µg/L	10	7/2/2019 6:28:06 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1930	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:43:55 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	700	50.0		mg/L	50	7/10/2019 7:11:48 PM
Sulfate	1660	50.0		mg/L	50	7/10/2019 7:11:48 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	370	10		mgCaCO3/L	1	6/26/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 6/19/2019 12:20:00 PM
Lab Sample ID: 190621004-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:35:17 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4860	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	4230	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Inlet To Pond
Collection Date: 6/19/2019 3:10:00 PM
Lab Sample ID: 190621004-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.14	0.10		mg/L		6/19/2019 3:10:00 PM
Flow, GPD	26631			gal/day		6/19/2019 3:10:00 PM
pH (E150.1)	8.1			S.U.		6/19/2019 3:10:00 PM
Temperature (E170.1)	12			deg C		6/19/2019 3:10:00 PM
Turbidity (E180.1)	73	1.0		NTU		6/19/2019 3:10:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 6:33:21 PM
Arsenic	23.0	5.00		µg/L	1	7/2/2019 6:33:21 PM
Boron	21900	500		µg/L	10	7/2/2019 6:38:42 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 6:33:21 PM
Calcium	465000	500		µg/L	10	7/2/2019 6:38:42 PM
Copper	ND	5.00		µg/L	1	7/2/2019 6:33:21 PM
Iron	2310	50.0		µg/L	1	7/2/2019 6:33:21 PM
Magnesium	70100	50.0		µg/L	1	7/2/2019 6:33:21 PM
Manganese	551	20.0		µg/L	1	7/2/2019 6:33:21 PM
Potassium	84000	500		µg/L	10	7/2/2019 6:38:42 PM
Selenium	37.5	5.00		µg/L	1	7/2/2019 6:33:21 PM
Sodium	182000	5000		µg/L	10	7/2/2019 6:38:42 PM

LOW LEVEL MERCURY - EPA 1631E

Analyst: **SM**

(Prep: 1631E - 6/21/2019)

Mercury	ND	0.5		ng/L	1	6/24/2019
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1451	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:45:36 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	243	20.0		mg/L	20	7/10/2019 7:30:56 PM
Sulfate	1190	20.0		mg/L	20	7/10/2019 7:30:56 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Inlet To Pond
Collection Date: 6/19/2019 3:10:00 PM
Lab Sample ID: 190621004-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	520	10		mgCaCO3/L	1	6/28/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	6/25/2019 10:41:45 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3250	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2660	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 6/19/2019 2:45:00 PM
Lab Sample ID: 190621004-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	3.85	0.10		mg/L		6/19/2019 2:45:00 PM
pH (E150.1)	8.4			S.U.		6/19/2019 2:45:00 PM
Temperature (E170.1)	22			deg C		6/19/2019 2:45:00 PM
Turbidity (E180.1)	47	1.0		NTU		6/19/2019 2:45:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 6:43:56 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 6:43:56 PM
Boron	67.5	50.0		µg/L	1	7/2/2019 6:43:56 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 6:43:56 PM
Calcium	39800	50.0		µg/L	1	7/2/2019 6:43:56 PM
Copper	ND	5.00		µg/L	1	7/2/2019 6:43:56 PM
Iron	83.4	50.0		µg/L	1	7/2/2019 6:43:56 PM
Magnesium	11800	50.0		µg/L	1	7/2/2019 6:43:56 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 6:43:56 PM
Potassium	3100	50.0		µg/L	1	7/2/2019 6:43:56 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 6:43:56 PM
Sodium	16700	500		µg/L	1	7/2/2019 6:43:56 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	148	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:50:37 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	37.0	2.00		mg/L	2	7/10/2019 7:49:57 PM
Sulfate	24.1	2.00		mg/L	2	7/10/2019 7:49:57 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA A**

Alkalinity, Total (As CaCO3)	130	10		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:46:42 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 6/19/2019 2:45:00 PM
Lab Sample ID: 190621004-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **KB**

Specific Conductance	403	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

TDS (Residue, Filterable)	285	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 6/19/2019 2:17:00 PM
Lab Sample ID: 190621004-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	4.00	0.10		mg/L		6/19/2019 2:17:00 PM
pH (E150.1)	8.2			S.U.		6/19/2019 2:17:00 PM
Temperature (E170.1)	22			deg C		6/19/2019 2:17:00 PM
Turbidity (E180.1)	37	1.0		NTU		6/19/2019 2:17:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 7:10:00 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 7:10:00 PM
Boron	ND	50.0		µg/L	1	7/2/2019 7:10:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 7:10:00 PM
Calcium	41500	50.0		µg/L	1	7/2/2019 7:10:00 PM
Copper	ND	5.00		µg/L	1	7/2/2019 7:10:00 PM
Iron	102	50.0		µg/L	1	7/2/2019 7:10:00 PM
Magnesium	12000	50.0		µg/L	1	7/2/2019 7:10:00 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 7:10:00 PM
Potassium	2970	50.0		µg/L	1	7/2/2019 7:10:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 7:10:00 PM
Sodium	16000	500		µg/L	1	7/2/2019 7:10:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	153	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:52:18 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	35.4	2.00		mg/L	2	7/10/2019 8:08:59 PM
Sulfate	23.5	2.00		mg/L	2	7/10/2019 8:08:59 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	150	10		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:48:18 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 6/19/2019 2:17:00 PM
Lab Sample ID: 190621004-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	400	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	105	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 6/19/2019 2:47:00 PM
Lab Sample ID: 190621004-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	3.85	0.10		mg/L		6/19/2019 2:47:00 PM
pH (E150.1)	8.4			S.U.		6/19/2019 2:47:00 PM
Temperature (E170.1)	22			deg C		6/19/2019 2:47:00 PM
Turbidity (E180.1)	43	1.0		NTU		6/19/2019 2:47:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 8:01:15 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 8:01:15 PM
Boron	ND	50.0		µg/L	1	7/2/2019 8:01:15 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 8:01:15 PM
Calcium	40000	50.0		µg/L	1	7/2/2019 8:01:15 PM
Copper	ND	5.00		µg/L	1	7/2/2019 8:01:15 PM
Iron	67.0	50.0		µg/L	1	7/2/2019 8:01:15 PM
Magnesium	11900	50.0		µg/L	1	7/2/2019 8:01:15 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 8:01:15 PM
Potassium	2960	50.0		µg/L	1	7/2/2019 8:01:15 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 8:01:15 PM
Sodium	16500	500		µg/L	1	7/2/2019 8:01:15 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	149	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:54:00 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	37.0	2.00		mg/L	2	7/10/2019 8:47:04 PM
Sulfate	24.2	2.00		mg/L	2	7/10/2019 8:47:04 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	140	10		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:49:59 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 6/19/2019 2:47:00 PM
Lab Sample ID: 190621004-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	405	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	255	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 6/19/2019 3:35:00 PM
Lab Sample ID: 190621004-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	10.51	0.10		mg/L		6/19/2019 3:35:00 PM
pH (E150.1)	8.6			S.U.		6/19/2019 3:35:00 PM
Temperature (E170.1)	29			deg C		6/19/2019 3:35:00 PM
Turbidity (E180.1)	34	1.0		NTU		6/19/2019 3:35:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 8:11:29 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 8:11:29 PM
Boron	16600	50.0		µg/L	1	7/2/2019 8:11:29 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 8:11:29 PM
Calcium	265000	500		µg/L	10	7/2/2019 8:32:47 PM
Copper	ND	5.00		µg/L	1	7/2/2019 8:11:29 PM
Iron	91.9	50.0		µg/L	1	7/2/2019 8:11:29 PM
Magnesium	65300	50.0		µg/L	1	7/2/2019 8:11:29 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 8:11:29 PM
Potassium	69500	500		µg/L	10	7/2/2019 8:32:47 PM
Selenium	7.18	5.00		µg/L	1	7/2/2019 8:11:29 PM
Sodium	129000	5000		µg/L	10	7/2/2019 8:32:47 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	931	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 2:55:42 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	241	20.0		mg/L	20	7/10/2019 9:06:06 PM
Sulfate	1060	20.0		mg/L	20	7/10/2019 9:06:06 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	84	4		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:51:38 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 6/19/2019 3:35:00 PM
Lab Sample ID: 190621004-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2590	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2030	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 6/19/2019 12:30:00 PM
Lab Sample ID: 190621004-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	6.42	0.10		mg/L		6/19/2019 12:30:00 PM
pH (E150.1)	7.7			S.U.		6/19/2019 12:30:00 PM
Temperature (E170.1)	21			deg C		6/19/2019 12:30:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		6/19/2019 12:30:00 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/21/2019)						
Aluminum	ND	100		µg/L	1	7/2/2019 8:38:02 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 8:38:02 PM
Boron	ND	50.0		µg/L	1	7/2/2019 8:38:02 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 8:38:02 PM
Calcium	74.9	50.0		µg/L	1	7/2/2019 8:38:02 PM
Copper	ND	5.00		µg/L	1	7/2/2019 8:38:02 PM
Iron	ND	50.0		µg/L	1	7/2/2019 8:38:02 PM
Magnesium	ND	50.0		µg/L	1	7/2/2019 8:38:02 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 8:38:02 PM
Potassium	ND	50.0		µg/L	1	7/2/2019 8:38:02 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 8:38:02 PM
Sodium	1040	500		µg/L	1	7/2/2019 8:38:02 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	7/2/2019
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/21/2019)						
Mercury	ND	0.0002		mg/L	1	6/21/2019 3:00:48 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	ND	2.00		mg/L	2	7/10/2019 9:44:09 PM
Sulfate	ND	2.00		mg/L	2	7/10/2019 9:44:09 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DA A
Alkalinity, Total (As CaCO3)	8	1		mgCaCO3/L	1	6/28/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:53:14 AM

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 6/19/2019 12:30:00 PM
Lab Sample ID: 190621004-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	1	1		µmhos/cm	1	6/21/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	ND	5		mg/L	1	6/26/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LLHg Field Blank
Collection Date: 6/19/2019 3:25:00 PM
Lab Sample ID: 190621004-024
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E

Analyst: **SM**

(Prep: 1631E - 6/21/2019)

Mercury	ND	0.5		ng/L	1	6/24/2019
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 6/19/2019 12:03:00 PM
Lab Sample ID: 190621004-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.10	0.10		mg/L		6/19/2019 12:03:00 PM
Flow, GPD	342			gal/day		6/19/2019 12:03:00 PM
pH (E150.1)	7.5			S.U.		6/19/2019 12:03:00 PM
Temperature (E170.1)	13			deg C		6/19/2019 12:03:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		6/19/2019 12:03:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 8:47:57 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 8:47:57 PM
Boron	212	50.0		µg/L	1	7/2/2019 8:47:57 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 8:47:57 PM
Calcium	255000	50000		µg/L	10	7/2/2019 8:53:08 PM
Copper	ND	5.00		µg/L	1	7/2/2019 8:47:57 PM
Iron	ND	50.0		µg/L	1	7/2/2019 8:47:57 PM
Magnesium	39700	50.0		µg/L	1	7/2/2019 8:47:57 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 8:47:57 PM
Potassium	3680	50.0	J	µg/L	1	7/2/2019 8:47:57 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 8:47:57 PM
Sodium	14100	500		µg/L	1	7/2/2019 8:47:57 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	801	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 3:02:29 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	5.15	2.00		mg/L	2	7/10/2019 11:21:00 PM
Sulfate	250	10.0		mg/L	10	7/10/2019 11:59:14 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	480	10		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 6/19/2019 12:03:00 PM
Lab Sample ID: 190621004-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:54:46 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1100	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	785	5		mg/L	1	6/26/2019

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 2
Collection Date: 6/19/2019 11:30:00 AM
Lab Sample ID: 190621004-026
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Observation	Dry			NA		6/19/2019 11:30:00 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 6/19/2019 11:34:00 AM
Lab Sample ID: 190621004-027
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Dry			NA		6/19/2019 11:34:00 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 5
Collection Date: 6/19/2019 3:45:00 PM
Lab Sample ID: 190621004-028
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: FLD

Observation

Dry

NA

6/19/2019 3:45:00 PM

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-SH
Collection Date: 6/20/2019 7:50:00 AM
Lab Sample ID: 190621004-029
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Poor Recovery			NA		6/20/2019 7:50:00 AM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8405
Work Order:	190621004	Collection Date:	6/19/2019 4:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	190621004-030
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Dry			NA		6/19/2019 4:45:00 PM
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Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 6/19/2019 3:25:00 PM
Lab Sample ID: 190621004-031
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	5.15	0.10		mg/L		6/19/2019 3:25:00 PM
Flow, GPD	608			gal/day		6/19/2019 3:25:00 PM
pH (E150.1)	7.5			S.U.		6/19/2019 3:25:00 PM
Temperature (E170.1)	13			deg C		6/19/2019 3:25:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		6/19/2019 3:25:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/21/2019)

Aluminum	ND	100		µg/L	1	7/2/2019 8:58:17 PM
Arsenic	ND	5.00		µg/L	1	7/2/2019 8:58:17 PM
Boron	2690	50.0		µg/L	1	7/2/2019 8:58:17 PM
Cadmium	ND	5.00		µg/L	1	7/2/2019 8:58:17 PM
Calcium	344000	50000		µg/L	10	7/2/2019 9:03:30 PM
Copper	ND	5.00		µg/L	1	7/2/2019 8:58:17 PM
Iron	ND	50.0		µg/L	1	7/2/2019 8:58:17 PM
Magnesium	98600	50.0		µg/L	1	7/2/2019 8:58:17 PM
Manganese	ND	20.0		µg/L	1	7/2/2019 8:58:17 PM
Potassium	6620	50.0		µg/L	1	7/2/2019 8:58:17 PM
Selenium	ND	5.00		µg/L	1	7/2/2019 8:58:17 PM
Sodium	31500	500		µg/L	1	7/2/2019 8:58:17 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1266	5		mg/L CaCO3	1	7/2/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/21/2019)

Mercury	ND	0.0002		mg/L	1	6/21/2019 3:04:11 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	69.8	10.0		mg/L	10	7/11/2019 12:18:17 AM
Sulfate	746	10.0		mg/L	10	7/11/2019 12:18:17 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	420	10		mgCaCO3/L	1	6/28/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 11-Jul-19

CLIENT: Lockwood Hills LLC
Work Order: 190621004
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 6/19/2019 3:25:00 PM
Lab Sample ID: 190621004-031
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/25/2019 10:59:22 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2010	1		µmhos/cm	1	6/21/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1590	5		mg/L	1	6/26/2019



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 190621004

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:								
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly				Samplers Name: Ryan Bausky / Ryan Bausley				
Client Phone No:		PO #:				Samplers Signature: <i>[Signature]</i>				
Client Fax No:										
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis		
				Matrix	C	G				
001	1842	6/20/19	0715	A P	GW		G	4	Lockwood Ash LF Quarterly	
002	8404	6/19/19	1700	A P	GW		G	4	Field pH, Temp, Turbidity	
003	8908-D	6/19/19	1930	A P	GW		G	4		
004	8908-SH	6/19/19	1445	A P	GW		G	4		
005	8909-D	6/19/19	1620	A P	GW		G	4		
006	8909-SH	6/19/19	1135	A P	GW		G	4		
007	8910-D	6/19/19	1240	A P	GW		G	4		
008	8911-D	6/19/19	1350	A P	GW		G	4		
009	8911-SH	6/20/19	0740	A P	GW		G	4		
010	8942-D	6/20/19	0725	A P	GW		G	4		
011	9306-SH	6/20/19	0700	A P	GW		G	4		
012	GW Dup 89109D	6/19/19	1620	A P	GW		G	4		
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____				Special Instructions/Remarks: Page 1 of 3						
Turnaround Time Requested: <input type="radio"/> 1 Day <input type="radio"/> 3 Day <input type="radio"/> Normal <input type="radio"/> 2 -Day <input type="radio"/> 5 Day										
Relinquished by: (Signature)		Received by: (Signature)				Date		Time		
Relinquished by: (Signature)		Received by: (Signature)				Date		Time		
Relinquished by: (Signature)		Received for Laboratory by:				Date		Time		
Sample Temperature Ambient <input type="radio"/> Chilled <input checked="" type="radio"/> Chilling Process begun Notes: <u>40c</u>		Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____				Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____				



190621004



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

190621004

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: Ryan Baisley / K. Amba				
Client Phone No:		PO #:			Samplers Signature:				
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
013	8401	6/19/19	1510	A P	GW		G	4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
014	Leak Detection Syst.	6/19/19	1240	A P	GW		G	4	+ Field Flow Reading, DO
015	Under Drain 1	6/19/19	1337	A P	GW		G	5	+ Field Flow Reading, DO
016	Under Drain 2	6/19/19	1308	A P	GW		G	4	+ Field Flow Reading, DO
017	Under Drain 3	6/19/19	1220	A P	GW		G	4	+ Field Flow Reading, DO
018	Inlet to Pond	6/19/19	1510	A P	GW		G	5	+ Field Flow Reading, DO
019	Keuka Upstream	6/19/19	1445	A P	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream	6/19/19	1417	A P	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup	6/19/19	1447	A P	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab	6/19/19	1535	A P	SF		G	4	Lockwood Quarterly +DO
023	Field Blank	6/19/19	1230	A	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank	6/19	1525	P	GW		G	1	EPA 1631
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____				Special Instructions/Remarks: Page 2 of 3					
Turnaround Time Requested: <input type="radio"/> 1 Day <input type="radio"/> 3 Day <input checked="" type="radio"/> Normal <input type="radio"/> 2-Day <input type="radio"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
Sample Temperature Ambient <input checked="" type="radio"/> Chilled Chilling Process begun		Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N			Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N				
Notes: <u>40C</u>		Notes: _____			Notes: _____				



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

190621004

EXPERIENCE IS THE SOLUTION

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Client Name: Lockwood Hills LLC	Address:	
Send Report to: Dale Irwin	Project Name (Location): Lockwood Ash LF Quarterly	Samplers Name: <i>Ryan Basley / K. Andry</i>
Client Phone No:	PO #:	Samplers Signature: <i>[Signature]</i>
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis
				Matrix	C	G		
025	GW Dep Drain 3	6/19/19	1203	A	GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity + Field Flow Reading, DO
				P				
026	GW Dep Drain 2	6/19/19	1130	A	GW		0	Observation Only
				P				
027	GW Dep Drain 4	6/19/19	1134	A	GW		0	Observation Only
				P				
028	Under Drain 5	6/19/19	1545	A	GW		0	Observation Only
				P				
029	8910-SH	6/20/19	0750	A	GW		0	Observation Only
				P				
030	8405	6/19/19	1645	A	GW		0	Observation Only
				P				
031	GW Dep Drain 1	6/19/19	1325		GW		04	Observation Only Lockwood Ash LF Quarterly Field pH, Temp, Turb, + Field Flow Reading, DO
				P				
				A				
				P				
				A				
				P				
				A				
				P				

Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____	Special Instructions/Remarks: Page 3 of 3
Turnaround Time Requested: <input checked="" type="radio"/> 1 Day <input checked="" type="radio"/> 3 Day <input checked="" type="radio"/> Normal <input checked="" type="radio"/> 2 -Day <input checked="" type="radio"/> 5 Day	

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by:	Date	Time

Sample Temperature Ambient Chilled Chilling Process begun Notes: _____	Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____	Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____
---	--	---

Lockwood Ash Disposal Site Second Quarter 2019

Collection Date	Sample ID	Depth	Elevation	Units
6/19/2019	8908-D	6.40	606.57	feet
6/19/2019	8909-D	44.89	517.01	feet
6/19/2019	8910-D	21.35	536.99	feet
6/19/2019	8911-D	26.94	529.97	feet
6/19/2019	8942-D	14.75	544.20	feet
6/19/2019	8908-SH	8.45	604.32	feet
6/19/2019	8909-SH	11.92	549.71	feet
6/19/2019	8910-SH	6.29	532.26	feet
6/19/2019	8911-SH	25.72	531.20	feet
6/19/2019	9306-SH	5.80	560.42	feet
6/19/2019	7741	17.25	570.80	feet
6/19/2019	1842	6.41	552.79	feet
6/19/2019	8406	14.22	555.33	feet
6/19/2019	8407	OBSTRUCTED	--	feet
6/19/2019	8401	6.31	653.98	feet
6/19/2019	8402	7.00	657.09	feet
6/19/2019	8403	7.96	656.11	feet
6/19/2019	8404	6.26	596.47	feet
6/19/2019	8405	DRY	--	feet

THIRD QUARTER

DATA VALIDATION REPORT

Review of Baseline Parameter Analytical Data

LOCKWOOD ASH DISPOSAL SITE

Prepared on behalf of:

Lockwood Hills LLC
590 Plant Road
Dresden, New York 14441

Prepared by:



2620 Grand Island Blvd.
Grand Island, New York 14072-2131

December 2019

DATA VALIDATION REPORT

Review of Baseline Parameter Analytical Data

LOCKWOOD ASH DISPOSAL SITE

Prepared on behalf of:

Lockwood Hills LLC
590 Plant Road
Dresden, New York 14441

Prepared by:



2620 Grand Island Blvd.
Grand Island, New York 14072-2131

December 2019

Site Name: Lockwood Ash Disposal Site

Laboratory Receipt Date: 9/20/19 and 10/1/19

Sample Data Group: 1842

Client Sample ID	Laboratory Sample ID	Sample Matrix	Analyte Types
1842	190920022-001	Water	Total Metals, Field Parameters, Conventional Parameters
8401	190920022-002	Water	Total Metals, Field Parameters, Conventional Parameters
8404	190920022-003	Water	Total Metals, Field Parameters, Conventional Parameters
8908-D	190920022-004	Water	Total Metals, Field Parameters, Conventional Parameters
8908-SH	190920022-005	Water	Total Metals, Field Parameters, Conventional Parameters
8909-D	190920022-006	Water	Total Metals, Field Parameters, Conventional Parameters
8909-SH	190920022-007	Water	Total Metals, Field Parameters, Conventional Parameters
8910-D	190920022-008	Water	Total Metals, Field Parameters, Conventional Parameters
8911-D	190920022-010	Water	Total Metals, Field Parameters, Conventional Parameters
8911-SH	190920022-011	Water	Total Metals, Field Parameters, Conventional Parameters
8942-D	190920022-012	Water	Total Metals, Field Parameters, Conventional Parameters
9306-SH	190920022-013	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dup 8909D	190920022-014	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 1	190920022-015	Water	Total Metals, Field Parameters, Conventional Parameters
Leak Detection System	190920022-016	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 1	190920022-017	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 2	190920022-018	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 3	190920022-019	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Upstream	190920022-021	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Downstream	190920022-022	Water	Total Metals, Field Parameters, Conventional Parameters
Surface Water Dup	190920022-023	Water	Total Metals, Field Parameters, Conventional Parameters
Field Blank	190920022-025	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 3	190920022-026	Water	Total Metals, Field Parameters, Conventional Parameters

LLHG Field Blank	190920022-027	Water	Total Mercury
Inlet to Pond	190920022-032	Water	Total Metals, Field Parameters, Conventional Parameters
Pond Grab	190920022-033	Water	Total Metals, Field Parameters, Conventional Parameters
LLHG FB	190920022-034	Water	Total Mercury

DATA VALIDATION REPORT
Review of Baseline Parameter Analytical Data

Lockwood Ash Disposal Site

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- Attachment 1 Field Data Report & Chain of Custody
- Attachment 2 Sample Results
- Attachment 3 Quality Control Documentation

1 DATA PACKAGE ASSESSMENT

One data package containing the results for a total of 26 samples, including two field blanks¹ and two duplicate samples, were prepared by Adirondack Environmental Services, Inc. (ADK) of Albany, New York for a sampling event that took place at the Lockwood Ash Disposal Site in the Town of Torrey, New York on September 18, 19, and 30, 2019. The sampling event was for an abbreviated set of 6 NYCRR Part 360 baseline parameters as specified in the site's approved *Environmental Monitoring Program* (Daigler Associates, February 2007). The site's baseline parameters include standard field measurements, conventional wet chemistry parameters, and select total metals. Data from the field measurements and wet chemistry parameters are here within reviewed using data quality objectives laid out in the *Lockwood Ash Disposal Site's Site Analytical Plan* (SAP) prepared by KR Applin & Associates in March 2007. The SAP specifies the use of the US EPA Region 2 Standard Operating Procedure (SOP) # HW-2, *Evaluation of Metals for the Contract Laboratory Program* (Version 11, January 1992). This document has since been revised and separated by method into three documents. The metals data have been reviewed using the two most recent and appropriate guidance protocols, US EPA SOP #HW-3a, *ICP-AES Data Validation* (Revision 1, September 2016) and US EPA SOP #HW-3c, *Mercury and Cyanide Data Validation* (Revision 1, September 2016). These documents are referred to as HW-3a and HW-3c, respectively, herein.

According to the Chain of Custody forms, presented in Attachment 1, the sampling event started with 19 environmental samples taken on September 18th and four samples taken on September 19th. The samples include groundwater monitoring wells, a field blank, up and downstream surface water samples from the Keuka Outlet, and a surface water field duplicate. The remaining three samples (Inlet to Pond, Pond Grab, and LLHG FB) were taken on September 30th, 2019 due to being obstructed by construction activities during the first sampling event. One field blank for each analytical method and one field duplicate per matrix type is required by the SAP per sampling event. These quality control requirements were met. No quality control samples were missing. Four required client sampling locations were observed to be dry and one required client sample location was listed as having poor recovery. Dry locations were not counted against completeness,

¹ The field blank and low-level mercury field blank collected on 9/18/19 were counted as separate samples on the Chain of Custody form, but are considered one sample for the purpose of this report.

thereby the 85% completeness requirement for sample collection per the SAP was exceeded; 29 samples were collected or observed dry out of 30 required samples.

The samples collected on September 18th and 19th were shipped together and received by the laboratory on September 20th, 2019. The samples collected on September 30th were received by the laboratory on October 1st, 2019. Proper cooler temperatures and sample preservation was confirmed upon receipt as indicated on the Chain of Custody forms. Cover pages, case narratives, formal data summary reports, chain of custody forms, raw data printouts, and all necessary quality control and other supporting information was present in the laboratory data package. However, the raw data did not include the actual negative results for total metals, only listing the results as less than zero. The laboratory reported that the instrument print out for metals does not provide the negative results. Otherwise, client samples and associated quality control samples were easily trackable through the package.

All samples were received and analyzed within the proper holding times. The accuracy of the summary data sheets was evaluated by examination of all data values against raw data printouts for the following samples; 1842, GW Dep Drain 1, and GW Dep Drain 3 for the October 31, 2019 analytical run, and the Pond Grab for the November 1, 2019 run. Data were examined for completeness, computation and transcriptional errors, and application of program QA/QC data.

One omission of data was noted. The field logs show that the required field measurements for the groundwater and surface water duplicates were not independently collected. Rather the data reported for these samples in Attachment 2 are the same as those reported for the original sample. The field data log is included in Attachment 1.

Application of program QA/QC data is discussed by parameter group in the following Sections.

2 FIELD MEASUREMENTS

Field measurements were made for pH, temperature, and turbidity for all samples. Flowrate measurements were taken in the groundwater drain and leachate sampling locations. Dissolved oxygen measurements were obtained in the surface water samples per the SAP and in the field blank, the groundwater drains, the leachate sampling locations, as requested by the Chain of Custody.

The pH meter, dissolved oxygen meter, and turbidimeter were calibrated daily and recorded on Field Meter Calibration Data sheets as required by the SAP. The pH meter is to be calibrated within the limits of 6.95 and 7.05 for the 7.0 standard solution. The field observation sheets reported a calibration above this range up to 7.09 on September 18, 2019. No pH data were qualified based on this observation.

According to the SAP, one check standard or reference should be run and documented before initial use for the day and at a continuing frequency of one for every ten client samples for the turbidity and pH meters. Since reference check information was not provided, proper meter performance and accuracy cannot be verified and check standard results have not been validated for the field measurements.

Duplicate field measurements are to be taken at a frequency of one in every twenty samples or once per day whichever is greater according to the SAP. Field duplicate samples were taken on September 18th but not September 19th or September 30th. While duplicate measurements and duplicate samples are not technically equivalent, in the absence of duplicate field measurements, the field duplicate samples could provide data for this QC analysis. In the future, field duplicates should be collected on separate days and field measurements on the duplicate samples should be performed to comply with this requirement.

Due to the missing check standards and missing duplicate measurements, all field measurements are flagged as usable estimates. A sample event trip report and/or field sampling sheets, including all required QC measurements, should be prepared for all future sampling events under this contract.

No field measurements were rejected. Independent field measurements for the GW Dup and Surface Water Dup samples were not obtained, therefore, the percent completeness for this sampling event for field measurements is 92%. This exceeds the 85% completeness requirement.

3 METALS

Metals were analyzed using inductively-coupled plasma, atomic emission spectroscopy (ICP-AES), with the exception of mercury which was analyzed using cold vapor atomic adsorption (AA) and, in the case of low-level mercury analysis, cold vapor atomic fluorescence spectroscopy (CVAFS). Two ICP-AES runs over two days, two AA runs, and one CVAFS run were included in the data package. The ICP-AES runs occurred on October 31st and November 1st, 2019, while the AA runs occurred on September 21st, and October 22nd, 2018 and the CVAFS run occurred on October 4th, 2019. The CVAFS run only consisted of the low-level mercury field blank, the Inlet to Pond, Pond Grab, and the Under Drain 1 samples. No raw data for the CVAFS run was included in the package, and QC data also was incomplete. The metals data were evaluated against the associated quality control checks as defined by HW-3a, HW-3c, and the SAP. The majority of data were validated without any qualification. Deficiencies are discussed below.

3.1 CALIBRATIONS

3.1.1 Initial Instrument Calibration

Revision 1 of HW-3a directs the validator to verify that the instrument is calibrated at the start of each run using one blank and at least five standards. One of these five standards should be at or below the analyte's Contract Required Detection Limit (CRDL). According to the site's SAP these standards are to be prepared fresh the day of the analysis. Should less than five standards per analyte be used, the validator is to use professional judgment on whether to qualify the data. However, if the second criteria (i.e., one standard must be at or below the CRDL) is not met, then the validator is to qualify all results greater than or equal to the Instrument Detection Limit (IDL), but less than two times the CRDL as J and non-detects as UJ, plus note the deficiency in the data review narrative. Further, according to HW-3a the validator must verify the correlation coefficient of the instrument's calibration curve. Qualification of the data is required for correlation coefficients that are less than 0.995, percent differences on any individual point of greater than 30%, and a y-intercept on a calibration curve that is greater than or equal to the CRDL.

From the information provided, it appears the ICP-AES instrument calibration was based on a blank and one standard per analyte. Information on when the standards were prepared and the true concentrations of the standards was not provided with the data package. Since the curve is only a

line between two points the correlation coefficient is exactly one and the y-intercept of the calibration curve is simply the measured concentration in the calibration blank. In no case was the measured concentration of the calibration blank equal to or greater than the CRDL. The percent differences on any individual point will all be zero since the calibration curve is simply a line between the blank and the concentration of the one standard. Without knowing the true concentrations of the standards, whether or not the concentration of the standard was at or below the CRDL could not be positively assessed. However, upon review of the raw data sheet from the instrument calibration standards, it was noted that a number of the analyte concentrations likely or possibly do not meet this requirement as shown in Table 3-1.

**TABLE 3-1: CONCENTRATIONS OF SELECT METALS
IN THE INSTRUMENT CALIBRATION STANDARDS**

Analyte	Measured Concentration (µg/L) *	CRDL (µg/L)
Antimony	109.05 / 106.90	60
Arsenic	13.154 / 13.295	10
Barium	945.12 / 957.21	200
Cadmium	119.24 / 117.34	5
Chromium	21.237 / 21.615	10
Copper	37.017 / 37.467	25
Iron	3,542.1 / 3,562.7	100
Manganese	887.67 / 881.48	15
Nickel	434.95 / 429.85	40
Selenium	10.881 / 11.048	5
Zinc	1,136.5 / 1,122.8	20

*October 31/Nov. 1 Analytical Run Results.

According to the laboratory, the initial instrument calibration procedure followed is in compliance with the actual method (EPA 200.7) as required by New York State Analytical Services Protocol (NYS ASP) which was not updated to conform with the revised federal guidelines. Therefore, while the initial instrument calibration for the ICP-AES run was not fully in compliance with HW-3a, the data was accepted unqualified.

The initial instrument calibration protocols in HW-3c for mercury are the same as that in HW-3a. All initial instrument calibration information was provided for the AA instrument and all criteria were met. No calibration information was included in the data package for the CVAFS run.

3.1.2 Initial and Continuing Calibration Verification

Initial and continuing calibration verification (ICV and CCV) standards are required to verify the calibration curve of the instrument and check for drift in the calibration. ICV standards are run immediately after constructing the calibration curve and CCV standards must be run after every ten analytical samples or every two hours, whichever is more frequent, and at the end of the sample analysis run. The federal mercury guidance, HW-3c, calls for an additional CCV to be run immediately after the initial calibration blank (ICB). Further, according to the Lockwood SAP, the ICV and CCV true concentrations should not be at a concentration used during the construction of the calibration curve.

ICV and CCV samples were run at the proper position in the analysis run sequences and at the proper frequencies for the ICP-AES run. The concentrations used were not the same as the standards used to generate the calibration curves. The concentration used for the ICV/CCVs was 2,000 µg/L for all analytes, except for potassium which was 10,000 µg/L as specified by the method used (EPA 200.7). The ICV/CCV recoveries for arsenic for CCV-5 in the October 31st, 2019 run and aluminum in CCV-2 for the November 1st run were greater than the acceptable limits (90% - 110%) at 122% and 112% respectively. Sample results greater than the IDL associated with these failing calibration verification standards are to be qualified as estimated high (J+). Arsenic concentrations for Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, Keuka Upstream, Keuka Downstream, and GW Dep Drain 3 met that criteria.

The mercury analysis used 2.0 µg/L as one of the six points in the calibration curve and for the ICV/CCV samples. According to the site's SAP, the ICV and CCVs should be independently prepared and at a concentration not used to construct the calibration curve for AA analysis. No sample data were flagged as a result, but this practice of using the same concentration for the ICV and CCVs as was used to construct the calibration curve should be discontinued, especially since doing so will not disrupt construction of a proper calibration curve because HW-3c requires only five points not six. All ICV/CCV recoveries were within acceptable limits (85-115%) for mercury during the AA run. ICV/CCV data are not required, nor provided for the CVAFS run.

A CRDL check standard (CRI or CRA sample) is no longer required by the EPA as indicated by its absence from HW-3a and HW-3c, respectively. However, the site's SAP calls for the CRI

check sample to be run at the beginning and end of every sample analysis run and after every 20 analytical samples or every eight hours, whichever is more frequent, to verify linearity of the instrument at the low end of its range. The CRI sample is to include every analyte with the exception of aluminum, barium, calcium, iron, magnesium, potassium, and sodium. CRI samples were included at the proper position in the run and at the proper frequency; however, one non-excluded analyte, boron, was missing from the CRI check sample. Boron results greater than the IDL but less than two times the CRDL were flagged as useable estimates as a result of this deficiency, including client samples 9306-SH, Keuka Upstream, Keuka downstream, and the Surface Water Duplicate.

The *New York State Department of Environmental Conservation's Analytical Services Protocol* (ASP, September 1989, Rev 7/2005) calls for analyte concentrations in the CRDL check standard to be near the CRDL. The concentrations used for the CRI samples were two times the CRDL. To accurately test the CRDL as is the purpose of this sample, the concentrations should be decreased to reflect each analyte's CRDL.

The recovery criteria are rather loose for the CRDL check standard. Per the site's SAP, the percent recoveries must be "reasonable". During this analysis "reasonable" was taken to be between 85% and 115%. Four failing results were observed in the CRDL check standards prepared for this SDG. The results for chromium in the initial CRI and selenium in the final CRI were above the acceptable percent recovery range at 120 and 116% respectively for the October 31, 2019 run. The results for zinc were greater than the acceptable percent recovery range in the final CRI for the November 1, 2019 run at 119%. The 84.8% recovery for arsenic for the initial CRI for the October 31, 2019 run was considered acceptable. Sample results associated with these failing CRI results are to be qualified if they fall within the applicable range of greater than the IDL but less than five times the CRDL. Sample results that meet these criteria include:

- Selenium concentrations in Under Drain 2 and Under Drain 3; which were qualified as bias high (J+); and,
- Chromium concentrations in 8404, 8909-D, and GW Dep Drain 3, which were qualified as bias high (J+).

None of the associated zinc results fell within the applicable range.

The site's SAP calls for the mercury CRA check standard to be run at the beginning of every sample analysis run and after every eight hours. The proper concentration for the CRA standard according to the method used (EPA 245.1) is greater than 10 times the IDL but less than the midpoint of the curve, i.e., between 1.4 and 5.0 µg/L. A CRA check standard is not required per EPA Method 1631 nor provided for the CVAFS run.

A CRA check standard for mercury was reported with the quality control data summary for each AA run, but at a true concentration of less than the proper range at 0.2 µg/L. However, a review of the raw data shows that two additional standards were run immediately following the ICB; one at 0.2 µg/L and one at 2.0 µg/L. The reported standards and the unidentified standards run at 2.0 µg/L, which was not reported in the quality control data summary had a percent recovery within the acceptable limits.

3.2 BLANKS

Initial and continuing calibration blanks (ICBs and CCBs) were run during the ICP-AES analyses at the proper positions in the analysis run sequence (after ICB and each CCVs, before the first analytical sample, and after the last analytical sample) and at the correct frequencies of after every ten analytical samples or every two hours, whichever is more frequent. The federal mercury guidance, HW-3c, calls for an additional CCV/CCB set to be run immediately after the ICB during AA analysis. A number of QC samples and several client samples were analyzed in between the ICB and first CCV/CCB set. This sequencing failure should be corrected prior to the next event analyzed under this contract. The concentrations of the mercury ICBs and CCBs during both runs were all acceptable. EPA Method 1631 does not require ICBs and CCBs and none were provided with the CVAFS QC summary data set.

In the ICP-AES analytical run on October 31, 2019, CCB-3 had chromium and copper concentrations greater than the IDL but less than the CRDL. CCB-3 was repeated immediately with no intervening samples and passing results. Therefore, only sample results between the passing CCB-2 and the failing CCB-3 were associated with this failing blank. For the November 1, 2019 run, concentrations greater than the IDL, but less than the CRDL were reported for calcium, iron, and magnesium in CCB-1, boron and barium in CCB-2, and barium in CCB-4. Per HW-3a, client sample results associated with these failing blanks with measured concentrations

greater than or equal to the IDL, but less than the CRDL must be reported as the CRDL concentration with a qualification of “U”. The requirement to adjust the reported concentrations of samples with measured concentrations between the CRDL and the IDL when the concentration of an associated blank is within the same range is not present in the state protocol. However, since the EPA protocol is specified in the site’s SAP, this more stringent requirement is followed herein.

The were no affected results for chromium, calcium, magnesium, iron, and boron as the associated results were non-detect or greater than the CRDL. The Inlet to Pond result was affected by the failing CCB for barium, while the 8909-D and 8909-SH results were affected by the failing CCB for copper.

Criteria for evaluation of negative bias using negative results found in the raw data for ICB and CCB samples are detailed in HW-3a. The raw data included in the laboratory data package did not report the negative results, only listing such result as less than zero. Therefore, this criterion could not be evaluated.

One preparation blank or method blank was prepared for each run/day. Aluminum, calcium, and iron were reported at concentrations greater than the IDL but less than the CRDL the preparation blank for the November 1, 2019 run. Per HW-3a results associated with the method blank shall be reported as the CRDL value with a “U” qualification if the result is greater than the IDL but less than the CRDL. The were no affected results for aluminum, calcium, and iron as the associated results were either non-detect or greater than two times the CRDL. All other method blanks were acceptable.

3.3 INTERFERENCE CHECK SAMPLES

One set of interference check samples (ICSs) consisting of an interferent solution (ICS-A) and analyte-interferent mix solution (ICS-AB) was run at the start and end of both ICP-AES sample analysis runs as required. The ICS-A and ICS-AB solutions contain known concentrations of four proven interfering compounds, aluminum, calcium, iron, and magnesium. It is of note that the composition of the ICS-AB solution is not inclusive of the analytes measured as part of this sampling program. The ICS-AB solution should be expanded to include antimony, arsenic, boron, potassium, selenium, and sodium in future cases under this contract.

Results of the four analytes in the ICS-A sample should be within \pm CRDL of the true concentration according to HW-3a or within $\pm 2 \times$ CRDL according to the NYS ASP. None of the ICS-A results for the four interfering compounds met the state or federal criterion. It is noted by the laboratory in the case narrative that the true concentrations for these compounds in both solutions are double the maximum concentration of the instrument's linear range. Therefore, while noted, no results are qualified based on these failing QC results.

Analytical results for the ICS solution results for iron were outside the acceptable percent recoveries (80% - 120%) in all eight ICS samples over both analytical runs, with reported percent recoveries between 60.9% and 63.4%.

Nine client samples in the SDG (8908-SH, GW Dep Drain 1, Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, GW Dep Drain 3, Inlet to Pond, and Pond Grab) were reported as having an interferent concentration, specifically calcium, at similar interfering levels (i.e., 250 mg/L for aluminum, calcium, magnesium, and 100 mg/L for iron). Therefore, the iron results were qualified as estimated low (J-) in 8908-SH, Under Drain 1, Under Drain 2, Under Drain 3, GW Dep Drain 3, and Inlet to Pond, and as a usable estimate (UJ) for GW Dep Drain 1 and the Leak Detection System as these iron results were non-detect.

In addition to the percent recovery analysis, the EPA guidance in HW-3a includes steps for reviewing the ICS-A and ICS-AB raw data for analytes *not* present in the true solutions. Any analyte not present in the true solution that produces an instrument reading greater than its IDL indicates the possibility of a false positive created by the presence of interferents. Conversely, any analyte not present in the true solution that produces an instrument reading lower than its negative IDL indicates the possibility of a false negative due to the presence of interferents. Since the raw data included in the laboratory data package did not report the negative results, the presence of false negatives could not be assessed.

The Barium concentration in the final ICS-A sample for the November 1, 2019 run was greater than the IDL. The associated barium Pond Grab result greater than or equal to the IDL were qualified as bias high (J+) for a possible false positive effect due to calcium interference.

3.4 MATRIX SPIKES

Two pre-digestion matrix spikes were performed for the October 31, 2019 analytical run, and one pre-digestion matrix spike was performed for the November 1, 2019 analytical run. Matrix spikes are not required for calcium, magnesium, potassium, and sodium and these analytes were excluded from the matrix spike. Boron was also excluded from the matrix spike, yet this analyte is required for this quality assurance check and should be added to future analyses. The 9306-SH sample and Leak Detection System samples were used to prepare the matrix spikes for the October 31, 2019 run and the Pond Grab sample was used for the November 1, 2019 run. Qualifications based on matrix spikes that do not meet technical criteria are only to be applied to the sample used to prepare the matrix spike per HW-3a protocol.

According to the ICP-AES method, EPA 200.7, the spike is to be made at a concentration equal to 0.2 mg/L for all analytes, or 100 times the IDL, whichever is greater. The spike concentrations for arsenic (0.04 mg/L), cadmium (0.05 mg/L), and selenium (0.01 mg/L) were made too low. While spike concentrations for aluminum (2.0 mg/L), antimony (0.5 mg/L), barium (2.0 mg/L), copper (0.25 mg/L), iron (1.0 mg/L), manganese (0.5 mg/L), nickel (0.5 mg/L), and zinc (0.5 mg/L) were too high. No qualifications were made based on this observation, but spike concentrations should be adjusted for future work under this contract.

Boron concentrations in 9306-SH, the Leak Detection System, and the Pond Grab client sample results were qualified as usable estimates due to the omitted matrix spikes. The matrix spike recoveries for the 9306-SH were greater than the acceptable limits (75-125%) for aluminum and iron at 126% and 161% respectively, and less than the acceptable limits for selenium at 65%. The matrix spike recoveries for the Leak Detection System were less than the acceptable limits for barium, and selenium at 31.1% and 71% respectively. The matrix spike recoveries for the Pond Grab were less than the acceptable limits for barium at 20.9%, and greater than the acceptable limits for cadmium, chromium, copper, selenium, and zinc at 129, 127, 128, 197, and 137% respectively. Post-digestion spikes were performed with acceptable results for 9306-SH and the Leak Detection System. The results of the post-digestion spike for the Pond Grab were greater than the acceptable limits for cadmium, copper, iron, nickel, selenium, and zinc at 136, 128, 128, 131, 205, and 143% respectively.

For matrix spike recoveries below 30 percent or between 30 and 74%, with a post-digestion spike greater or equal to 75% the affected results greater than the IDL are qualified as estimated J. Therefore, the barium results for the Leak Detection System and the Pond Grab were qualified as J. For matrix spike recoveries between 30 to 74% with an acceptable post-digestion spike, non-detect affected results are qualified as estimated. Therefore, the selenium result for the Leak Detection System and 9306-SH are qualified as UJ. For matrix spike recoveries greater than 125%, with an acceptable post-digestion spike result, the affected results greater than the IDL are qualified as estimated while the non-detect results are not qualified. Therefore, the iron result for 9306-SH is qualified as J.

For pre and post-digestion matrix spike recoveries above 125% results greater than the IDL are qualified as estimated high, while non detect results are not qualified. Therefore, the Pond Grab result for selenium are qualified as J+.

The 9306-SH, GW Dep Drain 3, and Inlet to Pond client samples were used for the AA matrix spikes. The GW Dep Drain 3 matrix spike percent recovery of 79.6% was flagged for being outside of the laboratories acceptable range of 80.8 to 119% but was within the HW-3C acceptable range of 75-125%, therefore no data was qualified based on this result. The Inlet to Pond percent recovery was reported as 45.2%, below the acceptable range. The Inlet to Pond mercury result for the AA analysis was non-detect and per HW-3C was classified as estimated (UJ). Under Drain 1 was used for the CVAFS matrix spike and the percent recovery was in the acceptable range.

3.5 DUPLICATE SAMPLES

Two duplicates were prepared in the laboratory for the October 31, 2019 analytical run, and one duplicate was prepared for the November 1, 2019 run. For the October 31, 2019 run, 9306-SH and the Leak Detection System client samples were used for the ICP-AES laboratory duplicate sample and the Pond Grab sample was used for the November 1, 2019 run. The acceptable criteria with respect to the duplicate samples were met.

Client samples 9306-SH, GW Dep Drain 3, and Inlet to Pond were used for the AA laboratory duplicates. Duplicate sample analysis was not performed on a client sample for the CVAFS run,

but a matrix spike duplicate was provided. All AA laboratory duplicates and the CVAFS matrix spike duplicate resulted in acceptable RDPs.

In addition to the laboratory duplicate, the Lockwood SAP stipulates a field duplicate be taken at a frequency of one duplicate per sampling event per matrix. A form (A.4) evaluating the field duplicates was appended to the quality control documentation for metals in Attachment 3. For the groundwater matrix a duplicate was performed for 8909-D, for the surface water matrix a duplicate was performed for the Keuka Upstream sample. For 8909-D, the RPD was greater than the acceptable percentage of 20% and the sample and field duplicate were greater than five times the CRDL for iron. Based on HW-3a the sample and the duplicate iron results are qualified as estimated (J). Also for 8909-D, for aluminum and zinc the sample and duplicate results were less than five times the CRDL and the absolute difference was greater than the CRDL. Therefore, the aluminum and zinc results for 8909-D and its duplicate were qualified as estimated (J). For the surface water sample and duplicate all of the results were acceptable.

3.6 LABORATORY CONTROL SAMPLE

One ICP-AES laboratory control sample (LCS) was analyzed with each day/run at proper concentrations. Three mercury LCS were ran as well, two with the AA analysis and one with the CVAFS analysis. All percent recoveries were within acceptable limits.

3.7 SERIAL DILUTIONS

Serial dilutions were made at a 1:5 ratio to reduce concentrations of interfering analytes within the matrix to evaluate possible matrix effects. Two serial dilutions were prepared for the October 31, 2019 analytical run, and one serial dilution was prepared for the November 1, 2019 run. The data must be qualified as usable estimates if the diluted sample is not within 10% of the original sample for all analytes with initial concentrations greater than 50 times the IDL. If the diluted concentration is greater than 100% different than the original concentration, all associated data must be rejected. Analytes with initial concentrations less than 50 times their IDL are not evaluated.

For the October 31, 2019 run, the client sample 9306-SH and the Leak Detection System were subject to serial dilution. For the November 1, 2019 run, the client sample Pond Grab was subject

to serial dilution. The laboratory narrative stated that potassium and sodium for 9306-SH, calcium, potassium and sodium for Leak Detection System, and boron, calcium, potassium, and sodium for Pond Grab did not meet the 10% RPD criteria. The QC summary sheets for serial dilution only reported an RPD greater than 10% for calcium and sodium in the Leak Detection System and boron, calcium, potassium and sodium for Pond Grab. The laboratory narrative correctly stated the failing serial dilution results and the QC Summary sheets provided in Attachment 3 were corrected.

Based on the HW-3a protocol, analytes failing the technical criteria result in the qualification of that analyte only in the sample from which the serial dilution was made. Thus, the potassium and sodium results in 9306-SH; the calcium, potassium, and sodium results in the Leak Detection System; and the boron, calcium, potassium, and sodium results in the Pond Grab were flagged as estimated (J) based on these failing serial dilution results. Other serial dilution results that were flagged in the QC Summary sheets were determined to be acceptable because the sample concentrations were less than 50 times the IDL, so no qualifications were made. These results include: arsenic, barium, and iron in the Pond Grab; arsenic and manganese in the Leak Detection System; and barium, boron, copper, and manganese in 9306-SH.

3.8 INSTRUMENT DETECTION LIMITS AND LINEAR RANGES

Instrument detection limits are to be verified on a regular basis. The frequency with which the laboratory is to verify the IDLs is unclear. The state guidance stipulates IDLs be verified annually. The Lockwood Ash Disposal Site's SAP indicates that the IDLs be determined within six months of the analysis. The federal guidance, neither HW-3a nor HW-3c, has guidance on the frequency with which IDLs should be verified. The ICP-AES Method Detection/ Reporting Limits (updated 9/3/19) provided with the data package was updated approximately two weeks prior to the sampling event and, therefore, is acceptable per state guidance and the SAP. The date of IDL certification for AA, dated 2/12/19 and updated 12/12/2018, is acceptable per state guidance and but not the SAP.

Another non-compliance issue of note is the IDLs for selenium and arsenic are not less than half their corresponding CRDL. This is a requirement of both the state and EPA guidance documents. No data are flagged as a result of this observation.

ICP-AES linear range determinations were not provided with the data package. The federal guidance, HW-3a, does not specify the frequency at which the instrument's linear ranges should be verified. The linear range determination is to be made within six months of the analysis according to the SAP. Again, while no data have been flagged due to this oversight, it should be corrected for future data packages under this contract.

4 WET CHEMISTRY

Wet chemistry results for alkalinity, ammonia, color, conductivity, chloride, sulfate, total dissolved solids (TDS), and total organic carbon (TOC) were included in the data package. There was one field duplicate analyzed per matrix (surface water and groundwater) with this event. Data from the field duplicate and its sample results were compared using Form A.4. Unlike metals, CRQLs are not established for conventional parameters, therefore, RPD is calculated for all comparisons where at least one of the results is greater than the reporting limit. The absolute difference is not calculated for any comparison. The completed Form A.4s are appended to the quality control documentation for wet chemistry in Attachment 3. All field duplicate comparisons for the groundwater matrix were acceptable. The surface water duplicate (Keuka Upstream) result for conductivity had an RPD of 20.8% and the result for TDS had an RPD of 58.5%. The conductivity and TDS results for Keuka Upstream and its duplicate Surface Water Dup were qualified as J.

The majority of quality control checks were within acceptable limits for the wet chemistry analytical data. The exceptions are detailed in the subsections below.

4.1 ALKALINITY

The site's SAP calls for one reference standard and one duplicate in every ten client samples for alkalinity analyses. The laboratory performed three LCS, or reference standard, on September 23, 2019 for 23 samples, and two on October 4, 2019 for the remaining 2 samples. The laboratory performed one matrix spike and matrix spike duplicate pair on September 23, 2019, and two on October 4, 2019. Two laboratory duplicates were performed for September 23, 2019 (one on a client sample) but none for October 4, 2019. One method blank was performed with each run. All quality control samples were within acceptable limits, the method blank results were listed at the detection limit. No qualifications were necessary.

4.2 AMMONIA

All samples for this event were analyzed in two ammonia runs, one on September 30, 2019 and one on October 2, 2019. The site's SAP calls for one duplicate per SDG for ammonia analyses. EPA method 350.1 for ammonia also requires initial and continuing calibration verifications and blanks at the beginning and end of each run, as well as, after every tenth client sample for

instrument calibration quality control checks. Additionally, one method blank, one LCS, and one reference sample are required per batch of samples and one matrix spike on a minimum of 10% of client samples per EPA method 350.1. All required quality control checks were performed; however, the two reported duplicate results (one with the September 30, 2019 run and one with the October 2, 2019 run) were for samples from a different data package. Matrix spike/matrix spike duplicate pairs were performed on samples from the data package. The SAP is not specific whether it is an acceptable practice to use a matrix spike/matrix spike duplicate pair to meet this criterion in lieu of duplicate analysis on an unspiked client sample. No data were flagged based on this observation.

Reported quality control results were acceptable except for one failing CCV during the October 2, 2019 run. The failing CCV result was not associated with any client samples. The percent recoveries on the September 30, 2019 samples were less than the acceptable range of 80 - 115% with a percent recovery of 66.6% and 72.7%, respectively. The October 2, 2019 CRI samples were also less than the acceptable range at 54.4% and 57.3% respectively. All ammonia results greater than the IDL (0.1 mg/L), but less than five times the IDL (0.5 mg/L), were qualified as estimated low (J-) based on this failing QC result. This includes the results for 1842, 8404, 8911-SH, 8942-D, Under Drain 1, Under Drain 3, Inlet to Pond, and Pond Grab.

4.3 COLOR

All samples for this event were analyzed in two runs one on September 20, 2019 and one on October 1, 2019. Three duplicate samples and two method blanks were performed on September 20, 2019, and one duplicate and one method blank on October 1, 2019. The reported QC results were acceptable and the duplicate frequency was as required. Color blanks are to be run after every ten samples according to the site's SAP. Therefore, the frequency of blanks was low. No qualifications were made based on this observation.

4.4 CONDUCTIVITY

Client samples were analyzed for conductivity in two runs performed on September 20, 2019 and one on October 4, 2019. The site's SAP requires an LCS to be analyzed every ten client samples, but only one LCS was analyzed per run. Three duplicates were performed for the entire data

package of 26 client samples, meeting the one in 20 client samples as required per the site's SAP. The percent recoveries of the LCS sample and the RPD of the duplicate analysis were acceptable.

No blank was reported for conductivity measurements. The site's SAP stipulates one blank be analyzed daily with a resulting concentration of less than 2 µmhos/cm. No results were flagged based on this observation, but a conductivity blank should be analyzed and reported in the future.

4.5 CHLORIDE AND SULFATE

Chloride and sulfate were measured using ion chromatography EPA method 300.0. The event's samples were analyzed in two analytical runs beginning on October 4, 2019 and October 7, 2019. The instrument calibration, initial and continuing calibration verifications, initial and continuing calibration blanks, and method blanks were performed as required. It was observed that the concentration of the ICV/CCVs used, 10 mg/L, was not mid-range of the calibration curve (0 to 100 mg/L) as required by EPA method 300.0. In the future, the concentration of the ICV/CCVs should be closer to 50 mg/L. No qualifications were made based on this observation.

The site's SAP calls for one duplicate in every 20 client samples for chloride and sulfate analyses while the EPA method used specifies one matrix spike for a minimum of 10% of client samples. The laboratory performed five matrix spike and matrix spike duplicate pairs on client samples. No laboratory duplicates were performed on client samples, but acceptable results for two duplicates for chloride only in separate client samples were provided in the data package. The EPA method 300.0 stipulates that the concentration of the spike added be the same as that used for the LCS. The laboratory used different concentrations for these quality control samples. No data were flagged based on these observations.

The percent recovery for the all five matrix spikes were within the acceptable range. The matrix spike percent recovery for Pond Grab was 87.6% and was flagged by the laboratory as less than the laboratory's acceptable limit of 90%. However, the percent recovery is within the SAP's acceptable limit of 75% - 100%. Further, the SAP states that the results of a matrix spike for chloride and sulfate are only applicable when the added concentration is at least 25% of the sample concentration. In this case it was not, therefore no data was qualified based on the Pond Grab matrix spike result.

4.6 TOTAL DISSOLVED SOLIDS

Similar to conductivity, no blank was reported for TDS measurements. The site's SAP stipulates one blank be analyzed daily with a result less than the reporting limit. No results were flagged based on this observation, but a TDS blank should be analyzed and reported in the future.

The site's SAP calls for one duplicate sample analysis to be performed on a minimum of one sample per SDG. The event's samples were analyzed on two different days, one passing duplicate analysis was performed for each day. The Site's SAP also calls for one reference sample in ten client samples. Three passing reference sample (LCS) were reported in the data package over the two days.

4.7 TOTAL ORGANIC CARBON

The client samples were analyzed in one run beginning on October 1, 2019. Per the Lockwood Ash Disposal Site's SAP, a matrix spike sample, a LCS, and a duplicate sample is to be performed at the frequency of one per ten samples. Two matrix spike and matrix spike duplicate pairs were performed, one LCS, and no laboratory duplicates were included the laboratory data package, which did not meet the frequency requirements. No data were flagged based on these observations.

The percent recoveries and RPDs of the matrix spike and matrix spike duplicate pairs, respectively, and were all within acceptable limits. The LCS percent recovery was within the acceptable limit.

An initial and a mid-run CRI check standard were performed during the run. The initial and mid-run CRI check standard resulted in a percent recovery of 129% and 120% respectively, which was within the laboratory's acceptable range of 50-150%. However, the acceptable range per the Site's SAP is between 85 and 115%. As a result, all total organic carbon sample results above, but less than five times the reporting limit are qualified as estimated high (J+). These samples include 1842, 8404, 8908-SH, 8909-D, 8942-D, GW Dup 8909-D, Leak Detection System, Keuka Upstream, Keuka Downstream, and the Surface Water Dup.

5 CORRECTNESS AND USABILITY SUMMARY

A summary of all qualified data is presented in Table 5-1. Most data for this SDG are considered usable in their current form. Data flagged with a J or UJ are considered usable with caution. Rejected data are considered unreliable and should not be used in any data tables or data analyses. No data was rejected.

Completeness of the laboratory analysis as defined by the Lockwood SAP is the percentage of baseline data that have not been rejected as a result of validation. Therefore, the completeness for laboratory analyses is 100% for this sample event. This exceeds the completeness goal stated in the SAP of 85% of the required laboratory analyses.

**Table 5-1: Summary of Qualified Data for Lockwood Ash Disposal Site
September 2019 Baseline Event**

Client Sample ID	Field Measurements ¹	Al	As	B	Ba	Ca	Cd	Cr	Cu	Fe	Hg	K	Mg	Mn	Na	Ni	Sb	Se	Zn	CON	NH ₄	TOC	TDS
1842	All J ²	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	
8401	All J ²																				0.4J ⁻¹⁶	1.8J ⁺¹⁷	
8404	All J ²							4.23J ⁺¹⁷													0.2J ⁻¹⁶	1.5J ⁺¹⁷	
8908-D	All J ²																						
8908-SH	All J ²									89.7J ⁻⁵												1.4J ⁺¹⁷	
8909-D	All J ²	1,530J ¹⁵							25.0J ⁴	4.870J ¹⁴									119J ¹⁵			2.5J ⁺¹⁷	
8909-SH	All J ²								25.0J ⁴														
8910-D	All J ²																						
8911-D	All J ²																						
8911-SH	All J ²																						
8942-D	All J ²																				0.2J ⁻¹⁶		
9306-SH	All J ²									770J ¹¹											0.3J ⁻¹⁶	2.8J ⁺¹⁷	
GW Dep Drain 1	All J ²									100J ⁵													
GW Dup (8909-D)	All J ²	978J ¹⁵																					
Leak Detect Syst	All J ²																						
Under Drain 1	All J ²																						
Under Drain 2	All J ²																						
Under Drain 3	All J ²																						
GW Dep Drain 3	All J ²																						
Inlet to Pond	All J ²																				0.3J ⁻¹⁶		
Keuka Downstream	All J ²																					3.1J ⁺¹⁷	
Keuka Upstream	All J ²																					3.2J ⁺¹⁷	145J ¹⁴
Surface Water Dup	All J ²																					3.2J ⁺¹⁷	265J ¹⁴
Pond Grab	All J ²																				0.2J ⁻¹⁶		
Field Blank/LLHG	All J ²																						

FOOTNOTES: (When more than one qualification applies, the most stringent qualification or combination of qualifications is used, as shown.)

- ¹Includes temperature, pH, & turbidity
- ²No Reference Standard Measurements
- ³CCV between 111-125% Recovery
- ⁴ICB or Associated CCB ≥ IDL, but < CRDL
- ⁵ICS between 50 - 79% Recovery
- ⁶ICS-A or ICS-AB Indicates False Positive
- ⁷No Matrix Spike
- ⁸Matrix Spike Recovery < 30%, Post Spike Recovery ≥ 75%
- ⁹Matrix Spike Recovery ≤ 30 - 74%, Post Spike Recovery ≥ 75%
- ¹⁰Matrix Spike Recovery > 125%, Post Spike Recovery > 125%
- ¹¹Matrix Spike Recovery > 125%, Post Spike Recovery < 125%
- ¹²Matrix Spike Recovery ≤ 30 - 74%
- ¹³Serial Dilution > 10%, but < 100%
- ¹⁴Field Duplicate RDP > 20%
- ¹⁵Field Duplicate Difference > CRDL
- ¹⁶CRI/CRA Check Standard Recovery < 80%
- ¹⁷CRI Check Standard Recovery > 115%
- ¹⁸No CRI Check Standard

ATTACHMENT 1

Field Data Report & Chain of Custody

Lockwood Ash Landfill							l/min	Date: 9/18/19		
Well ID	SWL	pH	Temp	Turbidity	D.O.	Flow	Time	Comments	GW Dup	SF Dup
7741	22.43	NA	NA	NA	NA	NA	1451			
1842	7.32	8.0	11	142	NA	NA	0925	0725		
8401	7.71	8.2	15	6	NA	NA	1445			
8402	9.69	NA	NA	NA	NA	NA	1503			
8403	8.00	NA	NA	NA	NA	NA	1505			
8404	10.40	7.2	15	5	NA	NA	1645			
8405	Dry				NA	NA	1459	Dry		
8406	12.89	NA	NA	NA	NA	NA	1445			
8407	17.23	NA	NA	NA	NA	NA	1512	Dry/Destructed		
8908-D	6.42	7.8	17	<1	NA	NA	1350			
8908-SH	8.01	8.8	15	3	NA	NA	1340			
8909-D	45.74	9.6	16	>999	NA	NA	1500			
8909-SH	11.18	7.8	18	8	NA	NA	1105			
8910-D	22.91	7.6	16	4	NA	NA	1155			
8910-SH	6.48	Inadequate Recovery			NA	NA	0700			
8911-D	26.89	7.5	14	<1	NA	NA	1205			
8911-SH	25.61	8.1	11	12	NA	NA	0745			
8942-D	15.84	7.5	10	<1	NA	NA	0715			
9306-SH	9.81	7.6	11	4	NA	NA	0700	080700		
GW DD 1	NA	7.3	15	3.21	5.12	1.275	1240			
GW DD 2	NA						1005	Dry		
GW DD 3	NA	7.5	20	4.45	3.67	0.200	1030			
GW DD 4	NA						1007	Dry		
Leak Det.	NA	8.0	16	5.71	5.90	0.175	1148			
UnDr. 1	NA	7.8	14	26.9	6.89	17.25	1315			
UnDr. 2	NA	7.5	15	20.0	6.28	6.75	1223			
UnDr. 3	NA	7.5	15	16.8	4.12	0.650	1125			
Inlet to Pond	NA									
UnDr. 5	NA						1440	Not Flowing Dry		
Keuka US	NA	8.5	19	4.82	5.20	NA	1410			X
Keuka DS	NA	8.2	18	15.5556	5.21	NA	1345			
Pond Grab	NA					NA				
Field Blank	NA	7.4	10	<1	4.18	NA	1425	Dry/Empty		



314 North Pearl Street
 Albany, New York 12207
 518-434-4545 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 190920022

EXPERIENCE IS THE SOLUTION

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Client Name: Lockwood Hills LLC		Address:			
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Annual		Samplers Name: <i>Ryan Baistley K. Ambler</i>	
Client Phone No:		PO #:		Samplers Signature: <i>[Signature]</i>	
Client Fax No:					

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis
				Matrix	C	G		
001	1842	9/19/19	0725	(A) GW		G	5	Lockwood Ash LF Annual
002	8401	9/18/19	1445	(A) GW		G	5	Field pH, Temp, Turbidity
003	8404	9/18/19	1645	(A) GW		G	5	
004	8908-D	9/18/19	1350	(A) GW		G	5	
005	8908-SH	9/18/19	1340	(A) GW		G	5	
006	8909-D	9/18/19	1500	(A) GW		G	5	
007	8909-SH	9/18/19	1105	(A) GW		G	5	
008	8910-D	9/18/19	1155	(A) GW		G	5	
009	8910-SH	9/19/19	0800	(A) GW		G	5	observation only
010	8911-D	9/18/19	1205	(A) GW		G	5	
011	8911-SH	9/19/19	0745	(A) GW		G	5	
012	8942-D	9/19/19	0715	(A) GW		G	5	

Shipment Arrived Via:
 FedEx UPS Client AES Other: _____

Special Instructions/Remarks:
 Page 1 of 3

Turnaround Time Requested:
 1 Day 3 Day Normal
 2 -Day 5 Day

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by:	Date	Time

Sample Temperature Ambient <u>(Chilled)</u> Chilling Process Begun Notes: <u>4°C</u>	Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____	Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____
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314 North Pearl Street
 Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#:

190920022

EXPERIENCE IS THE SOLUTION

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Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Annual			Samplers Name: Ryan Baisley K. Amba				
Client Phone No:		PO #:			Samplers Signature: <i>[Signatures]</i>				
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
013	9306-SH	9/19/19	0700	A P	GW		G	5	Lockwood Ash LF Annual
014	GW Dup 8909-D	9/18/19	1500	A P	GW		G	5	Field pH, Temp, Turbidity
015	GW Dep Drain 1	9/18/19	1240	A P	GW		G	5	+ Field Flow Reading, DO
016	Leak Detection Syst.	9/18/19	1148	A P	GW		G	5	+ Field Flow Reading, DO
017	Under Drain 1	9/18/19	1315	A P	GW		G	6	+ Field Flow Reading, DO
018	Under Drain 2	9/18/19	1223	A P	GW		G	5	+ Field Flow Reading, DO
019	Under Drain 3	9/18/19	1125	A P	GW		G	5	+ Field Flow Reading, DO
020	Inlet to Pond	9/19/19	0730	A P	GW		G	60	+ Field Flow Reading, DO <i>(obs) observation only</i>
021	Keuka Upstream	9/18/19	1410	A P	SF		G	5	Lockwood Annual + DO
022	Keuka Downstream	9/18/19	1345	A P	SF		G	5	Lockwood Annual + DO
023	Surface Water Dup	9/18/19	1412	A P	SF		G	5	Lockwood Annual + DO
024	Pond Grab	9/18/19	0730	A P	GW		G	60	Lockwood Annual + DO <i>(obs) observation only</i>
Shipment Arrived Via: FedEx UPS Client <input checked="" type="checkbox"/> AES Other: _____				Special Instructions/Remarks: Page 2 of 3					
Turnaround Time Requested: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
Sample Temperature Ambient <input checked="" type="checkbox"/> Chilled Chilling Process begun Notes: 4°C		Properly Preserved <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Notes: _____			Received Within Holding Times <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Notes: _____				



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

190920022

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Annual				Samplers Name: K. Aruba / Bryan Baiske			
Client Phone No:		PO #:				Samplers Signature:			
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
025	Field Blank	9/18/19	1425	A P	GW		G	5	Lockwood Ash LF Annual Field pH, Temp, Turbidity, D.O.
026	GW Dep Drain 3	9/18/19	1030	A P	GW		G	5	+Field Flow Reading
027	LLHG Field Blank	9/18/19	1310	A P	GW		G	1	EPA 1631
028	GW Dep Drain 2	9/18/19	1005	A P	GW			0	Observation Only
029	GW Dep Drain 4	9/18/19	1007	A P	GW			0	Observation Only
030	Under Drain 5	9/18/19	1440	A P	GW			0	Observation Only
031	8405	9/18/19	1459	A P	GW			0	Observation Only
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
Shipment Arrived Via: FedEx UPS Client <input checked="" type="checkbox"/> AES Other: _____				Special Instructions/Remarks: Page 3 of 3					
Turnaround Time Requested: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
Sample Temperature Ambient <input checked="" type="checkbox"/> Chilled Chilling Process begun		Properly Preserved <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			Received Within Holding Times <input checked="" type="checkbox"/> Y <input type="checkbox"/> N				
Notes: 4°C		Notes:			Notes:				



314 North Pearl Street
 Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#:

190920022

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: <i>Lockwood Hills</i>		Address:							
Send Report to: <i>Dee Irwin Chris Gill</i>		Project Name (Location): <i>Lockwood Ash Landfill</i>				Samplers Name: <i>K. Ambrose</i>			
Client Phone No:		PO #:				Samplers Signature: <i>[Signature]</i>			
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
032	Inlet to Pond	9/30/19	1240	A	WW	X	6	Lockwood Ash LF Annual Field pH Temp, Turbidity + Field Flow Reading, DO	
				P					
				A					
033	Pond Grab	9/30/19	1307	A	WW	X	6	Lockwood annual + DO	
				P					
				A					
034	LLHG FB	10/30/19	1235	A	WA		1	EPA 1631	
				P					
				A					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____		Special Instructions/Remarks:							
Turnaround Time Requested: <input checked="" type="checkbox"/> Normal									
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>				Date 10/1/19		Time 12:55P	
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>				Date 10/1/19		Time 1500	
Relinquished by: (Signature) <i>[Signature]</i>		Received for Laboratory by: <i>[Signature]</i>				Date 10/1/19		Time 4:04 PM	
Sample Temperature Ambient (hilled) Chilling Process begun Notes: <u>4°C</u>		Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____				Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____			

Attachment 2
Sample Data Group 1842

Sample Results

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 1842
Collection Date: 9/19/2019 7:25:00 AM
Lab Sample ID: 190920022-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
pH (E150.1)	8.0			S.U.		9/19/2019 7:25:00 AM
Temperature (E170.1)	11			deg C		9/19/2019 7:25:00 AM
Turbidity (E180.1)	142	1.0	J	NTU		9/19/2019 7:25:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	0.10	0.20	J	µg/L	1	9/21/2019 1:40:40 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	978	200		µg/L	1	10/31/2019 12:01:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:01:00 PM
Arsenic	5.98	10.0	J	µg/L	1	10/31/2019 12:01:00 PM
Barium	74.7	200	J	µg/L	1	10/31/2019 12:01:00 PM
Boron	284	50.0		µg/L	1	10/31/2019 12:01:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:01:00 PM
Calcium	81900	5000		µg/L	1	10/31/2019 12:01:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 12:01:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 12:01:00 PM
Iron	3190	100		µg/L	1	10/31/2019 12:01:00 PM
Magnesium	56200	5000		µg/L	1	10/31/2019 12:01:00 PM
Manganese	242	15.0		µg/L	1	10/31/2019 12:01:00 PM
Nickel	2.84	40.0	J	µg/L	1	10/31/2019 12:01:00 PM
Potassium	25900	5000		µg/L	1	10/31/2019 12:01:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:01:00 PM
Sodium	43800	50000	J	µg/L	10	10/31/2019 12:05:00 PM
Zinc	10.4	20.0	J	µg/L	1	10/31/2019 12:01:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	436	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	ND	2.00		mg/L	2	10/4/2019 1:27:00 PM
Sulfate	238	20.0		mg/L	10	10/7/2019 5:26:45 PM

*BAV
12/12/19*

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 1842
Collection Date: 9/19/2019 7:25:00 AM
Lab Sample ID: 190920022-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
						Analyst: DAA
ALKALINITY TO PH 4.5 - SM 2320B-2011						
Alkalinity, Total (As CaCO3)	140	10		mgCaCO3/L	1	9/23/2019
						Analyst: PL
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						
Nitrogen, Ammonia (As N)	0.4	0.1	J-	mg/L	1	9/30/2019 1:46:59 PM
						Analyst: KB
CONDUCTANCE AT 25C - SM 2510B-2011						
Specific Conductance	755	1		µmhos/cm	1	9/20/2019
						Analyst: CC
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						
TDS (Residue, Filterable)	405	5		mg/L	1	9/25/2019
						Analyst: NK
TOTAL ORGANIC CARBON - SM 5310C-2011						
Total Organic Carbon	1.8	1.0	J+	mg/L	1	10/1/2019 2:44:00 PM
						Analyst: PL
COLOR (PLATINUM-COBALT) - SM 2120B-2011						
Color	7	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAM
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8401
Collection Date: 9/18/2019 2:45:00 PM
Lab Sample ID: 190920022-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
pH (E150.1)	8.2			S.U.		9/18/2019 2:45:00 PM
Temperature (E170.1)	15			deg C		9/18/2019 2:45:00 PM
Turbidity (E180.1)	6	1.0		NTU		9/18/2019 2:45:00 PM
<p><i>Handwritten: 4014</i></p> <p><i>Handwritten: BAMS 12/12/19</i></p>						
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 9/20/2019)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	9/21/2019 1:42:23 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 9/20/2019)						Analyst: KH
Aluminum	ND	200		µg/L	1	10/31/2019 12:17:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:17:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 12:17:00 PM
Barium	63.3	200	J	µg/L	1	10/31/2019 12:17:00 PM
Boron	817	50.0		µg/L	1	10/31/2019 12:17:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:17:00 PM
Calcium	88700	5000		µg/L	1	10/31/2019 12:17:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 12:17:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 12:17:00 PM
Iron	228	100		µg/L	1	10/31/2019 12:17:00 PM
Magnesium	25300	5000		µg/L	1	10/31/2019 12:17:00 PM
Manganese	65.6	15.0		µg/L	1	10/31/2019 12:17:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 12:17:00 PM
Potassium	2700	5000	J	µg/L	1	10/31/2019 12:17:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:17:00 PM
Sodium	65500	50000		µg/L	10	10/31/2019 12:24:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 12:17:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: KH
Total Hardness (As CaCO3)	326	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	45.4	2.00		mg/L	2	10/4/2019 10:41:33 PM
Sulfate	74.8	4.00		mg/L	2	10/4/2019 10:41:33 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8401
Collection Date: 9/18/2019 2:45:00 PM
Lab Sample ID: 190920022-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	390	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.9	0.1		mg/L	1	9/30/2019 1:48:40 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	911	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	450	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 3:00:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: 8404
Work Order: 190920022	Collection Date: 9/18/2019 4:45:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-003
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.2			S.U.		9/18/2019 4:45:00 PM
Temperature (E170.1)	15			deg C		9/18/2019 4:45:00 PM
Turbidity (E180.1)	5	1.0	JJJ	NTU		9/18/2019 4:45:00 PM

MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 9/20/2019)

Mercury	ND	0.20		µg/L	1	9/21/2019 1:44:03 PM
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ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 9/20/2019)

Aluminum	ND	200		µg/L	1	10/31/2019 12:29:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:29:00 PM
Arsenic	6.95	10.0	J	µg/L	1	10/31/2019 12:29:00 PM
Barium	67.3	200	J	µg/L	1	10/31/2019 12:29:00 PM
Boron	323	50.0		µg/L	1	10/31/2019 12:29:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:29:00 PM
Calcium	121000	5000		µg/L	1	10/31/2019 12:29:00 PM
Chromium	4.23	10.0	J	µg/L	1	10/31/2019 12:29:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 12:29:00 PM
Iron	518	100		µg/L	1	10/31/2019 12:29:00 PM
Magnesium	25000	5000		µg/L	1	10/31/2019 12:29:00 PM
Manganese	223	15.0		µg/L	1	10/31/2019 12:29:00 PM
Nickel	7.85	40.0	J	µg/L	1	10/31/2019 12:29:00 PM
Potassium	1600	5000	J	µg/L	1	10/31/2019 12:29:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:29:00 PM
Sodium	22100	5000		µg/L	1	10/31/2019 12:29:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 12:29:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	405	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/4/2019 1:46:03 PM
Sulfate	85.1	4.00		mg/L	2	10/4/2019 1:46:03 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8404
Collection Date: 9/18/2019 4:45:00 PM
Lab Sample ID: 190920022-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	360	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1	J-	mg/L	1	9/30/2019 1:53:34 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	744	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	395	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.5	1.0	J+	mg/L	1	10/1/2019 3:51:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8908-D
Collection Date: 9/18/2019 1:50:00 PM
Lab Sample ID: 190920022-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: FLD

pH (E150.1)	7.8			S.U.		9/18/2019 1:50:00 PM
Temperature (E170.1)	17			deg C		9/18/2019 1:50:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		9/18/2019 1:50:00 PM

MERCURY - EPA 245.1 REV 3.0

(Prep: E245.1 - 9/20/2019)

Analyst: AVB

Mercury	ND	0.20		µg/L	1	9/21/2019 1:45:43 PM
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ICP METALS - EPA 200.7

(Prep: SW3010A - 9/20/2019)

Analyst: KH

Aluminum	ND	200		µg/L	1	10/31/2019 12:32:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:32:00 PM
Arsenic	6.83	10.0	J	µg/L	1	10/31/2019 12:32:00 PM
Barium	15.8	200	J	µg/L	1	10/31/2019 12:32:00 PM
Boron	244	50.0		µg/L	1	10/31/2019 12:32:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:32:00 PM
Calcium	163000	5000		µg/L	1	10/31/2019 12:32:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 12:32:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 12:32:00 PM
Iron	1090	100		µg/L	1	10/31/2019 12:32:00 PM
Magnesium	70400	5000		µg/L	1	10/31/2019 12:32:00 PM
Manganese	107	15.0		µg/L	1	10/31/2019 12:32:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 12:32:00 PM
Potassium	3170	5000	J	µg/L	1	10/31/2019 12:32:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:32:00 PM
Sodium	34400	5000		µg/L	1	10/31/2019 12:32:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 12:32:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: KH

Total Hardness (As CaCO3)	697	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	16.1	2.00		mg/L	2	10/4/2019 2:05:05 PM
Sulfate	298	20.0		mg/L	10	10/4/2019 2:24:07 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8908-D
Collection Date: 9/18/2019 1:50:00 PM
Lab Sample ID: 190920022-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	380	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	9/30/2019 1:55:11 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1200	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	910	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 4:07:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8908-SH
Collection Date: 9/18/2019 1:40:00 PM
Lab Sample ID: 190920022-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

pH (E150.1)	8.8			S.U.		9/18/2019 1:40:00 PM
Temperature (E170.1)	15			deg C		9/18/2019 1:40:00 PM
Turbidity (E180.1)	3	1.0	JJJ	NTU		9/18/2019 1:40:00 PM

MERCURY - EPA 245.1 REV 3.0 Analyst: AVB
 (Prep: E245.1 - 9/20/2019)

Mercury	ND	0.20		µg/L	1	9/21/2019 1:47:23 PM
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ICP METALS - EPA 200.7 Analyst: KH
 (Prep: SW3010A - 9/20/2019)

Aluminum	ND	200		µg/L	1	10/31/2019 12:37:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:37:00 PM
Arsenic	5.85	10.0	J	µg/L	1	10/31/2019 12:37:00 PM
Barium	48.0	200	J	µg/L	1	10/31/2019 12:37:00 PM
Boron	188	50.0		µg/L	1	10/31/2019 12:37:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:37:00 PM
Calcium	229000	50000		µg/L	10	10/31/2019 12:41:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 12:37:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 12:37:00 PM
Iron	89.7	100	J	µg/L	1	10/31/2019 12:37:00 PM
Magnesium	74100	5000		µg/L	1	10/31/2019 12:37:00 PM
Manganese	121	15.0		µg/L	1	10/31/2019 12:37:00 PM
Nickel	3.67	40.0	J	µg/L	1	10/31/2019 12:37:00 PM
Potassium	3000	5000	J	µg/L	1	10/31/2019 12:37:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:37:00 PM
Sodium	21400	50000	J	µg/L	10	10/31/2019 12:41:00 PM
Zinc	11.1	20.0	J	µg/L	1	10/31/2019 12:37:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: KH

Total Hardness (As CaCO3)	878	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: CS

Chloride	15.8	2.00		mg/L	2	10/4/2019 2:43:09 PM
Sulfate	396	20.0		mg/L	10	10/4/2019 3:02:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8908-SH
 Collection Date: 9/18/2019 1:40:00 PM
 Lab Sample ID: 190920022-005
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	440	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 1:56:48 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1370	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	990	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.4	1.0	J+	mg/L	1	10/1/2019 4:23:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8909-D
 Collection Date: 9/18/2019 3:00:00 PM
 Lab Sample ID: 190920022-006
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
pH (E150.1)	9.6		J	S.U.		9/18/2019 3:00:00 PM
Temperature (E170.1)	16		J	deg C		9/18/2019 3:00:00 PM
Turbidity (E180.1)	> 999	1.0	J	NTU		9/18/2019 3:00:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 1:49:04 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	1530	200	J	µg/L	1	10/31/2019 12:56:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 12:56:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 12:56:00 PM
Barium	113	200	J	µg/L	1	10/31/2019 12:56:00 PM
Boron	1060	50.0		µg/L	1	10/31/2019 12:56:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 12:56:00 PM
Calcium	16000	5000		µg/L	1	10/31/2019 12:56:00 PM
Chromium	10.3	10.0	J+	µg/L	1	10/31/2019 12:56:00 PM
Copper	6.16 25.0	25.0	U+	µg/L	1	10/31/2019 12:56:00 PM
Iron	4870	100	J	µg/L	1	10/31/2019 12:56:00 PM
Magnesium	3560	5000	J	µg/L	1	10/31/2019 12:56:00 PM
Manganese	127	15.0		µg/L	1	10/31/2019 12:56:00 PM
Nickel	13.4	40.0	J	µg/L	1	10/31/2019 12:56:00 PM
Potassium	1470	5000	J	µg/L	1	10/31/2019 12:56:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 12:56:00 PM
Sodium	155000	50000		µg/L	10	10/31/2019 1:01:00 PM
Zinc	119	20.0	J	µg/L	1	10/31/2019 12:56:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	54	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	4.18	2.00		mg/L	2	10/4/2019 4:18:58 PM
Sulfate	101	20.0		mg/L	10	10/4/2019 4:38:07 PM

BAK
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: 8909-D
Work Order: 190920022	Collection Date: 9/18/2019 3:00:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-006
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	300	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	9/30/2019 1:58:25 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	747	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	695	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.5	1.0	J+	mg/L	1	10/1/2019 4:39:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	7	5		cpu@pH7	1	9/20/2019 4:00:00 PM

BAMA
12/12/19

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8909-SH
 Collection Date: 9/18/2019 11:05:00 AM
 Lab Sample ID: 190920022-007
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.8		J	S.U.		9/18/2019 11:05:00 AM
Temperature (E170.1)	18		J	deg C		9/18/2019 11:05:00 AM
Turbidity (E180.1)	8	1.0	J	NTU		9/18/2019 11:05:00 AM

MERCURY - EPA 245.1 REV 3.0

(Prep: E245.1 - 9/20/2019)

BAM
12/12/19

Analyst: **AVB**

Mercury	ND	0.20		µg/L	1	9/21/2019 1:54:07 PM
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ICP METALS - EPA 200.7

(Prep: SW3010A - 9/20/2019)

Analyst: **KH**

Aluminum	ND	200		µg/L	1	10/31/2019 1:07:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 1:07:00 PM
Arsenic	9.06	10.0	J	µg/L	1	10/31/2019 1:07:00 PM
Barium	25.6	200	J	µg/L	1	10/31/2019 1:07:00 PM
Boron	253	50.0		µg/L	1	10/31/2019 1:07:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 1:07:00 PM
Calcium	29300	5000		µg/L	1	10/31/2019 1:07:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 1:07:00 PM
Copper	5.03 25.0	25.0	U	µg/L	1	10/31/2019 1:07:00 PM
Iron	47.7	100	J	µg/L	1	10/31/2019 1:07:00 PM
Magnesium	20200	5000		µg/L	1	10/31/2019 1:07:00 PM
Manganese	3.25	15.0	J	µg/L	1	10/31/2019 1:07:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 1:07:00 PM
Potassium	2260	5000	J	µg/L	1	10/31/2019 1:07:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 1:07:00 PM
Sodium	52600	50000		µg/L	10	10/31/2019 1:15:00 PM
Zinc	5.02	20.0	J	µg/L	1	10/31/2019 1:07:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	157	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/4/2019 4:57:09 PM
Sulfate	103	4.00		mg/L	2	10/4/2019 4:57:09 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8909-SH
Collection Date: 9/18/2019 11:05:00 AM
Lab Sample ID: 190920022-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	180	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:03:18 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	507	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	345	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 5:48:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8910-D
Collection Date: 9/18/2019 11:55:00 AM
Lab Sample ID: 190920022-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
pH (E150.1)	7.6			S.U.		9/18/2019 11:55:00 AM
Temperature (E170.1)	16			deg C		9/18/2019 11:55:00 AM
Turbidity (E180.1)	4	1.0	JJJ	NTU		9/18/2019 11:55:00 AM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 9/20/2019)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	9/21/2019 1:55:48 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 9/20/2019)						Analyst: KH
Aluminum	ND	200		µg/L	1	10/31/2019 1:21:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 1:21:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 1:21:00 PM
Barium	24.7	200	J	µg/L	1	10/31/2019 1:21:00 PM
Boron	3760	50.0		µg/L	1	10/31/2019 1:21:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 1:21:00 PM
Calcium	98300	5000		µg/L	1	10/31/2019 1:21:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 1:21:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 1:21:00 PM
Iron	25.2	100	J	µg/L	1	10/31/2019 1:21:00 PM
Magnesium	30500	5000		µg/L	1	10/31/2019 1:21:00 PM
Manganese	8.80	15.0	J	µg/L	1	10/31/2019 1:21:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 1:21:00 PM
Potassium	3720	5000	J	µg/L	1	10/31/2019 1:21:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 1:21:00 PM
Sodium	107000	50000		µg/L	10	10/31/2019 1:26:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 1:21:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: KH
Total Hardness (As CaCO3)	371	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	33.4	2.00		mg/L	2	10/4/2019 5:54:15 PM
Sulfate	361	20.0		mg/L	10	10/4/2019 6:13:18 PM

Handwritten: BMT
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8910-D
Collection Date: 9/18/2019 11:55:00 AM
Lab Sample ID: 190920022-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	170	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:04:56 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1050	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	710	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 6:05:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC **Client Sample ID:** 8910-SH
Work Order: 190920022 **Collection Date:** 9/19/2019 8:00:00 AM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 190920022-009
PO#: **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Poor Recovery			NA		9/19/2019 8:00:00 AM
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Qualifiers: ND - Not Detected at the Reporting Limit S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8911-D
 Collection Date: 9/18/2019 12:05:00 PM
 Lab Sample ID: 190920022-010
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
pH (E150.1)	7.5		J	S.U.		9/18/2019 12:05:00 PM
Temperature (E170.1)	14		J	deg C		9/18/2019 12:05:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		9/18/2019 12:05:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 1:57:30 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 1:31:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 1:31:00 PM
Arsenic	6.24	10.0	J	µg/L	1	10/31/2019 1:31:00 PM
Barium	20.1	200	J	µg/L	1	10/31/2019 1:31:00 PM
Boron	1360	50.0		µg/L	1	10/31/2019 1:31:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 1:31:00 PM
Calcium	60800	5000		µg/L	1	10/31/2019 1:31:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 1:31:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 1:31:00 PM
Iron	127	100		µg/L	1	10/31/2019 1:31:00 PM
Magnesium	19300	5000		µg/L	1	10/31/2019 1:31:00 PM
Manganese	46.0	15.0		µg/L	1	10/31/2019 1:31:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 1:31:00 PM
Potassium	3610	5000	J	µg/L	1	10/31/2019 1:31:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 1:31:00 PM
Sodium	94100	50000		µg/L	10	10/31/2019 1:37:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 1:31:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	231	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	9.79	2.00		mg/L	2	10/4/2019 6:32:20 PM
Sulfate	228	20.0		mg/L	10	10/7/2019 5:45:47 PM

Blank 12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: 8911-D
Work Order: 190920022	Collection Date: 9/18/2019 12:05:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-010
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	220	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:06:33 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	852	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	470	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 6:21:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8911-SH
 Collection Date: 9/19/2019 7:45:00 AM
 Lab Sample ID: 190920022-011
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	8.1			S.U.		9/19/2019 7:45:00 AM
Temperature (E170.1)	11			deg C		9/19/2019 7:45:00 AM
Turbidity (E180.1)	12	1.0	J	NTU		9/19/2019 7:45:00 AM

MERCURY - EPA 245.1 REV 3.0
 (Prep: E245.1 - 9/20/2019)

Analyst: **AVB**

Mercury	ND	0.20		µg/L	1	9/21/2019 1:59:11 PM
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ICP METALS - EPA 200.7
 (Prep: SW3010A - 9/20/2019)

Analyst: **KH**

Aluminum	ND	200		µg/L	1	10/31/2019 1:43:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 1:43:00 PM
Arsenic	17.9	10.0		µg/L	1	10/31/2019 1:43:00 PM
Barium	29.9	200	J	µg/L	1	10/31/2019 1:43:00 PM
Boron	336	50.0		µg/L	1	10/31/2019 1:43:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 1:43:00 PM
Calcium	62200	5000		µg/L	1	10/31/2019 1:43:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 1:43:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 1:43:00 PM
Iron	979	100		µg/L	1	10/31/2019 1:43:00 PM
Magnesium	17900	5000		µg/L	1	10/31/2019 1:43:00 PM
Manganese	103	15.0		µg/L	1	10/31/2019 1:43:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 1:43:00 PM
Potassium	2030	5000	J	µg/L	1	10/31/2019 1:43:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 1:43:00 PM
Sodium	65800	50000		µg/L	10	10/31/2019 1:48:00 PM
Zinc	4.89	20.0	J	µg/L	1	10/31/2019 1:43:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	229	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	9.22	2.00		mg/L	2	10/4/2019 6:51:22 PM
Sulfate	215	20.0		mg/L	10	10/7/2019 6:04:49 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - LCS Spike below accepted limits (+ above)
 J - Analyte detected below quantitation limits Z - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank N - Matrix Spike below accepted limits (+ above)
 X - Value exceeds Maximum Contaminant Level T - Tentatively Identified Compound-Estimated Conc.
 E - Value above quantitation range-Estimate

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8911-SH
Collection Date: 9/19/2019 7:45:00 AM
Lab Sample ID: 190920022-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	110	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1	J	mg/L	1	9/30/2019 2:08:14 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1080	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	460	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 6:37:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAMA
 12/17/19

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: 8942-D
 Collection Date: 9/19/2019 7:15:00 AM
 Lab Sample ID: 190920022-012
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
pH (E150.1)	7.5		J	S.U.		9/19/2019 7:15:00 AM
Temperature (E170.1)	10		J	deg C		9/19/2019 7:15:00 AM
Turbidity (E180.1)	< 1	1.0	J	NTU		9/19/2019 7:15:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:00:53 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 2:17:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 2:17:00 PM
Arsenic	13.7	10.0		µg/L	1	10/31/2019 2:17:00 PM
Barium	40.2	200	J	µg/L	1	10/31/2019 2:17:00 PM
Boron	314	50.0		µg/L	1	10/31/2019 2:17:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 2:17:00 PM
Calcium	86700	5000		µg/L	1	10/31/2019 2:17:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 2:17:00 PM
Copper	2.53	25.0	J	µg/L	1	10/31/2019 2:17:00 PM
Iron	589	100		µg/L	1	10/31/2019 2:17:00 PM
Magnesium	71600	5000		µg/L	1	10/31/2019 2:17:00 PM
Manganese	232	15.0		µg/L	1	10/31/2019 2:17:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 2:17:00 PM
Potassium	3120	5000	J	µg/L	1	10/31/2019 2:17:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 2:17:00 PM
Sodium	40500	5000		µg/L	1	10/31/2019 2:17:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 2:17:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	511	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	3.28	2.00		mg/L	2	10/4/2019 8:28:10 PM
Sulfate	234	20.0		mg/L	10	10/4/2019 8:47:21 PM

BAH
 12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: 8942-D
Work Order: 190920022	Collection Date: 9/19/2019 7:15:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-012
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	290	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.3	0.1	J	mg/L	1	9/30/2019 2:09:53 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	923	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	600	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.8	1.0	J	mg/L	1	10/1/2019 6:53:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAM
12/12/19

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 9306-SH
Collection Date: 9/19/2019 7:00:00 AM
Lab Sample ID: 190920022-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
pH (E150.1)	7.6		J	S.U.		9/19/2019 7:00:00 AM
Temperature (E170.1)	11		J	deg C		9/19/2019 7:00:00 AM
Turbidity (E180.1)	4	1.0	J	NTU		9/19/2019 7:00:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:02:35 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 2:22:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 2:22:00 PM
Arsenic	13.2	10.0		µg/L	1	10/31/2019 2:22:00 PM
Barium	48.3	200	J	µg/L	1	10/31/2019 2:22:00 PM
Boron	95.8	50.0	J	µg/L	1	10/31/2019 2:22:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 2:22:00 PM
Calcium	73200	5000		µg/L	1	10/31/2019 2:22:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 2:22:00 PM
Copper	7.18	25.0	J	µg/L	1	10/31/2019 2:22:00 PM
Iron	770	100	J	µg/L	1	10/31/2019 2:22:00 PM
Magnesium	63000	5000		µg/L	1	10/31/2019 2:22:00 PM
Manganese	51.9	15.0		µg/L	1	10/31/2019 2:22:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 2:22:00 PM
Potassium	3230	5000	J	µg/L	1	10/31/2019 2:22:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 2:22:00 PM
Sodium	20600	5000	J	µg/L	1	10/31/2019 2:22:00 PM
Zinc	11.4	20.0	J	µg/L	1	10/31/2019 2:22:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	442	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	ND	2.00		mg/L	2	10/4/2019 9:06:23 PM
Sulfate	71.7	4.00		mg/L	2	10/4/2019 9:06:23 PM

BAM
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: 9306-SH
Work Order: 190920022	Collection Date: 9/19/2019 7:00:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-013
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	380	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:11:31 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	700	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	365	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 7:10:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW-Dup 8909-D
Collection Date: 9/18/2019 3:00:00 PM
Lab Sample ID: 190920022-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	9.6		J	S.U.		9/18/2019 3:00:00 PM
Temperature (E170.1)	16		J	deg C		9/18/2019 3:00:00 PM
Turbidity (E180.1)	> 999	1.0	J	NTU		9/18/2019 3:00:00 PM

MERCURY - EPA 245.1 REV 3.0

(Prep: E245.1 - 9/20/2019)

*BANK
12/12/19*

Analyst: **AVB**

Mercury	ND	0.20		µg/L	1	9/21/2019 2:07:41 PM
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ICP METALS - EPA 200.7

(Prep: SW3010A - 9/20/2019)

Analyst: **KH**

Aluminum	978	200	J	µg/L	1	10/31/2019 2:58:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 2:58:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 2:58:00 PM
Barium	118	200	J	µg/L	1	10/31/2019 2:58:00 PM
Boron	1130	50.0		µg/L	1	10/31/2019 2:58:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 2:58:00 PM
Calcium	18200	5000		µg/L	1	10/31/2019 2:58:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 2:58:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 2:58:00 PM
Iron	3620	100	J	µg/L	1	10/31/2019 2:58:00 PM
Magnesium	3650	5000	J	µg/L	1	10/31/2019 2:58:00 PM
Manganese	137	15.0		µg/L	1	10/31/2019 2:58:00 PM
Nickel	8.58	40.0	J	µg/L	1	10/31/2019 2:58:00 PM
Potassium	1430	5000	J	µg/L	1	10/31/2019 2:58:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 2:58:00 PM
Sodium	164000	50000		µg/L	10	10/31/2019 3:03:00 PM
Zinc	35.6	20.0	J	µg/L	1	10/31/2019 2:58:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	61	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	4.19	2.00		mg/L	2	10/4/2019 10:03:30 PM
Sulfate	104	4.00		mg/L	2	10/4/2019 10:03:30 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	GW-Dup 8909-D
Work Order:	190920022	Collection Date:	9/18/2019 3:00:00 PM
Reference:	Lockwood Ash Landfill / Annual	Lab Sample ID:	190920022-014
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	9/30/2019 2:13:09 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	752	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	695	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.6	1.0	Jt	mg/L	1	10/1/2019 7:26:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	10	5		cpu@pH7	1	9/20/2019 4:00:00 PM

BAMA
12/12/19

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 9/18/2019 12:40:00 PM
Lab Sample ID: 190920022-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	5.12	0.10		mg/L		9/18/2019 12:40:00 PM
Flow, GPD	485.1			gal/day		9/18/2019 12:40:00 PM
pH (E150.1)	7.3		J	S.U.		9/18/2019 12:40:00 PM
Temperature (E170.1)	15		J	deg C		9/18/2019 12:40:00 PM
Turbidity (E180.1)	3	1.0	J	NTU		9/18/2019 12:40:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:09:22 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 3:07:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 3:07:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 3:07:00 PM
Barium	25.1	200	J	µg/L	1	10/31/2019 3:07:00 PM
Boron	3320	50.0		µg/L	1	10/31/2019 3:07:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 3:07:00 PM
Calcium	361000	50000		µg/L	10	10/31/2019 3:10:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 3:07:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 3:07:00 PM
Iron	ND	100	UJ	µg/L	1	10/31/2019 3:07:00 PM
Magnesium	119000	5000		µg/L	1	10/31/2019 3:07:00 PM
Manganese	ND	15.0		µg/L	1	10/31/2019 3:07:00 PM
Nickel	5.05	40.0	J	µg/L	1	10/31/2019 3:07:00 PM
Potassium	7710	5000		µg/L	1	10/31/2019 3:07:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 3:07:00 PM
Sodium	39000	50000	J	µg/L	10	10/31/2019 3:10:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 3:07:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	1390	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	75.4	2.00		mg/L	2	10/4/2019 11:59:06 PM
Sulfate	830	40.0		mg/L	20	10/5/2019 12:18:26 AM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: GW Dep Drain 1
Work Order: 190920022	Collection Date: 9/18/2019 12:40:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-015
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	380	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:14:47 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1830	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1700	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 7:42:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 9/18/2019 11:48:00 AM
Lab Sample ID: 190920022-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	5.9	0.10		mg/L		9/18/2019 11:48:00 AM
Flow, GPD	66.6			gal/day		9/18/2019 11:48:00 AM
pH (E150.1)	8.0		J	S.U.		9/18/2019 11:48:00 AM
Temperature (E170.1)	16		J	deg C		9/18/2019 11:48:00 AM
Turbidity (E180.1)	5	1.0	J	NTU		9/18/2019 11:48:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:14:25 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 3:33:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 3:33:00 PM
Arsenic	7.26	10.0	J	µg/L	1	10/31/2019 3:33:00 PM
Barium	18.7	200	J	µg/L	1	10/31/2019 3:33:00 PM
Boron	915	50.0	J	µg/L	1	10/31/2019 3:33:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 3:33:00 PM
Calcium	448000	50000	J	µg/L	10	10/31/2019 3:38:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 3:33:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 3:33:00 PM
Iron	ND	100	J	µg/L	1	10/31/2019 3:33:00 PM
Magnesium	186000	5000		µg/L	1	10/31/2019 3:33:00 PM
Manganese	22.4	15.0		µg/L	1	10/31/2019 3:33:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 3:33:00 PM
Potassium	5740	5000	J	µg/L	1	10/31/2019 3:33:00 PM
Selenium	ND	5.00	J	µg/L	1	10/31/2019 3:33:00 PM
Sodium	90400	50000	J	µg/L	10	10/31/2019 3:38:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 3:33:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	1883	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	31.2	2.00		mg/L	2	10/5/2019 12:37:28 AM
Sulfate	1150	100		mg/L	50	10/5/2019 12:56:31 AM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: Leak Detection Syst.
Work Order: 190920022	Collection Date: 9/18/2019 11:48:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-016
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	550	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:16:25 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2580	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2240	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.6	1.0	J+	mg/L	1	10/1/2019 7:58:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAW
12/12/19

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 1
Collection Date: 9/18/2019 1:15:00 PM
Lab Sample ID: 190920022-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	6.89	0.10		mg/L		9/18/2019 1:15:00 PM
Flow, GPD	6563			gal/day		9/18/2019 1:15:00 PM
pH (E150.1)	7.8		J	S.U.		9/18/2019 1:15:00 PM
Temperature (E170.1)	14		J	deg C		9/18/2019 1:15:00 PM
Turbidity (E180.1)	77	1.0	J	NTU		9/18/2019 1:15:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:16:05 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 4:09:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:09:00 PM
Arsenic	78.9	10.0	J+	µg/L	1	10/31/2019 4:09:00 PM
Barium	68.6	200	J	µg/L	1	10/31/2019 4:09:00 PM
Boron	4500	50.0		µg/L	1	10/31/2019 4:09:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:09:00 PM
Calcium	448000	50000		µg/L	10	10/31/2019 4:14:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:09:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:09:00 PM
Iron	6400	100	J-	µg/L	1	10/31/2019 4:09:00 PM
Magnesium	89700	5000		µg/L	1	10/31/2019 4:09:00 PM
Manganese	791	15.0		µg/L	1	10/31/2019 4:09:00 PM
Nickel	7.09	40.0	J	µg/L	1	10/31/2019 4:09:00 PM
Potassium	18700	5000		µg/L	1	10/31/2019 4:09:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:09:00 PM
Sodium	44500	50000	J	µg/L	10	10/31/2019 4:14:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:09:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: WB
(Prep: 1631E - 10/3/2019)						
Mercury	0.5	0.5		ng/L	1	10/4/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	1487	5		mg/L CaCO3	1	10/31/2019

Qualifiers: ND - Not Detected at the Reporting Limit
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 S - LCS Spike below accepted limits (+ above)
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 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: Under Drain 1
Work Order: 190920022	Collection Date: 9/18/2019 1:15:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-017
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	26.4	2.00		mg/L	2	10/5/2019 1:15:34 AM
Sulfate	446	40.0		mg/L	20	10/5/2019 1:34:37 AM
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DA A
Alkalinity, Total (As CaCO3)	650	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.1	0.1	J	mg/L	1	9/30/2019 2:18:03 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1750	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1330	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 8:14:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 3:25:00 PM

BAM
12/12/19

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 2
Collection Date: 9/18/2019 12:23:00 PM
Lab Sample ID: 190920022-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
Dissolved Oxygen (E360.1)	6.28	0.10		mg/L		9/18/2019 12:23:00 PM
Flow, GPD	2568			gal/day		9/18/2019 12:23:00 PM
pH (E150.1)	7.5		J	S.U.		9/18/2019 12:23:00 PM
Temperature (E170.1)	15		J	deg C		9/18/2019 12:23:00 PM
Turbidity (E180.1)	20	1.0	J	NTU		9/18/2019 12:23:00 PM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 9/20/2019)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	9/21/2019 2:17:46 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 9/20/2019)						Analyst: KH
Aluminum	ND	200		µg/L	1	10/31/2019 4:27:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:27:00 PM
Arsenic	18.3	10.0	J+	µg/L	1	10/31/2019 4:27:00 PM
Barium	24.6	200	J	µg/L	1	10/31/2019 4:27:00 PM
Boron	54000	500		µg/L	10	10/31/2019 4:32:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:27:00 PM
Calcium	670000	50000		µg/L	10	10/31/2019 4:32:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:27:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:27:00 PM
Iron	2180	100	J-	µg/L	1	10/31/2019 4:27:00 PM
Magnesium	107000	5000		µg/L	1	10/31/2019 4:27:00 PM
Manganese	1280	15.0		µg/L	1	10/31/2019 4:27:00 PM
Nickel	4.72	40.0	J	µg/L	1	10/31/2019 4:27:00 PM
Potassium	121000	50000		µg/L	10	10/31/2019 4:32:00 PM
Selenium	7.16	5.00	J+	µg/L	1	10/31/2019 4:27:00 PM
Sodium	281000	50000		µg/L	10	10/31/2019 4:32:00 PM
Zinc	6.97	20.0	J	µg/L	1	10/31/2019 4:27:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: KH
Total Hardness (As CaCO3)	2112	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	413	50.0		mg/L	50	10/5/2019 2:12:41 AM
Sulfate	1650	100		mg/L	50	10/5/2019 2:12:41 AM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: Under Drain 2
Work Order: 190920022	Collection Date: 9/18/2019 12:23:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-018
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	340	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	2.0	0.1		mg/L	1	9/30/2019 2:26:11 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4100	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3520	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 9:39:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 4:00:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 3
Collection Date: 9/18/2019 11:25:00 AM
Lab Sample ID: 190920022-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
Dissolved Oxygen (E360.1)	4.12	0.10		mg/L		9/18/2019 11:25:00 AM
Flow, GPD	247			gal/day		9/18/2019 11:25:00 AM
pH (E150.1)	7.5		J	S.U.		9/18/2019 11:25:00 AM
Temperature (E170.1)	15		J	deg C		9/18/2019 11:25:00 AM
Turbidity (E180.1)	7	1.0	J	NTU		9/18/2019 11:25:00 AM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 9/20/2019)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	9/21/2019 2:19:27 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 9/20/2019)						Analyst: KH
Aluminum	ND	200		µg/L	1	10/31/2019 4:35:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:35:00 PM
Arsenic	8.42	10.0	J+	µg/L	1	10/31/2019 4:35:00 PM
Barium	22.0	200	J	µg/L	1	10/31/2019 4:35:00 PM
Boron	39500	500		µg/L	10	10/31/2019 4:39:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:35:00 PM
Calcium	758000	50000		µg/L	10	10/31/2019 4:39:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:35:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:35:00 PM
Iron	188	100	J-	µg/L	1	10/31/2019 4:35:00 PM
Magnesium	142000	5000		µg/L	1	10/31/2019 4:35:00 PM
Manganese	453	15.0		µg/L	1	10/31/2019 4:35:00 PM
Nickel	3.12	40.0	J	µg/L	1	10/31/2019 4:35:00 PM
Potassium	180000	50000		µg/L	10	10/31/2019 4:39:00 PM
Selenium	7.16	5.00	J+	µg/L	1	10/31/2019 4:35:00 PM
Sodium	360000	50000		µg/L	10	10/31/2019 4:39:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:35:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: KH
Total Hardness (As CaCO3)	2476	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	534	50.0		mg/L	50	10/5/2019 4:48:11 AM
Sulfate	1660	100		mg/L	50	10/5/2019 4:48:11 AM

BXMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit S - LCS Spike below accepted limits (+ above)
 J - Analyte detected below quantitation limits Z - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank N - Matrix Spike below accepted limits (+ above)
 X - Value exceeds Maximum Contaminant Level T - Tentitively Identified Compound-Estimated Conc.
 E - Value above quantitation range-Estimate

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 3
Collection Date: 9/18/2019 11:25:00 AM
Lab Sample ID: 190920022-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	510	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1	J	mg/L	1	9/30/2019 2:27:52 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4670	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	4020	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/1/2019 9:56:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 4:00:00 PM

BAM
 12/12/19

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Inlet to Pond
Collection Date: 9/19/2019 7:30:00 AM
Lab Sample ID: 190920022-020
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Construction			NA		9/19/2019 7:30:00 AM
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Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC Client Sample ID: Keuka Upstream
 Work Order: 190920022 Collection Date: 9/18/2019 2:10:00 PM
 Reference: Lockwood Ash Landfill / Annual Lab Sample ID: 190920022-021
 PO#: Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Dissolved Oxygen (E360.1)	5.20	0.10		mg/L		9/18/2019 2:10:00 PM
pH (E150.1)	8.5		J	S.U.		9/18/2019 2:10:00 PM
Temperature (E170.1)	19		J	deg C		9/18/2019 2:10:00 PM
Turbidity (E180.1)	5	1.0	J	NTU		9/18/2019 2:10:00 PM

MERCURY - EPA 245.1 REV 3.0 Analyst: AVB
 (Prep: E245.1 - 9/20/2019)

Mercury	ND	0.20		µg/L	1	9/21/2019 2:21:08 PM
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12/12/19

ICP METALS - EPA 200.7 Analyst: KH
 (Prep: SW3010A - 9/20/2019)

Aluminum	ND	200		µg/L	1	10/31/2019 4:43:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:43:00 PM
Arsenic	6.65	10.0	J+	µg/L	1	10/31/2019 4:43:00 PM
Barium	26.5	200	J	µg/L	1	10/31/2019 4:43:00 PM
Boron	40.4	50.0	J	µg/L	1	10/31/2019 4:43:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:43:00 PM
Calcium	39300	5000		µg/L	1	10/31/2019 4:43:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:43:00 PM
Copper	2.19	25.0	J	µg/L	1	10/31/2019 4:43:00 PM
Iron	53.4	100	J	µg/L	1	10/31/2019 4:43:00 PM
Magnesium	13300	5000		µg/L	1	10/31/2019 4:43:00 PM
Manganese	ND	15.0		µg/L	1	10/31/2019 4:43:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 4:43:00 PM
Potassium	3220	5000	J	µg/L	1	10/31/2019 4:43:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:43:00 PM
Sodium	28400	5000		µg/L	1	10/31/2019 4:43:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:43:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: KH

Total Hardness (As CaCO3)	153	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: CS

Chloride	43.1	2.00		mg/L	2	10/4/2019 8:18:24 PM
Sulfate	26.3	4.00		mg/L	2	10/4/2019 8:18:24 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - LCS Spike below accepted limits (+ above)
 J - Analyte detected below quantitation limits Z - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank N - Matrix Spike below accepted limits (+ above)
 X - Value exceeds Maximum Contaminant Level T - Tentitively Identified Compound-Estimated Conc.
 E - Value above quantitation range-Estimate

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 9/18/2019 2:10:00 PM
Lab Sample ID: 190920022-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	116	4		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:29:31 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	404	1	J	µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	145	5	J	mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.2	1.0	J+	mg/L	1	10/1/2019 10:12:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	7	5		cpu@pH7	1	9/20/2019 4:00:00 PM

*BAMA
12/12/19*

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 9/18/2019 1:45:00 PM
Lab Sample ID: 190920022-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Dissolved Oxygen (E360.1)	5.21	0.10		mg/L		9/18/2019 1:45:00 PM
pH (E150.1)	8.2		J	S.U.		9/18/2019 1:45:00 PM
Temperature (E170.1)	18		J	deg C		9/18/2019 1:45:00 PM
Turbidity (E180.1)	5	1.0	J	NTU		9/18/2019 1:45:00 PM

MERCURY - EPA 245.1 REV 3.0 Analyst: AVB
 (Prep: E245.1 - 9/20/2019)

Mercury	ND	0.20		µg/L	1	9/21/2019 2:22:50 PM
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12/12/19*

ICP METALS - EPA 200.7 Analyst: KH
 (Prep: SW3010A - 9/20/2019)

Aluminum	ND	200		µg/L	1	10/31/2019 4:47:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:47:00 PM
Arsenic	5.60	10.0	J	µg/L	1	10/31/2019 4:47:00 PM
Barium	28.8	200	J	µg/L	1	10/31/2019 4:47:00 PM
Boron	36.3	50.0	J	µg/L	1	10/31/2019 4:47:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:47:00 PM
Calcium	41700	5000		µg/L	1	10/31/2019 4:47:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:47:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:47:00 PM
Iron	49.9	100	J	µg/L	1	10/31/2019 4:47:00 PM
Magnesium	13700	5000		µg/L	1	10/31/2019 4:47:00 PM
Manganese	7.50	15.0	J	µg/L	1	10/31/2019 4:47:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 4:47:00 PM
Potassium	3420	5000	J	µg/L	1	10/31/2019 4:47:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:47:00 PM
Sodium	30400	5000		µg/L	1	10/31/2019 4:47:00 PM
Zinc	4.90	20.0	J	µg/L	1	10/31/2019 4:47:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: KH

Total Hardness (As CaCO3)	161	5		mg/L CaCO3	1	10/31/2019
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: CS

Chloride	45.7	2.00		mg/L	2	10/4/2019 8:37:26 PM
Sulfate	27.5	4.00		mg/L	2	10/4/2019 8:37:26 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 9/18/2019 1:45:00 PM
Lab Sample ID: 190920022-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	130	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:31:09 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	423	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	315	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.1	1.0	J	mg/L	1	10/1/2019 10:29:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	10	5		cpu@pH7	1	9/20/2019 4:00:00 PM

BAM
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 9/18/2019 2:12:00 PM
Lab Sample ID: 190920022-023
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	5.24	0.10		mg/L		9/18/2019 2:12:00 PM
pH (E150.1)	8.3		J	S.U.		9/18/2019 2:12:00 PM
Temperature (E170.1)	19		J	deg C		9/18/2019 2:12:00 PM
Turbidity (E180.1)	5	1.0	J	NTU		9/18/2019 2:12:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:24:32 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 4:51:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:51:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 4:51:00 PM
Barium	26.0	200	J	µg/L	1	10/31/2019 4:51:00 PM
Boron	30.3	50.0	J	µg/L	1	10/31/2019 4:51:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:51:00 PM
Calcium	39500	5000		µg/L	1	10/31/2019 4:51:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:51:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:51:00 PM
Iron	52.5	100	J	µg/L	1	10/31/2019 4:51:00 PM
Magnesium	13300	5000		µg/L	1	10/31/2019 4:51:00 PM
Manganese	ND	15.0		µg/L	1	10/31/2019 4:51:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 4:51:00 PM
Potassium	3210	5000	J	µg/L	1	10/31/2019 4:51:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:51:00 PM
Sodium	28200	5000		µg/L	1	10/31/2019 4:51:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:51:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	153	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	43.2	2.00		mg/L	2	10/4/2019 8:56:28 PM
Sulfate	25.8	4.00		mg/L	2	10/4/2019 8:56:28 PM

BAM
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: Surface Water Dup
Work Order: 190920022	Collection Date: 9/18/2019 2:12:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-023
PO#:	Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	110	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:36:00 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	498	1	J	µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	265	5	J	mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.2	1.0	J+	mg/L	1	10/1/2019 11:19:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	7	5		cpu@pH7	1	9/20/2019 4:00:00 PM

BAMA
12/12/19

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Pond Grab
 Collection Date: 9/19/2019 7:30:00 AM
 Lab Sample ID: 190920022-024
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	Construction			NA		9/19/2019 7:30:00 AM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Field Blank
Collection Date: 9/18/2019 2:25:00 PM
Lab Sample ID: 190920022-025
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
Dissolved Oxygen (E360.1)	4.18	0.10		mg/L		9/18/2019 2:25:00 PM
pH (E150.1)	7.4		J	S.U.		9/18/2019 2:25:00 PM
Temperature (E170.1)	10		J	deg C		9/18/2019 2:25:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		9/18/2019 2:25:00 PM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 9/20/2019)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	9/21/2019 2:26:14 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 9/20/2019)						Analyst: KH
Aluminum	ND	200		µg/L	1	10/31/2019 4:54:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:54:00 PM
Arsenic	ND	10.0		µg/L	1	10/31/2019 4:54:00 PM
Barium	4.86	200	J	µg/L	1	10/31/2019 4:54:00 PM
Boron	ND	50.0		µg/L	1	10/31/2019 4:54:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:54:00 PM
Calcium	ND	5000		µg/L	1	10/31/2019 4:54:00 PM
Chromium	ND	10.0		µg/L	1	10/31/2019 4:54:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:54:00 PM
Iron	ND	100		µg/L	1	10/31/2019 4:54:00 PM
Magnesium	ND	5000		µg/L	1	10/31/2019 4:54:00 PM
Manganese	ND	15.0		µg/L	1	10/31/2019 4:54:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 4:54:00 PM
Potassium	ND	5000		µg/L	1	10/31/2019 4:54:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:54:00 PM
Sodium	ND	5000		µg/L	1	10/31/2019 4:54:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:54:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: KH
Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	ND	2.00		mg/L	2	10/4/2019 11:00:35 PM
Sulfate	ND	4.00		mg/L	2	10/4/2019 11:00:35 PM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC	Client Sample ID: Field Blank
Work Order: 190920022	Collection Date: 9/18/2019 2:25:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 190920022-025
PO#:	Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	2	1		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:37:37 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	< 1	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	ND	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	10/2/2019 12:44:00 AM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	ND	5		cpu@pH7	1	9/20/2019 4:00:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 9/18/2019 10:30:00 AM
Lab Sample ID: 190920022-026
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Dissolved Oxygen (E360.1)	5.12	0.10		mg/L		9/18/2019 10:30:00 AM
Flow, GPD	76.1			gal/day		9/18/2019 10:30:00 AM
pH (E150.1)	7.5		J	S.U.		9/18/2019 10:30:00 AM
Temperature (E170.1)	20		J	deg C		9/18/2019 10:30:00 AM
Turbidity (E180.1)	4	1.0	J	NTU		9/18/2019 10:30:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 9/20/2019)						
Mercury	ND	0.20		µg/L	1	9/21/2019 2:27:57 PM
ICP METALS - EPA 200.7						Analyst: KH
(Prep: SW3010A - 9/20/2019)						
Aluminum	ND	200		µg/L	1	10/31/2019 4:58:00 PM
Antimony	ND	60.0		µg/L	1	10/31/2019 4:58:00 PM
Arsenic	7.78	10.0	J	µg/L	1	10/31/2019 4:58:00 PM
Barium	66.4	200	J	µg/L	1	10/31/2019 4:58:00 PM
Boron	231	50.0		µg/L	1	10/31/2019 4:58:00 PM
Cadmium	ND	5.00		µg/L	1	10/31/2019 4:58:00 PM
Calcium	247000	50000		µg/L	10	10/31/2019 5:03:00 PM
Chromium	4.68	10.0	J	µg/L	1	10/31/2019 4:58:00 PM
Copper	ND	25.0		µg/L	1	10/31/2019 4:58:00 PM
Iron	12.4	100	J	µg/L	1	10/31/2019 4:58:00 PM
Magnesium	66300	5000		µg/L	1	10/31/2019 4:58:00 PM
Manganese	ND	15.0		µg/L	1	10/31/2019 4:58:00 PM
Nickel	ND	40.0		µg/L	1	10/31/2019 4:58:00 PM
Potassium	3960	5000	J	µg/L	1	10/31/2019 4:58:00 PM
Selenium	ND	5.00		µg/L	1	10/31/2019 4:58:00 PM
Sodium	29400	5000		µg/L	1	10/31/2019 4:58:00 PM
Zinc	ND	20.0		µg/L	1	10/31/2019 4:58:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
Total Hardness (As CaCO3)	890	5		mg/L CaCO3	1	10/31/2019
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	9.32	2.00		mg/L	2	10/4/2019 9:15:30 PM
Sulfate	446	20.0		mg/L	10	10/4/2019 9:34:32 PM

BAMA
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit S - LCS Spike below accepted limits (+ above)
 J - Analyte detected below quantitation limits Z - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank N - Matrix Spike below accepted limits (+ above)
 X - Value exceeds Maximum Contaminant Level T - Tentatively Identified Compound-Estimated Conc.
 E - Value above quantitation range-Estimate

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 9/18/2019 10:30:00 AM
Lab Sample ID: 190920022-026
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	430	10		mgCaCO3/L	1	9/23/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	9/30/2019 2:42:28 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1410	1		µmhos/cm	1	9/20/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1070	5		mg/L	1	9/25/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.4	1.0		mg/L	1	10/2/2019 1:00:00 AM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: PL
Color	7	5		cpu@pH7	1	9/20/2019 4:00:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: LLHG Field Blank
Collection Date: 9/18/2019 12:10:00 PM
Lab Sample ID: 190920022-027
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: WB
(Prep: 1631E - 10/3/2019)						
Mercury	1.2	0.5		ng/L	1	10/4/2019

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: GW Dep Drain 2
 Collection Date: 9/18/2019 10:05:00 AM
 Lab Sample ID: 190920022-028
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	Dry			NA		9/18/2019 10:05:00 AM

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 9/18/2019 10:07:00 AM
Lab Sample ID: 190920022-029
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	<i>Dry</i>			NA		9/18/2019 10:07:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	Under Drain 5
Work Order:	190920022	Collection Date:	9/18/2019 2:40:00 PM
Reference:	Lockwood Ash Landfill / Annual	Lab Sample ID:	190920022-030
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	<i>Dry</i>			NA		9/18/2019 2:40:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8405
Collection Date: 9/18/2019 2:59:00 PM
Lab Sample ID: 190920022-031
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	Dry			NA		9/18/2019 2:59:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
	J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
	X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Inlet To Pond
 Collection Date: 9/30/2019 12:40:00 PM
 Lab Sample ID: 190920022-032
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: FLD

Dissolved Oxygen (E360.1)	6.94	0.10		mg/L		9/30/2019 12:40:00 PM
Flow, GPD	12,174			gal/day		9/30/2019 12:40:00 PM
pH (E150.1)	7.8		J	S.U.		9/30/2019 12:40:00 PM
Temperature (E170.1)	14		J	deg C		9/30/2019 12:40:00 PM
Turbidity (E180.1)	8	1.0	J	NTU		9/30/2019 12:40:00 PM

MERCURY - EPA 245.1 REV 3.0

(Prep: E245.1 - 10/22/2019)

Analyst: AVB

Mercury	ND	0.20	UJ	µg/L	1	10/22/2019 4:13:31 PM
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ICP METALS - EPA 200.7

(Prep: SW3010A - 10/4/2019)

Analyst: KH

Aluminum	ND	200		µg/L	1	11/1/2019 10:53:00 AM
Antimony	ND	60.0		µg/L	1	11/1/2019 10:53:00 AM
Arsenic	26.8	10.0		µg/L	1	11/1/2019 10:53:00 AM
Barium	34.3 200	200	UJ	µg/L	1	11/1/2019 10:53:00 AM
Boron	35100	500		µg/L	10	11/1/2019 10:59:00 AM
Cadmium	ND	5.00		µg/L	1	11/1/2019 10:53:00 AM
Calcium	613000	50000		µg/L	10	11/1/2019 10:59:00 AM
Chromium	ND	10.0		µg/L	1	11/1/2019 10:53:00 AM
Copper	ND	25.0		µg/L	1	11/1/2019 10:53:00 AM
Iron	2400	100	J+	µg/L	1	11/1/2019 10:53:00 AM
Magnesium	99300	5000		µg/L	1	11/1/2019 10:53:00 AM
Manganese	603	15.0		µg/L	1	11/1/2019 10:53:00 AM
Nickel	3.95	40.0	J	µg/L	1	11/1/2019 10:53:00 AM
Potassium	89500	50000		µg/L	10	11/1/2019 10:59:00 AM
Selenium	23.6	5.00		µg/L	1	11/1/2019 10:53:00 AM
Sodium	270000	50000		µg/L	10	11/1/2019 10:59:00 AM
Zinc	ND	20.0		µg/L	1	11/1/2019 10:53:00 AM

LOW LEVEL MERCURY - EPA 1631E

(Prep: 1631E - 10/3/2019)

Analyst: WB

Mercury	0.7	0.5		ng/L	1	10/4/2019
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HARDNESS - EPA 200.7 REV 4.4

Analyst: KH

Total Hardness (As CaCO3)	1939	5		mg/L CaCO3	1	11/1/2019
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Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-estimate

S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Inlet To Pond
Collection Date: 9/30/2019 12:40:00 PM
Lab Sample ID: 190920022-032
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	245	20.0		mg/L	20	10/4/2019 11:11:12 PM
Sulfate	1380	40.0		mg/L	20	10/4/2019 11:11:12 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	440	10		mgCaCO3/L	1	10/4/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.3	0.1	J	mg/L	1	10/2/2019 1:02:34 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3460	1		µmhos/cm	1	10/4/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3000	5		mg/L	1	10/2/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.1	1.0		mg/L	1	10/2/2019 2:41:00 AM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH6	1	10/1/2019 5:20:00 PM

RLM
 12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Pond Grab
 Collection Date: 9/30/2019 1:07:00 PM
 Lab Sample ID: 190920022-033
 Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						
						Analyst: FLD
Dissolved Oxygen (E360.1)	7.44	0.10		mg/L		9/30/2019 1:07:00 PM
pH (E150.1)	7.9		J	S.U.		9/30/2019 1:07:00 PM
Temperature (E170.1)	19		J	deg C		9/30/2019 1:07:00 PM
Turbidity (E180.1)	11	1.0	J	NTU		9/30/2019 1:07:00 PM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 10/22/2019)						
Mercury	ND	0.20		µg/L	1	10/22/2019 4:18:33 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 10/4/2019)						
Aluminum	ND	200		µg/L	1	11/1/2019 11:03:00 AM
Antimony	ND	60.0		µg/L	1	11/1/2019 11:03:00 AM
Arsenic	6.98	10.0	J	µg/L	1	11/1/2019 11:03:00 AM
Barium	225	200	J	µg/L	1	11/1/2019 11:03:00 AM
Boron	39100	500	J	µg/L	10	11/1/2019 11:09:00 AM
Cadmium	ND	5.00		µg/L	1	11/1/2019 11:03:00 AM
Calcium	584000	50000	J	µg/L	10	11/1/2019 11:09:00 AM
Chromium	ND	10.0		µg/L	1	11/1/2019 11:03:00 AM
Copper	ND	25.0		µg/L	1	11/1/2019 11:03:00 AM
Iron	217	100	J-	µg/L	1	11/1/2019 11:03:00 AM
Magnesium	126000	5000		µg/L	1	11/1/2019 11:03:00 AM
Manganese	132	15.0		µg/L	1	11/1/2019 11:03:00 AM
Nickel	ND	40.0		µg/L	1	11/1/2019 11:03:00 AM
Potassium	79300	50000	J	µg/L	10	11/1/2019 11:09:00 AM
Selenium	35.3	5.00	J	µg/L	1	11/1/2019 11:03:00 AM
Sodium	298000	50000	J	µg/L	10	11/1/2019 11:09:00 AM
Zinc	ND	20.0		µg/L	1	11/1/2019 11:03:00 AM
LOW LEVEL MERCURY - EPA 1631E						
(Prep: 1631E - 10/3/2019)						
Mercury	5.1	0.5		ng/L	1	10/4/2019
HARDNESS - EPA 200.7 REV 4.4						
(Prep: 200.7 - 11/1/2019)						
Total Hardness (As CaCO3)	1977	5		mg/L CaCO3	1	11/1/2019

BAMA
12/12/19

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- X - Value exceeds Maximum Contaminant Level
- E - Value above quantitation range-Estimate
- S - LCS Spike below accepted limits (+ above)
- Z - RPD outside accepted recovery limits
- N - Matrix Spike below accepted limits (+ above)
- T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Pond Grab
Collection Date: 9/30/2019 1:07:00 PM
Lab Sample ID: 190920022-033
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	301	20.0		mg/L	20	10/4/2019 11:30:23 PM
Sulfate	1680	40.0		mg/L	20	10/4/2019 11:30:23 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	210	10		mgCaCO3/L	1	10/4/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1	J	mg/L	1	10/2/2019 1:07:31 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3700	1		µmhos/cm	1	10/4/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3280	5		mg/L	1	10/2/2019
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.6	1.0		mg/L	1	10/2/2019 2:58:00 AM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH7	1	10/1/2019 5:20:00 PM

BAH
12/12/19

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 X - Value exceeds Maximum Contaminant Level
 E - Value above quantitation range-Estimate
 S - LCS Spike below accepted limits (+ above)
 Z - RPD outside accepted recovery limits
 N - Matrix Spike below accepted limits (+ above)
 T - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: LLHG FB
Collection Date: 9/30/2019 12:35:00 PM
Lab Sample ID: 190920022-034
Matrix: FIELD BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: WB
(Prep: 1631E - 10/3/2019)						
Mercury	0.4	0.5	J	ng/L	1	10/4/2019

Qualifiers:

ND - Not Detected at the Reporting Limit	S - LCS Spike below accepted limits (+ above)
J - Analyte detected below quantitation limits	Z - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	N - Matrix Spike below accepted limits (+ above)
X - Value exceeds Maximum Contaminant Level	T - Tentitively Identified Compound-Estimated Conc.
E - Value above quantitation range-Estimate	

Attachment 3
Sample Data Group 1842

Quality Control Documentation

Metals

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

PS	SeqNo: 2731559		PrepDate:		TestNo: E200.7		RunNo: 176921					
	Samp ID: 190920022-013	(9306-SH)	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4270	200	4000	0	0	107	75	125	0	0		
Antimony	1038	60.0	1000	0	0	104	75	125	0	0		
Arsenic	78.71	10.0	80	13.19	0	81.9	75	125	0	0		
Barium	4121	200	4000	48.33	0	102	75	125	0	0		
Cadmium	106.4	5.00	100	0	0	106	75	125	0	0		
Chromium	416.4	10.0	400	0	0	104	75	125	0	0		
Copper	532.4	25.0	500	7.178	0	105	75	125	0	0		
Iron	2864	100	2000	769.8	0	105	75	125	0	0		
Manganese	1075	15.0	1000	51.86	0	102	75	125	0	0		
Nickel	1054	40.0	1000	0	0	105	75	125	0	0		
Selenium	20.52	5.00	20	0	0	103	75	125	0	0		
Zinc	1148	20.0	1000	11.4	0	114	75	125	0	0		

SD	SeqNo: 2731560		PrepDate:		TestNo: E200.7		RunNo: 176921					
	Samp ID: 190920022-013	(9306-SH)	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	1000	0	0	0	0	0	0	0	0		
Antimony	ND	300	0	0	0	0	0	0	0	0		
Arsenic	ND	50.0	0	0	0	0	0	0	13.19	0		
Barium	46.33	1000	0	0	0	0	0	0	48.33	0		< 50x MDL
Boron	94.15	250	0	0	0	0	0	0	95.76	0		< 50x MDL
Cadmium	ND	25.0	0	0	0	0	0	0	0	0		
Calcium	73300	25000	0	0	0	0	0	0	73220	0.106		10
Chromium	ND	50.0	0	0	0	0	0	0	0	0		
Copper	20.76	120	0	0	0	0	0	0	7.178	0		< 50x MDL
Iron	811.4	500	0	0	0	0	0	0	769.8	5.26		10
Magnesium	60300	25000	0	0	0	0	0	0	62950	4.30		10
Manganese	54.54	75.0	0	0	0	0	0	0	51.86	0		< 50x MDL
Nickel	ND	200	0	0	0	0	0	0	0	0		
Potassium	2490	25000	0	0	0	0	0	0	3231	25.9		10

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

SD		SeqNo: 2731560		PrepDate:		TestNo: E200.7		RunNo: 176921			
Samp ID: 190920022-013		(9306-SH)		PrepRef:(SW3010A)		Units: µg/L		Analysis Date: 10/31/2019			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	25.0	0	0	0	0	0	0	0	0	0
Sodium	16600	25000	0	0	0	0	0	20600	21.5%	10	J
Zinc	ND	100	0	0	0	0	0	11.4	0	0	0

PS		SeqNo: 2731573		PrepDate:		TestNo: E200.7		RunNo: 176921			
Samp ID: 190920022-016		(Leak Detection Sy)		PrepRef:(SW3010A)		Units: µg/L		Analysis Date: 10/31/2019			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4130	200	4000	0	103	75	125	0	0	0	0
Antimony	1113	60.0	1000	0	111	75	125	0	0	0	0
Arsenic	81.92	10.0	80	7.263	93.3	75	125	0	0	0	0
Barium	4132	200	4000	18.74	103	75	125	0	0	0	0
Cadmium	112	5.00	100	0	112	75	125	0	0	0	0
Chromium	443.8	10.0	400	0	111	75	125	0	0	0	0
Copper	560.6	25.0	500	0	112	75	125	0	0	0	0
Iron	2182	100	2000	0	109	75	125	0	0	0	0
Manganese	989.5	15.0	1000	22.41	96.7	75	125	0	0	0	0
Nickel	1007	40.0	1000	0	101	75	125	0	0	0	0
Selenium	20.46	5.00	20	0	102	75	125	0	0	0	0
Zinc	1216	20.0	1000	0	122	75	125	0	0	0	0

SD		SeqNo: 2731574		PrepDate:		TestNo: E200.7		RunNo: 176921			
Samp ID: 190920022-016		(Leak Detection Sy)		PrepRef:(SW3010A)		Units: µg/L		Analysis Date: 10/31/2019			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	1000	0	0	0	0	0	0	0	0	0
Antimony	ND	300	0	0	0	0	0	0	0	0	0
Arsenic	31.7	50.0	0	0	0	0	0	7.263	0	0	0
Barium	ND	1000	0	0	0	0	0	18.74	0	0	0
Boron	994.9	250	0	0	0	0	0	915.3	8.34	0	0
Cadmium	ND	25.0	0	0	0	0	0	0	0	0	0
Calcium	455600	25000	0	0	0	0	0	400600	12.9	10	J
Chromium	ND	50.0	0	0	0	0	0	0	0	0	0

< 50xWDL

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

BatchID: 75727

SD	SeqNo: 2731574	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: 190920022-016 (Leak Detection Sx)	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	120	0	0	0	0	0	0	0	0	
Iron	ND	500	0	0	0	0	0	0	0	0	
Magnesium	192300	25000	0	0	0	0	0	185700	3.50	0	
Manganese	24.59	75.0	0	0	0	0	0	22.41	0	0	
Nickel	ND	200	0	0	0	0	0	0	0	0	
Potassium	4372	25000	0	0	0	0	0	5741	27.1%	10	J
Selenium	ND	25.0	0	0	0	0	0	0	0	0	
Sodium	99710	25000	0	0	0	0	0	87730	12.8	10	J
Zinc	ND	100	0	0	0	0	0	0	0	0	

J < 50x MDL

MBLK	SeqNo: 2731530	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: MB-75727	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200									
Antimony	ND	60.0									
Arsenic	ND	10.0									
Barium	ND	200									
Boron	ND	50.0									
Cadmium	ND	5.00									
Calcium	ND	5000									
Chromium	ND	10.0									
Copper	ND	25.0									
Iron	ND	100									
Magnesium	ND	5000									
Manganese	ND	15.0									
Nickel	ND	40.0									
Potassium	ND	5000									
Selenium	ND	5.00									
Sodium	ND	5000									
Zinc	ND	20.0									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

LCS	SeqNo: 2731531	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: LCS-75727	PrepRef: (SW3010A)	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1985	200	2000	0	99.3	80	120	0	0		
Antimony	1976	60.0	2000	0	98.8	80	120	0	0		
Arsenic	2102	10.0	2000	0	105	80	120	0	0		
Barium	2058	200	2000	0	103	80	120	0	0		
Boron	2104	50.0	2000	0	105	80	120	0	0		
Cadmium	2080	5.00	2000	0	104	80	120	0	0		
Calcium	2024	5000	2000	0	101	80	120	0	0		
Chromium	2019	10.0	2000	0	101	80	120	0	0		
Copper	2142	25.0	2000	0	107	80	120	0	0		
Iron	2098	100	2000	0	105	80	120	0	0		
Magnesium	2032	5000	2000	0	102	80	120	0	0		
Manganese	2014	15.0	2000	0	101	80	120	0	0		
Nickel	2114	40.0	2000	0	106	80	120	0	0		
Potassium	9501	5000	10000	0	95	80	120	0	0		
Selenium	2110	5.00	2000	0	106	80	120	0	0		
Sodium	1947	5000	2000	0	97.4	80	120	0	0		
Zinc	2143	20.0	2000	0	107	80	120	0	0		

MS	SeqNo: 2731558	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: 190920022-013 (9306-SH)	PrepRef: (SW3010A)	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2527	200	2000	0	126	75	125	0	0		S
Antimony	517.8	60.0	500	0	104	75	125	0	0		
Arsenic	47.81	10.0	40	13.19	86.5	75	125	0	0		
Barium	2157	200	2000	48.33	105	75	121	0	0		
Cadmium	54.64	5.00	50	0	109	75	114	0	0		
Chromium	217.5	10.0	200	0	109	75	125	0	0		
Copper	279.9	25.0	250	7.178	109	75	123	0	0		
Iron	2381	100	1000	769.8	161	75	125	0	0		S
Manganese	582.8	15.0	500	51.86	106	75	125	0	0		
Nickel	542.6	40.0	500	0	109	75	120	0	0		
Selenium	6.5	5.00	10	0	65	75	125	0	0		S

Qualifiers: N/D - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

MS	SeqNo: 2731558	PrepDate: 9/20/2019	RunNo: 176921
	Samp ID: 190920022-013 (9306-SH)	PrepRef: (SW3010A)	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	602.4	20.0	500	11.4	118	78.5	123	0	0	0	

MS	SeqNo: 2731572	PrepDate: 9/20/2019	RunNo: 176921
	Samp ID: 190920022-016 (Leak Detection Sy)	PrepRef: (SW3010A)	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1938	200	2000	0	96.9	75	125	0	0	0	
Antimony	554.9	60.0	500	0	111	75	125	0	0	0	
Arsenic	44.84	10.0	40	7.263	93.9	75	125	0	0	0	
Barium	641.1	200	2000	18.74	31.1	75	121	0	0	0	S
Cadmium	56.23	5.00	50	0	112	75	114	0	0	0	
Chromium	226.7	10.0	200	0	113	75	125	0	0	0	
Copper	290.1	25.0	250	0	116	75	123	0	0	0	
Iron	1100	100	1000	0	110	75	125	0	0	0	
Manganese	507.5	15.0	500	22.41	97	75	125	0	0	0	
Nickel	506.9	40.0	500	0	101	75	120	0	0	0	
Selenium	7.104	5.00	10	0	71	75	125	0	0	0	S
Zinc	617	20.0	500	0	123	78.5	123	0	0	0	S

DUP	SeqNo: 2731557	PrepDate: 9/20/2019	RunNo: 176921
	Samp ID: 190920022-013	PrepRef:	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	43.86	200	0	0	0	0	0	0	0	20	
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	13.07	10.0	0	0	0	0	0	13.19	0.975	20	
Barium	49.85	200	0	0	0	0	0	48.33	0	20	
Boron	95.22	50.0	0	0	0	0	0	95.76	0.568	20	
Cadmium	0.0496	5.00	0	0	0	0	0	0	0	20	
Calcium	73490	5000	0	0	0	0	0	73220	0.374	20	
Chromium	ND	10.0	0	0	0	0	0	0	0	20	
Copper	8.153	25.0	0	0	0	0	0	7.178	0	20	
Iron	891.6	100	0	0	0	0	0	769.8	14.7	20	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank
 S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits
 J - Analyte detected below quantitation limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

DUP	SeqNo: 2731557	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: 190920022-013	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	63260	5000	0	0	0	0	0	62950	0.494	20	
Manganese	52.58	15.0	0	0	0	0	0	51.86	1.39	20	
Nickel	1.171	40.0	0	0	0	0	0	0	0	20	
Potassium	3273	5000	0	0	0	0	0	3231	0	20	
Selenium	ND	5.00	0	0	0	0	0	0	0	20	
Sodium	20760	5000	0	0	0	0	0	20600	0.778	20	
Zinc	11.78	20.0	0	0	0	0	0	11.4	0	20	

DUP	SeqNo: 2731570	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: 190920022-016	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	20	
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	9.268	10.0	0	0	0	0	0	7.263	0	20	
Barium	19.05	200	0	0	0	0	0	18.74	0	20	
Boron	914.2	50.0	0	0	0	0	0	915.3	0.120	20	
Cadmium	ND	5.00	0	0	0	0	0	0	0	20	
Chromium	ND	10.0	0	0	0	0	0	0	0	20	
Copper	3.267	25.0	0	0	0	0	0	0	0	20	
Iron	ND	100	0	0	0	0	0	0	0	20	
Magnesium	183900	5000	0	0	0	0	0	185700	0.958	20	
Manganese	22.6	15.0	0	0	0	0	0	22.41	0.857	20	
Nickel	1.536	40.0	0	0	0	0	0	0	0	20	
Potassium	5652	5000	0	0	0	0	0	5741	1.57	20	
Selenium	ND	5.00	0	0	0	0	0	0	0	20	
Zinc	ND	20.0	0	0	0	0	0	0	0	20	

DUP	SeqNo: 2731571	PrepDate: 9/20/2019	TestNo: E200.7	RunNo: 176921
	Samp ID: 190920022-016	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	463300	50000	0	0	0	0	0	447900	3.37	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

DUP	SeqNo: 2731571	PrepDate: 9/20/2019	RunNo: 176921
	Samp ID: 190920022-016	PrepRef:	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	89640	50000	0	0	0	0	0	90410	0.863	20	

CCB	SeqNo: 2731529	PrepDate:	RunNo: 176921
	Samp ID: CCB-1	PrepRef:	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	0.00055	10.0	0	0	0	0	0	0	0	0	
Barium	ND	200	0	0	0	0	0	0	0	0	
Beryllium	0.02075	5.00	0	0	0	0	0	0	0	0	
Boron	1.437	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.03109	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.03073	50.0	0	0	0	0	0	0	0	0	
Copper	0.4252	25.0	0	0	0	0	0	0	0	0	
Iron	0.3025	100	0	0	0	0	0	0	0	0	
Lead	1.268	3.00	0	0	0	0	0	0	0	0	
Lithium	14.3	100	0	0	0	0	0	0	0	0	
Magnesium	13.58	5000	0	0	0	0	0	0	0	0	
Manganese	0.00979	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	5.067	5000	0	0	0	0	0	0	0	0	
Selenium	0.4918	5.00	0	0	0	0	0	0	0	0	
Silver	ND	10.0	0	0	0	0	0	0	0	0	
Sodium	7.194	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	0.06229	10.0	0	0	0	0	0	0	0	0	
Tin	0.9752	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	5.152	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCB	SeqNo: 2731529 Samp ID: CCB-1	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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CCB	SeqNo: 2731541 Samp ID: CCB-2	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	1.542	200	0	0	0	0	0	0	0	0	
Beryllium	0.02539	5.00	0	0	0	0	0	0	0	0	
Boron	1.315	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.01735	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	ND	50.0	0	0	0	0	0	0	0	0	
Copper	0.05451	25.0	0	0	0	0	0	0	0	0	
Iron	0.1153	100	0	0	0	0	0	0	0	0	
Lead	0.945	3.00	0	0	0	0	0	0	0	0	
Lithium	67.51	100	0	0	0	0	0	0	0	0	
Magnesium	19.51	5000	0	0	0	0	0	0	0	0	
Manganese	0.03486	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	5.962	5000	0	0	0	0	0	0	0	0	
Selenium	0.7871	5.00	0	0	0	0	0	0	0	0	
Silver	0.9874	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	ND	10.0	0	0	0	0	0	0	0	0	
Tin	0.3883	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCB	SeqNo: 2731541	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	20.0	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2731553	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.335	10.0	0	0	0	0	0	0	0	0	
Barium	ND	200	0	0	0	0	0	0	0	0	
Beryllium	0.09921	5.00	0	0	0	0	0	0	0	0	
Boron	1.193	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.09798	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	7.92	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.07685	50.0	0	0	0	0	0	0	0	0	
Copper	2.157	25.0	0	0	0	0	0	0	0	0	
Iron	0.346	100	0	0	0	0	0	0	0	0	
Lead	0.5585	3.00	0	0	0	0	0	0	0	0	
Lithium	87.4	100	0	0	0	0	0	0	0	0	
Magnesium	6.418	5000	0	0	0	0	0	0	0	0	
Manganese	0.05324	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	0.09581	40.0	0	0	0	0	0	0	0	0	
Potassium	2.363	5000	0	0	0	0	0	0	0	0	
Selenium	ND	5.00	0	0	0	0	0	0	0	0	
Silver	3.091	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	0.9422	10.0	0	0	0	0	0	0	0	0	
Tin	0.719	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

CCB	SeqNo: 2731553	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019
Analyte	Result	PQL	SPK value	SPK Ref Val
Zinc	ND	20.0	0	0

CCB	SeqNo: 2731554	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	2.224	200	0	0	0	0	0	0	0	0	
Beryllium	0.1867	5.00	0	0	0	0	0	0	0	0	
Boron	ND	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.00719	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.1032	50.0	0	0	0	0	0	0	0	0	
Copper	1.006	25.0	0	0	0	0	0	0	0	0	
Iron	0.03599	100	0	0	0	0	0	0	0	0	
Lead	0.4078	3.00	0	0	0	0	0	0	0	0	
Lithium	97.56	100	0	0	0	0	0	0	0	0	
Magnesium	12.59	5000	0	0	0	0	0	0	0	0	
Manganese	0.03139	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	3.852	5000	0	0	0	0	0	0	0	0	
Selenium	2.648	5.00	0	0	0	0	0	0	0	0	
Silver	0.5928	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	0.879	10.0	0	0	0	0	0	0	0	0	
Tin	0.595	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

CCB	SeqNo: 2731554	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	20.0	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2731566	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	0
Antimony	ND	60.0	0	0	0	0	0	0	0	0	0
Arsenic	1.027	10.0	0	0	0	0	0	0	0	0	0
Barium	0.83	200	0	0	0	0	0	0	0	0	0
Beryllium	0.2448	5.00	0	0	0	0	0	0	0	0	0
Boron	2.537	50.0	0	0	0	0	0	0	0	0	0
Cadmium	0.08784	5.00	0	0	0	0	0	0	0	0	0
Calcium	ND	5000	0	0	0	0	0	0	0	0	0
Chromium	ND	10.0	0	0	0	0	0	0	0	0	0
Cobalt	0.1515	50.0	0	0	0	0	0	0	0	0	0
Copper	0.2644	25.0	0	0	0	0	0	0	0	0	0
Iron	0.3309	100	0	0	0	0	0	0	0	0	0
Lead	1.438	3.00	0	0	0	0	0	0	0	0	0
Lithium	113.6	100	0	0	0	0	0	0	0	0	0
Magnesium	20	5000	0	0	0	0	0	0	0	0	0
Manganese	0.03192	15.0	0	0	0	0	0	0	0	0	0
Molybdenum	0.2517	50.0	0	0	0	0	0	0	0	0	0
Nickel	0.3382	40.0	0	0	0	0	0	0	0	0	0
Potassium	1.305	5000	0	0	0	0	0	0	0	0	0
Selenium	1.967	5.00	0	0	0	0	0	0	0	0	0
Silver	3.749	10.0	0	0	0	0	0	0	0	0	0
Sodium	ND	5000	0	0	0	0	0	0	0	0	0
Strontium	ND	20.0	0	0	0	0	0	0	0	0	0
Thallium	2.508	10.0	0	0	0	0	0	0	0	0	0
Tin	0.6804	50.0	0	0	0	0	0	0	0	0	0
Titanium	ND	50.0	0	0	0	0	0	0	0	0	0
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCB	SeqNo: 2731566	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

CCB	SeqNo: 2731578	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-5	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	0.1464	60.0	0	0	0	0	0	0	0	0	
Arsenic	0.02616	10.0	0	0	0	0	0	0	0	0	
Barium	3.19	200	0	0	0	0	0	0	0	0	
Beryllium	2.048	5.00	0	0	0	0	0	0	0	0	
Boron	1.834	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.02003	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.07719	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.5922	100	0	0	0	0	0	0	0	0	
Lead	0.4972	3.00	0	0	0	0	0	0	0	0	
Lithium	54.54	100	0	0	0	0	0	0	0	0	
Magnesium	11.58	5000	0	0	0	0	0	0	0	0	
Manganese	0.08059	15.0	0	0	0	0	0	0	0	0	
Molybdenum	0.1119	50.0	0	0	0	0	0	0	0	0	
Nickel	0.1136	40.0	0	0	0	0	0	0	0	0	
Potassium	4.102	5000	0	0	0	0	0	0	0	0	
Selenium	0.5667	5.00	0	0	0	0	0	0	0	0	
Silver	1.594	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	1.541	10.0	0	0	0	0	0	0	0	0	
Tin	0.8416	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCB	SeqNo: 2731578	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-5	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	20.0	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2731590	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-6	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	2.132	10.0	0	0	0	0	0	0	0	0	
Barium	2.783	200	0	0	0	0	0	0	0	0	
Beryllium	1.891	5.00	0	0	0	0	0	0	0	0	
Boron	4.044	50.0	0	0	0	0	0	0	0	0	
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.00774	50.0	0	0	0	0	0	0	0	0	
Copper	0.5288	25.0	0	0	0	0	0	0	0	0	
Iron	0.3452	100	0	0	0	0	0	0	0	0	
Lead	1.453	3.00	0	0	0	0	0	0	0	0	
Lithium	44.11	100	0	0	0	0	0	0	0	0	
Magnesium	7.903	5000	0	0	0	0	0	0	0	0	
Manganese	0.05766	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	2.609	5000	0	0	0	0	0	0	0	0	
Selenium	1.203	5.00	0	0	0	0	0	0	0	0	
Silver	3.804	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	1.512	10.0	0	0	0	0	0	0	0	0	
Tin	0.9132	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 13 of 52

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCB	SeqNo: 2731590	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-6	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

CCB	SeqNo: 2731595	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCB-7	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.703	10.0	0	0	0	0	0	0	0	0	
Barium	2.748	200	0	0	0	0	0	0	0	0	
Beryllium	1.91	5.00	0	0	0	0	0	0	0	0	
Boron	2.49	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.02908	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.1015	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.8554	100	0	0	0	0	0	0	0	0	
Lead	1.691	3.00	0	0	0	0	0	0	0	0	
Lithium	48.52	100	0	0	0	0	0	0	0	0	
Magnesium	12.1	5000	0	0	0	0	0	0	0	0	
Manganese	0.1032	15.0	0	0	0	0	0	0	0	0	
Molybdenum	0.1081	50.0	0	0	0	0	0	0	0	0	
Nickel	0.1209	40.0	0	0	0	0	0	0	0	0	
Potassium	2.425	5000	0	0	0	0	0	0	0	0	
Selenium	1.883	5.00	0	0	0	0	0	0	0	0	
Silver	0.1315	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	1.519	10.0	0	0	0	0	0	0	0	0	
Tin	0.7342	50.0	0	0	0	0	0	0	0	0	
Titanium	0.7977	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	

Qualifiers: NND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

CCB	SeqNo: 2731595	PrepDate:	TestNo: E200.7	RunNo: 176921
	Sampl ID: CCB -7	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCV	SeqNo: 2731528	PrepDate:	TestNo: E200.7	RunNo: 176921
	Sampl ID: CCV-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1960	200	2000	0	98	90	110	0	0	0	
Antimony	1942	60.0	2000	0	97.1	90	110	0	0	0	
Arsenic	2010	10.0	2000	0	100	90	110	0	0	0	
Barium	2059	200	2000	0	103	90	110	0	0	0	
Beryllium	2057	5.00	2000	0	103	90	110	0	0	0	
Boron	2073	50.0	2000	0	104	90	110	0	0	0	
Cadmium	2026	5.00	2000	0	101	90	110	0	0	0	
Calcium	2001	5000	2000	0	100	90	110	0	0	0	
Chromium	1971	10.0	2000	0	98.6	90	110	0	0	0	
Cobalt	1992	50.0	2000	0	99.6	90	110	0	0	0	
Copper	2086	25.0	2000	0	104	90	110	0	0	0	
Iron	2053	100	2000	0	103	90	110	0	0	0	
Lead	2021	3.00	2000	0	101	90	110	0	0	0	
Lithium	1972	100	2000	0	98.6	90	110	0	0	0	
Magnesium	1965	5000	2000	0	98.3	90	110	0	0	0	
Manganese	1978	15.0	2000	0	98.9	90	110	0	0	0	
Molybdenum	2032	50.0	2000	0	102	90	110	0	0	0	
Nickel	2082	40.0	2000	0	104	90	110	0	0	0	
Potassium	10400	5000	10000	0	104	90	110	0	0	0	
Selenium	2022	5.00	2000	0	101	90	110	0	0	0	
Silver	511.3	10.0	500	0	102	90	110	0	0	0	
Sodium	1936	5000	2000	0	96.8	90	110	0	0	0	
Strontium	2077	20.0	2000	0	104	90	110	0	0	0	
Thallium	2031	10.0	2000	0	102	90	110	0	0	0	
Tin	2052	50.0	2000	0	103	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	1976	50.0	2000	0	98.8	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCV	SeqNo: 2731528	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCV-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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CCV	SeqNo: 2731540	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCV-2	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2003	200	2000	0	100	90	110	0	0		
Antimony	2024	60.0	2000	0	101	90	110	0	0		
Arsenic	2101	10.0	2000	0	105	90	110	0	0		
Barium	2061	200	2000	0	103	90	110	0	0		
Beryllium	2139	5.00	2000	0	107	90	110	0	0		
Boron	2135	50.0	2000	0	107	90	110	0	0		
Cadmium	2087	5.00	2000	0	104	90	110	0	0		
Calcium	2134	5000	2000	0	107	90	110	0	0		
Chromium	1957	10.0	2000	0	97.8	90	110	0	0		
Cobalt	2099	50.0	2000	0	105	90	110	0	0		
Copper	2089	25.0	2000	0	104	90	110	0	0		
Iron	2128	100	2000	0	106	90	110	0	0		
Lead	2148	3.00	2000	0	107	90	110	0	0		
Lithium	2008	100	2000	0	100	90	110	0	0		
Magnesium	1996	5000	2000	0	99.8	90	110	0	0		
Manganese	2078	15.0	2000	0	104	90	110	0	0		
Molybdenum	2114	50.0	2000	0	106	90	110	0	0		
Nickel	2187	40.0	2000	0	109	90	110	0	0		
Potassium	9266	5000	10000	0	92.7	90	110	0	0		
Selenium	2117	5.00	2000	0	106	90	110	0	0		
Silver	519.3	10.0	500	0	104	90	110	0	0		
Sodium	1897	5000	2000	0	94.9	90	110	0	0		
Strontium	2171	20.0	2000	0	109	90	110	0	0		
Thallium	2120	10.0	2000	0	106	90	110	0	0		
Tin	2174	50.0	2000	0	109	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2053	50.0	2000	0	103	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCV	SeqNo: 2731552	PrepDate:	TestNo: E200.7
	Samp ID: CCV-3	PrepRef:	RunNo: 176921
			Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2176	20.0	2000	0	109	90	110	0	0	0	

CCV	SeqNo: 2731565	PrepDate:	TestNo: E200.7
	Samp ID: CCV-4	PrepRef:	RunNo: 176921
			Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	2200	5.00	2000	0	110	90	110	0	0	0	S
Boron	2188	50.0	2000	0	109	90	110	0	0	0	
Cadmium	2149	5.00	2000	0	107	90	110	0	0	0	
Calcium	2171	5000	2000	0	109	90	110	0	0	0	
Chromium	1947	10.0	2000	0	97.3	90	110	0	0	0	
Cobalt	2131	50.0	2000	0	107	90	110	0	0	0	
Copper	2070	25.0	2000	0	104	90	110	0	0	0	
Iron	2166	100	2000	0	108	90	110	0	0	0	
Lead	1939	3.00	2000	0	96.9	90	110	0	0	0	
Lithium	1956	100	2000	0	97.8	90	110	0	0	0	
Magnesium	2003	5000	2000	0	100	90	110	0	0	0	
Manganese	1943	15.0	2000	0	97.2	90	110	0	0	0	
Molybdenum	2070	50.0	2000	0	104	90	110	0	0	0	
Nickel	2099	40.0	2000	0	105	90	110	0	0	0	
Potassium	9252	5000	10000	0	92.5	90	110	0	0	0	
Selenium	2172	5.00	2000	0	109	90	110	0	0	0	
Silver	531.2	10.0	500	0	106	90	110	0	0	0	
Sodium	1848	5000	2000	0	92.4	90	110	0	0	0	
Strontium	2116	20.0	2000	0	106	90	110	0	0	0	
Thallium	2107	10.0	2000	0	105	90	110	0	0	0	
Tin	1848	50.0	2000	0	92.4	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	2109	50.0	2000	0	105	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCV	SeqNo: 2731540 Samp ID: CCV-2	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2178	20.0	2000	0	109	90	110	0	0		

CCV	SeqNo: 2731552 Samp ID: CCV-3	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2012	200	2000	0	101	90	110	0	0		
Antimony	2073	60.0	2000	0	104	90	110	0	0		
Arsenic	2127	10.0	2000	0	106	90	110	0	0		
Barium	2052	200	2000	0	103	90	110	0	0		
Beryllium	2160	5.00	2000	0	108	90	110	0	0		
Boron	2170	50.0	2000	0	108	90	110	0	0		
Cadmium	2125	5.00	2000	0	106	90	110	0	0		
Calcium	2186	5000	2000	0	109	90	110	0	0		
Chromium	1949	10.0	2000	0	97.4	90	110	0	0		
Cobalt	2148	50.0	2000	0	107	90	110	0	0		
Copper	2078	25.0	2000	0	104	90	110	0	0		
Iron	2166	100	2000	0	108	90	110	0	0		
Lead	2121	3.00	2000	0	106	90	110	0	0		
Lithium	1946	100	2000	0	97.3	90	110	0	0		
Magnesium	2002	5000	2000	0	100	90	110	0	0		
Manganese	2141	15.0	2000	0	107	90	110	0	0		
Molybdenum	2165	50.0	2000	0	108	90	110	0	0		
Nickel	2010	40.0	2000	0	100	90	110	0	0		
Potassium	9218	5000	10000	0	92.2	90	110	0	0		
Selenium	2153	5.00	2000	0	108	90	110	0	0		
Silver	5272	10.0	500	0	105	90	110	0	0		
Sodium	1867	5000	2000	0	93.3	90	110	0	0		
Strontium	2154	20.0	2000	0	108	90	110	0	0		
Thallium	2171	10.0	2000	0	109	90	110	0	0		
Tin	2082	50.0	2000	0	104	90	110	0	0		
Titanium	NID	50.0	0	0	0	90	110	0	0		
Vanadium	2067	50.0	2000	0	103	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75727

CCV	SeqNo: 2731565 Samp ID: <u>CCV-4</u>	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Zinc	1888	20.0	2000	0	94.4	90	110	0	0	0	

CCV	SeqNo: 2731577 Samp ID: <u>CCV-5</u>	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	2148	200	2000	0	107	90	110	0	0	0	
Antimony	1838	60.0	2000	0	91.9	90	110	0	0	0	
<u>Arsenic</u>	2441	10.0	2000	0	122	90	110	0	0	0	S
Barium	2172	200	2000	0	109	90	110	0	0	0	
Beryllium	2010	5.00	2000	0	100	90	110	0	0	0	
Boron	1993	50.0	2000	0	99.6	90	110	0	0	0	
Cadmium	2009	5.00	2000	0	100	90	110	0	0	0	
Calcium	1958	5000	2000	0	97.9	90	110	0	0	0	
Chromium	2046	10.0	2000	0	102	90	110	0	0	0	
Cobalt	1901	50.0	2000	0	95	90	110	0	0	0	
Copper	2024	25.0	2000	0	101	90	110	0	0	0	
Iron	1967	100	2000	0	98.4	90	110	0	0	0	
Lead	2191	3.00	2000	0	110	90	110	0	0	0	
Lithium	2042	100	2000	0	102	90	110	0	0	0	
Magnesium	2129	5000	2000	0	106	90	110	0	0	0	
Manganese	2125	15.0	2000	0	106	90	110	0	0	0	
Molybdenum	1949	50.0	2000	0	97.4	90	110	0	0	0	
Nickel	2040	40.0	2000	0	102	90	110	0	0	0	
Potassium	9684	5000	10000	0	96.8	90	110	0	0	0	
Selenium	2186	5.00	2000	0	109	90	110	0	0	0	
Silver	474.4	10.0	500	0	94.9	90	110	0	0	0	
Sodium	1999	5000	2000	0	100	90	110	0	0	0	
Strontium	2146	20.0	2000	0	107	90	110	0	0	0	
Thallium	2016	10.0	2000	0	101	90	110	0	0	0	
Tin	2089	50.0	2000	0	104	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	1860	50.0	2000	0	93	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank
 S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits
 J - Analyte detected below quantitation limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCV	SeqNo: 2731577	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCV-5	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	1960	20.0	2000	0	98	90	110	0	0		

CCV	SeqNo: 2731589	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CCV-6	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2141	200	2000	0	107	90	110	0	0		
Antimony	1882	60.0	2000	0	94.1	90	110	0	0		
Arsenic	2170	10.0	2000	0	108	90	110	0	0		
Barium	2129	200	2000	0	106	90	110	0	0		
Beryllium	2048	5.00	2000	0	102	90	110	0	0		
Boron	2037	50.0	2000	0	102	90	110	0	0		
Cadmium	2078	5.00	2000	0	104	90	110	0	0		
Calcium	2020	5000	2000	0	101	90	110	0	0		
Chromium	1996	10.0	2000	0	99.8	90	110	0	0		
Cobalt	1965	50.0	2000	0	98.3	90	110	0	0		
Copper	2153	25.0	2000	0	108	90	110	0	0		
Iron	2028	100	2000	0	101	90	110	0	0		
Lead	2100	3.00	2000	0	105	90	110	0	0		
Lithium	2061	100	2000	0	103	90	110	0	0		
Magnesium	2133	5000	2000	0	107	90	110	0	0		
Manganese	2152	15.0	2000	0	108	90	110	0	0		
Molybdenum	2016	50.0	2000	0	101	90	110	0	0		
Nickel	2132	40.0	2000	0	107	90	110	0	0		
Potassium	9575	5000	10000	0	95.8	90	110	0	0		
Selenium	2108	5.00	2000	0	105	90	110	0	0		
Silver	479.6	10.0	500	0	95.9	90	110	0	0		
Sodium	1946	5000	2000	0	97.3	90	110	0	0		
Strontium	2125	20.0	2000	0	106	90	110	0	0		
Thallium	2090	10.0	2000	0	104	90	110	0	0		
Tin	1926	50.0	2000	0	96.3	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	1845	50.0	2000	0	92.3	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCV SeqNo: 2731589 PrepDate: E200.7 RunNo: 176921
 Samp ID: CCV-6 PrepRef: Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2035	20.0	2000	0	102	90	110	0	0	0	

CCV SeqNo: 2731594 PrepDate: E200.7 RunNo: 176921
 Samp ID: CCV-7 PrepRef: Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2160	200	2000	0	108	90	110	0	0	0	
Antimony	1878	60.0	2000	0	93.9	90	110	0	0	0	
Arsenic	2176	10.0	2000	0	109	90	110	0	0	0	
Barium	2130	200	2000	0	107	90	110	0	0	0	
Beryllium	2057	5.00	2000	0	103	90	110	0	0	0	
Boron	2038	50.0	2000	0	102	90	110	0	0	0	
Cadmium	2082	5.00	2000	0	104	90	110	0	0	0	
Calcium	2046	5000	2000	0	102	90	110	0	0	0	
Chromium	2001	10.0	2000	0	100	90	110	0	0	0	
Cobalt	1971	50.0	2000	0	98.5	90	110	0	0	0	
Copper	2142	25.0	2000	0	107	90	110	0	0	0	
Iron	2041	100	2000	0	102	90	110	0	0	0	
Lead	2104	3.00	2000	0	105	90	110	0	0	0	
Lithium	2056	100	2000	0	103	90	110	0	0	0	
Magnesium	2124	5000	2000	0	106	90	110	0	0	0	
Manganese	2155	15.0	2000	0	108	90	110	0	0	0	
Molybdenum	2019	50.0	2000	0	101	90	110	0	0	0	
Nickel	2139	40.0	2000	0	107	90	110	0	0	0	
Potassium	9555	5000	10000	0	95.6	90	110	0	0	0	
Selenium	2184	5.00	2000	0	109	90	110	0	0	0	
Silver	482.8	10.0	500	0	96.6	90	110	0	0	0	
Sodium	1924	5000	2000	0	96.2	90	110	0	0	0	
Strontium	2132	20.0	2000	0	107	90	110	0	0	0	
Thallium	2094	10.0	2000	0	105	90	110	0	0	0	
Tin	2063	50.0	2000	0	103	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	1863	50.0	2000	0	93.2	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 21 of 52

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

CCV	SeqNo: 2731594 Samp ID: CCV-7	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2039	20.0	2000	0	102	90	110	0	0		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4.674	200	0	0	0	50	150	0	0		
Antimony	119.4	60.0	120	0	99.5	50	150	0	0		
Arsenic	16.97	10.0	20	0	84.8	50	150	0	0		
Barium	ND	200	0	0	0	50	150	0	0		
Boron	0.8482	50.0	0	0	0	50	150	0	0		
Cadmium	10.47	5.00	10	0	105	50	150	0	0		
Calcium	ND	5000	0	0	0	50	150	0	0		
Chromium	23.95	10.0	20	0	120	50	150	0	0		
Copper	48.15	25.0	50	0	96.3	50	150	0	0		
Iron	ND	100	0	0	0	50	150	0	0		
Magnesium	5.925	5000	0	0	0	50	150	0	0		
Manganese	29.08	15.0	30	0	96.9	50	150	0	0		
Nickel	83.46	40.0	80	0	104	50	150	0	0		
Potassium	7.584	5000	0	0	0	50	150	0	0		
Selenium	10.15	5.00	10	0	102	50	150	0	0		
Sodium	ND	5000	0	0	0	50	150	0	0		
Zinc	45.29	20.0	40	0	113	50	150	0	0		

CRI	SeqNo: 2731591 Samp ID: CRI-2	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	50	150	0	0		
Antimony	113.1	60.0	120	0	94.3	50	150	0	0		
Arsenic	20.84	10.0	20	0	104	50	150	0	0		
Barium	2.205	200	0	0	0	50	150	0	0		
Boron	1.682	50.0	0	0	0	50	150	0	0		

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

CRI	SeqNo: 2731591	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: CRI-2	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	10.79	5.00	10	0	108	50	150	0	0	0	
Calcium	0.1494	5000	0	0	0	50	150	0	0	0	
Chromium	21.1	10.0	20	0	105	50	150	0	0	0	
Copper	48.42	25.0	50	0	96.8	50	150	0	0	0	
Iron	0.5366	100	0	0	0	50	150	0	0	0	
Magnesium	ND	5000	0	0	0	50	150	0	0	0	
Manganese	32.34	15.0	30	0	108	50	150	0	0	0	
Nickel	86.58	40.0	80	0	108	50	150	0	0	0	
Potassium	5.874	5000	0	0	0	50	150	0	0	0	
Selenium	11.64	5.00	10	0	116	50	150	0	0	0	
Sodium	ND	5000	0	0	0	50	150	0	0	0	
Zinc	44.49	20.0	40	0	111	50	150	0	0	0	

ICB	SeqNo: 2731524	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	0.5178	200	0	0	0	0	0	0	0	0	
Boron	1.79	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.03885	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	0.5842	10.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	ND	100	0	0	0	0	0	0	0	0	
Magnesium	26.66	5000	0	0	0	0	0	0	0	0	
Manganese	ND	15.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	5.128	5000	0	0	0	0	0	0	0	0	
Selenium	0.5772	5.00	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75727

ICB	SeqNo: 2731524	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2731523	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: ICV-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1956	200	2000	0	97.8	90	110	0	0	0	
Antimony	1922	60.0	2000	0	96.1	90	110	0	0	0	
Arsenic	1988	10.0	2000	0	99.4	90	110	0	0	0	
Barium	2046	200	2000	0	102	90	110	0	0	0	
Boron	2057	50.0	2000	0	103	90	110	0	0	0	
Cadmium	2009	5.00	2000	0	100	90	110	0	0	0	
Calcium	1978	5000	2000	0	98.9	90	110	0	0	0	
Chromium	1956	10.0	2000	0	97.8	90	110	0	0	0	
Copper	2079	25.0	2000	0	104	90	110	0	0	0	
Iron	2031	100	2000	0	102	90	110	0	0	0	
Magnesium	1962	5000	2000	0	98.1	90	110	0	0	0	
Manganese	1956	15.0	2000	0	97.8	90	110	0	0	0	
Nickel	2055	40.0	2000	0	103	90	110	0	0	0	
Potassium	10280	5000	10000	0	103	90	110	0	0	0	
Selenium	2006	5.00	2000	0	100	90	110	0	0	0	
Sodium	1927	5000	2000	0	96.4	90	110	0	0	0	
Zinc	2057	20.0	2000	0	103	90	110	0	0	0	

ICSA	SeqNo: 2731526	PrepDate:	TestNo: E200.7	RunNo: 176921
	Samp ID: ICSA-1	PrepRef:	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	492300	200	500000	0	98.5	80	120	0	0	0	
Antimony	ND	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	0.2082	200	0	0	0	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

ICSA	SeqNo: 2731526	PrepDate:
	Samp ID: <u>ICSA-1</u>	PrepRef:
	TestNo: E200.7	RunNo: 176921
	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	5.00	0	0	0	80	120	0	0	0	
Calcium	429700	5000	500000	0	85.9	80	120	0	0	0	
Chromium	ND	10.0	0	0	0	80	120	0	0	0	
Copper	ND	25.0	0	0	0	80	120	0	0	0	
<u>Iron</u>	123600	100	200000	0	61.8	80	120	0	0	0	S
Magnesium	510800	5000	500000	0	102	80	120	0	0	0	
Manganese	ND	15.0	0	0	0	80	120	0	0	0	
Nickel	ND	40.0	0	0	0	80	120	0	0	0	
Potassium	ND	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	ND	5000	0	0	0	80	120	0	0	0	
Zinc	ND	20.0	0	0	0	80	120	0	0	0	

ICSA	SeqNo: 2731592	PrepDate:
	Samp ID: <u>ICSA-2</u>	PrepRef:
	TestNo: E200.7	RunNo: 176921
	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	526100	200	500000	0	105	80	120	0	0	0	
Antimony	ND	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	3.368	200	0	0	0	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	ND	5.00	0	0	0	80	120	0	0	0	
Calcium	426700	5000	500000	0	85.3	80	120	0	0	0	
Chromium	ND	10.0	0	0	0	80	120	0	0	0	
Copper	ND	25.0	0	0	0	80	120	0	0	0	
<u>Iron</u>	125200	100	200000	0	62.6	80	120	0	0	0	S
Magnesium	539500	5000	500000	0	108	80	120	0	0	0	
Manganese	ND	15.0	0	0	0	80	120	0	0	0	
Nickel	ND	40.0	0	0	0	80	120	0	0	0	
Potassium	ND	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	ND	5000	0	0	0	80	120	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
BatchID: 75727

ICSA	SeqNo: 2731592 Samp ID: ICSA-2	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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ICCSAB	SeqNo: 2731527 Samp ID: <u>ICCSAB-1</u>	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: <u>10/31/2019</u>
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	490600	200	500000	0	98.1	80	120	0	0		
Antimony	1.286	60.0	0	0	0	80	120	0	0		
Arsenic	ND	10.0	0	0	0	80	120	0	0		
Barium	518	200	500	0	104	80	120	0	0		
Boron	ND	50.0	0	0	0	80	120	0	0		
Cadmium	926.6	5.00	1000	0	92.7	80	120	0	0		
Calcium	428200	5000	500000	0	85.6	80	120	0	0		
Chromium	599	10.0	500	0	120	80	120	0	0		
Copper	566.1	25.0	500	0	113	80	120	0	0		
<u>Iron</u>	123500	100	200000	0	<u>61.7</u>	80	120	0	0		<u>S</u>
Magnesium	506100	5000	500000	0	101	80	120	0	0		
Manganese	465.5	15.0	500	0	93.1	80	120	0	0		
Nickel	964.2	40.0	1000	0	96.4	80	120	0	0		
Potassium	0.746	5000	0	0	0	80	120	0	0		
Selenium	ND	5.00	0	0	0	80	120	0	0		
Sodium	ND	5000	0	0	0	80	120	0	0		
Zinc	919.8	20.0	1000	0	92	80	120	0	0		

ICCSAB	SeqNo: 2731593 Samp ID: ICSAB-2	PrepDate: PrepRef:	TestNo: E200.7 Units: µg/L	RunNo: 176921 Analysis Date: 10/31/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	528100	200	500000	0	106	80	120	0	0		
Antimony	ND	60.0	0	0	0	80	120	0	0		
Arsenic	ND	10.0	0	0	0	80	120	0	0		
Barium	542.4	200	500	0	108	80	120	0	0		
Boron	ND	50.0	0	0	0	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75727

ICSAB	SeqNo: 2731593	PrepDate:
	Samp ID: ICSAB-2	PrepRef:
	TestNo: E200.7	RunNo: 176921
	Units: µg/L	Analysis Date: 10/31/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	963.4	5.00	1000	0	96.3	80	120	0	0	0	
Calcium	427900	5000	500000	0	85.6	80	120	0	0	0	
Chromium	511.5	10.0	500	0	102	80	120	0	0	0	
Copper	577.5	25.0	500	0	115	80	120	0	0	0	
Iron	125200	100	200000	0	62.6	80	120	0	0	0	S
Magnesium	540800	5000	500000	0	108	80	120	0	0	0	
Manganese	409.5	15.0	500	0	81.9	80	120	0	0	0	
Nickel	819	40.0	1000	0	81.9	80	120	0	0	0	
Potassium	ND	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	ND	5000	0	0	0	80	120	0	0	0	
Zinc	922.7	20.0	1000	0	92.3	80	120	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
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CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75728

mbik	SeqNo: 2704505 Samp ID: MB-75728	PrepDate: 9/20/2019 PrepRef: (E245.1)	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200									

lcs	SeqNo: 2704506 Samp ID: LCS-75728	PrepDate: 9/20/2019 PrepRef: (E245.1)	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.974	0.200	2	0	98.7	85	115	0	0		

ms	SeqNo: 2704522 Samp ID: 190920022-013 (9306-SH)	PrepDate: 9/20/2019 PrepRef: (E245.1)	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.951	0.200	2	0	97.6	80.8	119	0	0		

ms	SeqNo: 2704539 Samp ID: 190920022-026 (GW Dep Drain 3)	PrepDate: 9/20/2019 PrepRef: (E245.1)	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.592	0.200	2	0	79.6	80.8	119	0	0		S

dup	SeqNo: 2704521 Samp ID: 190920022-013	PrepDate: 9/20/2019 PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0075	0.200	0	0	0	0	0	0	0		

dup	SeqNo: 2704536 Samp ID: 190920022-026	PrepDate: 9/20/2019 PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0321	0.200	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

BatchID: 75728

CCB	SeqNo: 2704514	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCB	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.1014	0.200	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2704526	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCB	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.1029	0.200	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2704538	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCB	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0979	0.200	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2704541	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCB	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0972	0.200	0	0	0	0	0	0	0	0	0

CCV	SeqNo: 2704513	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCV	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.974	0.200	2	0	98.7	85	115	0	0	0	0

CCV	SeqNo: 2704525	PrepDate:	TestNo: E245.1	RunNo: 175596	Analysis Date: 9/21/2019
	Samp ID: CCV	PrepRef:	Units: µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.938	0.200	2	0	96.9	85	115	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75728

CCV	SeqNo: 2704537 Samp ID: CCV	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.945	0.200	2	0	97.2	85	115	0	0		

CCV	SeqNo: 2704540 Samp ID: CCV	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.041	0.200	2	0	102	85	115	0	0		

CrA	SeqNo: 2704503 Samp ID: 0.2ppb	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1774	0.200	0.2	0	88.7	70	130	0	0		

ICB	SeqNo: 2704502 Samp ID: ICB	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0998	0.200	0	0	0	0	0	0	0		

ICV	SeqNo: 2704501 Samp ID: ICV	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 175596 Analysis Date: 9/21/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.993	0.200	2	0	99.7	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

PS	SeqNo: 2732045	TestNo: E200.7	RunNo: 176944
	Samp ID: 190920022-033 (Pond Grab)	Units: µg/L	Analysis Date: 11/1/2019
PrepDate: PrepRef:(SW3010A)			

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	4904	200	4000	0	123	75	125	0	0	0	
Antimony	1244	60.0	1000	0	124	75	125	0	0	0	
Arsenic	98.78	10.0	80	6.982	115	75	125	0	0	0	
Barium	4688	200	4000	224.8	112	75	125	0	0	0	
Cadmium	135.8	5.00	100	0	136	75	125	0	0	0	S
Chromium	501.4	10.0	400	0	125	75	125	0	0	0	S
Copper	638.8	25.0	500	0	128	75	125	0	0	0	S
Iron	2772	100	2000	216.8	128	75	125	0	0	0	S
Manganese	1343	15.0	1000	131.8	121	75	125	0	0	0	
Nickel	1308	40.0	1000	0	131	75	125	0	0	0	S
Selenium	76.32	5.00	20	35.26	205	75	125	0	0	0	S
Zinc	1431	20.0	1000	0	143	75	125	0	0	0	S

SD	SeqNo: 2732048	TestNo: E200.7	RunNo: 176944
	Samp ID: 190920022-033 (Pond Grab)	Units: µg/L	Analysis Date: 11/1/2019
PrepDate: PrepRef:(SW3010A)			

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	ND	1000	0	0	0	0	0	0	0	0	
Antimony	ND	300	0	0	0	0	0	0	0	0	
Arsenic	37.26	50.0	0	0	0	0	0	6.982	0	0	J < 50x MDL
Barium	255.3	1000	0	0	0	0	0	224.8	0	0	J < 50x MDL
Boron	43540	250	0	0	0	0	0	37210	15.7	10	J
Cadmium	ND	25.0	0	0	0	0	0	0	0	0	
Calcium	435200	25000	0	0	0	0	0	516100	17.0	10	J
Chromium	ND	50.0	0	0	0	0	0	0	0	0	
Copper	ND	120	0	0	0	0	0	0	0	0	
Iron	197.3	500	0	0	0	0	0	216.8	0	0	J < 50x MDL
Magnesium	121200	25000	0	0	0	0	0	126000	3.84	0	
Manganese	130.8	75.0	0	0	0	0	0	131.8	0.735	0	
Nickel	ND	200	0	0	0	0	0	0	0	0	
Potassium	98520	25000	0	0	0	0	0	112100	12.9	10	J
Selenium	34.23	25.0	0	0	0	0	0	35.26	2.94	0	
Sodium	312800	25000	0	0	0	0	0	182200	52.8	10	J

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

SD	SeqNo: 2732048 Samp ID: 190920022-033 (Pond Grab)	PrepDate: PrepRef:(SW3010A)	TestNo: E200.7 Units: µg/L	RunNo: 176944 Analysis Date: 11/1/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	100	0	0	0	0	0	0	0	0	

MBLK	SeqNo: 2732036 Samp ID: MB-75961	PrepDate: PrepRef:(SW3010A)	TestNo: E200.7 Units: µg/L	RunNo: 176944 Analysis Date: 11/1/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	31.44	200									J
Antimony	ND	60.0									
Arsenic	ND	10.0									
Barium	ND	200									
Boron	ND	50.0									
Cadmium	ND	5.00									
Calcium	33.3	5000									J
Chromium	ND	10.0									
Copper	ND	25.0									
Iron	14.51	100									J
Magnesium	ND	5000									
Manganese	ND	15.0									
Nickel	ND	40.0									
Potassium	ND	5000									
Selenium	ND	5.00									
Sodium	ND	5000									
Zinc	ND	20.0									

LCS	SeqNo: 2732037 Samp ID: LCS-75961	PrepDate: PrepRef:(SW3010A)	TestNo: E200.7 Units: µg/L	RunNo: 176944 Analysis Date: 11/1/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2024	200	2000	0	101	80	120	0	0		
Antimony	1970	60.0	2000	0	98.5	80	120	0	0		
Arsenic	2082	10.0	2000	0	104	80	120	0	0		
Barium	2053	200	2000	0	103	80	120	0	0		
Boron	2131	50.0	2000	0	107	80	120	0	0		

Qualifiers: NID - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75961

LCS	SeqNo: 2732037	PrepDate: 10/4/2019	TestNo: E200.7	RunNo: 176944
	Samp ID: LCS-75961	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	2100	5.00	2000	0	105	80	120	0	0	0	
Calcium	2052	5000	2000	0	103	80	120	0	0	0	J
Chromium	2001	10.0	2000	0	100	80	120	0	0	0	
Copper	2138	25.0	2000	0	107	80	120	0	0	0	
Iron	2066	100	2000	0	103	80	120	0	0	0	
Magnesium	2042	5000	2000	0	102	80	120	0	0	0	J
Manganese	1960	15.0	2000	0	98	80	120	0	0	0	
Nickel	2091	40.0	2000	0	105	80	120	0	0	0	
Potassium	9538	5000	10000	0	95.4	80	120	0	0	0	
Selenium	2087	5.00	2000	0	104	80	120	0	0	0	
Sodium	1978	5000	2000	0	98.9	80	120	0	0	0	J
Zinc	2126	20.0	2000	0	106	80	120	0	0	0	

MS	SeqNo: 2732044	PrepDate: 10/4/2019	TestNo: E200.7	RunNo: 176944
	Samp ID: 190920022-033 (Pond Grab)	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2237	200	2000	0	112	75	125	0	0	0	
Antimony	591.3	60.0	500	0	118	75	125	0	0	0	
Arsenic	53.22	10.0	40	6.982	116	75	125	0	0	0	
Barium	643.4	200	2000	224.8	20.9	75	121	0	0	0	S
Cadmium	64.46	5.00	50	0	129	75	114	0	0	0	S
Chromium	253.6	10.0	200	0	127	75	125	0	0	0	S
Copper	319.3	25.0	250	0	128	75	123	0	0	0	S
Iron	1454	100	1000	216.8	124	75	125	0	0	0	
Manganese	716.4	15.0	500	131.8	117	75	125	0	0	0	
Nickel	616.4	40.0	500	0	123	75	120	0	0	0	
Selenium	54.94	5.00	10	35.26	197	75	125	0	0	0	S
Zinc	682.8	20.0	500	0	137	78.5	123	0	0	0	S

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

DUP	SeqNo: 2732042	PrepDate: 10/4/2019	TestNo: E200.7	RunNo: 176944
	Samp ID: 190920022-033	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	20	
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	9.344	10.0	0	0	0	0	0	6.982	0	20	
Barium	231.8	200	0	0	0	0	0	224.8	3.07	20	
Cadmium	ND	5.00	0	0	0	0	0	0	0	20	
Chromium	ND	10.0	0	0	0	0	0	0	0	20	
Copper	ND	25.0	0	0	0	0	0	0	0	20	
Iron	232.7	100	0	0	0	0	0	216.8	7.10	20	
Magnesium	130600	5000	0	0	0	0	0	126000	3.60	20	
Manganese	141.6	15.0	0	0	0	0	0	131.8	7.17	20	
Nickel	2.115	40.0	0	0	0	0	0	0	0	20	
Selenium	35.54	5.00	0	0	0	0	0	35.26	0.802	20	
Zinc	ND	20.0	0	0	0	0	0	0	0	20	

DUP	SeqNo: 2732043	PrepDate: 10/4/2019	TestNo: E200.7	RunNo: 176944
	Samp ID: 190920022-033	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	40310	500	0	0	0	0	0	39110	3.01	20	
Calcium	608900	50000	0	0	0	0	0	584300	4.13	20	
Potassium	78790	50000	0	0	0	0	0	79330	0.683	20	
Sodium	300600	50000	0	0	0	0	0	297700	0.983	20	

CCB	SeqNo: 2732035	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCB-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	3.592	200	0	0	0	0	0	0	0	20	
Antimony	ND	60.0	0	0	0	0	0	0	0	20	
Arsenic	0.3304	10.0	0	0	0	0	0	0	0	20	
Barium	0.1469	200	0	0	0	0	0	0	0	20	
Beryllium	ND	5.00	0	0	0	0	0	0	0	20	
Boron	ND	50.0	0	0	0	0	0	0	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75961

CCB	SeqNo: 2732035	PrepDate:	TestNo: E200.7	RunNo: 176944
	Sampl ID: CCB-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.07349	5.00	0	0	0	0	0	0	0	0	
Calcium	27.19	5000	0	0	0	0	0	0	0	0	
Chromium	0.07386	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.03072	50.0	0	0	0	0	0	0	0	0	
Copper	2.084	25.0	0	0	0	0	0	0	0	0	
Iron	17.68	100	0	0	0	0	0	0	0	0	
Lead	1.138	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	35.92	5000	0	0	0	0	0	0	0	0	
Manganese	0.02665	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	0.158	5000	0	0	0	0	0	0	0	0	
Selenium	ND	5.00	0	0	0	0	0	0	0	0	
Silver	ND	10.0	0	0	0	0	0	0	0	0	
Sodium	7.243	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	1.609	10.0	0	0	0	0	0	0	0	0	
Tin	ND	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2732047	PrepDate:	TestNo: E200.7	RunNo: 176944
	Sampl ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.448	10.0	0	0	0	0	0	0	0	0	
Barium	5.375	200	0	0	0	0	0	0	0	0	
Beryllium	1.878	5.00	0	0	0	0	0	0	0	0	
Boron	16.47	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

CCB	SeqNo: 2732047	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	2.324	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	ND	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.1393	100	0	0	0	0	0	0	0	0	
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	2.878	5000	0	0	0	0	0	0	0	0	
Manganese	ND	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	15.77	5000	0	0	0	0	0	0	0	0	
Selenium	2.429	5.00	0	0	0	0	0	0	0	0	
Silver	ND	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	1.634	10.0	0	0	0	0	0	0	0	0	
Tin	0.1362	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	2.678	50.0	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2732056	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.884	10.0	0	0	0	0	0	0	0	0	
Barium	4.351	200	0	0	0	0	0	0	0	0	
Beryllium	3.117	5.00	0	0	0	0	0	0	0	0	
Boron	2.905	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75961

CCB	SeqNo: 2732056	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	8.971	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	ND	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	ND	100	0	0	0	0	0	0	0	0	
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	3.129	100	0	0	0	0	0	0	0	0	
Magnesium	ND	5000	0	0	0	0	0	0	0	0	
Manganese	ND	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	6.546	5000	0	0	0	0	0	0	0	0	
Selenium	1.959	5.00	0	0	0	0	0	0	0	0	
Silver	4.992	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	ND	10.0	0	0	0	0	0	0	0	0	
Tin	0.2766	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2732064	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	3.9	10.0	0	0	0	0	0	0	0	0	
Barium	5.29	200	0	0	0	0	0	0	0	0	
Beryllium	3.046	5.00	0	0	0	0	0	0	0	0	
Boron	0.6755	50.0	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

CCB SeqNo: 2732064 TestNo: E200.7 RunNo: 176944
 Samp ID: CCB-4 Units: µg/L Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	9,244	5000	0	0	0	0	0	0	0	0	
Chromium	1,211	10.0	0	0	0	0	0	0	0	0	
Cobalt	ND	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.3401	100	0	0	0	0	0	0	0	0	
Lead	0.4232	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	ND	5000	0	0	0	0	0	0	0	0	
Manganese	ND	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	1,652	5000	0	0	0	0	0	0	0	0	
Selenium	1,008	5.00	0	0	0	0	0	0	0	0	
Silver	7,358	10.0	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	ND	10.0	0	0	0	0	0	0	0	0	
Tin	0.01373	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	4,236	50.0	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCV SeqNo: 2732034 TestNo: E200.7 RunNo: 176944
 Samp ID: CCV-1 Units: µg/L Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2034	200	2000	0	102	90	110	0	0	0	
Antimony	1928	60.0	2000	0	96.4	90	110	0	0	0	
Arsenic	2005	10.0	2000	0	100	90	110	0	0	0	
Barium	2046	200	2000	0	102	90	110	0	0	0	
Beryllium	2040	5.00	2000	0	102	90	110	0	0	0	
Boron	2097	50.0	2000	0	105	90	110	0	0	0	

Qualifiers: NID - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

CCV	SeqNo: 2732034	PrepDate:
	Samp ID: CCV-1	PrepRef:
	TestNo: E200.7	RunNo: 176944
	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	2048	5.00	2000	0	102	90	110	0	0	0	
Calcium	2071	5000	2000	0	104	90	110	0	0	0	
Chromium	1947	10.0	2000	0	97.3	90	110	0	0	0	
Cobalt	1943	50.0	2000	0	97.1	90	110	0	0	0	
Copper	2079	25.0	2000	0	104	90	110	0	0	0	
Iron	2041	100	2000	0	102	90	110	0	0	0	
Lead	2049	3.00	2000	0	102	90	110	0	0	0	
Lithium	2010	100	2000	0	101	90	110	0	0	0	
Magnesium	2040	5000	2000	0	102	90	110	0	0	0	
Manganese	1919	15.0	2000	0	95.9	90	110	0	0	0	
Molybdenum	2035	50.0	2000	0	102	90	110	0	0	0	
Nickel	2044	40.0	2000	0	102	90	110	0	0	0	
Potassium	9368	5000	10000	0	93.7	90	110	0	0	0	
Selenium	2010	5.00	2000	0	100	90	110	0	0	0	
Silver	508.4	10.0	500	0	102	90	110	0	0	0	
Sodium	1922	5000	2000	0	96.1	90	110	0	0	0	
Strontium	1994	20.0	2000	0	99.7	90	110	0	0	0	
Thallium	2042	10.0	2000	0	102	90	110	0	0	0	
Tin	2007	50.0	2000	0	100	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	1944	50.0	2000	0	97.2	90	110	0	0	0	
Zinc	2061	20.0	2000	0	103	90	110	0	0	0	

CCV	SeqNo: 2732046	PrepDate:
	Samp ID: CCV-2	PrepRef:
	TestNo: E200.7	RunNo: 176944
	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2236	200	2000	0	112	90	110	0	0	0	S
Antimony	2033	60.0	2000	0	102	90	110	0	0	0	
Arsenic	2045	10.0	2000	0	102	90	110	0	0	0	
Barium	1888	200	2000	0	94.4	90	110	0	0	0	
Beryllium	2127	5.00	2000	0	106	90	110	0	0	0	
Boron	2187	50.0	2000	0	109	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

CCV	SeqNo: 2732046	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCV-2	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	1960	5.00	2000	0	98	90	110	0	0		
Calcium	1854	5000	2000	0	92.7	90	110	0	0		
Chromium	2018	10.0	2000	0	101	90	110	0	0		
Cobalt	2156	50.0	2000	0	108	90	110	0	0		
Copper	1990	25.0	2000	0	99.5	90	110	0	0		
Iron	2044	100	2000	0	102	90	110	0	0		
Lead	1940	3.00	2000	0	97	90	110	0	0		
Lithium	2181	100	2000	0	109	90	110	0	0		
Magnesium	2072	5000	2000	0	104	90	110	0	0		
Manganese	2158	15.0	2000	0	108	90	110	0	0		
Molybdenum	2161	50.0	2000	0	108	90	110	0	0		
Nickel	1871	40.0	2000	0	93.6	90	110	0	0		
Potassium	10090	5000	10000	0	101	90	110	0	0		
Selenium	1884	5.00	2000	0	94.2	90	110	0	0		
Silver	542.7	10.0	500	0	109	90	110	0	0		
Sodium	2179	5000	2000	0	109	90	110	0	0		
Strontium	1937	20.0	2000	0	96.9	90	110	0	0		
Thallium	2189	10.0	2000	0	109	90	110	0	0		
Tin	1904	50.0	2000	0	95.2	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2031	50.0	2000	0	102	90	110	0	0		
Zinc	2176	20.0	2000	0	109	90	110	0	0		

CCV	SeqNo: 2732055	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCV-3	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2092	200	2000	0	105	90	110	0	0		
Antimony	1820	60.0	2000	0	91	90	110	0	0		
Arsenic	2014	10.0	2000	0	101	90	110	0	0		
Barium	2119	200	2000	0	106	90	110	0	0		
Beryllium	1931	5.00	2000	0	96.5	90	110	0	0		
Boron	1894	50.0	2000	0	94.7	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75961

CCV	SeqNo: 2732055	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCV-3	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	1966	5.00	2000	0	98.3	90	110	0	0	0	
Calcium	2005	5000	2000	0	100	90	110	0	0	0	
Chromium	1938	10.0	2000	0	96.9	90	110	0	0	0	
Cobalt	1850	50.0	2000	0	92.5	90	110	0	0	0	
Copper	2155	25.0	2000	0	108	90	110	0	0	0	
Iron	1863	100	2000	0	93.2	90	110	0	0	0	
Lead	2002	3.00	2000	0	100	90	110	0	0	0	
Lithium	2110	100	2000	0	106	90	110	0	0	0	
Magnesium	1979	5000	2000	0	98.9	90	110	0	0	0	
Manganese	1940	15.0	2000	0	97	90	110	0	0	0	
Molybdenum	1943	50.0	2000	0	97.2	90	110	0	0	0	
Nickel	1999	40.0	2000	0	100	90	110	0	0	0	
Potassium	9529	5000	10000	0	95.3	90	110	0	0	0	
Selenium	2187	5.00	2000	0	109	90	110	0	0	0	
Silver	452.6	10.0	500	0	90.5	90	110	0	0	0	
Sodium	1980	5000	2000	0	99	90	110	0	0	0	
Strontium	2111	20.0	2000	0	106	90	110	0	0	0	
Thallium	1825	10.0	2000	0	91.2	90	110	0	0	0	
Tin	1958	50.0	2000	0	97.9	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	1894	50.0	2000	0	94.7	90	110	0	0	0	
Zinc	1948	20.0	2000	0	97.4	90	110	0	0	0	

CCV	SeqNo: 2732062	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCV-4	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	2042	200	2000	0	102	90	110	0	0	0	
Antimony	2166	60.0	2000	0	108	90	110	0	0	0	
Arsenic	2049	10.0	2000	0	102	90	110	0	0	0	
Barium	2136	200	2000	0	107	90	110	0	0	0	
Beryllium	2067	5.00	2000	0	103	90	110	0	0	0	
Boron	2020	50.0	2000	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

CCV	SeqNo: 2732062	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CCV-4	PrepRef:	Units: µg/L	Analysis Date: 11/11/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	2129	5.00	2000	0	106	90	110	0	0		
Calcium	2182	5000	2000	0	109	90	110	0	0		
Chromium	1950	10.0	2000	0	97.5	90	110	0	0		
Cobalt	2040	50.0	2000	0	102	90	110	0	0		
Copper	2179	25.0	2000	0	109	90	110	0	0		
Iron	2014	100	2000	0	101	90	110	0	0		
Lead	2108	3.00	2000	0	105	90	110	0	0		
Lithium	2057	100	2000	0	103	90	110	0	0		
Magnesium	2005	5000	2000	0	100	90	110	0	0		
Manganese	2092	15.0	2000	0	105	90	110	0	0		
Molybdenum	2095	50.0	2000	0	105	90	110	0	0		
Nickel	2108	40.0	2000	0	105	90	110	0	0		
Potassium	9804	5000	10000	0	98	90	110	0	0		
Selenium	2044	5.00	2000	0	102	90	110	0	0		
Silver	4672	10.0	500	0	93.4	90	110	0	0		
Sodium	2115	5000	2000	0	106	90	110	0	0		
Strontium	2073	20.0	2000	0	104	90	110	0	0		
Thallium	1971	10.0	2000	0	98.5	90	110	0	0		
Tin	1945	50.0	2000	0	97.3	90	110	0	0		
Titanium	ND	50.0	0	0	0	90	110	0	0		
Vanadium	2002	50.0	2000	0	100	90	110	0	0		
Zinc	2145	20.0	2000	0	107	90	110	0	0		

CRI	SeqNo: 2732031	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CRI-1	PrepRef:	Units: µg/L	Analysis Date: 11/11/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	3.413	200	0	0	0	50	150	0	0		
Antimony	120.4	60.0	120	0	100	50	150	0	0		
Arsenic	18.44	10.0	20	0	92.2	50	150	0	0		
Barium	ND	200	0	0	0	50	150	0	0		
Boron	ND	50.0	0	0	0	50	150	0	0		
Cadmium	10.51	5.00	10	0	105	50	150	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

CRI	SeqNo: 2732031	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CRI-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	3.546	5000	0	0	0	50	150	0	0	0	
Chromium	22.48	10.0	20	0	112	50	150	0	0	0	
Copper	48.25	25.0	50	0	96.5	50	150	0	0	0	
Iron	0.06344	100	0	0	0	50	150	0	0	0	
Magnesium	ND	5000	0	0	0	50	150	0	0	0	
Manganese	28.97	15.0	30	0	96.6	50	150	0	0	0	
Nickel	83.54	40.0	80	0	104	50	150	0	0	0	
Potassium	7.046	5000	0	0	0	50	150	0	0	0	
Selenium	9.402	5.00	10	0	94	50	150	0	0	0	
Sodium	ND	5000	0	0	0	50	150	0	0	0	
Zinc	45.58	20.0	40	0	114	50	150	0	0	0	

CRI	SeqNo: 2732059	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: CRI-2	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	7.544	200	0	0	0	50	150	0	0	0	
Antimony	136	60.0	120	0	113	50	150	0	0	0	
Arsenic	21.56	10.0	20	0	108	50	150	0	0	0	
Barium	4.513	200	0	0	0	50	150	0	0	0	
Boron	1.386	50.0	0	0	0	50	150	0	0	0	
Cadmium	11.19	5.00	10	0	112	50	150	0	0	0	
Calcium	9.244	5000	0	0	0	50	150	0	0	0	
Chromium	21.97	10.0	20	0	110	50	150	0	0	0	
Copper	47.51	25.0	50	0	95	50	150	0	0	0	
Iron	0.03066	100	0	0	0	50	150	0	0	0	
Magnesium	ND	5000	0	0	0	50	150	0	0	0	
Manganese	31.96	15.0	30	0	107	50	150	0	0	0	
Nickel	91.83	40.0	80	0	115	50	150	0	0	0	
Potassium	11.47	5000	0	0	0	50	150	0	0	0	
Selenium	10.87	5.00	10	0	109	50	150	0	0	0	
Sodium	62.55	5000	0	0	0	50	150	0	0	0	
Zinc	47.62	20.0	40	0	119	50	150	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 43 of 52

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

ICB	SeqNo: 2732030	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	0	0	0	0	0	
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	ND	200	0	0	0	0	0	0	0	0	
Boron	ND	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.04799	5.00	0	0	0	0	0	0	0	0	
Calcium	ND	5000	0	0	0	0	0	0	0	0	
Chromium	0.8921	10.0	0	0	0	0	0	0	0	0	
Copper	1.331	25.0	0	0	0	0	0	0	0	0	
Iron	ND	100	0	0	0	0	0	0	0	0	
Magnesium	ND	5000	0	0	0	0	0	0	0	0	
Manganese	ND	15.0	0	0	0	0	0	0	0	0	
Nickel	ND	40.0	0	0	0	0	0	0	0	0	
Potassium	0.9362	5000	0	0	0	0	0	0	0	0	
Selenium	0.1294	5.00	0	0	0	0	0	0	0	0	
Sodium	5.516	5000	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2732029	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: ICV-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1976	200	2000	0	98.8	90	110	0	0	0	
Antimony	1929	60.0	2000	0	96.5	90	110	0	0	0	
Arsenic	1980	10.0	2000	0	99	90	110	0	0	0	
Barium	2039	200	2000	0	102	90	110	0	0	0	
Boron	2088	50.0	2000	0	104	90	110	0	0	0	
Cadmium	2031	5.00	2000	0	102	90	110	0	0	0	
Calcium	1988	5000	2000	0	99.4	90	110	0	0	0	
Chromium	1937	10.0	2000	0	96.8	90	110	0	0	0	
Copper	2076	25.0	2000	0	104	90	110	0	0	0	
Iron	1999	100	2000	0	100	90	110	0	0	0	
Magnesium	1981	5000	2000	0	99	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75961

ICV	PrepDate:	RunNo: 176944
SeqNo: 2732029	SPK value	Analysis Date: 11/1/2019
Samp ID: ICV-1	PrepRef:	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1926	15.0	2000	0	96.3	90	110	0	0	0	
Nickel	2037	40.0	2000	0	102	90	110	0	0	0	
Potassium	10330	5000	10000	0	103	90	110	0	0	0	
Selenium	1982	5.00	2000	0	99.1	90	110	0	0	0	
Sodium	1963	5000	2000	0	98.1	90	110	0	0	0	
Zinc	2055	20.0	2000	0	103	90	110	0	0	0	

ICSA	PrepDate:	RunNo: 176944
SeqNo: 2732032	SPK value	Analysis Date: 11/1/2019
Samp ID: ICSA-1	PrepRef:	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	492800	200	500000	0	98.6	80	120	0	0	0	
Antimony	ND	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	0.0689	200	0	0	0	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	ND	5.00	0	0	0	80	120	0	0	0	
Calcium	430400	5000	500000	0	86.1	80	120	0	0	0	
Chromium	ND	10.0	0	0	0	80	120	0	0	0	
Copper	ND	25.0	0	0	0	80	120	0	0	0	
Iron	121800	100	200000	0	60.9	80	120	0	0	0	S
Magnesium	520600	5000	500000	0	104	80	120	0	0	0	
Manganese	ND	15.0	0	0	0	80	120	0	0	0	
Nickel	ND	40.0	0	0	0	80	120	0	0	0	
Potassium	ND	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	0.6339	5000	0	0	0	80	120	0	0	0	
Zinc	ND	20.0	0	0	0	80	120	0	0	0	

ICSA	PrepDate:	RunNo: 176944
SeqNo: 2732060	SPK value	Analysis Date: 11/1/2019
Samp ID: ICSA-2	PrepRef:	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1926	15.0	2000	0	96.3	90	110	0	0	0	
Nickel	2037	40.0	2000	0	102	90	110	0	0	0	
Potassium	10330	5000	10000	0	103	90	110	0	0	0	
Selenium	1982	5.00	2000	0	99.1	90	110	0	0	0	
Sodium	1963	5000	2000	0	98.1	90	110	0	0	0	
Zinc	2055	20.0	2000	0	103	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits S - Spike Recovery outside accepted recovery limits Page 45 of 52

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75961

ICSA	SeqNo: 2732060	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: ICSA-2	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	534400	200	500000	0	107	80	120	0	0		
Antimony	ND	60.0	0	0	0	80	120	0	0		
Arsenic	ND	10.0	0	0	0	80	120	0	0		
Barium	6.001	200	0	0	0	80	120	0	0		
Boron	ND	50.0	0	0	0	80	120	0	0		
Cadmium	ND	5.00	0	0	0	80	120	0	0		
Calcium	468400	5000	500000	0	93.7	80	120	0	0		
Chromium	ND	10.0	0	0	0	80	120	0	0		
Copper	ND	25.0	0	0	0	80	120	0	0		
Iron	126800	100	200000	0	63.4	80	120	0	0		S
Magnesium	517800	5000	500000	0	104	80	120	0	0		
Manganese	ND	15.0	0	0	0	80	120	0	0		
Nickel	ND	40.0	0	0	0	80	120	0	0		
Potassium	11.39	5000	0	0	0	80	120	0	0		
Selenium	ND	5.00	0	0	0	80	120	0	0		
Sodium	123	5000	0	0	0	80	120	0	0		
Zinc	ND	20.0	0	0	0	80	120	0	0		

ICSAB	SeqNo: 2732033	PrepDate:	TestNo: E200.7	RunNo: 176944
	Samp ID: ICSAB-1	PrepRef:	Units: µg/L	Analysis Date: 11/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	494200	200	500000	0	98.8	80	120	0	0		
Antimony	ND	60.0	0	0	0	80	120	0	0		
Arsenic	ND	10.0	0	0	0	80	120	0	0		
Barium	520.4	200	500	0	104	80	120	0	0		
Boron	ND	50.0	0	0	0	80	120	0	0		
Cadmium	941	5.00	1000	0	94.1	80	120	0	0		
Calcium	430600	5000	500000	0	86.1	80	120	0	0		
Chromium	464	10.0	500	0	92.8	80	120	0	0		
Copper	571.6	25.0	500	0	114	80	120	0	0		
Iron	121800	100	200000	0	60.9	80	120	0	0		S
Magnesium	519300	5000	500000	0	104	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: 75961

ICSAB	SeqNo: 2732033	PrepDate:
	Samp ID: ICSAB-1	TestNo: E200.7
		RunNo: 176944
		Analysis Date: 11/1/2019
		Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	465.1	15.0	500	0	93	80	120	0	0	0	
Nickel	934.6	40.0	1000	0	93.5	80	120	0	0	0	
Potassium	3.212	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	ND	5000	0	0	0	80	120	0	0	0	
Zinc	916.7	20.0	1000	0	91.7	80	120	0	0	0	

ICSAB	SeqNo: 2732061	PrepDate:
	Samp ID: ICSAB-2	TestNo: E200.7
		RunNo: 176944
		Analysis Date: 11/1/2019
		Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	534100	200	500000	0	107	80	120	0	0	0	
Antimony	ND	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	541	200	500	0	108	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	974.1	5.00	1000	0	97.4	80	120	0	0	0	
Calcium	462600	5000	500000	0	92.5	80	120	0	0	0	
Chromium	583.9	10.0	500	0	117	80	120	0	0	0	
Copper	580.5	25.0	500	0	116	80	120	0	0	0	
Iron	126900	100	200000	0	63.4	80	120	0	0	0	S
Magnesium	516100	5000	500000	0	103	80	120	0	0	0	
Manganese	475.1	15.0	500	0	95	80	120	0	0	0	
Nickel	838.9	40.0	1000	0	83.9	80	120	0	0	0	
Potassium	4.802	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	18.56	5000	0	0	0	80	120	0	0	0	
Zinc	963.3	20.0	1000	0	96.3	80	120	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 75970

MBLK	SeqNo: 2714058	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176062
	Samp ID: MB-75970	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK	SeqNo: 2715458	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176114
	Samp ID: MB-75970	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS	SeqNo: 2714059	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176062
	Samp ID: LCS-75970	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	10	0	113	77	123	0	0		

LCS	SeqNo: 2715459	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176114
	Samp ID: LCS-75970	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.3	0.500	10	0	103	77	123	0	0		

MS	SeqNo: 2714064	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176062
	Samp ID: 190920022-017F (Under Drain 1)	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.4	0.500	12.5	0.541	103	71	125	0	0		

MS	SeqNo: 2715275	PrepDate:10/3/2019	TestNo: E1631	RunNo: 176062
	Samp ID: 191001026-009	PrepRef:(1631E)	Units: ng/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.62	0.500	12.5	0.55	72.6	71	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 75970

MSD	SeqNo: 2714065	PrepDate: 10/3/2019	RunNo: 176062	Analysis Date: 10/4/2019
	Samp ID: 190920022-017F (Under Drain 1)	PrepRef: (1631E)	TestNo: E1631	Units: ng/L

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Mercury	13.4	0.500	12.5	0.541	103	71	125	13.4	0	24	

MSD	SeqNo: 2715276	PrepDate: 10/3/2019	RunNo: 176062	Analysis Date: 10/4/2019
	Samp ID: 191001026-009	PrepRef: (1631E)	TestNo: E1631	Units: ng/L

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Mercury	9.49	0.500	12.5	0.55	71.5	71	125	9.62	1.36	24	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 49 of 52

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 76252

mblk	SeqNo: 2724399 Samp ID: MB-76252	PrepDate: 10/22/2019 PrepRef: E245.1	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200									

LCS	SeqNo: 2724400 Samp ID: LCS-76252	PrepDate: 10/22/2019 PrepRef: E245.1	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.987	0.200	2	0	99.4	85	115	0	0		

ms	SeqNo: 2724403 Samp ID: 190920022-032 (Inlet To Pond)	PrepDate: 10/22/2019 PrepRef: E245.1	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9049	0.200	2	0	45.2	80.8	119	0	0		S

dup	SeqNo: 2724402 Samp ID: 190920022-032	PrepDate: 10/22/2019 PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0409	0.200	0	0	0	0	0	0	0	16.5	

CCB	SeqNo: 2724408 Samp ID: CCB	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0418	0.200	0	0	0	0	0	0	0		

CCB	SeqNo: 2724422 Samp ID: CCB	PrepDate: PrepRef:	TestNo: E245.1 Units: µg/L	RunNo: 176599 Analysis Date: 10/22/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0613	0.200	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 76252

CCV	SeqNo: 2724407	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: CCV	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.081	0.200	2	0	104	85	115	0	0	0	

CCV	SeqNo: 2724421	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: CCV	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.092	0.200	2	0	105	85	115	0	0	0	

Cra	SeqNo: 2724397	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: 0.2ppb	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1581	0.200	0.2	0	79.1	70	130	0	0	0	

ICB	SeqNo: 2724396	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: ICB	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0989	0.200	0	0	0	0	0	0	0	0	

ICB	SeqNo: 2724410	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: ICB	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.0501	0.200	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2724395	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: ICV	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.053	0.200	2	0	103	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 76252

ICV	SeqNo: 2724409	PrepDate:	TestNo: E245.1	RunNo: 176599
	Samp ID: ICV	PrepRef:	Units: µg/L	Analysis Date: 10/22/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.087	0.200	2	0	104	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Test Code: CLPW
 Test Number: E200.7
 Test Name: ICP Metals Water
 Matrix: Water Units: µg/L

**METHOD DETECTION /
 REPORTING LIMITS**

Updated: 03-Sep-19

Type	Analyte	MDL	PQL
A	Aluminum	29.4	200
A	Antimony	6.7	60
A	Arsenic	5.3	10
A	Barium	4.8	200
A	Beryllium	1	5
A	Boron	8.6	50
A	Cadmium	1	5
A	Calcium	24.5	5000
A	Chromium	4	10
A	Cobalt	1	50
A	Copper	2.1	25
A	Iron	11.1	100
A	Lead	2.8	3
A	Lithium	40.7	100
A	Magnesium	34.7	5000
A	Manganese	3	15
A	Molybdenum	3.5	50
A	Nickel	2.7	40
A	Potassium	19	5000
A	Selenium	3.5	5
A	Silver	8	10
A	Sodium	185	5000
A	Strontium	10.2	20
A	Thallium	5.1	10
A	Tin	2.6	50
A	Titanium	0	50
A	Vanadium	8	50
A	Zinc	4.6	20

A.4 FIELD DUPLICATES

Sample No. 190920022-006 Field Duplicate No. 190920022-014 Run date: 10/31/2019
 Lab Code: AES Case No. 190920022 Sample Matrix: Groundwater
 % Solids Sample: NA % Solids Duplicate: NA
 Concentration Units (ug/l or mg/kg dry weight): ug/L

Analyte	CRQL	Action Limit (5xCRQL)	Sample Concentration	C	Duplicate Concentration	C	RPD, %	Absolute Difference	Q	M
Aluminum	200	1,000	1,530		978			552	J	P
Antimony	60	300	60	U	60	U				P
Arsenic	10	50	10	U	10	U				P
Barium	200	1,000	113	B	118	B		5		P
Boron	50	250	1060		1130		6.39			P
Cadmium	5	25	5	U	5	U				P
Calcium	5,000	25,000	16,000		18,200			2,200		P
Chromium	10	50	10.3		10	U		0.3		P
Copper	25	125	6.16	B	25	U				P
Iron	100	500	4,870		3,620		29.45		J	P
Magnesium	5,000	25,000	3,560		3,650			90		P
Manganese	15	75	127		137		7.58			P
Mercury	0.2	1.0	0.2	U	0.2	U				CV
Nickel	40	200	13.4	B	8.58	B		4.8		P
Potassium	5,000	25,000	1,470	B	1,430	B		40		P
Selenium	5	25	5	U	5	U				P
Sodium	5,000	25,000	155,000		164,000		5.64			P
Zinc	20	100	119.00		35.6			83.4	J	P

A.4 FIELD DUPLICATES

Sample No. 190920022-021 Field Duplicate No. 190920022-023 Run Date: 10/31/2019
 Lab Code: AES Case No. 190920022 Sample Matrix: Surface Water
 % Solids Sample: NA % Solids Duplicate: NA
 Concentration Units (ug/l or mg/kg dry weight): ug/L

Analyte	CRQL	Action Limit (5xCRQL)	Sample Concentration	C	Duplicate Concentration	C	RPD, %	Absolute Difference	Q	M
Aluminum	200	1,000	200	U	200	U				P
Antimony	60	300	60	U	60	U				P
Arsenic	10	50	6.65	B	10	U				P
Barium	200	1,000	26.5	B	26.0	B		0.5		P
Boron	50	250	40.4	B	30.3	B		10.1		P
Cadmium	5	25	5	U	5	U				P
Calcium	5,000	25,000	39,300		39,500		0.51			P
Chromium	10	50	10	U	10	U				P
Copper	25	125	2.19	B	25	U		22.8		P
Iron	100	500	53.4	B	52.5	B		1		P
Magnesium	5,000	25,000	13,300		13,300			0		P
Manganese	15	75	15.0	U	15.0	U		0.0		P
Mercury	0.2	1.0	0.20	U	0.20	U				CV
Nickel	40	200	40.0	U	40.0	U		0.0		P
Potassium	5,000	25,000	3,220	B	3,210	B				P
Selenium	5	25	5	U	5	U				P
Sodium	5,000	25,000	28,400		28,200		0.71			P
Zinc	20	100	20.0	U	20.0	U				P

Wet Chemistry

Adirondack Environmental Services, Inc

Date: 04-Nov-19

CLIENT: Lockwood Hills LLC

Work Order: 190920022

Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175615

SeqNo: 2705065	TestNo: SM2320B	RunNo: 175615
Samp ID: MB-R175615	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	1	PQL	1.00	SPK value	0	SPK Ref Val		%REC		LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)															

SeqNo: 2705066	TestNo: SM2320B	RunNo: 175615
Samp ID: LCS-R175615	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	325	PQL	1.00	SPK value	313	SPK Ref Val	0	%REC	104	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)															

SeqNo: 2705709	TestNo: SM2320B	RunNo: 175615
Samp ID: LCS-R175615	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	320	PQL	5.00	SPK value	313	SPK Ref Val	0	%REC	102	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)															

SeqNo: 2705730	TestNo: SM2320B	RunNo: 175615
Samp ID: LCS-R175615	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	320	PQL	5.00	SPK value	313	SPK Ref Val	0	%REC	102	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)															

SeqNo: 2705723	TestNo: SM2320B	RunNo: 175615
Samp ID: 190920022-001 (1842)	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	650	PQL	10.00	SPK value	500	SPK Ref Val	140	%REC	102	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)															

SeqNo: 2705724	TestNo: SM2320B	RunNo: 175615
Samp ID: 190920022-001 (1842)	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Result	650	PQL	10.00	SPK value	500	SPK Ref Val	140	%REC	102	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)												650	0	15	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175615

DUP	SeqNo: 2705708	TestNo: SM2320B	RunNo: 175615
	Samp ID: 190920051-002	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	84	4.00	0	0	0	0	0	88	4.65	9.9	

DUP	SeqNo: 2705745	TestNo: SM2320B	RunNo: 175615
	Samp ID: 190920022-022	Units: mgCaCO3/L	Analysis Date: 9/23/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	130	10.0	0	0	0	0	0	130	0	9.9	

Qualifiers: NID - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175653

LCS	SeqNo: 2705997 Samp ID: LCS-R175653	TestNo: SM 2510B Units: µmhos/cm	RunNo: 175653 Analysis Date: 9/20/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	242	1.00	244	0	99.2	95	109	0	0	0	

DUP	SeqNo: 2706008 Samp ID: 190920022-010	TestNo: SM 2510B Units: µmhos/cm	RunNo: 175653 Analysis Date: 9/20/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	842	1.00	0	0	0	0	0	852	1.18	5.5	

DUP	SeqNo: 2706020 Samp ID: 190920022-021	TestNo: SM 2510B Units: µmhos/cm	RunNo: 175653 Analysis Date: 9/20/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	397	1.00	0	0	0	0	0	404	1.75	5.5	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175807

LCS	SeqNo: 2709129	TestNo: SM2540C	RunNo: 175807
	Samp ID: LCS-R175807	Units: mg/L	Analysis Date: 9/25/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	650	5.00	639	0	102	85.4	114	0	0		

LCS	SeqNo: 2709152	TestNo: SM2540C	RunNo: 175807
	Samp ID: LCS-R175807	Units: mg/L	Analysis Date: 9/25/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	630	5.00	639	0	98.6	85.4	114	0	0		

DUP	SeqNo: 2709131	TestNo: SM2540C	RunNo: 175807
	Samp ID: 190918014-008	Units: mg/L	Analysis Date: 9/25/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	580	5.00	0	0	0	0	0	550	5.31	10	

DUP	SeqNo: 2709151	TestNo: SM2540C	RunNo: 175807
	Samp ID: 190920022-005	Units: mg/L	Analysis Date: 9/25/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	960	5.00	0	0	0	0	0	990	3.08	10	

Qualifiers: - N/D - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175873

MBLK	SeqNo: 2710597	TestNo: E350.1	RunNo: 175873
	Samp ID: MBLK	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.100									

Ics	SeqNo: 2710440	TestNo: E350.1	RunNo: 175873
	Samp ID: Ics WC7-111-J	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.933	1.00	9.44	0	94.6	90	110	0	0	0	

Ics	SeqNo: 2710464	TestNo: E350.1	RunNo: 175873
	Samp ID: Ics WC7-111-J	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.873	1.00	9.44	0	94	90	110	0	0	0	

Ics	SeqNo: 2710487	TestNo: E350.1	RunNo: 175873
	Samp ID: Ics WC7-111-J	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.875	1.00	9.44	0	94	90	110	0	0	0	

ms	SeqNo: 2710444	TestNo: E350.1	RunNo: 175873
	Samp ID: 190920022-002 (8401)	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.854	0.100	1	0.8881	96.5	90	110	0	0	0	

ms	SeqNo: 2710470	TestNo: E350.1	RunNo: 175873
	Samp ID: 190920022-022 (Keuka Downstrea	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9769	0.100	1	0	97.7	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175873

ms	SeqNo: 2710496	TestNo: E350.1	RunNo: 175873
	Samp ID: 190927003-001	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.037	0.100	1	0	104	90	110	0	0		

msd	SeqNo: 2710445	TestNo: E350.1	RunNo: 175873
	Samp ID: 190920022-002 (8401)	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.878	0.100	1	0.8881	99	90	110	1.854	1.29	20	

msd	SeqNo: 2710471	TestNo: E350.1	RunNo: 175873
	Samp ID: 190920022-022 (Keuka Downstrea	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.961	0.100	1	0	96.1	90	110	0.9769	1.64	20	

dup	SeqNo: 2710495	TestNo: E350.1	RunNo: 175873
	Samp ID: 190927003-001	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.035	0.100	0	0	0	0	0	0	0	11.1	

ccb	SeqNo: 2710451	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0233	0.100	0	0	0	0	0	0	0		

ccb	SeqNo: 2710463	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0226	0.100	0	0	0	0	0	0	0		

Qualifiers: N/D - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175873

ccb	SeqNo: 2710475	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0236	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2710486	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.023	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2710498	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0225	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2710504	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0232	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2710506	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0232	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2710512	TestNo: E350.1	RunNo: 175873
	Samp ID: CCB	Units: mg/L	Analysis Date: 9/30/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0238	0.100	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 7 of 37

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175873

CCV	SeqNo: 2710450 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9393	0.100	1	0	93.9	90	110	0	0		

CCV	SeqNo: 2710462 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9222	0.100	1	0	92.2	90	110	0	0		

CCV	SeqNo: 2710474 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9247	0.100	1	0	92.5	90	110	0	0		

CCV	SeqNo: 2710485 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9161	0.100	1	0	91.6	90	110	0	0		

CCV	SeqNo: 2710497 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9449	0.100	1	0	94.5	90	110	0	0		

CCV	SeqNo: 2710503 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175873 Analysis Date: 9/30/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9089	0.100	1	0	90.9	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175873

CCV	TestNo: E350.1 RunNo: 175873
Samp ID: CCV	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9046	0.100	1	0	90.5	90	110	0	0	0	

CCV	TestNo: E350.1 RunNo: 175873
Samp ID: CCV	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.925	0.100	1	0	92.5	90	110	0	0	0	

cri	TestNo: E350.1 RunNo: 175873
Samp ID: cri 9-30-19	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0666	0.100	0.1	0	66.6	50	150	0	0	0	OK

cri	TestNo: E350.1 RunNo: 175873
Samp ID: cri 9-30-19	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0727	0.100	0.1	0	72.7	50	150	0	0	0	OK

icb	TestNo: E350.1 RunNo: 175873
Samp ID: ICB	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0229	0.100	0	0	0	0	0	0	0	0	

icv	TestNo: E350.1 RunNo: 175873
Samp ID: ICV	Analysis Date: 9/30/2019
Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9337	0.100	1	0	93.4	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
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CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R175946

MBLK	SeqNo: 2711898	TestNo: SM5310C	RunNo: 175946
	Samp ID: MBLK	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	1.00	0	0	0	0	0	0	0		

LCS	SeqNo: 2711833	TestNo: SM5310C	RunNo: 175946
	Samp ID: LCS	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	32.83	1.00	30	0	109	88.7	115	0	0		

MS	SeqNo: 2711836	TestNo: SM5310C	RunNo: 175946
	Samp ID: 190920022-002 (8401)	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	24.85	1.00	25	0	99.4	82	120	0	0		

MS	SeqNo: 2711862	TestNo: SM5310C	RunNo: 175946
	Samp ID: 190920022-023 (Surface Water Du	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	27.59	1.00	25	3.176	97.6	82	120	0	0		

MSD	SeqNo: 2711837	TestNo: SM5310C	RunNo: 175946
	Samp ID: 190920022-002 (8401)	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	24.48	1.00	25	0	97.9	82	120	24.85	1.49	21.2	

MSD	SeqNo: 2711863	TestNo: SM5310C	RunNo: 175946
	Samp ID: 190920022-023 (Surface Water Du	Units: mg/L	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	27.68	1.00	25	3.176	98	82	120	27.59	0.335	21.2	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175946

CCB	SeqNo: 2711843	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/1/2019
	Samp ID: CCB	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.3775	1.00	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2711855	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/1/2019
	Samp ID: CCB	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.3095	1.00	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2711865	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/2/2019
	Samp ID: CCB	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.4758	1.00	0	0	0	0	0	0	0	0	0

CCB	SeqNo: 2711876	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/2/2019
	Samp ID: CCB	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.2345	1.00	0	0	0	0	0	0	0	0	0

CCV	SeqNo: 2711842	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/1/2019
	Samp ID: CCV	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	54.11	1.00	50	0	108	90	110	0	0	0	0

CCV	SeqNo: 2711854	TestNo: SM5310C	RunNo: 175946	Analysis Date: 10/1/2019
	Samp ID: CCV	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	54.29	1.00	50	0	109	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R175946

CCV	SeqNo: 2711864 Samp ID: CCV	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/2/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	54.65	1.00	50	0	109	90	110	0	0		

CCV	SeqNo: 2711875 Samp ID: CCV	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/2/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	53.58	1.00	50	0	107	90	110	0	0		

CRI	SeqNo: 2711832 Samp ID: CRI	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/1/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.288	1.00	1	0	129	50	150	0	0		

CRI	SeqNo: 2711860 Samp ID: CRI	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/1/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.199	1.00	1	0	120	50	150	0	0		

ICB	SeqNo: 2711831 Samp ID: ICB	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/1/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.2569	1.00	0	0	0	0	0	0	0		

ICV	SeqNo: 2711830 Samp ID: ICV	TestNo: SM5310C Units: mg/L	RunNo: 175946 Analysis Date: 10/1/2019
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AnalYTE	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	54.58	1.00	50	0	109	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175965

MBLK	SeqNo: 2712302 Samp ID: MBLK	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ND	0.100	0	0	0	0	0	0	0	0	

ICS	SeqNo: 2712216 Samp ID: Ics WC7-111-J	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
8.651	1.00	9.44	0	91.6	90	110	0	0	0	

ICS	SeqNo: 2712240 Samp ID: Ics WC7-111-J	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
8.606	1.00	9.44	0	91.2	90	110	0	0	0	

ICS	SeqNo: 2712259 Samp ID: Ics WC7-111-J	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
8.689	1.00	9.44	0	92	90	110	0	0	0	

MS	SeqNo: 2712219 Samp ID: 190920022-032 (Inlet To Pond)	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1.316	0.100	1	0.2619	105	90	110	0	0	0	

MS	SeqNo: 2712245 Samp ID: 190925032-006	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.9302	0.100	1	0	93	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175965

ms	SeqNo: 2712261	TestNo: E350.1	RunNo: 175965
	Samp ID: 190926012-002	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.046	0.100	1	0	105	90	110	0	0		

msd	SeqNo: 2712220	TestNo: E350.1	RunNo: 175965
	Samp ID: 190920022-032 (Inlet To Pond)	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.292	0.100	1	0.2619	103	90	110	1.316	1.82	20	

msd	SeqNo: 2712246	TestNo: E350.1	RunNo: 175965
	Samp ID: 190925032-006	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9407	0.100	1	0	94.1	90	110	0.9302	1.12	20	

dup	SeqNo: 2712264	TestNo: E350.1	RunNo: 175965
	Samp ID: 190926047-002	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	3.464	0.500	0	0	0	0	0	3.516	1.50	11.1	

ccb	SeqNo: 2712227	TestNo: E350.1	RunNo: 175965
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0252	0.100	0	0	0	0	0	0	0		

ccb	SeqNo: 2712239	TestNo: E350.1	RunNo: 175965
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.028	0.100	0	0	0	0	0	0	0		

Qualifiers: NND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175965

ccb	SeqNo: 2712251	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0267	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2712258	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0282	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2712269	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0277	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2712275	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0258	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2712277	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0294	0.100	0	0	0	0	0	0	0	0	0

ccb	SeqNo: 2712285	RunNo: 175965				
	Samp ID: CCB	Analysis Date: 10/2/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0272	0.100	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R175965

ccb	SeqNo: 2712288	TestNo: E350.1	RunNo: 175965
	Samp ID: ccb man	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0381	0.100	0	0	0	0	0	0	0		

CCV	SeqNo: 2712226	TestNo: E350.1	RunNo: 175965
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9381	0.100	1	0	93.8	90	110	0	0		

CCV	SeqNo: 2712238	TestNo: E350.1	RunNo: 175965
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9164	0.100	1	0	91.6	90	110	0	0		

CCV	SeqNo: 2712250	TestNo: E350.1	RunNo: 175965
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9226	0.100	1	0	92.3	90	110	0	0		

CCV	SeqNo: 2712257	TestNo: E350.1	RunNo: 175965
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9109	0.100	1	0	91.1	90	110	0	0		

CCV	SeqNo: 2712268	TestNo: E350.1	RunNo: 175965
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.8977	0.100	1	0	89.8	90	110	0	0		S

Qualifiers: NID - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R175965

CCV	SeqNo: 2712274 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.9119	0.100	1	0	91.2	90	110	0	0	0	

CCV	SeqNo: 2712276 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.9186	0.100	1	0	91.9	90	110	0	0	0	

CCV	SeqNo: 2712284 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.9263	0.100	1	0	92.6	90	110	0	0	0	

CCV	SeqNo: 2712287 Samp ID: ccv man	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.9086	0.100	1	0	90.9	90	110	0	0	0	

cri	SeqNo: 2712217 Samp ID: cri 10-2-19	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.0544	0.100	0.1	0	54.4	50	150	0	0	0	OK

cri	SeqNo: 2712241 Samp ID: cri 10-2-19	TestNo: E350.1 Units: mg/L	RunNo: 175965 Analysis Date: 10/2/2019
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Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.0573	0.100	0.1	0	57.3	50	150	0	0	0	OK

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R175965

icb	SeqNo: 2712215	TestNo: E350.1	RunNo: 175965
	Samp ID: ICB	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	-0.0253	0.100	0	0	0	0	0	0	0		
icv	SeqNo: 2712214	TestNo: E350.1	RunNo: 175965	Samp ID: ICB	Units: mg/L	Analysis Date: 10/2/2019					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9215	0.100	1	0	92.2	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176023

LCS	SeqNo: 2713287	TestNo: SM2540C	RunNo: 176023
	Samp ID: LCS-R176023	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	655	5.00	639	0	103	85.4	114	0	0	0	

DUP	SeqNo: 2713641	TestNo: SM2540C	RunNo: 176023
	Samp ID: 190920022-033	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	3285	5.00	0	0	0	0	0	3275	0.305	10	

DUP	SeqNo: 2713647	TestNo: SM2540C	RunNo: 176023
	Samp ID: 190925031-001	Units: mg/L	Analysis Date: 10/2/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TDS (Residue, Filterable)	400	5.00	0	0	0	0	0	435	8.38	10	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176050

MBLK	SeqNo: 2713622	TestNo: SM2120 B	RunNo: 176050
	Samp ID: MB-R176050	Units: cpu@pH6	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0									

DUP	SeqNo: 2713633	TestNo: SM2120 B	RunNo: 176050
	Samp ID: 190920022-032	Units: cpu@pH6	Analysis Date: 10/1/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0	0	0	0	0	0	0	0	10	

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176059

LCS	SeqNo: 2713875	TestNo: SM 2510B	RunNo: 176059
	Samp ID: LCS-R176059	Units: μ mhos/cm	Analysis Date: 10/4/2019

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>	<u>SPK value</u>	<u>SPK Ref Val</u>	<u>%REC</u>	<u>LowLimit</u>	<u>HighLimit</u>	<u>RPD Ref Val</u>	<u>%RPD</u>	<u>RPDLimit</u>	<u>Qual</u>
Specific Conductance	248	1.00	244	0	102	95	109	0	0	0	

DUP	SeqNo: 2713878	TestNo: SM 2510B	RunNo: 176059
	Samp ID: 190920022-033	Units: μ mhos/cm	Analysis Date: 10/4/2019

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>	<u>SPK value</u>	<u>SPK Ref Val</u>	<u>%REC</u>	<u>LowLimit</u>	<u>HighLimit</u>	<u>RPD Ref Val</u>	<u>%RPD</u>	<u>RPDLimit</u>	<u>Qual</u>
Specific Conductance	3743	1.00	0	0	0	0	0	3704	1.05	5.5	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits
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CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R176073

MBLK	SeqNo: 2714101	TestNo: SM2320B	RunNo: 176073
	Samp ID: MB-R176073	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	1	1.00									

LCS	SeqNo: 2714102	TestNo: SM2320B	RunNo: 176073
	Samp ID: LCS-R176073	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	315	5.00	313	0	101	88.6	115	0	0		

LCS	SeqNo: 2714127	TestNo: SM2320B	RunNo: 176073
	Samp ID: LCS-R176073	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	325	10.0	313	0	104	88.6	115	0	0		

MS	SeqNo: 2714104	TestNo: SM2320B	RunNo: 176073
	Samp ID: 190920022-032 (Inlet To Pond)	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	930	10.0	500	440	98	80	120	0	0		

MS	SeqNo: 2714129	TestNo: SM2320B	RunNo: 176073
	Samp ID: 191002049-012	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	880	10.0	500	390	98	80	120	0	0		

MSD	SeqNo: 2714105	TestNo: SM2320B	RunNo: 176073
	Samp ID: 190920022-032 (Inlet To Pond)	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	920	10.0	500	440	96	80	120	930	1.08	15	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176073

MSD	SeqNo: 2714130	TestNo: SM2320B	RunNo: 176073
	Samp ID: 191002049-012	Units: mgCaCO3/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	890	10.0	500	390	100	80	120	880	1.13	15	

Qualifiers: ND - Not Detected at the Reporting Limit B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R176096

MBLK	SeqNo: 2714497	TestNo: SM2120 B	RunNo: 176096
	Samp ID: MB-R176096	Units: cpu@pH6	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0	0	0	0	0	0	0	0		

MBLK	SeqNo: 2714519	TestNo: SM2120 B	RunNo: 176096
	Samp ID: MB-R176096	Units: cpu@pH6	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0	0	0	0	0	0	0	0		

DUP	SeqNo: 2714499	TestNo: SM2120 B	RunNo: 176096
	Samp ID: 190920022-001	Units: cpu@pH7	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	7	5.0	0	0	0	0	0	7	0	10	

DUP	SeqNo: 2714514	TestNo: SM2120 B	RunNo: 176096
	Samp ID: 190920022-017	Units: cpu@pH7	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0	0	0	0	0	0	0	0	10	

DUP	SeqNo: 2714521	TestNo: SM2120 B	RunNo: 176096
	Samp ID: 190920022-021	Units: cpu@pH7	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	7	5.0	0	0	0	0	0	7	0	10	

CCB	SeqNo: 2714508	TestNo: SM2120 B	RunNo: 176096
	Samp ID: CCB	Units: cpu@pH6	Analysis Date: 9/20/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	ND	5.0	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176096

CCB	SeqNo: 2714527	TestNo: SM2120 B	RunNo: 176096
	Samp ID: CCB	Units: cpu@pH6	Analysis Date: 9/20/2019

Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Color	5.0	0	0	0	0	0	0	0	0	

Result
ND

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R176097

MBLK	SeqNo: 2714539 Samp ID: MBLK 3449 DI	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00									
Sulfate	ND	1.00									

LCS	SeqNo: 2714540 Samp ID: LCS ICA-82-B	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	201.9	100	200	0	101	90	110	0	0		
Sulfate	415.2	100	400	0	104	90	110	0	0		

LCS	SeqNo: 2714562 Samp ID: LCS	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	203.6	100	200	0	102	90	110	0	0		
Sulfate	415.2	100	400	0	104	90	110	0	0		

MS	SeqNo: 2714552 Samp ID: 190926068-001c	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1237	20.0	200	1046	95.5	90	110	0	0		

MS	SeqNo: 2714565 Samp ID: 190920022-033a (Pond Grab)	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	502.2	20.0	200	301.3	100	90	110	0	0		
Sulfate	1859	40.0	200	1683	87.6	90	110	0	0		S

MS	SeqNo: 2714577 Samp ID: 190926049-004a	TestNo: E300 Units: mg/L	RunNo: 176097 Analysis Date: 10/5/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	882.2	20.0	200	691.7	95.2	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: RI76097

MSD	SeqNo: 2714566	RunNo: 176097
	Samp ID: 190920022-033a (Pond Grab)	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	501.7	20.0	200	301.3	100	90	110	502.2	0.0916	20	
Sulfate	1864	40.0	200	1683	90.4	90	110	1859	0.294	20	

DUP	SeqNo: 2714548	RunNo: 176097
	Samp ID: 190926025-002a	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	52.52	2.00	0	0	0	0	0	52.78	0.505	19.6	

DUP	SeqNo: 2714575	RunNo: 176097
	Samp ID: 190926049-003a	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	263.8	5.00	0	0	0	0	0	264.7	0.373	19.6	

CCB	SeqNo: 2714550	RunNo: 176097
	Samp ID: CCB	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714561	RunNo: 176097
	Samp ID: CCB	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits Page 27 of 37

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176097

CCB	SeqNo: 2714572	TestNo: E300	RunNo: 176097
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714581	TestNo: E300	RunNo: 176097
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCV	SeqNo: 2714549	TestNo: E300	RunNo: 176097
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.949	1.00	10	0	99.5	90	110	0	0	0	
Fluoride	1.007	0.100	1	0	101	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.034	0.0200	1	0	103	90	110	0	0	0	
Sulfate	10.12	1.00	10	0	101	90	110	0	0	0	

CCV	SeqNo: 2714560	TestNo: E300	RunNo: 176097
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.03	1.00	10	0	100	90	110	0	0	0	
Fluoride	1.027	0.100	1	0	103	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.038	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.16	1.00	10	0	102	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176097

CCV	SeqNo: 2714571	RunNo: 176097	Analysis Date: 10/5/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.04	1.00	10	0	100	90	110	0	0	0	
Fluoride	1.022	0.100	1	0	102	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.036	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.17	1.00	10	0	102	90	110	0	0	0	

CCV	SeqNo: 2714580	RunNo: 176097	Analysis Date: 10/5/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.08	1.00	10	0	101	90	110	0	0	0	
Fluoride	0.981	0.100	1	0	98.1	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.039	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.22	1.00	10	0	102	90	110	0	0	0	

ICB	SeqNo: 2714538	RunNo: 176097	Analysis Date: 10/4/2019
	Samp ID: ICB 3449 DI	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2714537	RunNo: 176097	Analysis Date: 10/4/2019
	Samp ID: ICV IC100319C	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.965	1.00	10	0	99.7	90	110	0	0	0	
Sulfate	10.19	1.00	10	0	102	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176099

MBLK	SeqNo: 2714595	TestNo: E300	RunNo: 176099
	Samp ID: MBLK 3449 DI	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00									
Sulfate	ND	1.00									

LCS	SeqNo: 2714596	TestNo: E300	RunNo: 176099
	Samp ID: LCS ICA-82-B	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	194.9	100	200	0	97.4	90	110	0	0		
Sulfate	405.9	100	400	0	101	90	110	0	0		

LCS	SeqNo: 2714617	TestNo: E300	RunNo: 176099
	Samp ID: LCS	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	194.1	100	200	0	97.1	90	110	0	0		
Sulfate	403.4	100	400	0	101	90	110	0	0		

LCS	SeqNo: 2714642	TestNo: E300	RunNo: 176099
	Samp ID: LCS	Units: mg/L	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	194.6	100	200	0	97.3	90	110	0	0		
Sulfate	403.3	100	400	0	101	90	110	0	0		

MS	SeqNo: 2714637	TestNo: E300	RunNo: 176099
	Samp ID: 190920022-018a (Under Drain 2)	Units: mg/L	Analysis Date: 10/5/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	2133	50.0	500	1649	96.9	90	110	0	0		

MS	SeqNo: 2714657	TestNo: E300	RunNo: 176099
	Samp ID: 190920022-007a (8909-SH)	Units: mg/L	Analysis Date: 10/4/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.16	2.00	20	0	106	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: R176099

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

MS	SeqNo: 2714657	RunNo: 176099				
	Samp ID: 190920022-007a (8909-SH)	Analysis Date: 10/4/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	122.1	4.00	20	102.9	95.8	90	110	0	0	0	

MS	SeqNo: 2714666	RunNo: 176099				
	Samp ID: 190920022-013a (9306-SH)	Analysis Date: 10/4/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.09	2.00	20	0	105	90	110	0	0	0	
Sulfate	92.51	4.00	20	71.71	104	90	110	0	0	0	

MSD	SeqNo: 2714643	RunNo: 176099				
	Samp ID: 190920022-018a (Under Drain 2)	Analysis Date: 10/5/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	2132	50.0	500	1649	96.7	90	110	2133	0.0417	20	

MSD	SeqNo: 2714658	RunNo: 176099				
	Samp ID: 190920022-007a (8909-SH)	Analysis Date: 10/4/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	121.8	2.00	20	0	107	90	110	21.16	0.772	20	
Sulfate	121.8	4.00	20	102.9	94.4	90	110	122.1	0.231	20	

MSD	SeqNo: 2714667	RunNo: 176099				
	Samp ID: 190920022-013a (9306-SH)	Analysis Date: 10/4/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.14	2.00	20	0	106	90	110	21.09	0.214	20	
Sulfate	91.94	4.00	20	71.71	101	90	110	92.51	0.614	20	

CCB	SeqNo: 2714605	RunNo: 176099				
	Samp ID: CCB	Analysis Date: 10/4/2019				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.04721	1.00	0	0	0	0	0	0	0	0	
Fluoride	0.02597	0.100	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R176099

CCB	SeqNo: 2714605 Samp ID: CCB	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714616 Samp ID: CCB	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.05438	1.00	0	0	0	0	0	0	0	0	
Fluoride	0.02749	0.100	0	0	0	0	0	0	0	0	
Sulfate	0.008728	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714628 Samp ID: CCB	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.0506	1.00	0	0	0	0	0	0	0	0	
Fluoride	0.02657	0.100	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714641 Samp ID: CCB	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/5/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.05069	1.00	0	0	0	0	0	0	0	0	
Fluoride	0.02488	0.100	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2714647 Samp ID: CCB	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/5/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.05739	1.00	0	0	0	0	0	0	0	0	
Fluoride	0.02657	0.100	0	0	0	0	0	0	0	0	
Sulfate	0.006693	1.00	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: R176099

CCV	SeqNo: 2714604	RunNo: 176099	Analysis Date: 10/4/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.775	1.00	10	0	97.7	90	110	0	0	0	
Fluoride	0.9813	0.100	1	0	98.1	90	110	0	0	0	
Sulfate	9.991	1.00	10	0	99.9	90	110	0	0	0	

CCV	SeqNo: 2714615	RunNo: 176099	Analysis Date: 10/4/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.76	1.00	10	0	97.6	90	110	0	0	0	
Fluoride	0.9657	0.100	1	0	96.6	90	110	0	0	0	
Sulfate	9.957	1.00	10	0	99.6	90	110	0	0	0	

CCV	SeqNo: 2714627	RunNo: 176099	Analysis Date: 10/4/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.777	1.00	10	0	97.8	90	110	0	0	0	
Fluoride	0.9813	0.100	1	0	98.1	90	110	0	0	0	
Sulfate	9.963	1.00	10	0	99.6	90	110	0	0	0	

CCV	SeqNo: 2714638	RunNo: 176099	Analysis Date: 10/5/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.832	1.00	10	0	98.3	90	110	0	0	0	
Fluoride	0.9918	0.100	1	0	99.2	90	110	0	0	0	
Sulfate	9.998	1.00	10	0	100	90	110	0	0	0	

CCV	SeqNo: 2714646	RunNo: 176099	Analysis Date: 10/5/2019
	Samp ID: CCV	Units: mg/L	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.828	1.00	10	0	98.3	90	110	0	0	0	
Fluoride	0.9529	0.100	1	0	95.3	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R176099

CCV	SeqNo: 2714646 Samp ID: CCV	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/5/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	9.986	1.00	10	0	99.9	90	110	0	0		

CRI	SeqNo: 2714597 Samp ID: CRI ICA-81-D	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.96	1.00	1	0	96	50	150	0	0		
Sulfate	2.028	1.00	2	0	101	50	150	0	0		

ICB	SeqNo: 2714594 Samp ID: ICB 3449 DI	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.05196	1.00	0	0	0	0	0	0	0		
Sulfate	0.01207	1.00	0	0	0	0	0	0	0		

ICV	SeqNo: 2714593 Samp ID: ICV IC100319C	TestNo: E300 Units: mg/L	RunNo: 176099 Analysis Date: 10/4/2019
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Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.805	1.00	10	0	98.1	90	110	0	0		
Sulfate	10.08	1.00	10	0	101	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 190920022
Project: Lockwood Ash Landfill

BatchID: R176134

MBLK	SeqNo: 2715324	TestNo: E300	RunNo: 176134
	Samp ID: MBLK 3449 DI	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00									
Sulfate	ND	1.00									

LCS	SeqNo: 2715325	TestNo: E300	RunNo: 176134
	Samp ID: LCS ICA-82-B	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	200.9	100	200	0	100	90	110	0	0	0	
Sulfate	414	100	400	0	104	90	110	0	0	0	

LCS	SeqNo: 2715347	TestNo: E300	RunNo: 176134
	Samp ID: LCS	Units: mg/L	Analysis Date: 10/8/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	202.6	100	200	0	101	90	110	0	0	0	
Sulfate	414.9	100	400	0	104	90	110	0	0	0	

MS	SeqNo: 2715330	TestNo: E300	RunNo: 176134
	Samp ID: 190920022-011a (8911-SH)	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	312.4	20.0	100	214.7	97.7	90	110	0	0	0	

MS	SeqNo: 2715344	TestNo: E300	RunNo: 176134
	Samp ID: 190930032-001a	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1904	50.0	500	1423	96.2	90	110	0	0	0	
Sulfate	927.7	50.0	500	414.1	103	90	110	0	0	0	

MSD	SeqNo: 2715331	TestNo: E300	RunNo: 176134
	Samp ID: 190920022-011a (8911-SH)	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	313.8	20.0	100	214.7	99.1	90	110	312.4	0.450	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176134

CCB	SeqNo: 2715334	TestNo: E300	RunNo: 176134
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2715346	TestNo: E300	RunNo: 176134
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2715357	TestNo: E300	RunNo: 176134
	Samp ID: CCB	Units: mg/L	Analysis Date: 10/8/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Fluoride	ND	0.100	0	0	0	0	0	0	0	0	
Nitrate, Nitrogen (As N)	ND	0.0200	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

CCV	SeqNo: 2715333	TestNo: E300	RunNo: 176134
	Samp ID: CCV	Units: mg/L	Analysis Date: 10/7/2019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.05	1.00	10	0	101	90	110	0	0	0	
Fluoride	1.021	0.100	1	0	102	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.038	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.14	1.00	10	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 190920022
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R176134

CCV	SeqNo: 2715345	RunNo: 176134	
	Samp ID: CCV	Analysis Date: 10/7/2019	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.11	1.00	10	0	101	90	110	0	0	0	
Fluoride	1.038	0.100	1	0	104	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.042	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.15	1.00	10	0	102	90	110	0	0	0	

CCV	SeqNo: 2715356	RunNo: 176134	
	Samp ID: CCV	Analysis Date: 10/8/2019	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.04	1.00	10	0	100	90	110	0	0	0	
Fluoride	1.008	0.100	1	0	101	90	110	0	0	0	
Nitrate, Nitrogen (As N)	1.04	0.0200	1	0	104	90	110	0	0	0	
Sulfate	10.2	1.00	10	0	102	90	110	0	0	0	

CRI	SeqNo: 2715326	RunNo: 176134	
	Samp ID: CRI ICA-81-D	Analysis Date: 10/7/2019	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	2.031	1.00	2	0	102	50	150	0	0	0	

ICB	SeqNo: 2715323	RunNo: 176134	
	Samp ID: ICB 3449 DI	Analysis Date: 10/7/2019	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	1.00	0	0	0	0	0	0	0	0	
Sulfate	ND	1.00	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2715322	RunNo: 176134	
	Samp ID: ICV IC100319C	Analysis Date: 10/7/2019	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10	1.00	10	0	100	90	110	0	0	0	
Sulfate	10.1	1.00	10	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

**A.4
FIELD DUPLICATES**

Sample No. 190920022-006 Field Duplicate No. 190920022-014 Run date: 10/31/2019

Lab Code: AES Case No. 190920022 Sample Matrix: Groundwater

% Solids Sample: NA % Solids Duplicate: NA

Concentration Units (ug/l or mg/kg dry weight): mg/L (unless noted)

Analyte	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
Ammonia	0.5		0.5				
Alkalinity	300		320		6.5%		
Color	7		10			CPU	
Conductivity	747		752		0.7%	umhos/cm	
Chloride	4.18		4.19		0.2%		
Hardness	54		61		12.2%		
Sulfate	101		104		2.9%		
TDS	695		695				
TOC	2.5		2.6		3.9%		

Parameter*	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
pH	9.6					SU	
Temperature	16					Deg C	
Turbidity	>999					NTU	

*Field parameters not measured on field duplicate.

**A.4
FIELD DUPLICATES**

Sample No. 190920022-021 Field Duplicate No. 190920022-023 Run Date: 10/31/2019
 Lab Code: AES Case No. 190920022 Sample Matrix: Surface Water
 % Solids Sample: NA % Solids Duplicate: NA
 Concentration Units (ug/l or mg/kg dry weight): mg/L (unless noted)

Analyte	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
Ammonia	0.1	U	0.1	U			
Alkalinity	116		110		5.3%		
Color	7		7			CPU	
Conductivity	404		498		20.8%	umhos/cm	J
Chloride	43.1		43.2		0.2%		
Hardness	153		153				
Sulfate	26.3		25.8		1.9%		
TDS	145		265		58.5%		J
TOC	3.2		3.2				

Parameter	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
pH	8.5		8.3		2.4%	SU	
Temperature	19		19			Deg C	
Turbidity	5		5			NTU	
Dissolved Oxygen	5.2		5.24		0.8%	mg/l	

Lockwood Ash Disposal Site Second Quarter 2019

Collection Date	Sample ID	Depth	Elevation	Units
9/18/2019	8908-D	6.42	606.55	feet
9/18/2019	8909-D	45.74	516.16	feet
9/18/2019	8910-D	22.91	535.43	feet
9/18/2019	8911-D	26.89	530.02	feet
9/18/2019	8942-D	15.84	543.11	feet
9/18/2019	8908-SH	8.01	604.76	feet
9/18/2019	8909-SH	11.18	550.45	feet
9/18/2019	8910-SH	6.48	552.07	feet
9/18/2019	8911-SH	25.61	531.31	feet
9/18/2019	9306-SH	9.81	556.41	feet
9/18/2019	7741	22.43	565.62	feet
9/18/2019	1842	7.32	551.88	feet
9/18/2019	8406	12.69	556.86	feet
9/18/2019	8407	OBSTRUCTED	--	feet
9/18/2019	8401	7.71	652.58	feet
9/18/2019	8402	9.69	654.40	feet
9/18/2019	8403	8.00	656.07	feet
9/18/2019	8404	10.40	592.33	feet
9/18/2019	8405	DRY	--	feet

FOURTH QUARTER



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

December 13, 2019

Dale Irwin
Lockwood Hills LLC
590 Plant Road, PO Box 187
Dresden, NY 14441

Work Order No: 191122020

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:


Adirondack Environmental Services, Inc received 31 samples on 11/22/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709


Monica Higdon
Laboratory Manager

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 191122020

Date: 13-Dec-19

The sampling was performed in accordance with the AES field sampling procedures and/or the client specified sampling procedures. Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 11/21/2019 8:40:00 AM
Lab Sample ID: 191122020-001
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	8.3			S.U.		11/21/2019 8:40:00 AM
Temperature (E170.1)	10			deg C		11/21/2019 8:40:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		11/21/2019 8:40:00 AM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	1160	100		µg/L	1	12/4/2019 3:38:00 PM
Arsenic	ND	5.00		µg/L	1	12/4/2019 3:38:00 PM
Boron	299	50.0		µg/L	1	12/4/2019 3:38:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 3:38:00 PM
Calcium	83900	50.0		µg/L	1	12/4/2019 3:38:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 3:38:00 PM
Iron	3620	50.0		µg/L	1	12/4/2019 3:38:00 PM
Magnesium	54900	50.0		µg/L	1	12/4/2019 3:38:00 PM
Manganese	258	20.0		µg/L	1	12/4/2019 3:38:00 PM
Potassium	22200	50.0		µg/L	1	12/4/2019 3:38:00 PM
Selenium	ND	5.00		µg/L	1	12/4/2019 3:38:00 PM
Sodium	53900	5000		µg/L	10	12/4/2019 3:44:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	435	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:33:33 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	1.00		mg/L	1	12/4/2019 8:31:59 PM
Sulfate	25.4	1.00		mg/L	1	12/4/2019 8:51:02 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	130	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	11/25/2019 1:22:42 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	1842
Work Order:	191122020	Collection Date:	11/21/2019 8:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	191122020-001
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	781	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	535	5		mg/L	1	11/27/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 11/20/2019 4:20:00 PM
Lab Sample ID: 191122020-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.1			S.U.		11/20/2019 4:20:00 PM
Temperature (E170.1)	11			deg C		11/20/2019 4:20:00 PM
Turbidity (E180.1)	4	1.0		NTU		11/20/2019 4:20:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/4/2019 3:48:00 PM
Arsenic	5.31	5.00	N	µg/L	1	12/4/2019 3:48:00 PM
Boron	179	50.0		µg/L	1	12/4/2019 3:48:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 3:48:00 PM
Calcium	128000	50.0		µg/L	1	12/4/2019 3:48:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 3:48:00 PM
Iron	106	50.0		µg/L	1	12/4/2019 3:48:00 PM
Magnesium	24800	50.0		µg/L	1	12/4/2019 3:48:00 PM
Manganese	21.4	20.0		µg/L	1	12/4/2019 3:48:00 PM
Potassium	1200	50.0		µg/L	1	12/4/2019 3:48:00 PM
Selenium	ND	5.00	N	µg/L	1	12/4/2019 3:48:00 PM
Sodium	11700	500		µg/L	1	12/4/2019 3:48:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	421	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:41:59 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	2.17	2.00	N	mg/L	2	12/4/2019 10:27:52 PM
Sulfate	137	2.00		mg/L	2	12/4/2019 10:27:52 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	300	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:24:19 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8404
Work Order:	191122020	Collection Date:	11/20/2019 4:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	191122020-002
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	755	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	465	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 11/20/2019 1:30:00 PM
Lab Sample ID: 191122020-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.1			S.U.		11/20/2019 1:30:00 PM
Temperature (E170.1)	11			deg C		11/20/2019 1:30:00 PM
Turbidity (E180.1)	2	1.0		NTU		11/20/2019 1:30:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/4/2019 4:20:00 PM
Arsenic	ND	5.00		µg/L	1	12/4/2019 4:20:00 PM
Boron	258	50.0		µg/L	1	12/4/2019 4:20:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 4:20:00 PM
Calcium	167000	50.0		µg/L	1	12/4/2019 4:20:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 4:20:00 PM
Iron	1100	50.0		µg/L	1	12/4/2019 4:20:00 PM
Magnesium	72000	50.0		µg/L	1	12/4/2019 4:20:00 PM
Manganese	109	20.0		µg/L	1	12/4/2019 4:20:00 PM
Potassium	3310	50.0		µg/L	1	12/4/2019 4:20:00 PM
Selenium	ND	5.00		µg/L	1	12/4/2019 4:20:00 PM
Sodium	35200	500		µg/L	1	12/4/2019 4:20:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	713	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:43:41 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	15.4	2.00		mg/L	2	12/4/2019 11:06:06 PM
Sulfate	321	10.0		mg/L	10	12/4/2019 11:44:10 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	420	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	11/25/2019 1:25:56 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 11/20/2019 1:30:00 PM
Lab Sample ID: 191122020-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	1200	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	825	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 11/20/2019 1:50:00 PM
Lab Sample ID: 191122020-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.0			S.U.		11/20/2019 1:50:00 PM
Temperature (E170.1)	12			deg C		11/20/2019 1:50:00 PM
Turbidity (E180.1)	1	1.0		NTU		11/20/2019 1:50:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/4/2019 4:38:00 PM
Arsenic	ND	5.00		µg/L	1	12/4/2019 4:38:00 PM
Boron	196	50.0		µg/L	1	12/4/2019 4:38:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 4:38:00 PM
Calcium	211000	500		µg/L	10	12/4/2019 4:55:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 4:38:00 PM
Iron	163	50.0		µg/L	1	12/4/2019 4:38:00 PM
Magnesium	71800	50.0		µg/L	1	12/4/2019 4:38:00 PM
Manganese	194	20.0		µg/L	1	12/4/2019 4:38:00 PM
Potassium	2870	50.0		µg/L	1	12/4/2019 4:38:00 PM
Selenium	ND	5.00		µg/L	1	12/4/2019 4:38:00 PM
Sodium	28000	500		µg/L	1	12/4/2019 4:38:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	822	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:45:23 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	15.9	2.00		mg/L	2	12/5/2019 12:03:12 AM
Sulfate	378	10.0		mg/L	10	12/5/2019 12:22:14 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	430	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	11/25/2019 1:27:33 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 11/20/2019 1:50:00 PM
Lab Sample ID: 191122020-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	1330	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	905	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 11/20/2019 3:05:00 PM
Lab Sample ID: 191122020-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	9.3			S.U.		11/20/2019 3:05:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 3:05:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		11/20/2019 3:05:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	1000	100		µg/L	1	12/4/2019 4:42:00 PM
Arsenic	ND	5.00		µg/L	1	12/4/2019 4:42:00 PM
Boron	1050	50.0		µg/L	1	12/4/2019 4:42:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 4:42:00 PM
Calcium	14800	50.0		µg/L	1	12/4/2019 4:42:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 4:42:00 PM
Iron	3590	50.0		µg/L	1	12/4/2019 4:42:00 PM
Magnesium	3250	50.0		µg/L	1	12/4/2019 4:42:00 PM
Manganese	116	20.0		µg/L	1	12/4/2019 4:42:00 PM
Potassium	1450	50.0		µg/L	1	12/4/2019 4:42:00 PM
Selenium	ND	5.00		µg/L	1	12/4/2019 4:42:00 PM
Sodium	186000	5000		µg/L	10	12/4/2019 4:49:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	50	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:47:04 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	4.34	2.00		mg/L	2	12/5/2019 12:41:16 AM
Sulfate	106	2.00		mg/L	2	12/5/2019 12:41:16 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	310	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	11/25/2019 1:29:10 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 11/20/2019 3:05:00 PM
Lab Sample ID: 191122020-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	754	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	675	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 11/20/2019 3:10:00 PM
Lab Sample ID: 191122020-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.7			S.U.		11/20/2019 3:10:00 PM
Temperature (E170.1)	11			deg C		11/20/2019 3:10:00 PM
Turbidity (E180.1)	2	1.0		NTU		11/20/2019 3:10:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/4/2019 4:59:00 PM
Arsenic	6.16	5.00		µg/L	1	12/4/2019 4:59:00 PM
Boron	261	50.0		µg/L	1	12/4/2019 4:59:00 PM
Cadmium	ND	5.00		µg/L	1	12/4/2019 4:59:00 PM
Calcium	32400	50.0		µg/L	1	12/4/2019 4:59:00 PM
Copper	ND	5.00		µg/L	1	12/4/2019 4:59:00 PM
Iron	121	50.0		µg/L	1	12/4/2019 4:59:00 PM
Magnesium	19500	50.0		µg/L	1	12/4/2019 4:59:00 PM
Manganese	ND	20.0		µg/L	1	12/4/2019 4:59:00 PM
Potassium	2260	50.0		µg/L	1	12/4/2019 4:59:00 PM
Selenium	ND	5.00		µg/L	1	12/4/2019 4:59:00 PM
Sodium	60300	5000		µg/L	10	12/4/2019 5:03:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

11/25/2019)

Total Hardness (As CaCO3)	161	5		mg/L CaCO3	1	12/4/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:48:45 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/5/2019 1:59:32 AM
Sulfate	110	2.00		mg/L	2	12/5/2019 1:59:32 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	180	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:35:40 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 11/20/2019 3:10:00 PM
Lab Sample ID: 191122020-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	533	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	290	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 11/20/2019 3:20:00 PM
Lab Sample ID: 191122020-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.5			S.U.		11/20/2019 3:20:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 3:20:00 PM
Turbidity (E180.1)	4	1.0		NTU		11/20/2019 3:20:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 2:35:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 2:35:00 PM
Boron	2780	50.0		µg/L	1	12/6/2019 2:35:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 2:35:00 PM
Calcium	72100	50.0		µg/L	1	12/6/2019 2:35:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 2:35:00 PM
Iron	54.9	50.0		µg/L	1	12/6/2019 2:35:00 PM
Magnesium	23400	50.0		µg/L	1	12/6/2019 2:35:00 PM
Manganese	ND	20.0		µg/L	1	12/6/2019 2:35:00 PM
Potassium	3350	50.0		µg/L	1	12/6/2019 2:35:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 2:35:00 PM
Sodium	99700	5000		µg/L	10	12/6/2019 2:41:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	276	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:50:26 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	23.9	2.00		mg/L	2	12/5/2019 2:37:54 AM
Sulfate	308	10.0		mg/L	10	12/5/2019 2:56:57 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA A**

Alkalinity, Total (As CaCO3)	150	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:37:18 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 11/20/2019 3:20:00 PM
Lab Sample ID: 191122020-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	941	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	530	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 11/20/2019 3:30:00 PM
Lab Sample ID: 191122020-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.5			S.U.		11/20/2019 3:30:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 3:30:00 PM
Turbidity (E180.1)	4	1.0		NTU		11/20/2019 3:30:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 2:46:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 2:46:00 PM
Boron	1180	50.0		µg/L	1	12/6/2019 2:46:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 2:46:00 PM
Calcium	47500	50.0		µg/L	1	12/6/2019 2:46:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 2:46:00 PM
Iron	56.7	50.0		µg/L	1	12/6/2019 2:46:00 PM
Magnesium	16200	50.0		µg/L	1	12/6/2019 2:46:00 PM
Manganese	23.1	20.0		µg/L	1	12/6/2019 2:46:00 PM
Potassium	3240	50.0		µg/L	1	12/6/2019 2:46:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 2:46:00 PM
Sodium	101000	5000		µg/L	10	12/6/2019 2:57:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	185	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:52:07 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	7.28	2.00		mg/L	2	12/5/2019 3:15:58 AM
Sulfate	219	10.0		mg/L	10	12/5/2019 3:35:00 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	210	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.3	0.1		mg/L	1	11/25/2019 4:10:30 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 11/20/2019 3:30:00 PM
Lab Sample ID: 191122020-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	839	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	535	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 11/20/2019 3:42:00 PM
Lab Sample ID: 191122020-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.6			S.U.		11/20/2019 3:42:00 PM
Temperature (E170.1)	9			deg C		11/20/2019 3:42:00 PM
Turbidity (E180.1)	4	1.0		NTU		11/20/2019 3:42:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 3:02:00 PM
Arsenic	11.1	5.00		µg/L	1	12/6/2019 3:02:00 PM
Boron	313	50.0		µg/L	1	12/6/2019 3:02:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:02:00 PM
Calcium	49600	50.0		µg/L	1	12/6/2019 3:02:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:02:00 PM
Iron	736	50.0		µg/L	1	12/6/2019 3:02:00 PM
Magnesium	16000	50.0		µg/L	1	12/6/2019 3:02:00 PM
Manganese	72.3	20.0		µg/L	1	12/6/2019 3:02:00 PM
Potassium	1950	50.0		µg/L	1	12/6/2019 3:02:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:02:00 PM
Sodium	68400	5000		µg/L	10	12/6/2019 3:07:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	189	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:53:48 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	9.62	2.00		mg/L	2	12/5/2019 3:54:01 AM
Sulfate	216	10.0		mg/L	10	12/5/2019 4:13:04 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA**

Alkalinity, Total (As CaCO3)	96	4		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	11/25/2019 1:43:53 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 11/20/2019 3:42:00 PM
Lab Sample ID: 191122020-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	656	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	385	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 11/20/2019 7:45:00 AM
Lab Sample ID: 191122020-010
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.3			S.U.		11/20/2019 7:45:00 AM
Temperature (E170.1)	9			deg C		11/20/2019 7:45:00 AM
Turbidity (E180.1)	18	1.0		NTU		11/20/2019 7:45:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 3:11:00 PM
Arsenic	7.95	5.00		µg/L	1	12/6/2019 3:11:00 PM
Boron	332	50.0		µg/L	1	12/6/2019 3:11:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:11:00 PM
Calcium	79900	50.0		µg/L	1	12/6/2019 3:11:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:11:00 PM
Iron	469	50.0		µg/L	1	12/6/2019 3:11:00 PM
Magnesium	71800	50.0		µg/L	1	12/6/2019 3:11:00 PM
Manganese	180	20.0		µg/L	1	12/6/2019 3:11:00 PM
Potassium	3020	50.0		µg/L	1	12/6/2019 3:11:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:11:00 PM
Sodium	39800	500		µg/L	1	12/6/2019 3:11:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	495	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:55:29 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	3.82	2.00		mg/L	2	12/5/2019 4:32:06 AM
Sulfate	239	10.0		mg/L	10	12/5/2019 6:10:33 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA**

Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.3	0.1		mg/L	1	11/25/2019 1:45:31 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8942-D
Work Order:	191122020	Collection Date:	11/20/2019 7:45:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	191122020-010
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	950	1		µmhos/cm	1	11/25/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	615	5		mg/L	1	11/25/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 11/21/2019 7:30:00 AM
Lab Sample ID: 191122020-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

pH (E150.1)	7.4			S.U.		11/21/2019 7:30:00 AM
Temperature (E170.1)	10			deg C		11/21/2019 7:30:00 AM
Turbidity (E180.1)	7	1.0		NTU		11/21/2019 7:30:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 3:16:00 PM
Arsenic	13.3	5.00		µg/L	1	12/6/2019 3:16:00 PM
Boron	100	50.0		µg/L	1	12/6/2019 3:16:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:16:00 PM
Calcium	57600	50.0		µg/L	1	12/6/2019 3:16:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:16:00 PM
Iron	253	50.0		µg/L	1	12/6/2019 3:16:00 PM
Magnesium	60800	50.0		µg/L	1	12/6/2019 3:16:00 PM
Manganese	ND	20.0		µg/L	1	12/6/2019 3:16:00 PM
Potassium	3060	50.0		µg/L	1	12/6/2019 3:16:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:16:00 PM
Sodium	20500	500		µg/L	1	12/6/2019 3:16:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	394	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 1:57:10 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/5/2019 6:29:46 AM
Sulfate	70.3	2.00		mg/L	2	12/5/2019 6:29:46 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA A**

Alkalinity, Total (As CaCO3)	370	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:47:08 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 11/21/2019 7:30:00 AM
Lab Sample ID: 191122020-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	706	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	420	5		mg/L	1	11/27/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909D
Collection Date: 11/20/2019 3:05:00 PM
Lab Sample ID: 191122020-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	9.3			S.U.		11/20/2019 3:05:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 3:05:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		11/20/2019 3:05:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	747	100		µg/L	1	12/6/2019 3:32:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 3:32:00 PM
Boron	1050	50.0		µg/L	1	12/6/2019 3:32:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:32:00 PM
Calcium	13800	50.0		µg/L	1	12/6/2019 3:32:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:32:00 PM
Iron	3040	50.0		µg/L	1	12/6/2019 3:32:00 PM
Magnesium	3040	50.0		µg/L	1	12/6/2019 3:32:00 PM
Manganese	104	20.0		µg/L	1	12/6/2019 3:32:00 PM
Potassium	1380	50.0		µg/L	1	12/6/2019 3:32:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:32:00 PM
Sodium	163000	5000		µg/L	10	12/6/2019 3:43:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	47	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:02:13 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	4.31	2.00		mg/L	2	12/5/2019 4:15:58 PM
Sulfate	106	2.00		mg/L	2	12/5/2019 4:15:58 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	310	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	11/25/2019 1:48:46 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909D
Collection Date: 11/20/2019 3:05:00 PM
Lab Sample ID: 191122020-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	758	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	640	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 11/20/2019 1:10:00 PM
Lab Sample ID: 191122020-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	4.69	0.10		mg/L		11/20/2019 1:10:00 PM
Flow, GPD	475			gal/day		11/20/2019 1:10:00 PM
pH (E150.1)	6.4			S.U.		11/20/2019 1:10:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 1:10:00 PM
Turbidity (E180.1)	20	1.0		NTU		11/20/2019 1:10:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 3:46:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 3:46:00 PM
Boron	3300	50.0		µg/L	1	12/6/2019 3:46:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:46:00 PM
Calcium	308000	500		µg/L	10	12/6/2019 3:51:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:46:00 PM
Iron	ND	50.0		µg/L	1	12/6/2019 3:46:00 PM
Magnesium	118000	50.0		µg/L	1	12/6/2019 3:46:00 PM
Manganese	ND	20.0		µg/L	1	12/6/2019 3:46:00 PM
Potassium	7770	50.0		µg/L	1	12/6/2019 3:46:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:46:00 PM
Sodium	46900	500		µg/L	1	12/6/2019 3:46:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	1255	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:03:54 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	72.2	2.00		mg/L	2	12/5/2019 4:35:01 PM
Sulfate	828	20.0		mg/L	20	12/5/2019 5:13:06 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	430	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 11/20/2019 1:10:00 PM
Lab Sample ID: 191122020-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:50:24 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2070	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1700	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 11/20/2019 1:30:00 PM
Lab Sample ID: 191122020-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.33	0.10		mg/L		11/20/2019 1:30:00 PM
Flow, GPD	38			gal/day		11/20/2019 1:30:00 PM
pH (E150.1)	6.6			S.U.		11/20/2019 1:30:00 PM
Temperature (E170.1)	11			deg C		11/20/2019 1:30:00 PM
Turbidity (E180.1)	24	1.0		NTU		11/20/2019 1:30:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 3:55:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 3:55:00 PM
Boron	1020	50.0		µg/L	1	12/6/2019 3:55:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 3:55:00 PM
Calcium	412000	500		µg/L	10	12/6/2019 3:59:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 3:55:00 PM
Iron	ND	50.0		µg/L	1	12/6/2019 3:55:00 PM
Magnesium	181000	50.0		µg/L	1	12/6/2019 3:55:00 PM
Manganese	23.7	20.0		µg/L	1	12/6/2019 3:55:00 PM
Potassium	5750	50.0		µg/L	1	12/6/2019 3:55:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 3:55:00 PM
Sodium	100000	5000		µg/L	10	12/6/2019 3:59:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	1772	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:05:36 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	30.7	2.00		mg/L	2	12/5/2019 5:32:08 PM
Sulfate	1150	20.0		mg/L	20	12/5/2019 5:51:11 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	510	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 11/20/2019 1:30:00 PM
Lab Sample ID: 191122020-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:55:24 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	2520	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2110	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 11/20/2019 12:00:00 PM
Lab Sample ID: 191122020-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.63	0.10		mg/L		11/20/2019 12:00:00 PM
Flow, GPD	4185			gal/day		11/20/2019 12:00:00 PM
pH (E150.1)	6.6			S.U.		11/20/2019 12:00:00 PM
Temperature (E170.1)	9			deg C		11/20/2019 12:00:00 PM
Turbidity (E180.1)	541	1.0		NTU		11/20/2019 12:00:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 4:03:00 PM
Arsenic	54.6	5.00		µg/L	1	12/6/2019 4:03:00 PM
Boron	4270	50.0		µg/L	1	12/6/2019 4:03:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 4:03:00 PM
Calcium	324000	500		µg/L	10	12/6/2019 4:07:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 4:03:00 PM
Iron	4890	50.0		µg/L	1	12/6/2019 4:03:00 PM
Magnesium	81900	50.0		µg/L	1	12/6/2019 4:03:00 PM
Manganese	625	20.0		µg/L	1	12/6/2019 4:03:00 PM
Potassium	17700	50.0		µg/L	1	12/6/2019 4:03:00 PM
Selenium	ND	5.00		µg/L	1	12/6/2019 4:03:00 PM
Sodium	45400	500		µg/L	1	12/6/2019 4:03:00 PM

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 11/25/2019)

Mercury	ND	0.5		ng/L	1	11/26/2019
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	1147	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:07:18 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	22.9	2.00		mg/L	2	12/5/2019 6:10:13 PM
Sulfate	429	20.0		mg/L	20	12/5/2019 7:27:03 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 11/20/2019 12:00:00 PM
Lab Sample ID: 191122020-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	530	10		mgCaCO3/L	1	12/3/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 1:56:59 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1610	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1190	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 11/20/2019 12:40:00 PM
Lab Sample ID: 191122020-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.08	0.10		mg/L		11/20/2019 12:40:00 PM
Flow, GPD	3652			gal/day		11/20/2019 12:40:00 PM
pH (E150.1)	6.9			S.U.		11/20/2019 12:40:00 PM
Temperature (E170.1)	11			deg C		11/20/2019 12:40:00 PM
Turbidity (E180.1)	152	1.0		NTU		11/20/2019 12:40:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 4:12:00 PM
Arsenic	13.8	5.00		µg/L	1	12/6/2019 4:12:00 PM
Boron	49600	50.0		µg/L	1	12/6/2019 4:12:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 4:12:00 PM
Calcium	673000	500		µg/L	10	12/6/2019 4:16:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 4:12:00 PM
Iron	1820	50.0		µg/L	1	12/6/2019 4:12:00 PM
Magnesium	104000	50.0		µg/L	1	12/6/2019 4:12:00 PM
Manganese	1210	20.0		µg/L	1	12/6/2019 4:12:00 PM
Potassium	106000	500		µg/L	10	12/6/2019 4:16:00 PM
Selenium	7.18	5.00		µg/L	1	12/6/2019 4:12:00 PM
Sodium	249000	5000		µg/L	10	12/6/2019 4:16:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	2110	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:09:00 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	407	50.0		mg/L	50	12/5/2019 8:05:14 PM
Sulfate	1660	50.0		mg/L	50	12/5/2019 8:05:14 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	320	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 11/20/2019 12:40:00 PM
Lab Sample ID: 191122020-016
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.7	0.1		mg/L	1	11/25/2019 1:58:31 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4210	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3540	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 11/20/2019 11:33:00 AM
Lab Sample ID: 191122020-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.55	0.10		mg/L		11/20/2019 11:33:00 AM
Flow, GPD	238			gal/day		11/20/2019 11:33:00 AM
pH (E150.1)	6.5			S.U.		11/20/2019 11:33:00 AM
Temperature (E170.1)	11			deg C		11/20/2019 11:33:00 AM
Turbidity (E180.1)	31	1.0		NTU		11/20/2019 11:33:00 AM

ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 4:31:00 PM
Arsenic	ND	5.00		µg/L	1	12/6/2019 4:31:00 PM
Boron	33400	500		µg/L	10	12/6/2019 4:34:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 4:31:00 PM
Calcium	733000	500		µg/L	10	12/6/2019 4:34:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 4:31:00 PM
Iron	106	50.0		µg/L	1	12/6/2019 4:31:00 PM
Magnesium	135000	50.0		µg/L	1	12/6/2019 4:31:00 PM
Manganese	343	20.0		µg/L	1	12/6/2019 4:31:00 PM
Potassium	149000	500		µg/L	10	12/6/2019 4:34:00 PM
Selenium	6.01	5.00		µg/L	1	12/6/2019 4:31:00 PM
Sodium	299000	5000		µg/L	10	12/6/2019 4:34:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	2386	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:10:41 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	534	50.0		mg/L	50	12/5/2019 9:02:22 PM
Sulfate	1720	50.0		mg/L	50	12/5/2019 9:02:22 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DA A**

Alkalinity, Total (As CaCO3)	460	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 11/20/2019 11:33:00 AM
Lab Sample ID: 191122020-017
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/26/2019 12:28:11 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	4850	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	4050	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

BAMA 02/20/20

CLIENT: Lockwood Hills LLC **Client Sample ID:** 21st Inlet To Pond
Work Order: 191122020 **Collection Date:** 11/20/2019 1:50:00 PM
Reference: Lockwood Ash Landfill / Quarterly **Lab Sample ID:** 191122020-018
PO#: **Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Dissolved Oxygen (E360.1)	6.24	0.10		mg/L		11/20/2019 1:50:00 PM
Flow, GPD	11,033			gal/day		11/20/2019 1:50:00 PM
pH (E150.1)	6.5			S.U.		11/20/2019 1:50:00 PM
Temperature (E170.1)	10			deg C		11/20/2019 1:50:00 PM
Turbidity (E180.1)	610	1.0		NTU		11/20/2019 1:50:00 PM

ICP METALS - EPA 200.7 Analyst: KH
 (Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/6/2019 4:40:00 PM
Arsenic	50.7	5.00		µg/L	1	12/6/2019 4:40:00 PM
Boron	24500	500		µg/L	10	12/6/2019 4:44:00 PM
Cadmium	ND	5.00		µg/L	1	12/6/2019 4:40:00 PM
Calcium	513000	500		µg/L	10	12/6/2019 4:44:00 PM
Copper	ND	5.00		µg/L	1	12/6/2019 4:40:00 PM
Iron	5010	50.0		µg/L	1	12/6/2019 4:40:00 PM
Magnesium	96000	50.0		µg/L	1	12/6/2019 4:40:00 PM
Manganese	599	20.0		µg/L	1	12/6/2019 4:40:00 PM
Potassium	69500	500		µg/L	10	12/6/2019 4:44:00 PM
Selenium	21.8	5.00		µg/L	1	12/6/2019 4:40:00 PM
Sodium	224000	5000		µg/L	10	12/6/2019 4:44:00 PM

LOW LEVEL MERCURY - EPA 1631E Analyst: WB
 (Prep: 1631E - 11/25/2019)

Mercury	0.6	0.5		ng/L	1	11/26/2019
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HARDNESS - EPA 200.7 REV 4.4 Analyst: KH

Total Hardness (As CaCO3)	1675	5		mg/L CaCO3	1	12/6/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: AVB
 (Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 2:12:22 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: CS

Chloride	250	20.0		mg/L	20	12/5/2019 9:21:24 PM
Sulfate	1410	20.0		mg/L	20	12/5/2019 9:21:24 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: DAA

Adirondack Environmental Services, Inc

Date: 13-Dec-19

BAMA 02/20/20

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 21 Inlet To Pond
Collection Date: 11/20/2019 1:50:00 PM
Lab Sample ID: 191122020-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	350	10		mgCaCO3/L	1	12/3/2019
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	11/26/2019 12:29:49 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	3510	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2880	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 11/20/2019 2:53:00 PM
Lab Sample ID: 191122020-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	7.15	0.10		mg/L		11/20/2019 2:53:00 PM
pH (E150.1)	6.3			S.U.		11/20/2019 2:53:00 PM
Temperature (E170.1)	7			deg C		11/20/2019 2:53:00 PM
Turbidity (E180.1)	35	1.0		NTU		11/20/2019 2:53:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 12:40:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 12:40:00 PM
Boron	ND	50.0		µg/L	1	12/9/2019 12:40:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 12:40:00 PM
Calcium	36000	50.0		µg/L	1	12/9/2019 12:40:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 12:40:00 PM
Iron	53.4	50.0		µg/L	1	12/9/2019 12:40:00 PM
Magnesium	11000	50.0		µg/L	1	12/9/2019 12:40:00 PM
Manganese	ND	20.0		µg/L	1	12/9/2019 12:40:00 PM
Potassium	2440	50.0		µg/L	1	12/9/2019 12:40:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 12:40:00 PM
Sodium	19500	500		µg/L	1	12/9/2019 12:40:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	135	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:07:03 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	34.6	2.00		mg/L	2	12/5/2019 9:59:29 PM
Sulfate	22.3	2.00		mg/L	2	12/5/2019 9:59:29 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	120	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/26/2019 12:31:26 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 11/20/2019 2:53:00 PM
Lab Sample ID: 191122020-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	361	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	175	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 11/20/2019 2:33:00 PM
Lab Sample ID: 191122020-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	7.34	0.10		mg/L		11/20/2019 2:33:00 PM
pH (E150.1)	6.4			S.U.		11/20/2019 2:33:00 PM
Temperature (E170.1)	7			deg C		11/20/2019 2:33:00 PM
Turbidity (E180.1)	37	1.0		NTU		11/20/2019 2:33:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 12:45:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 12:45:00 PM
Boron	ND	50.0		µg/L	1	12/9/2019 12:45:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 12:45:00 PM
Calcium	35900	50.0		µg/L	1	12/9/2019 12:45:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 12:45:00 PM
Iron	56.5	50.0		µg/L	1	12/9/2019 12:45:00 PM
Magnesium	11000	50.0		µg/L	1	12/9/2019 12:45:00 PM
Manganese	ND	20.0		µg/L	1	12/9/2019 12:45:00 PM
Potassium	2410	50.0		µg/L	1	12/9/2019 12:45:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 12:45:00 PM
Sodium	19400	500		µg/L	1	12/9/2019 12:45:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	135	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:08:45 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	34.4	2.00		mg/L	2	12/5/2019 11:55:30 PM
Sulfate	22.1	2.00		mg/L	2	12/5/2019 11:55:30 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	120	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 2:00:03 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 11/20/2019 2:33:00 PM
Lab Sample ID: 191122020-020
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	361	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	140	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 11/20/2019 2:53:00 PM
Lab Sample ID: 191122020-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	7.21	0.10		mg/L		11/20/2019 2:53:00 PM
pH (E150.1)	6.4			S.U.		11/20/2019 2:53:00 PM
Temperature (E170.1)	7			deg C		11/20/2019 2:53:00 PM
Turbidity (E180.1)	34	1.0		NTU		11/20/2019 2:53:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 12:48:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 12:48:00 PM
Boron	ND	50.0		µg/L	1	12/9/2019 12:48:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 12:48:00 PM
Calcium	35300	50.0		µg/L	1	12/9/2019 12:48:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 12:48:00 PM
Iron	94.9	50.0		µg/L	1	12/9/2019 12:48:00 PM
Magnesium	10900	50.0		µg/L	1	12/9/2019 12:48:00 PM
Manganese	ND	20.0		µg/L	1	12/9/2019 12:48:00 PM
Potassium	2390	50.0		µg/L	1	12/9/2019 12:48:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 12:48:00 PM
Sodium	19100	500		µg/L	1	12/9/2019 12:48:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	133	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:13:51 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	34.7	2.00		mg/L	2	12/6/2019 12:14:32 AM
Sulfate	22.2	2.00		mg/L	2	12/6/2019 12:14:32 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	110	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/26/2019 12:33:03 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 11/20/2019 2:53:00 PM
Lab Sample ID: 191122020-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	358	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	160	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 11/20/2019 2:00:00 PM
Lab Sample ID: 191122020-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	9.49	0.10		mg/L		11/20/2019 2:00:00 PM
pH (E150.1)	6.8			S.U.		11/20/2019 2:00:00 PM
Temperature (E170.1)	4			deg C		11/20/2019 2:00:00 PM
Turbidity (E180.1)	71	1.0		NTU		11/20/2019 2:00:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 12:54:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 12:54:00 PM
Boron	18800	50.0		µg/L	1	12/9/2019 12:54:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 12:54:00 PM
Calcium	267000	500		µg/L	10	12/9/2019 12:59:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 12:54:00 PM
Iron	163	50.0		µg/L	1	12/9/2019 12:54:00 PM
Magnesium	65600	50.0		µg/L	1	12/9/2019 12:54:00 PM
Manganese	85.1	20.0		µg/L	1	12/9/2019 12:54:00 PM
Potassium	67800	50.0		µg/L	1	12/9/2019 12:54:00 PM
Selenium	12.5	5.00		µg/L	1	12/9/2019 12:54:00 PM
Sodium	154000	5000		µg/L	10	12/9/2019 12:59:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	938	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:18:57 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	165	20.0		mg/L	20	12/6/2019 12:33:34 AM
Sulfate	929	20.0		mg/L	20	12/6/2019 12:33:34 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	120	10		mgCaCO3/L	1	12/3/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.2		mg/L	2	11/26/2019 1:42:38 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 11/20/2019 2:00:00 PM
Lab Sample ID: 191122020-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011Analyst: **KB**

Specific Conductance	2340	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CC**

TDS (Residue, Filterable)	1770	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 11/20/2019 1:05:00 PM
Lab Sample ID: 191122020-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.74	0.10		mg/L		11/20/2019 1:05:00 PM
pH (E150.1)	6.9			S.U.		11/20/2019 1:05:00 PM
Temperature (E170.1)	8			deg C		11/20/2019 1:05:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		11/20/2019 1:05:00 PM

ICP METALS - EPA 200.7 Analyst: **KH**
 (Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 1:02:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 1:02:00 PM
Boron	ND	50.0		µg/L	1	12/9/2019 1:02:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 1:02:00 PM
Calcium	ND	50.0		µg/L	1	12/9/2019 1:02:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 1:02:00 PM
Iron	ND	50.0		µg/L	1	12/9/2019 1:02:00 PM
Magnesium	ND	50.0		µg/L	1	12/9/2019 1:02:00 PM
Manganese	ND	20.0		µg/L	1	12/9/2019 1:02:00 PM
Potassium	ND	50.0		µg/L	1	12/9/2019 1:02:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 1:02:00 PM
Sodium	ND	500		µg/L	1	12/9/2019 1:02:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: **KH**

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:20:40 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/6/2019 12:52:36 AM
Sulfate	ND	2.00		mg/L	2	12/6/2019 12:52:36 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011 Analyst: **DAA**

Alkalinity, Total (As CaCO3)	ND	10		mgCaCO3/L	1	12/4/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/26/2019 12:42:49 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 11/20/2019 1:05:00 PM
Lab Sample ID: 191122020-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011 Analyst: **KB**

Specific Conductance	2	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	5	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LLHg Field Blank
Collection Date: 11/20/2019 1:45:00 AM
Lab Sample ID: 191122020-024
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E Analyst: **WB**

(Prep: 1631E - 11/25/2019)

Mercury	ND	0.5		ng/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 11/20/2019 2:20:00 PM
Lab Sample ID: 191122020-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

pH (E150.1)	7.4			S.U.		11/20/2019 2:20:00 PM
Temperature (E170.1)	8			deg C		11/20/2019 2:20:00 PM
Turbidity (E180.1)	8	1.0		NTU		11/20/2019 2:20:00 PM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 1:07:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 1:07:00 PM
Boron	881	50.0		µg/L	1	12/9/2019 1:07:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 1:07:00 PM
Calcium	89100	50.0		µg/L	1	12/9/2019 1:07:00 PM
Copper	ND	5.00		µg/L	1	12/9/2019 1:07:00 PM
Iron	210	50.0		µg/L	1	12/9/2019 1:07:00 PM
Magnesium	26200	50.0		µg/L	1	12/9/2019 1:07:00 PM
Manganese	65.4	20.0		µg/L	1	12/9/2019 1:07:00 PM
Potassium	2730	50.0		µg/L	1	12/9/2019 1:07:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 1:07:00 PM
Sodium	81700	5000		µg/L	10	12/9/2019 1:12:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	330	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:22:23 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	50.3	2.00		mg/L	2	12/6/2019 1:11:38 AM
Sulfate	79.0	2.00		mg/L	2	12/6/2019 1:11:38 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	360	10		mgCaCO3/L	1	12/4/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.9	0.1		mg/L	1	11/25/2019 2:01:35 PM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 11/20/2019 2:20:00 PM
Lab Sample ID: 191122020-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **KB**

Specific Conductance	951	1		µmhos/cm	1	11/26/2019
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

TDS (Residue, Filterable)	560	5		mg/L	1	11/26/2019
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 11/20/2019 11:17:00 AM
Lab Sample ID: 191122020-026
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE

Analyst: **FLD**

Dissolved Oxygen (E360.1)	6.24	0.10		mg/L		11/20/2019 11:17:00 AM
Flow, GPD	266			gal/day		11/20/2019 11:17:00 AM
pH (E150.1)	7.0			S.U.		11/20/2019 11:17:00 AM
Temperature (E170.1)	10			deg C		11/20/2019 11:17:00 AM
Turbidity (E180.1)	43	1.0		NTU		11/20/2019 11:17:00 AM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 11/25/2019)

Aluminum	ND	100		µg/L	1	12/9/2019 1:40:00 PM
Arsenic	ND	5.00		µg/L	1	12/9/2019 1:40:00 PM
Boron	177	50.0		µg/L	1	12/9/2019 1:40:00 PM
Cadmium	ND	5.00		µg/L	1	12/9/2019 1:40:00 PM
Calcium	191000	50.0		µg/L	1	12/9/2019 1:40:00 PM
Copper	5.84	5.00		µg/L	1	12/9/2019 1:40:00 PM
Iron	ND	50.0		µg/L	1	12/9/2019 1:40:00 PM
Magnesium	46900	50.0		µg/L	1	12/9/2019 1:40:00 PM
Manganese	ND	20.0		µg/L	1	12/9/2019 1:40:00 PM
Potassium	3230	50.0		µg/L	1	12/9/2019 1:40:00 PM
Selenium	ND	5.00		µg/L	1	12/9/2019 1:40:00 PM
Sodium	20300	500		µg/L	1	12/9/2019 1:40:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	670	5		mg/L CaCO3	1	12/9/2019
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 11/25/2019)

Mercury	ND	0.0002		mg/L	1	11/25/2019 3:27:28 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	6.17	2.00		mg/L	2	12/6/2019 1:30:40 AM
Sulfate	319	10.0		mg/L	10	12/6/2019 1:49:42 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	330	10		mgCaCO3/L	1	12/4/2019
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 11/20/2019 11:17:00 AM
Lab Sample ID: 191122020-026
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	11/25/2019 2:03:07 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: KB
Specific Conductance	1130	1		µmhos/cm	1	11/26/2019
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	800	5		mg/L	1	11/26/2019

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 2
Collection Date: 11/20/2019 11:12:00 AM
Lab Sample ID: 191122020-027
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	DRY			NA		11/20/2019 11:12:00 AM

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 11/20/2019 11:14:00 AM
Lab Sample ID: 191122020-028
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	DRY			NA		11/20/2019 11:14:00 AM

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 5
Collection Date: 11/20/2019 11:27:00 AM
Lab Sample ID: 191122020-029
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	DRY			NA		11/20/2019 11:27:00 AM

Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT: Lockwood Hills LLC
Work Order: 191122020
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-SH
Collection Date: 11/20/2019 8:00:00 AM
Lab Sample ID: 191122020-030
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD

Observation	Poor Recovery			NA		11/20/2019 8:00:00 AM
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Adirondack Environmental Services, Inc

Date: 13-Dec-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8405
Work Order:	191122020	Collection Date:	11/20/2019 3:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	191122020-031
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
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Observation	DRY			NA		11/20/2019 3:35:00 PM
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314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

191122020

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly				Samplers Name: <i>Ryan Baisley / Kevin Ambra</i>			
Client Phone No:		PO #:				Samplers Signature: <i>[Signature]</i>			
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
001	1842	11/21/19	0840	<input checked="" type="checkbox"/> P	GW		G	4	Lockwood Ash LF Quarterly
002	8404	11/20/19	1620	A	GW		G	4	Field pH, Temp, Turbidity
003	8908-D	11/20/19	1330	A	GW		G	4	
004	8908-SH	11/20/19	1350	A	GW		G	4	
005	8909-D	11/20/19	1505	A	GW		G	4	
006	8909-SH	11/20/19	1510	A	GW		G	4	
007	8910-D	11/20/19	1520	A	GW		G	4	
008	8911-D	11/20/19	1530	A	GW		G	4	
009	8911-SH	11/20/19	1542	A	GW		G	4	
010	8942-D	11/20/19	0745	A	GW		G	4	
011	9306-SH	11/21/19	0730	A	GW		G	4	
012	GW Dup 8909-D	11/20/19	1505		GW		G	4	

Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____		Special Instructions/Remarks: Page 1 of 3	
Turnaround Time Requested: <input checked="" type="checkbox"/> 1 Day <input checked="" type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Normal <input checked="" type="checkbox"/> 2-Day <input checked="" type="checkbox"/> 5 Day			

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by:	Date	Time

Sample Temperature Ambient <input checked="" type="checkbox"/> Chilled Chilling Process begun Notes: _____	Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____	Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____
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CHAIN OF CUSTODY RECORD

AES Work Order#:

191122020

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: <i>Ryan Bawley / Kevin Ambrose</i>				
Client Phone No:		PO #:			Sampler's Signature: <i>[Signature]</i>				
Client Fax No:									
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis	
				Matrix	C	G			
013	GW Dep Drain 1	11/20/19	1310	A P	GW		G	4	Lockwood Q Field pH, Temp, Turb, Field Flow Reading, DO
014	Leak Detection Syst.	11/20/19	1330	A P	GW		G	4	"
015	Under Drain 1	11/20/19	1200	A P	GW		G	5	"
016	Under Drain 2	11/20/19	1240	A P	GW		G	4	"
017	Under Drain 3	11/20/19	1133	A P	GW		G	4	"
018	21" Inlet to Pond	11/20/19	1350	A P	GW		G	5	"
019	Keuka Upstream	11/20/19	1453	A P	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream	11/20/19	1433	A P	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup	11/20/19	1453	A P	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab	11/20/19	1400	A P	SF		G	4	Lockwood Quarterly +DO
023	Field Blank	11/20/19	1305	A P	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank	11/20/19	1345	A P	GW		G	1	EPA 1631
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____				Special Instructions/Remarks: Page 2 of 3					
Turnaround Time Requested: <input checked="" type="radio"/> 1 Day <input checked="" type="radio"/> 3 Day <input checked="" type="radio"/> Normal <input checked="" type="radio"/> 2-Day <input checked="" type="radio"/> 5 Day									
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
Sample Temperature Ambient <input checked="" type="radio"/> Chilled Chilling Process begun Notes: <u>40°C</u>		Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____			Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____				



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CHAIN OF CUSTODY RECORD

AES Work Order#: 191122020

EXPERIENCE IS THE SOLUTION

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Client Name: Lockwood Hills LLC		Address:						
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: <i>Ryan Baistley / Kevin Abma</i>			
Client Phone No:		PO #:			Samplers Signature: <i>[Signature]</i>			
Client Fax No:								
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis
				Matrix	C	G		
<i>025</i>	8401	<i>11/20/19</i>	<i>1420</i>		GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
<i>026</i>	GW Dep Drain 3	<i>11/20/19</i>	<i>1117</i>	A P	GW		4	+ Field Flow Reading, DO
<i>027</i>	GW Dep Drain 2	<i>11/20/19</i>	<i>1112</i>	A P	GW		0	Observation Only
<i>028</i>	GW Dep Drain 4	<i>11/20/19</i>	<i>1114</i>	A P	GW		0	Observation Only
<i>029</i>	Under Drain 5	<i>11/20/19</i>	<i>1127</i>	A P	GW		0	Observation Only
<i>030</i>	8910-SH	<i>11/20/19</i>	<i>0800</i>	A P	GW		0	Observation Only
<i>031</i>	8405	<i>11/20/19</i>	<i>1535</i>	A P	GW		0	Observation Only
				P				
				A				
				P				
				A				
				P				
				A				
				P				
				A				
				P				
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> AES Other: _____				Special Instructions/Remarks: Page 3 of 3				
Turnaround Time Requested: <input checked="" type="radio"/> 1 Day <input checked="" type="radio"/> 3 Day <input checked="" type="radio"/> Normal <input type="radio"/> 2 -Day <input type="radio"/> 5 Day								
Relinquished by: (Signature)		Received by: (Signature)		Date	Time			
Relinquished by: (Signature)		Received by: (Signature)		Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:		Date	Time			
<i>[Signature]</i>		<i>[Signature]</i>		<i>11/22/19</i>	<i>11:58AM</i>			
Sample Temperature Ambient Chilled Chilling Process begun Notes: <u>4°C</u>		Properly Preserved <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____		Received Within Holding Times <input checked="" type="radio"/> Y <input type="radio"/> N Notes: _____				

Lockwood Ash Disposal Site Fourth Quarter 2019

Collection Date	Sample ID	Depth	Elevation	Units
11/20/2019	8908-D	7.69	605.28	feet
11/20/2019	8909-D	45.62	516.28	feet
11/20/2019	8910-D	23.28	535.06	feet
11/20/2019	8911-D	28.71	528.20	feet
11/20/2019	8942-D	15.72	543.23	feet
11/20/2019	8908-SH	6.71	606.06	feet
11/20/2019	8909-SH	10.52	551.11	feet
11/20/2019	8910-SH	15.79	542.76	feet
11/20/2019	8911-SH	19.72	537.20	feet
11/20/2019	9306-SH	8.30	557.92	feet
11/20/2019	7741	22.51	565.54	feet
11/20/2019	1842	6.92	552.28	feet
11/20/2019	8406	16.21	553.34	feet
11/20/2019	8407	Obstructed	-	feet
11/20/2019	8401	7.48	652.81	feet
11/20/2019	8402	9.42	654.67	feet
11/20/2019	8403	8.18	655.89	feet
11/20/2019	8404	7.06	595.67	feet
11/20/2019	8405	DRY	DRY	feet

ATTACHMENT 5

Time-Series Plots

Baseline Parameters in the Leachate and Monitoring Wells

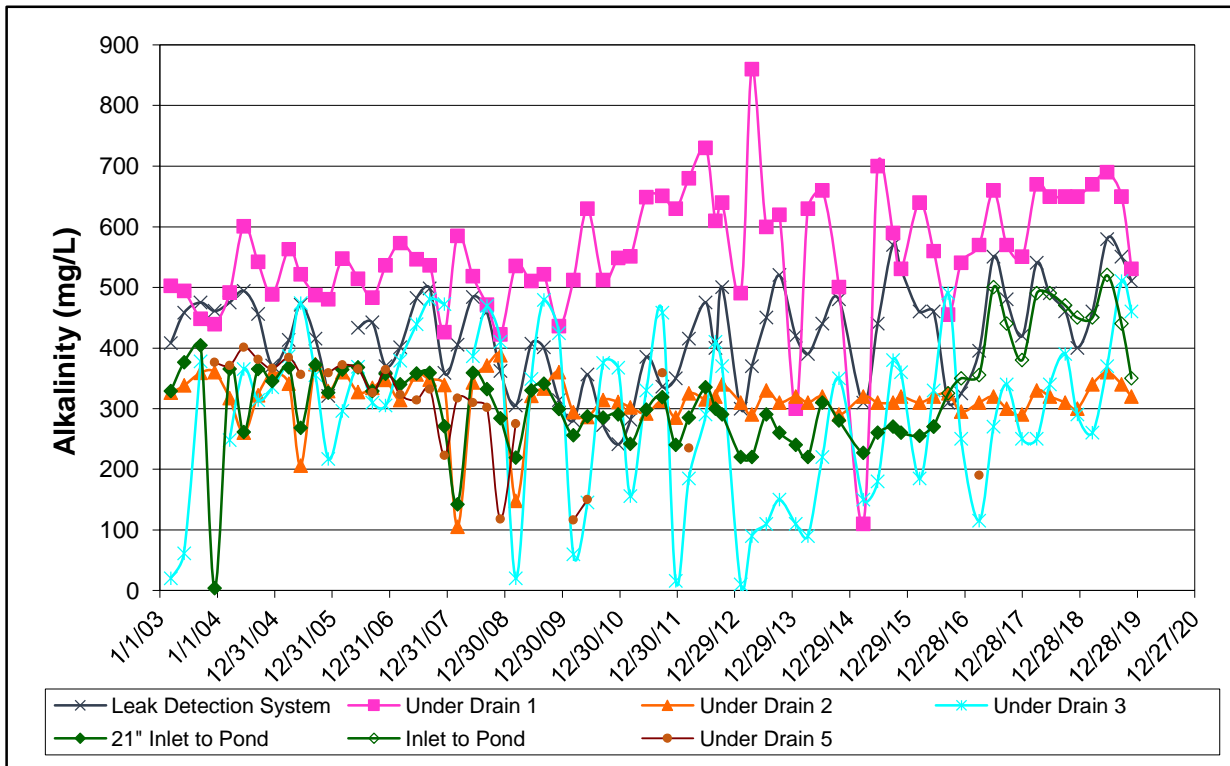
Updated Through 4th Quarter 2019

Table of Contents:

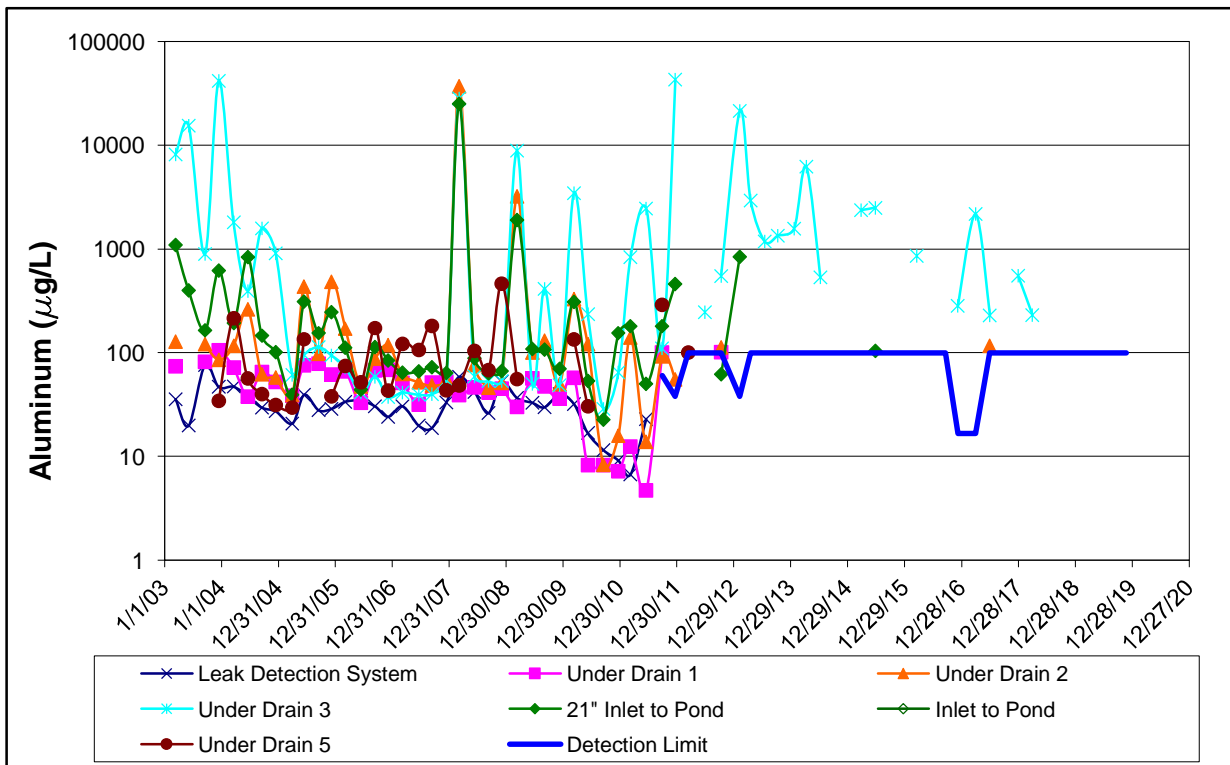
Leachate Time-Series Plots (alphabetical order)	A5-2 thru A5-16
Monitoring Well Time-Series Plots (alphabetical order)	A5-17 thru A5-45
Static Groundwater Level Time-Series Plots.....	A5-46 thru A5-47

LEACHATE TIME-SERIES PLOTS

ALKALINITY

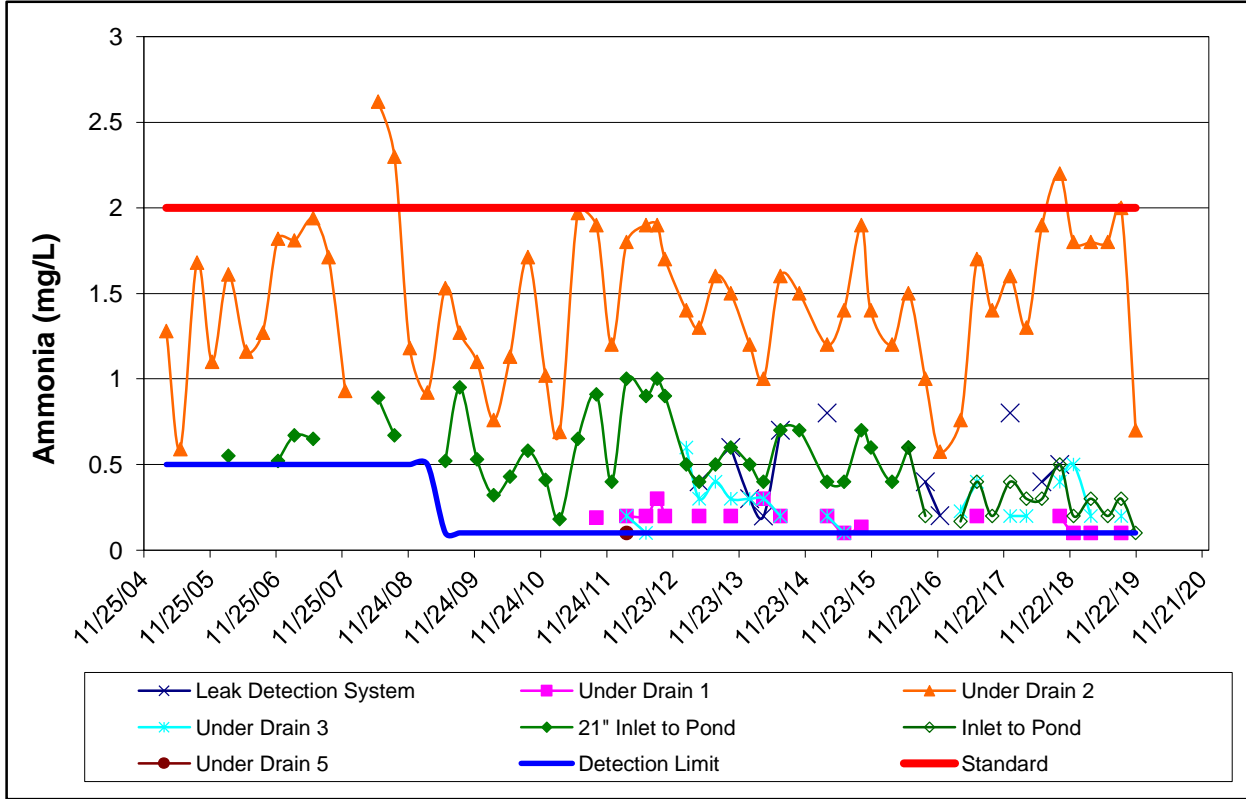


ALUMINUM

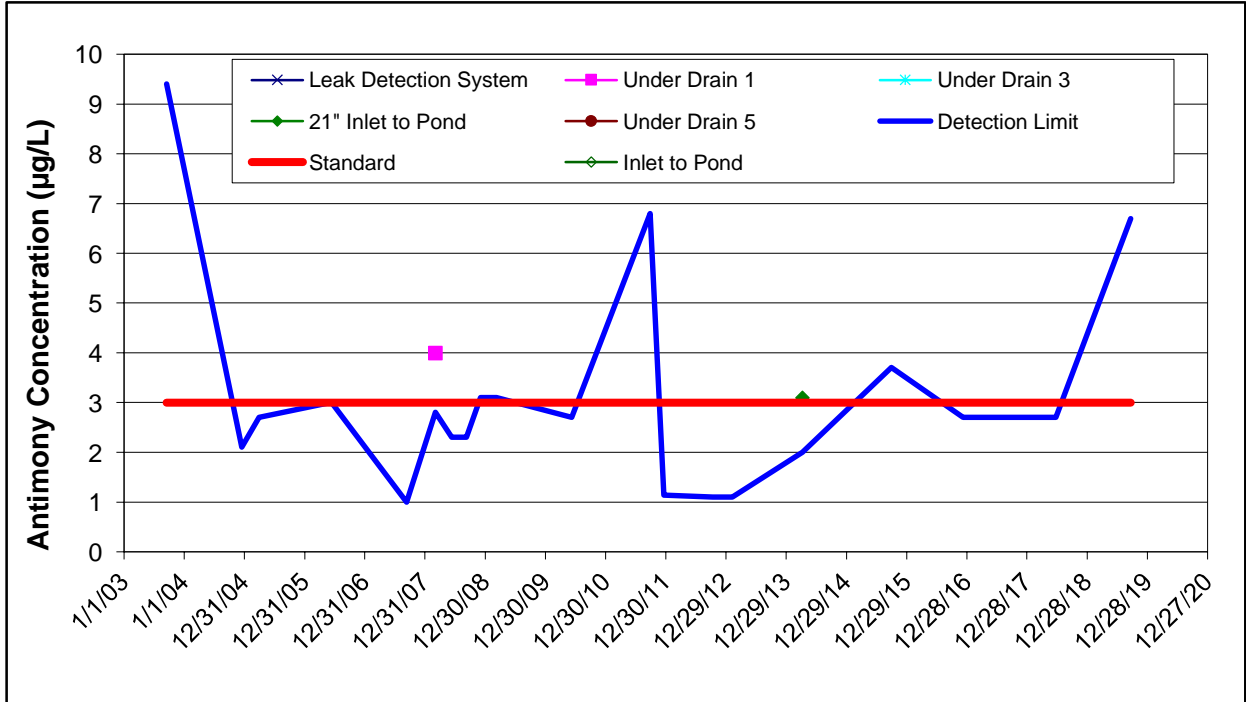


LEACHATE TIME-SERIES PLOTS, CONT.

AMMONIA (Note: Only data above detection has been included in this plot)

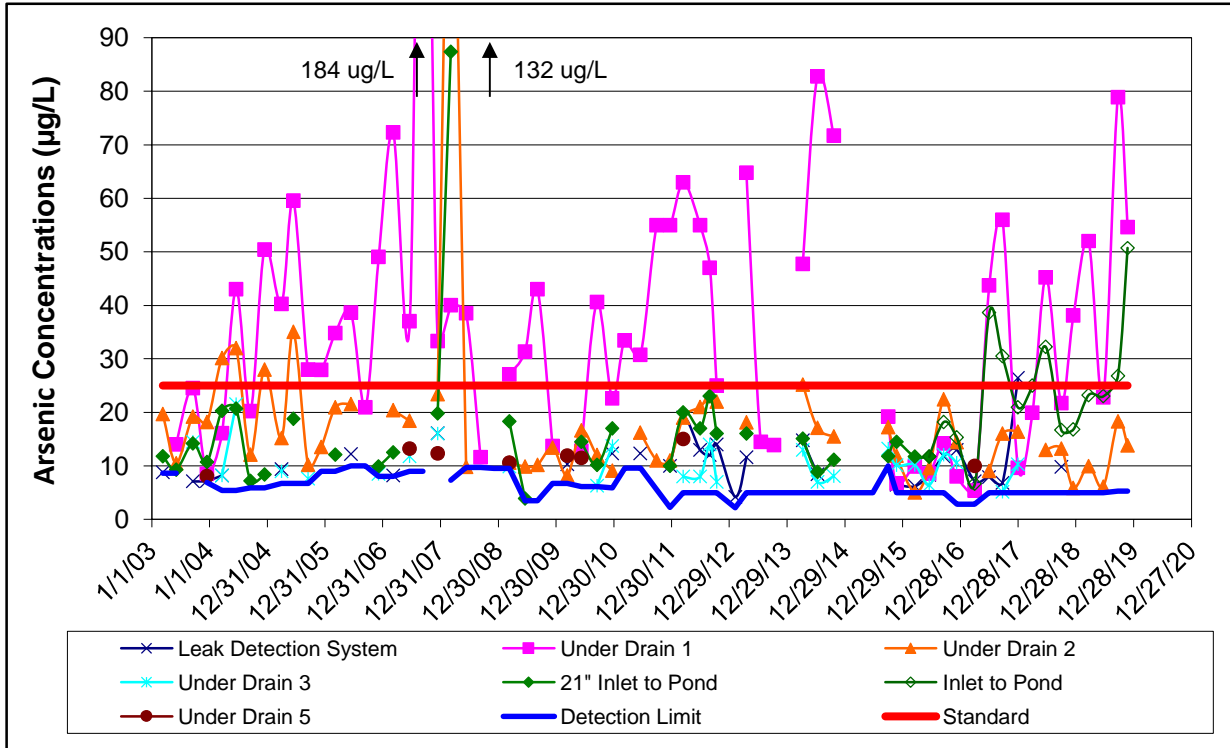


ANTIMONY (Note: Only data above detection has been included in this plot)

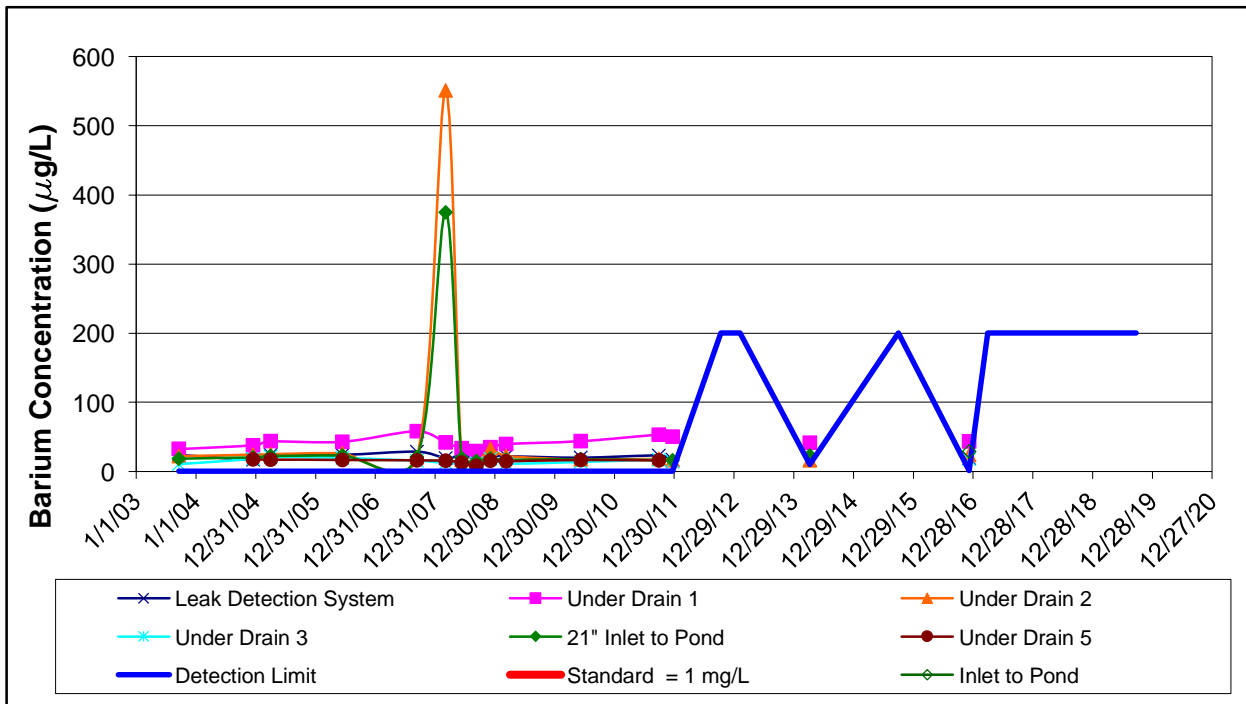


LEACHATE TIME-SERIES PLOTS, CONT.

ARSENIC (Note: Only data above detection has been included in this plot)

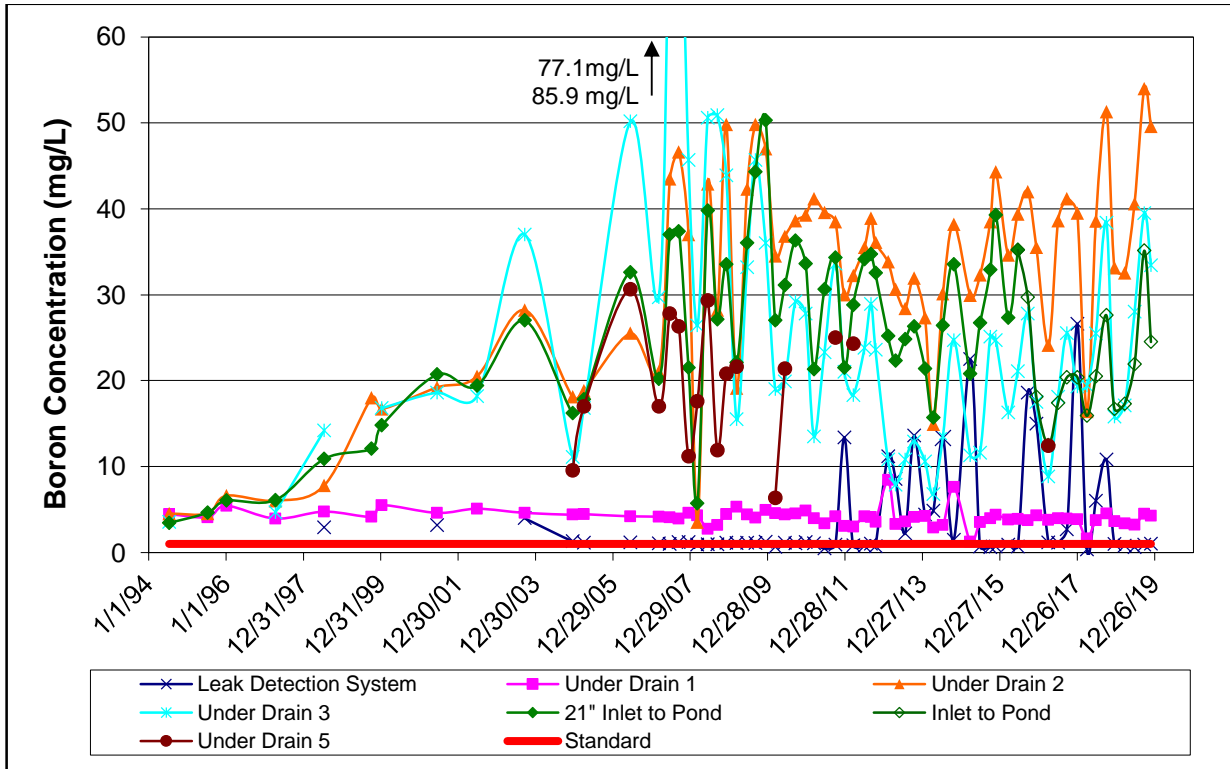


BARIUM

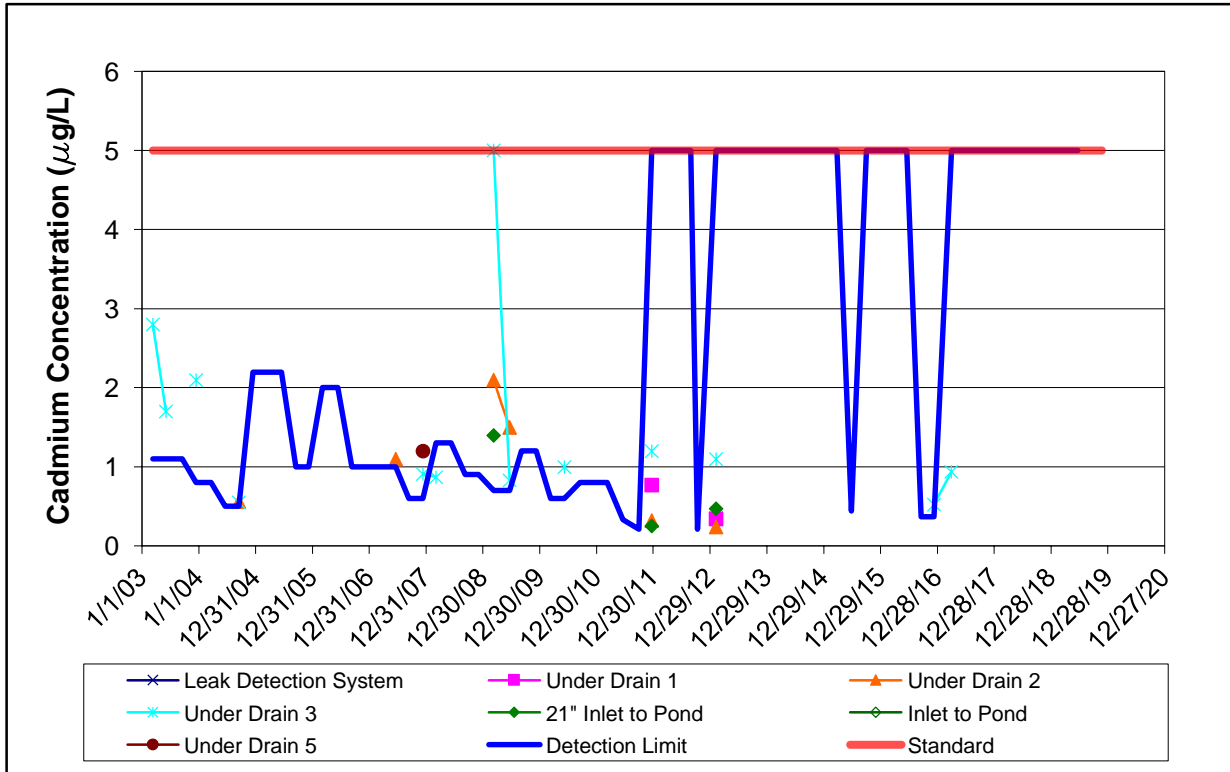


LEACHATE TIME-SERIES PLOTS, CONT.

BORON

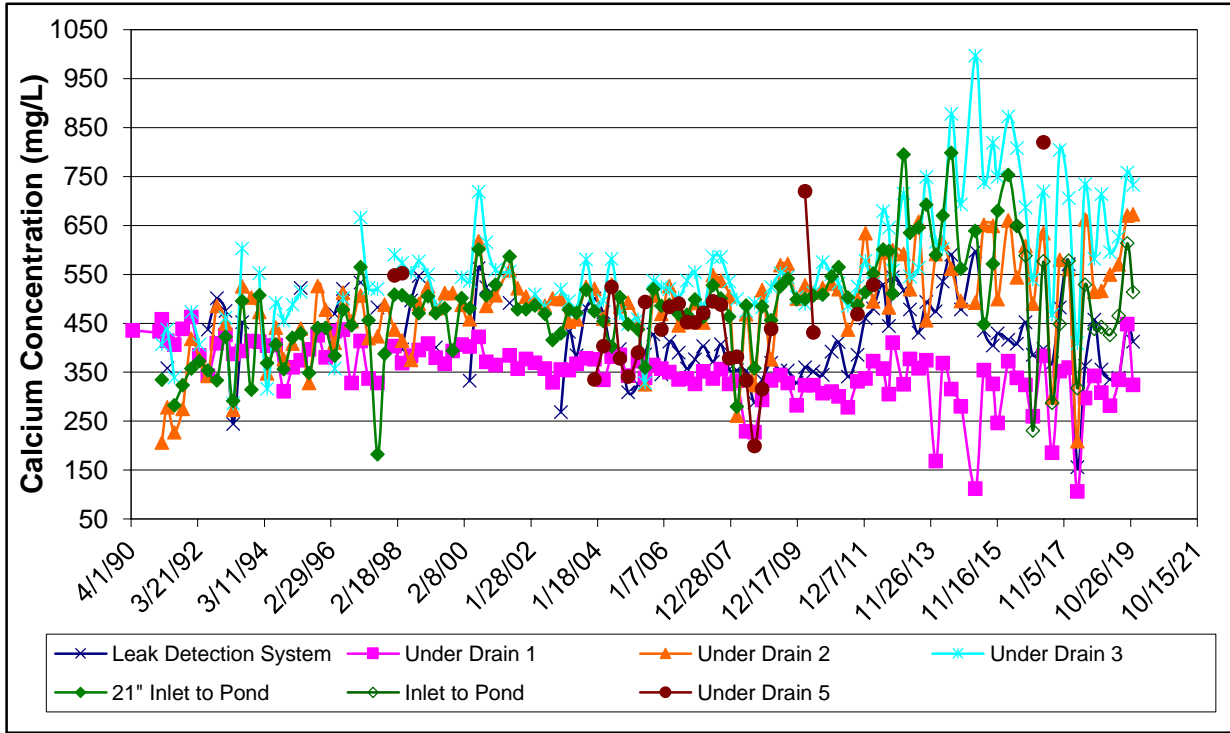


CADMIUM (Note: Only data above detection has been included in this plot)

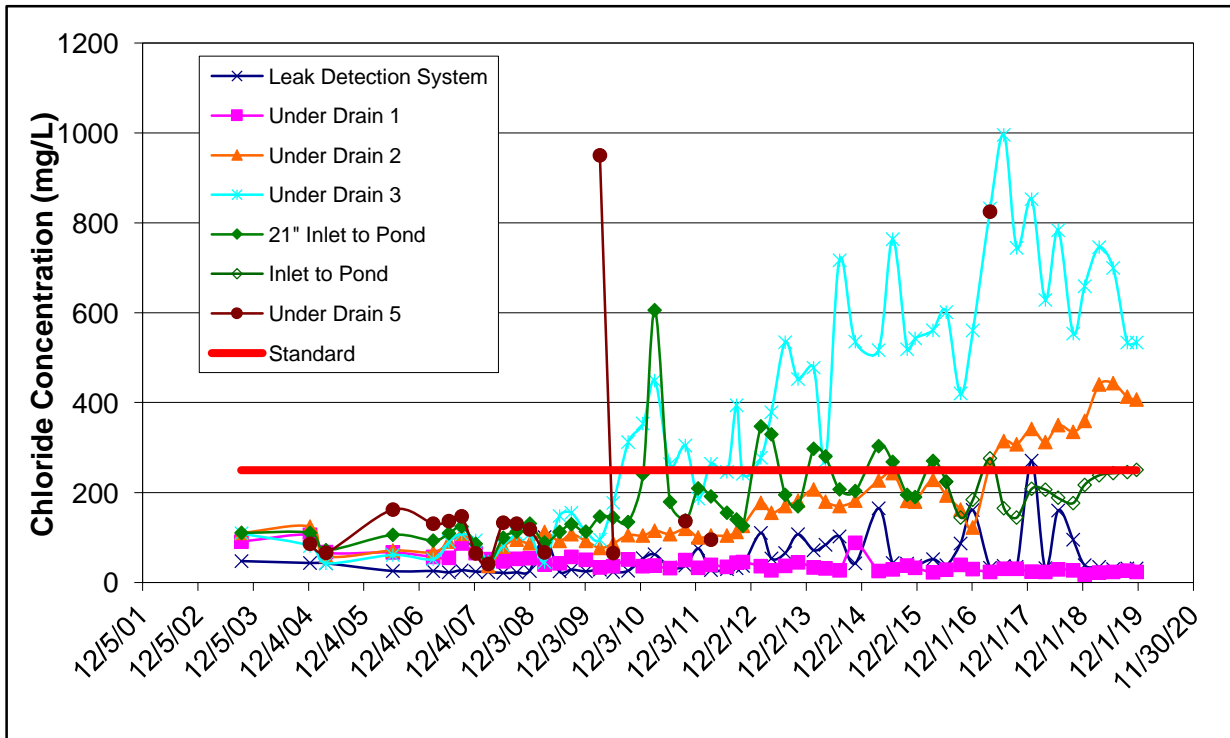


LEACHATE TIME-SERIES PLOTS, CONT.

CALCIUM

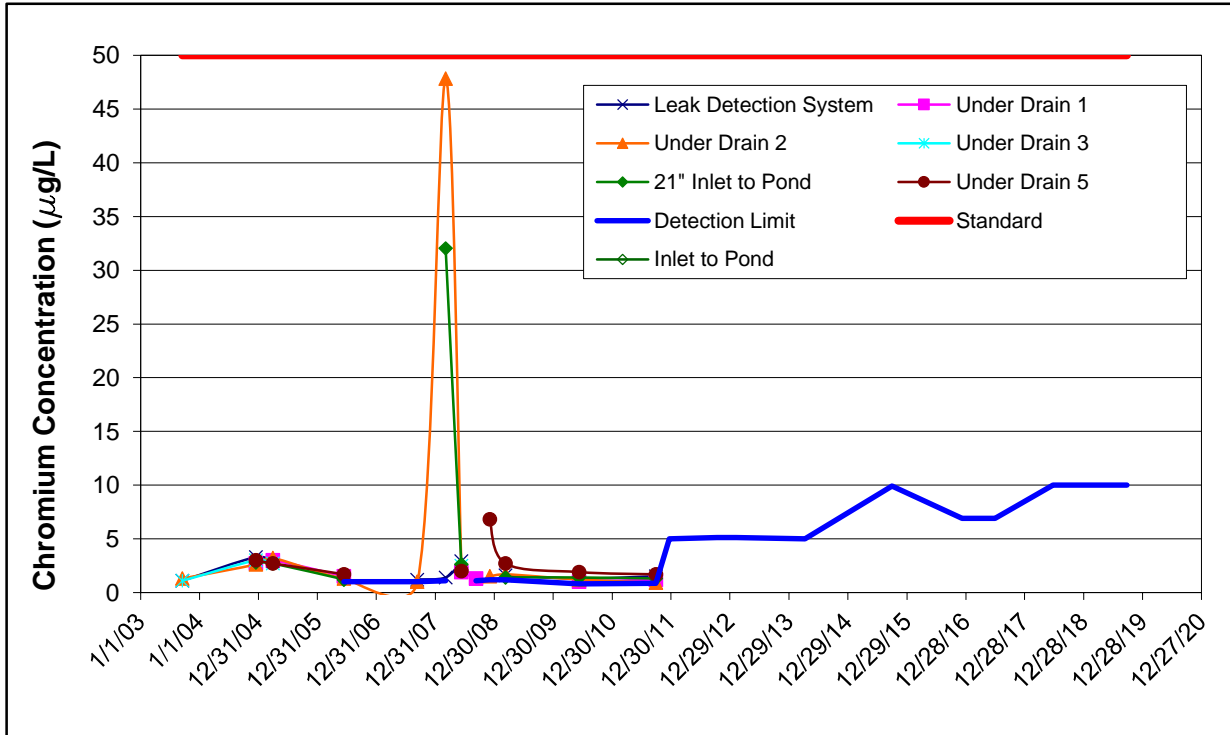


CHLORIDE

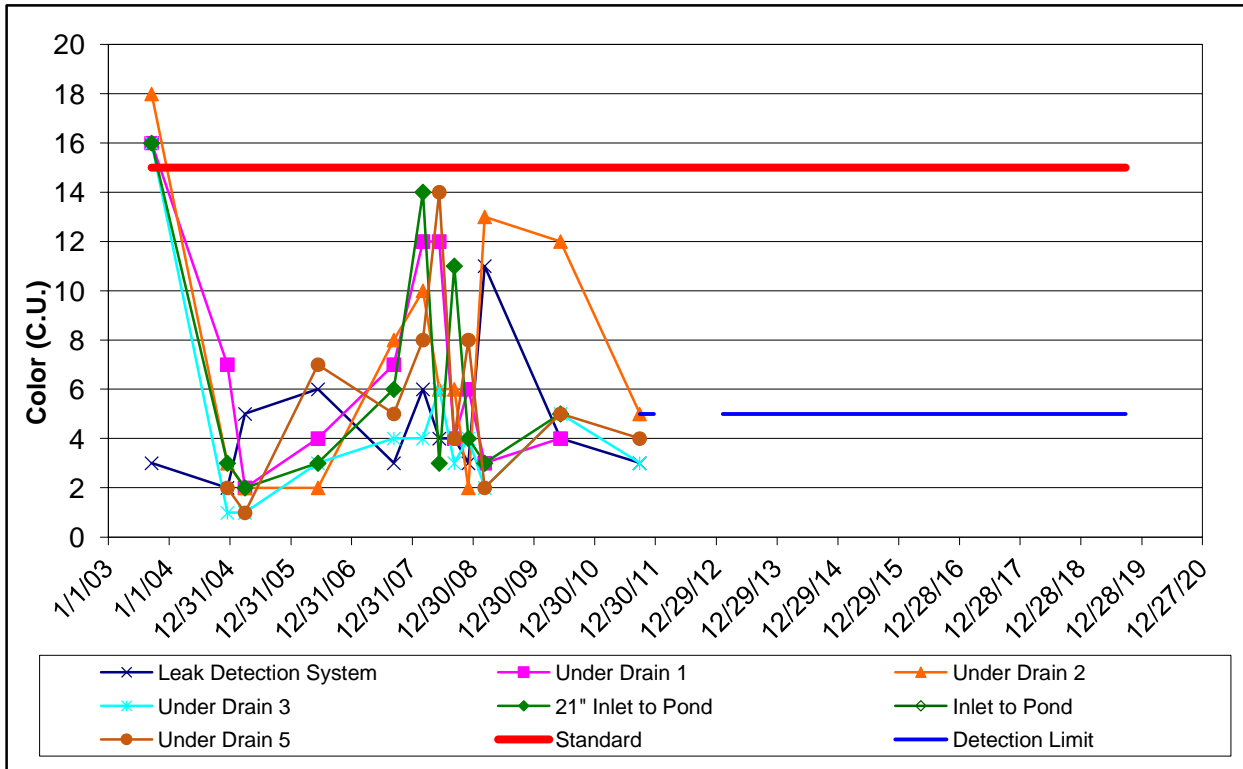


LEACHATE TIME-SERIES PLOTS, CONT.

CHROMIUM (Note: Only data above detection has been included in this plot)

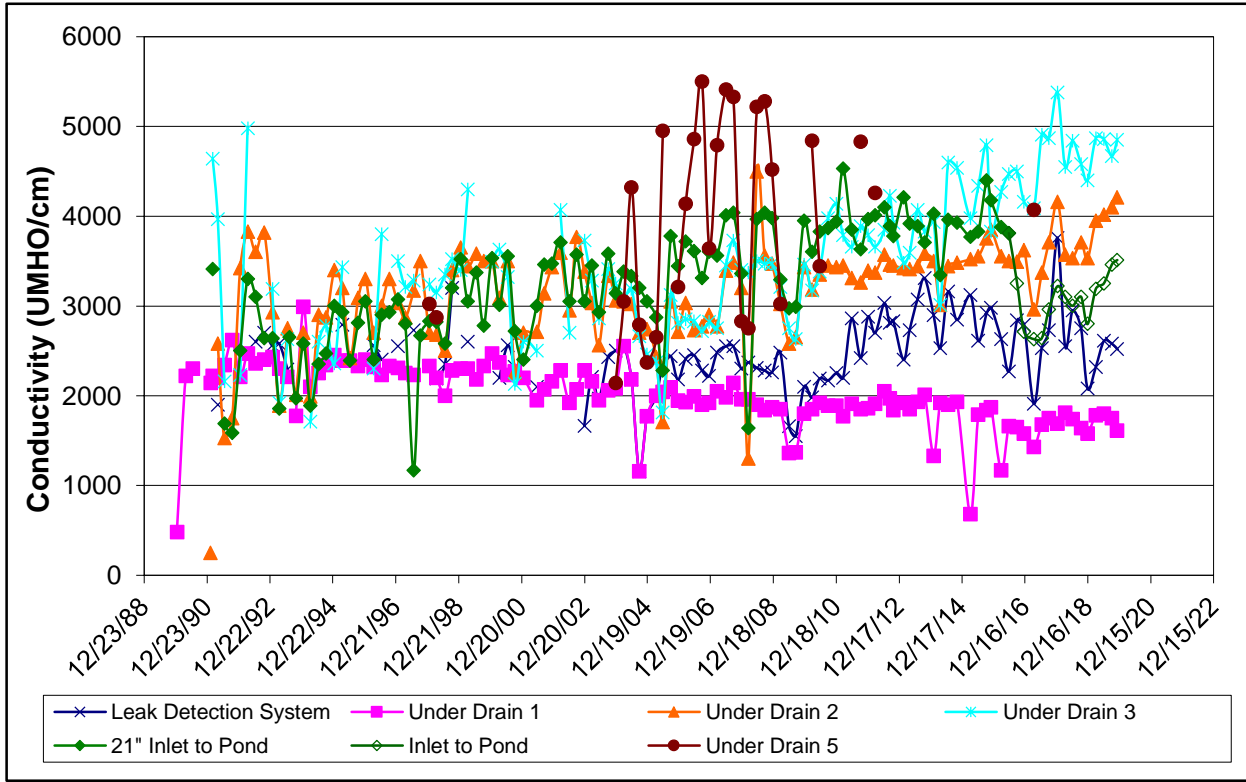


COLOR

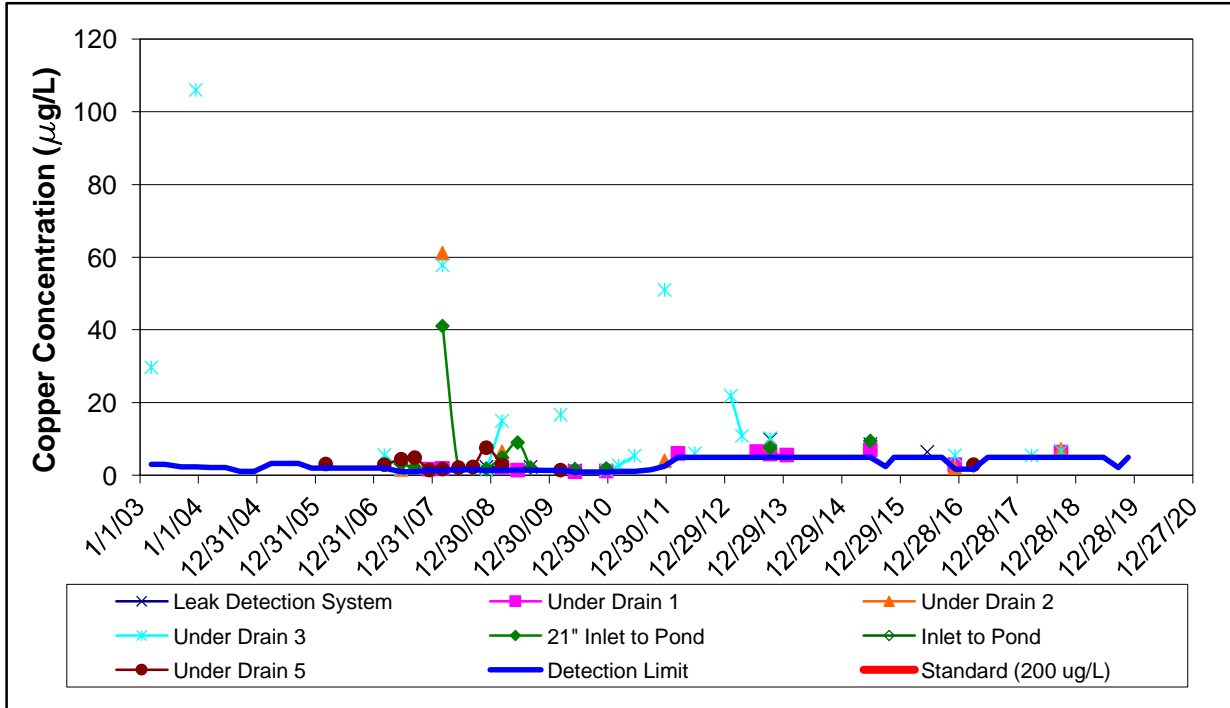


LEACHATE TIME-SERIES PLOTS, CONT.

CONDUCTIVITY

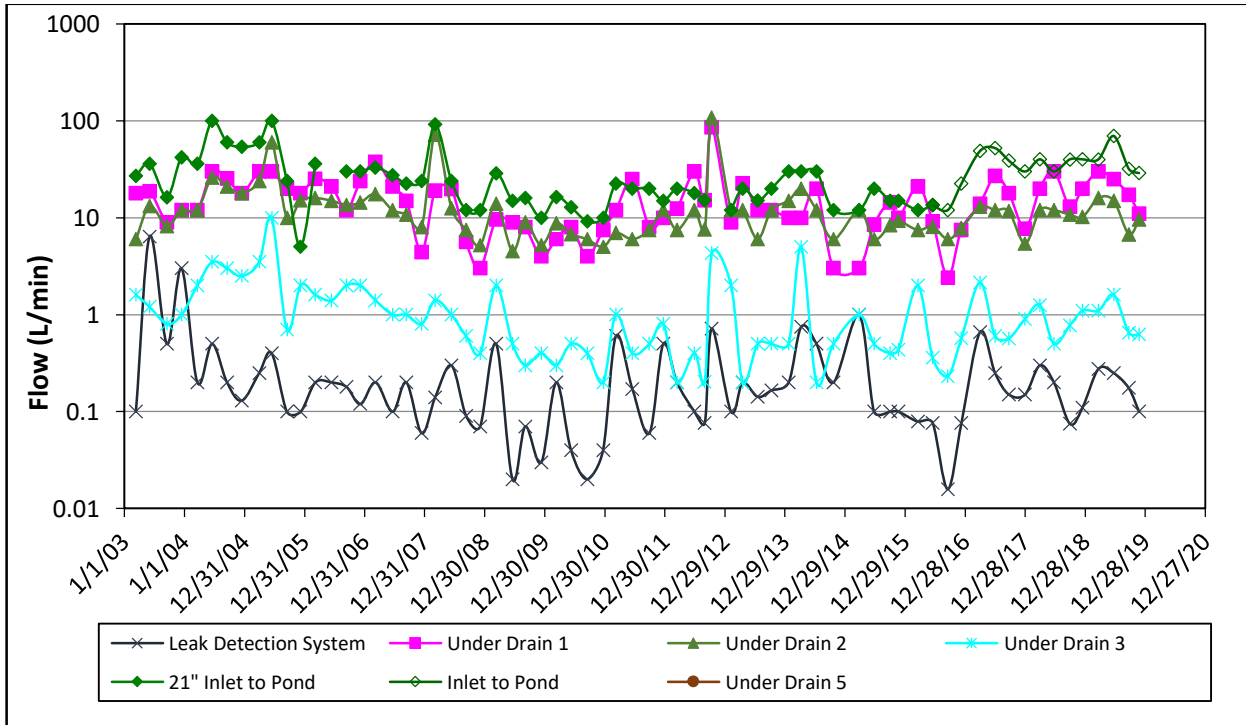


COPPER (Note: Only data above detection has been included in this plot)

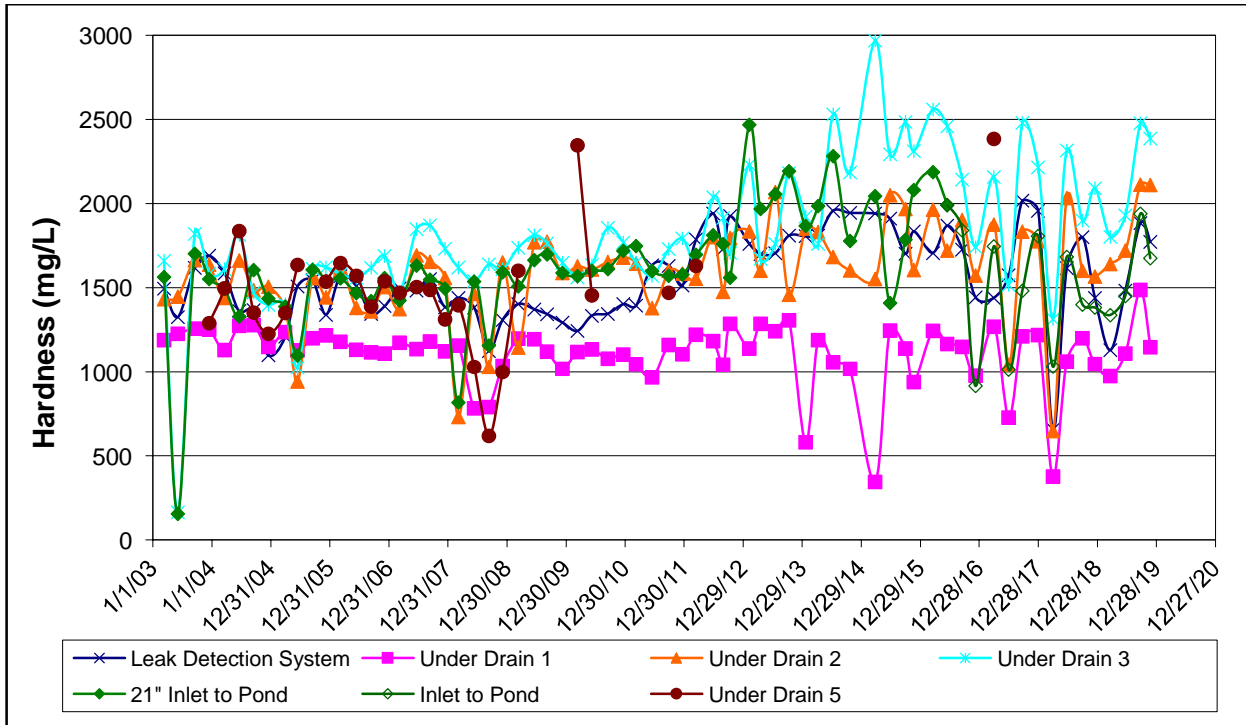


LEACHATE TIME-SERIES PLOTS, CONT.

FLOW

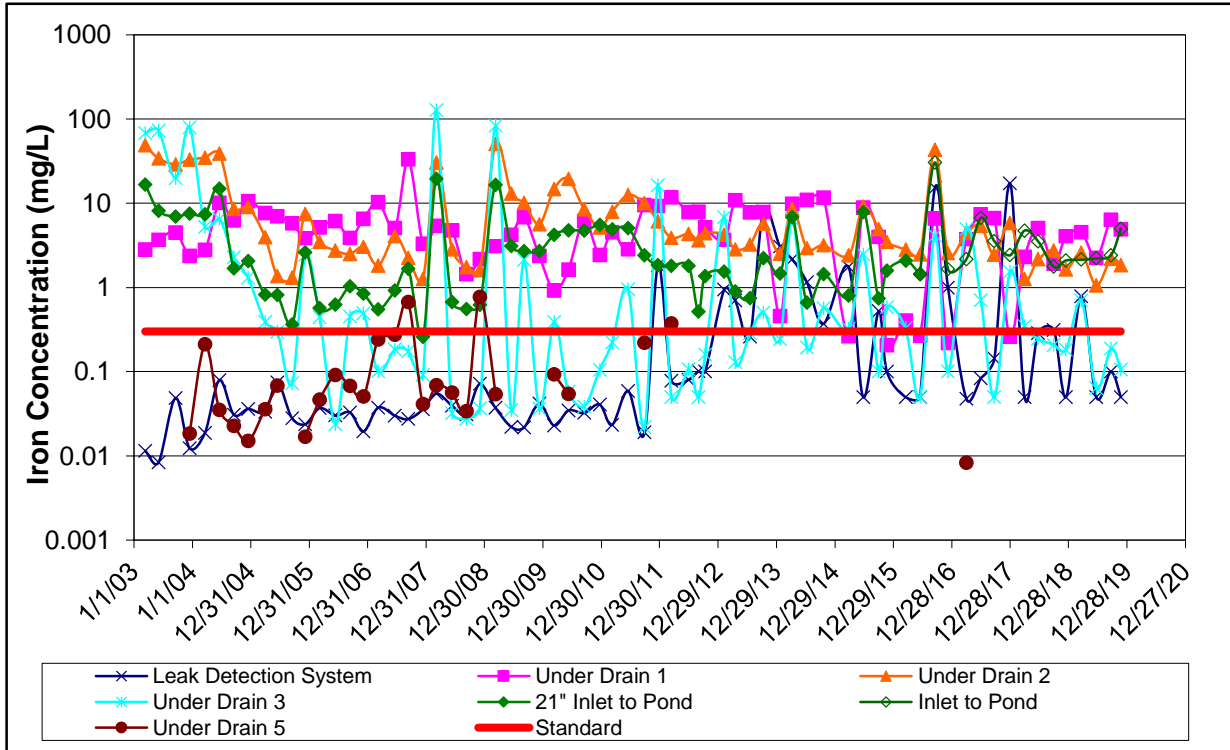


HARDNESS

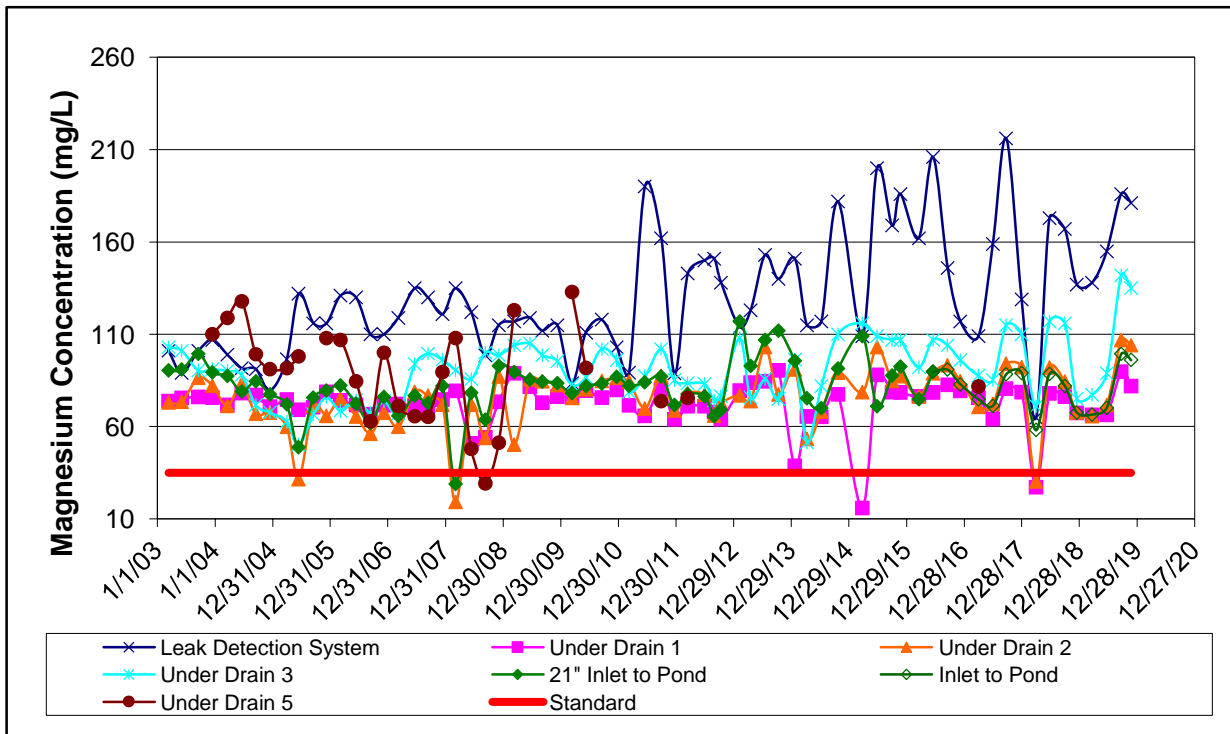


LEACHATE TIME-SERIES PLOTS, CONT.

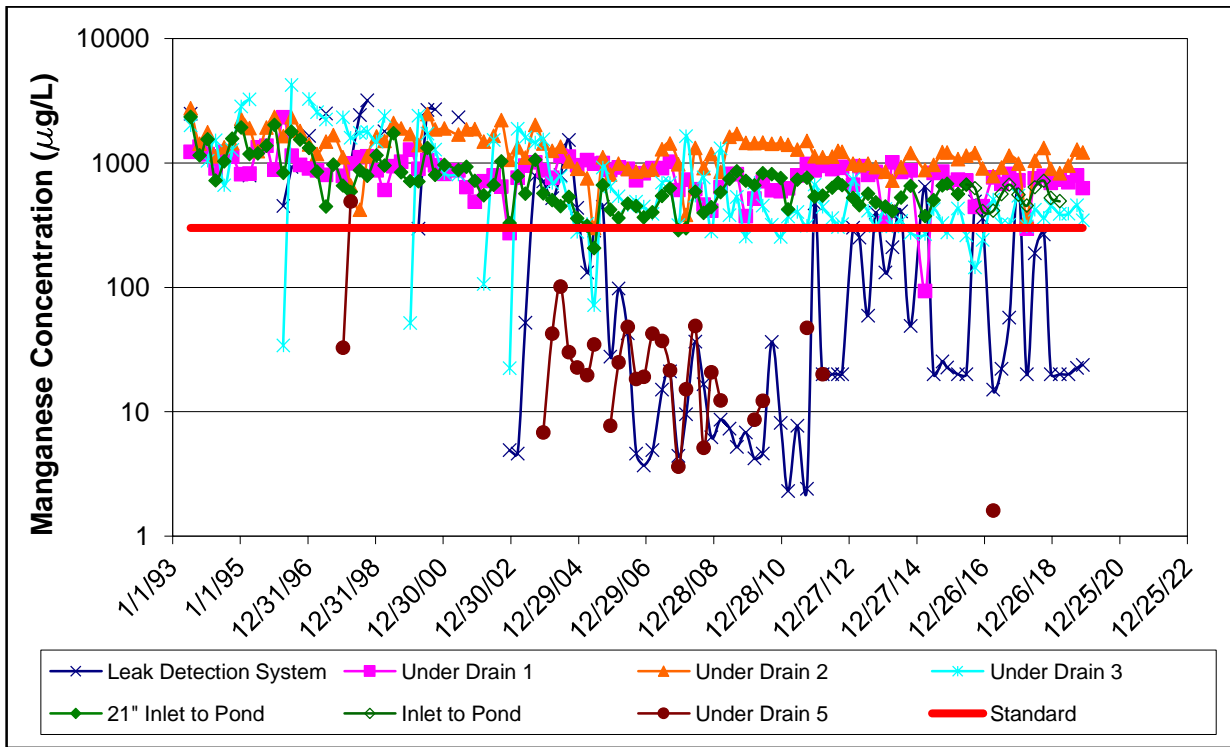
IRON



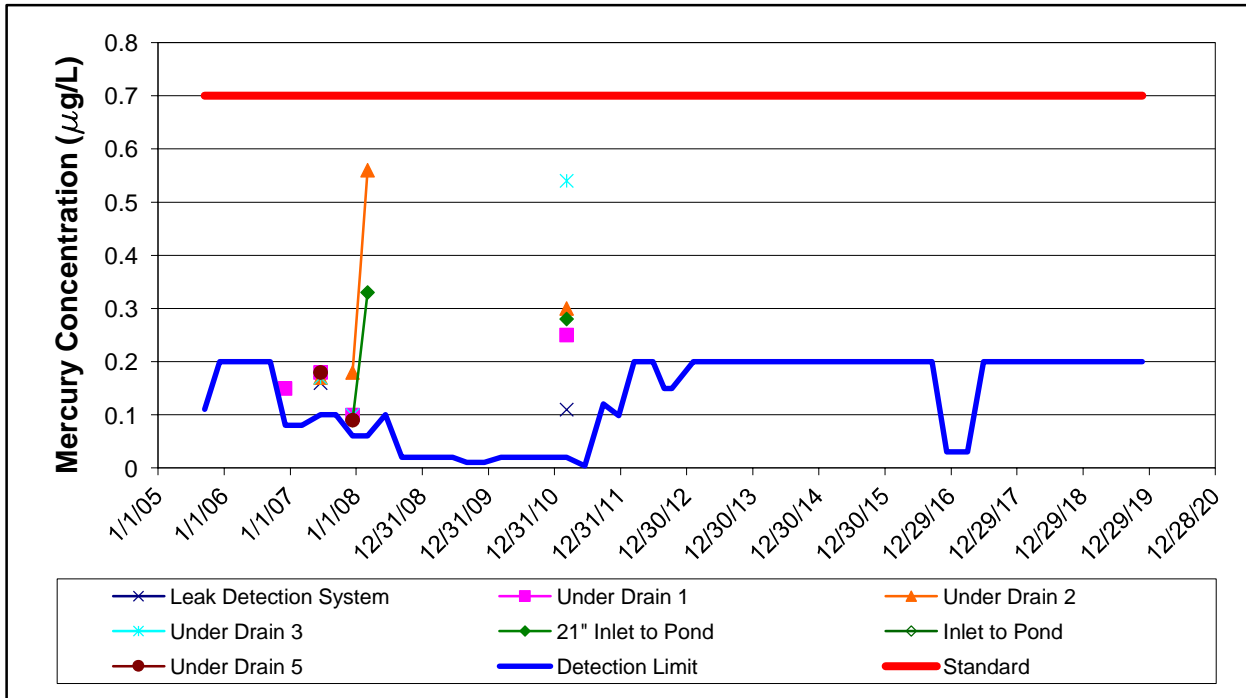
MAGNESIUM



LEACHATE TIME-SERIES PLOTS, CONT.
MANGANESE

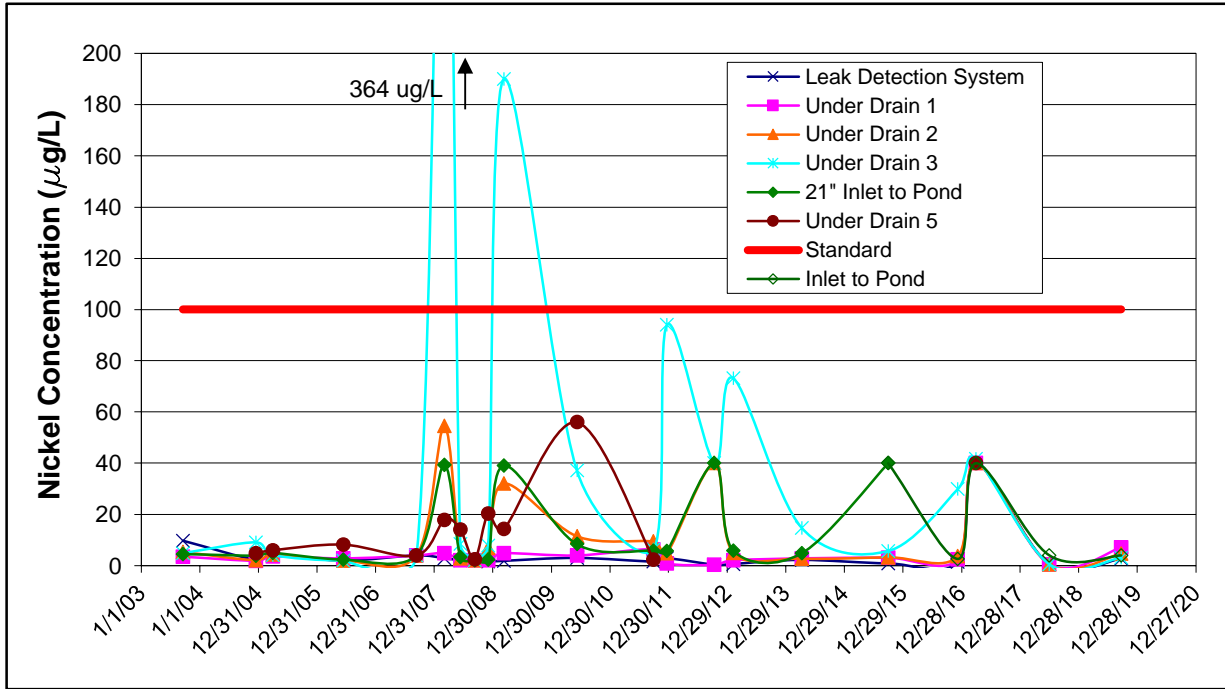


MERCURY (Note: Only data above detection has been included in this plot)

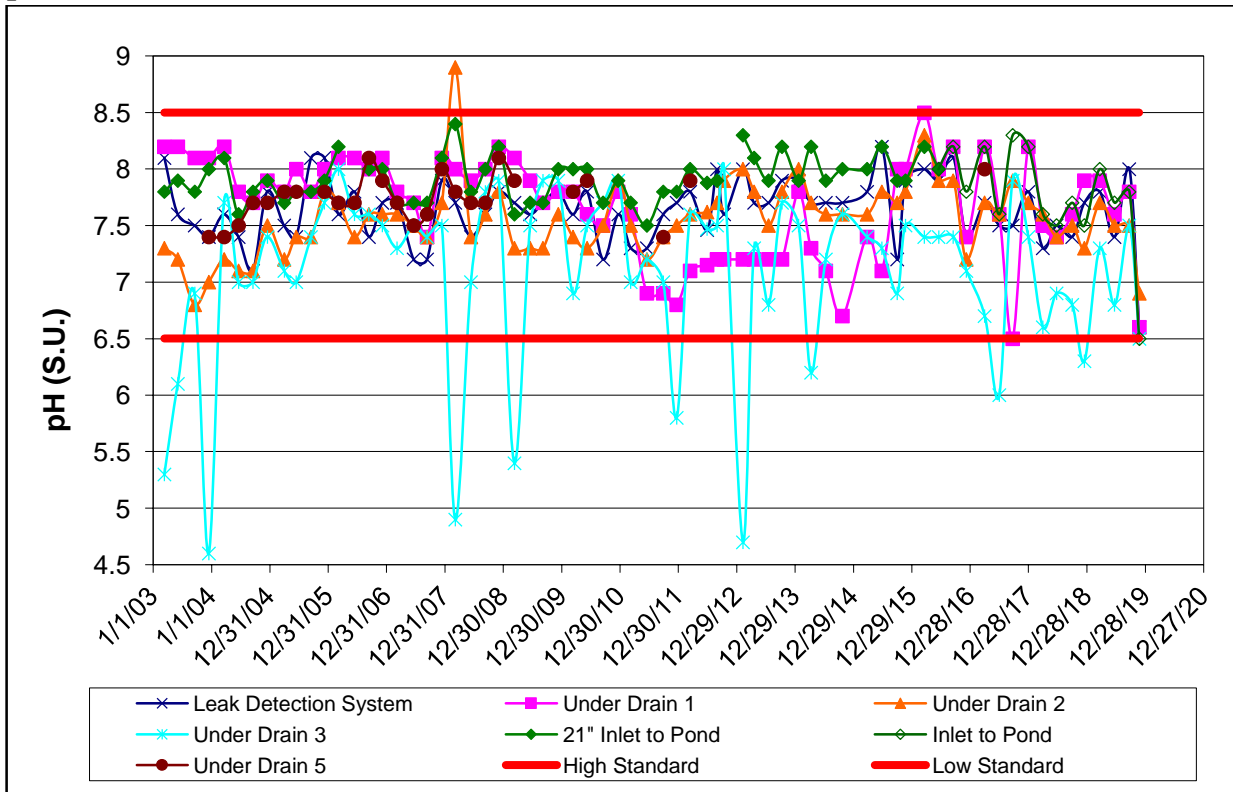


LEACHATE TIME-SERIES PLOTS, CONT.

NICKEL

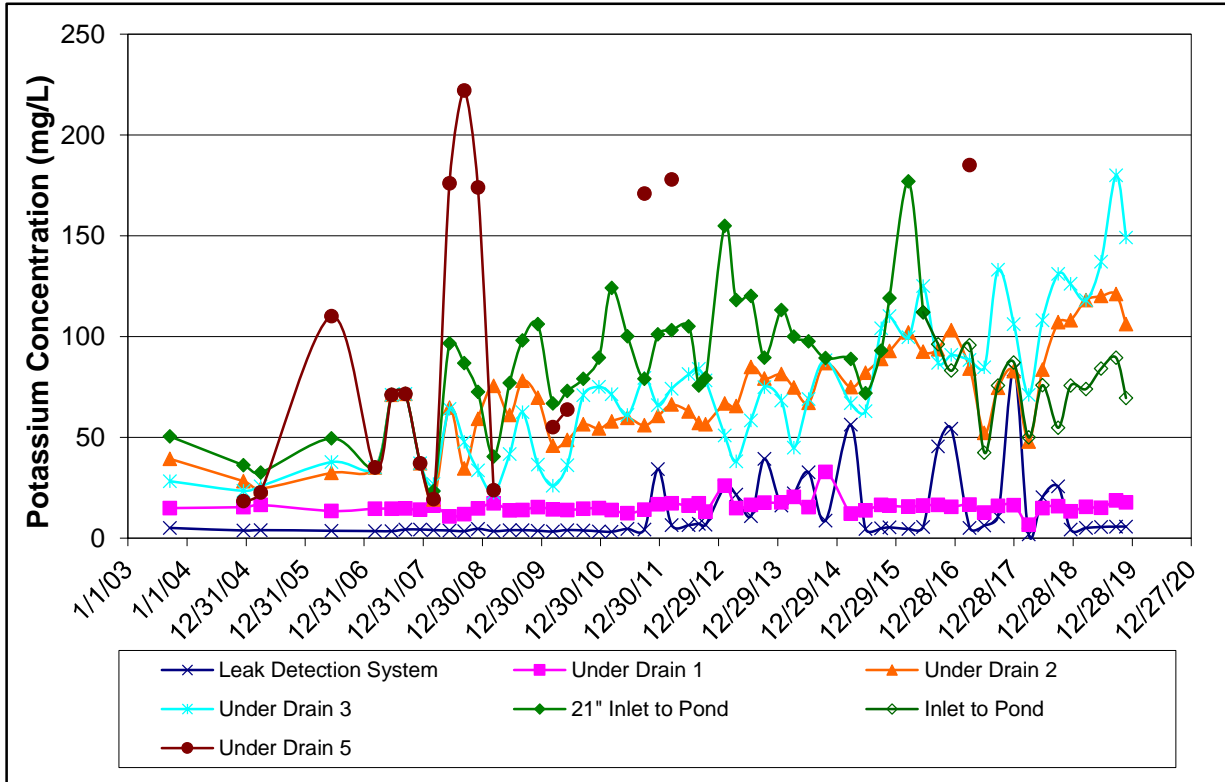


pH

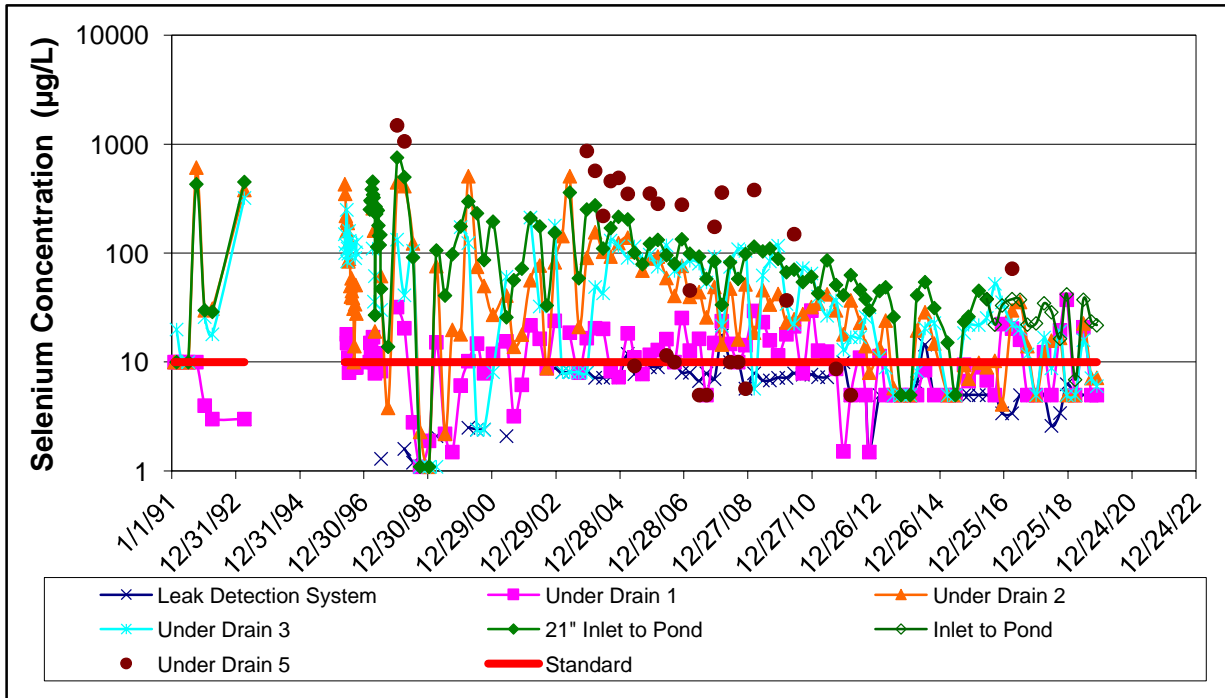


LEACHATE TIME-SERIES PLOTS, CONT.

POTASSIUM

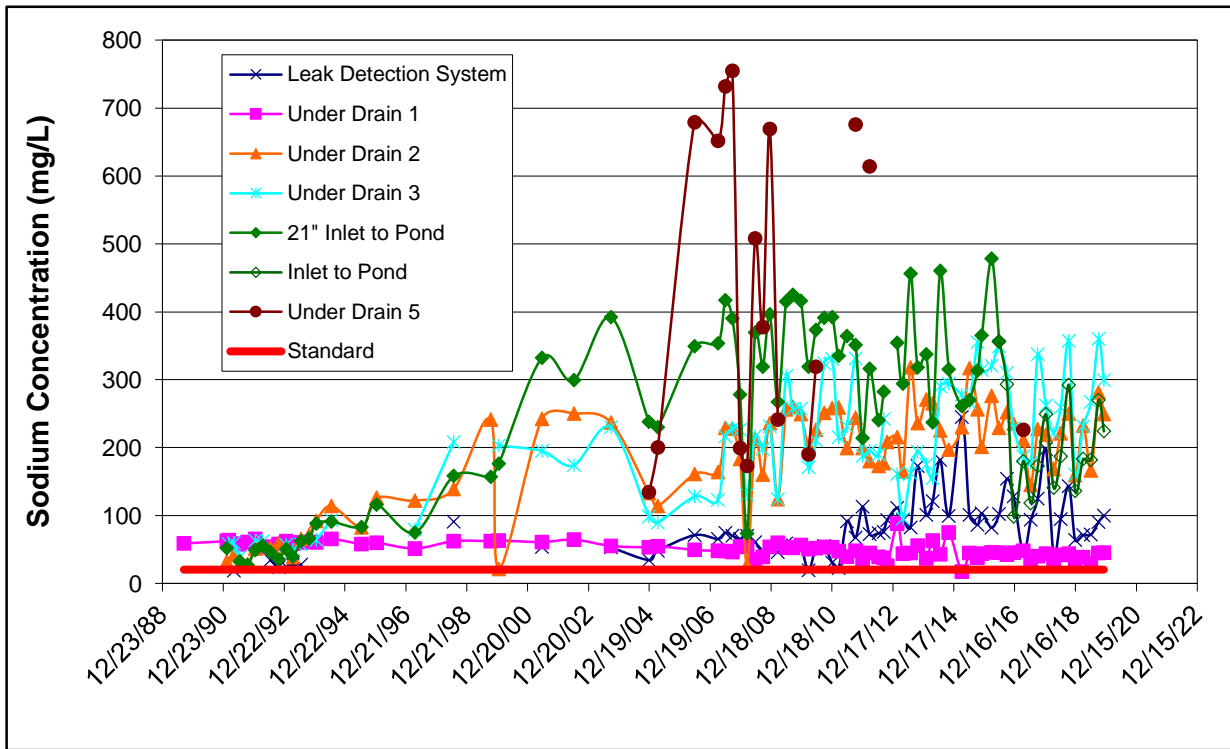


SELENIUM

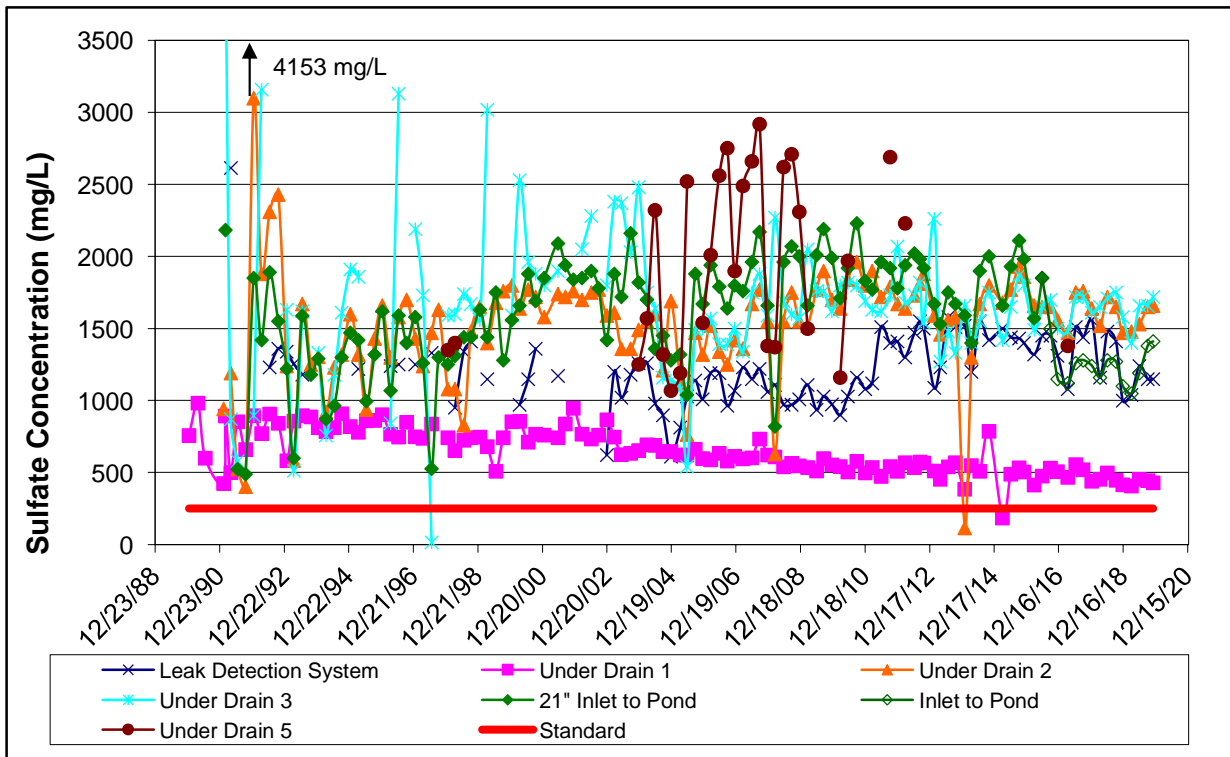


LEACHATE TIME-SERIES PLOTS, CONT.

SODIUM

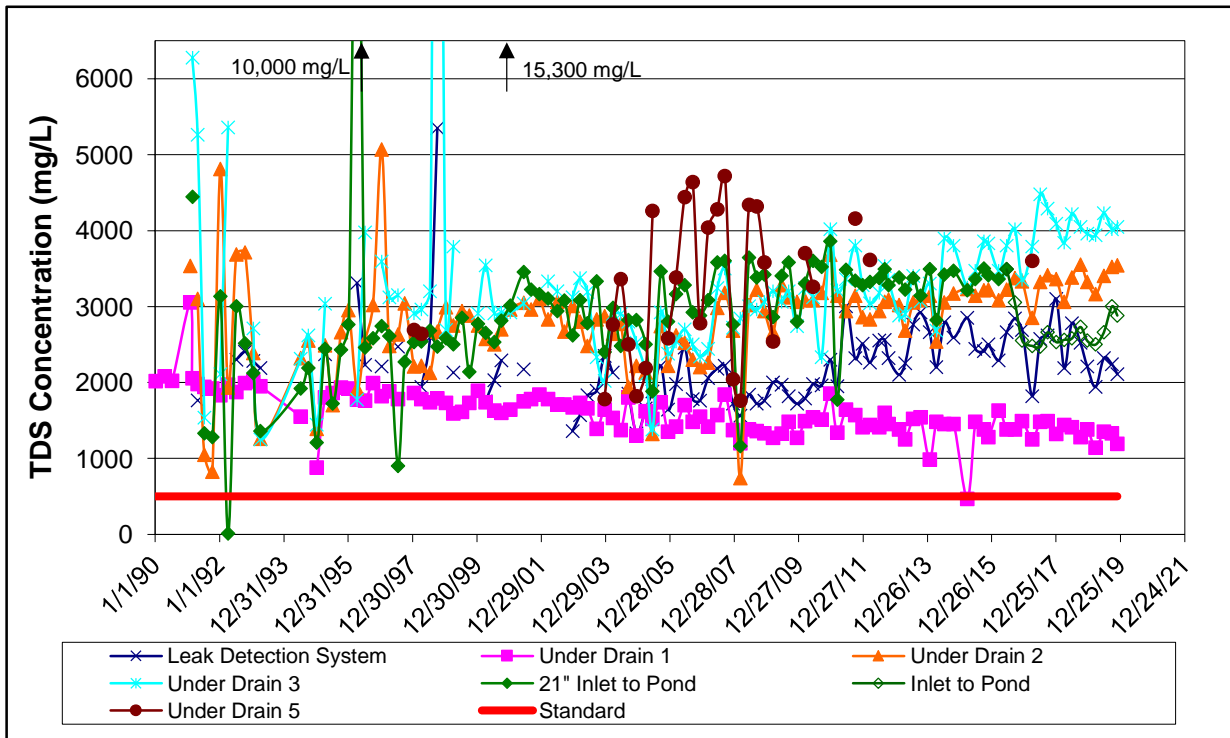


SULFATE

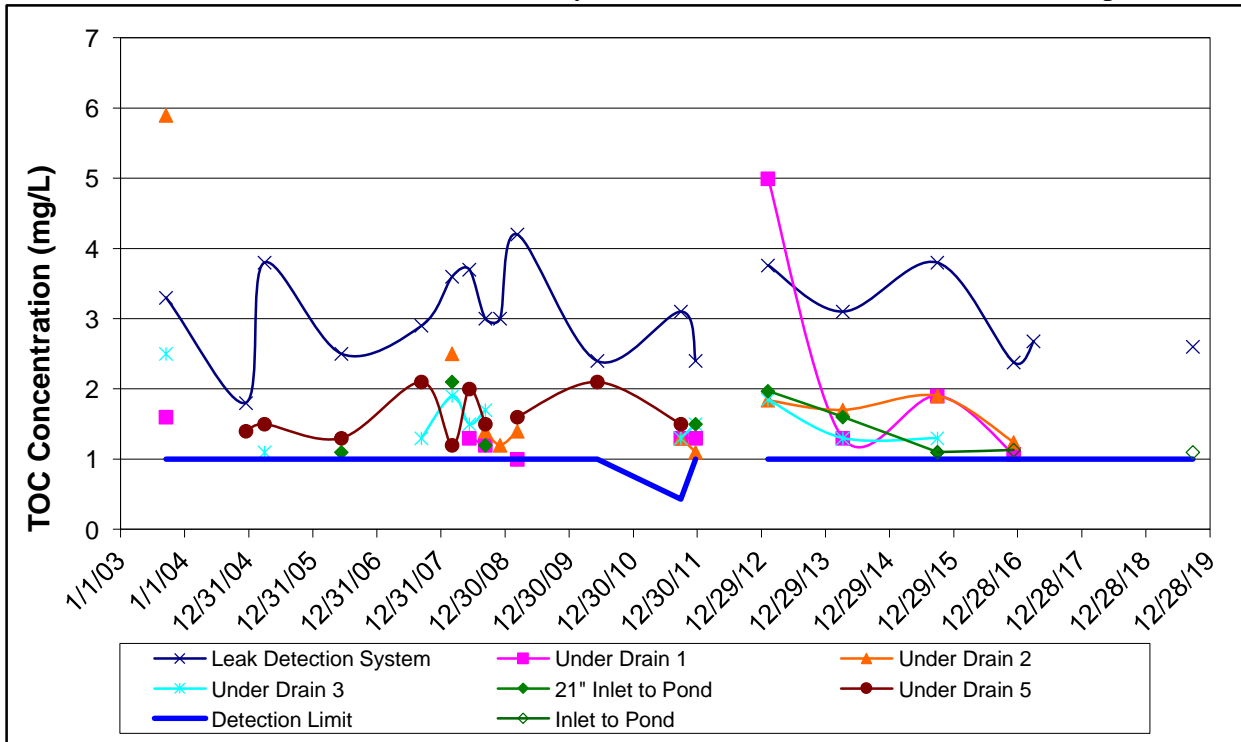


LEACHATE TIME-SERIES PLOTS, CONT.

TOTAL DISSOLVED SOLIDS

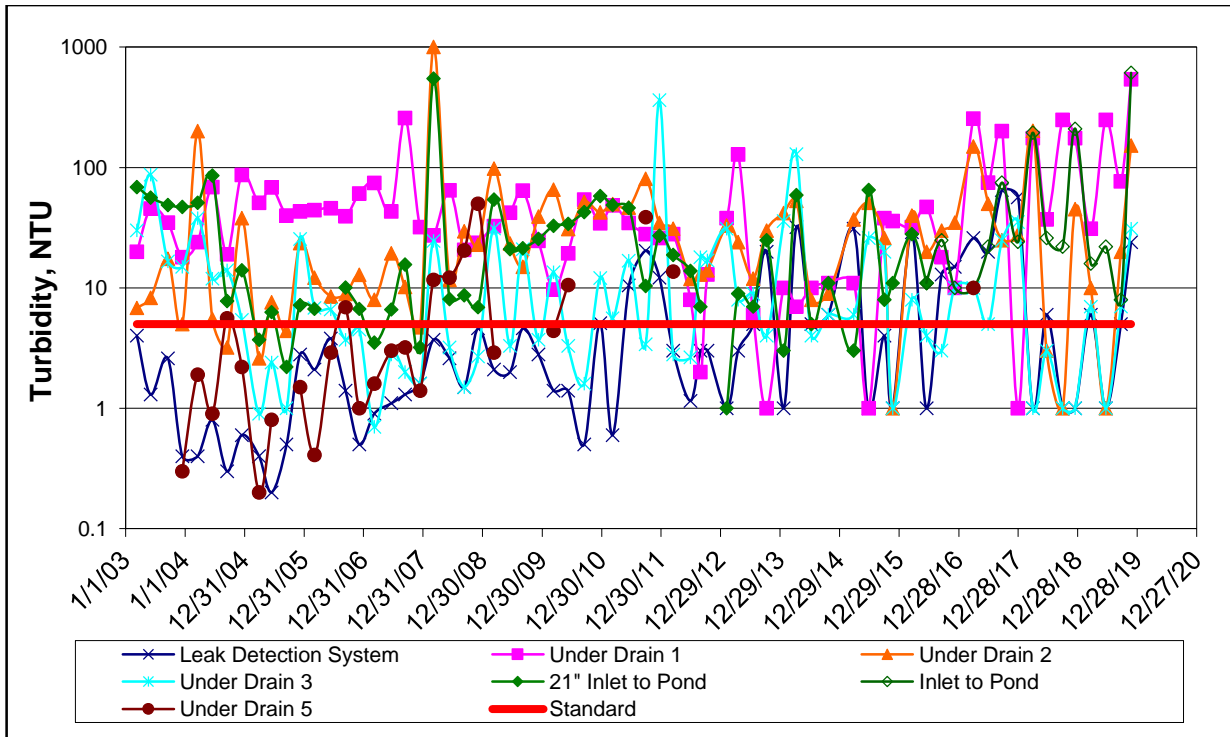


TOTAL ORGANIC CARBON (Note: Only data above detection is included in this plot)

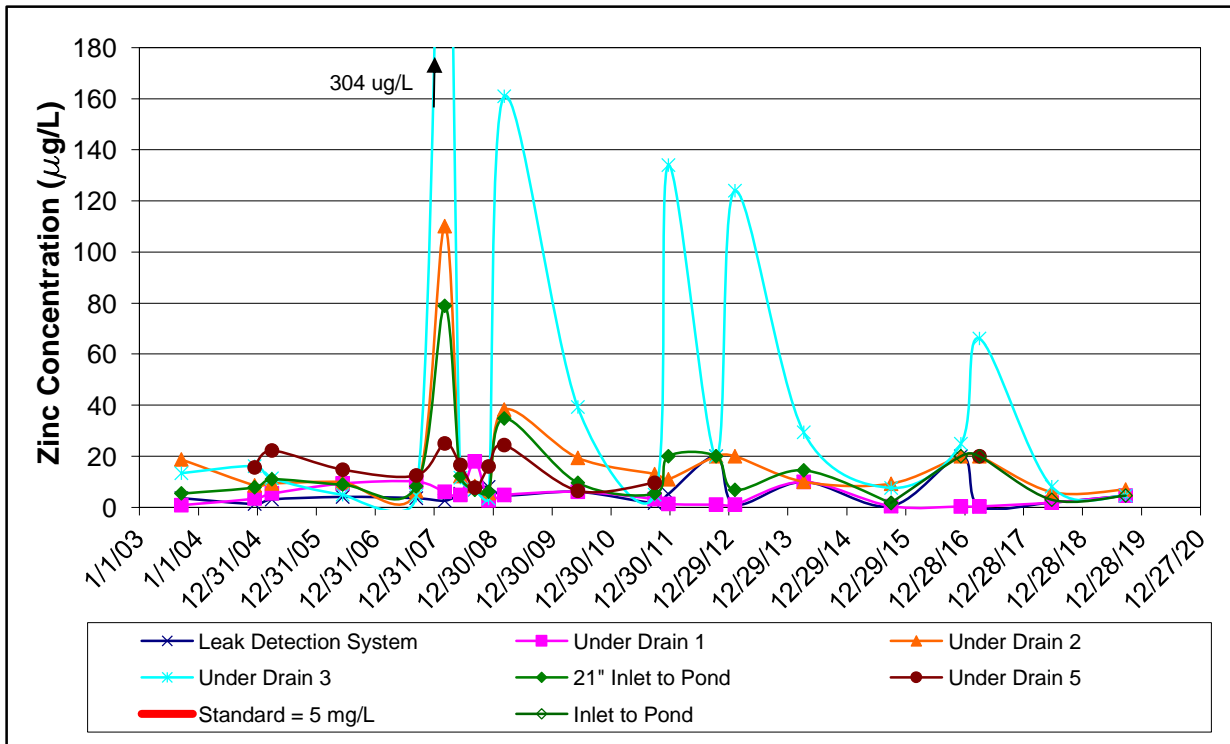


LEACHATE TIME-SERIES PLOTS, CONT.

TURBIDITY



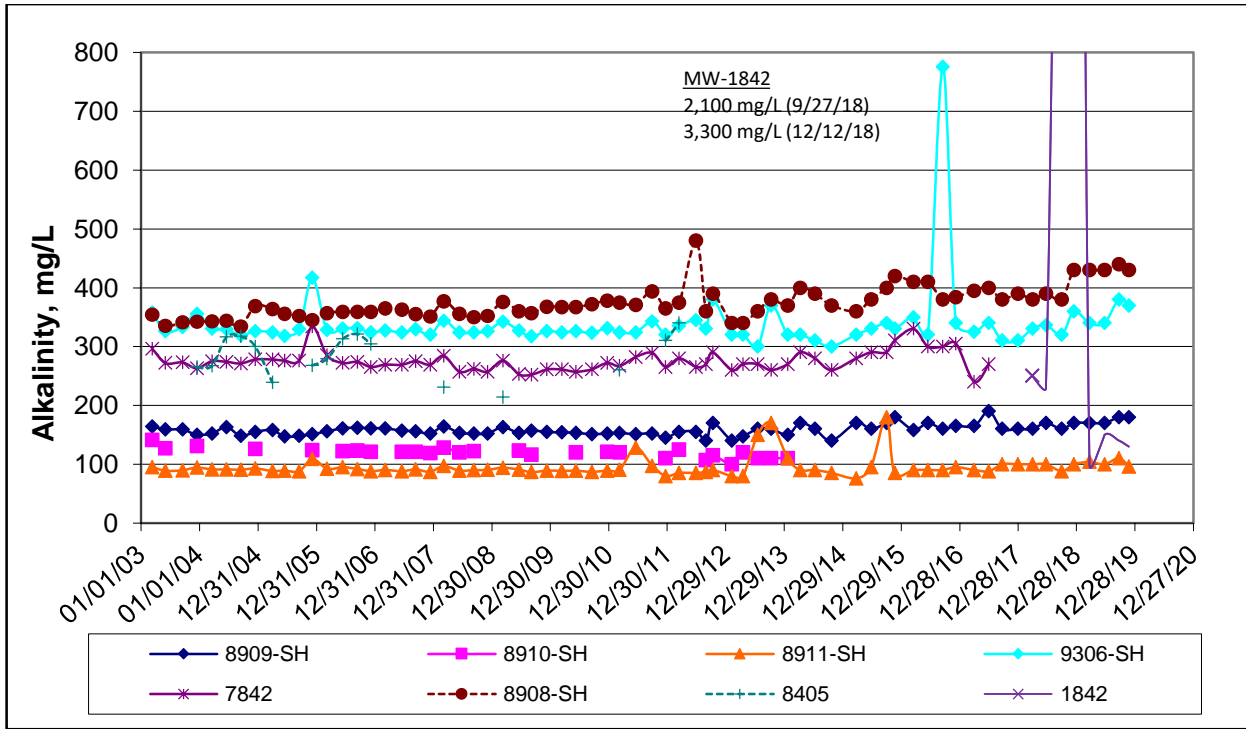
ZINC



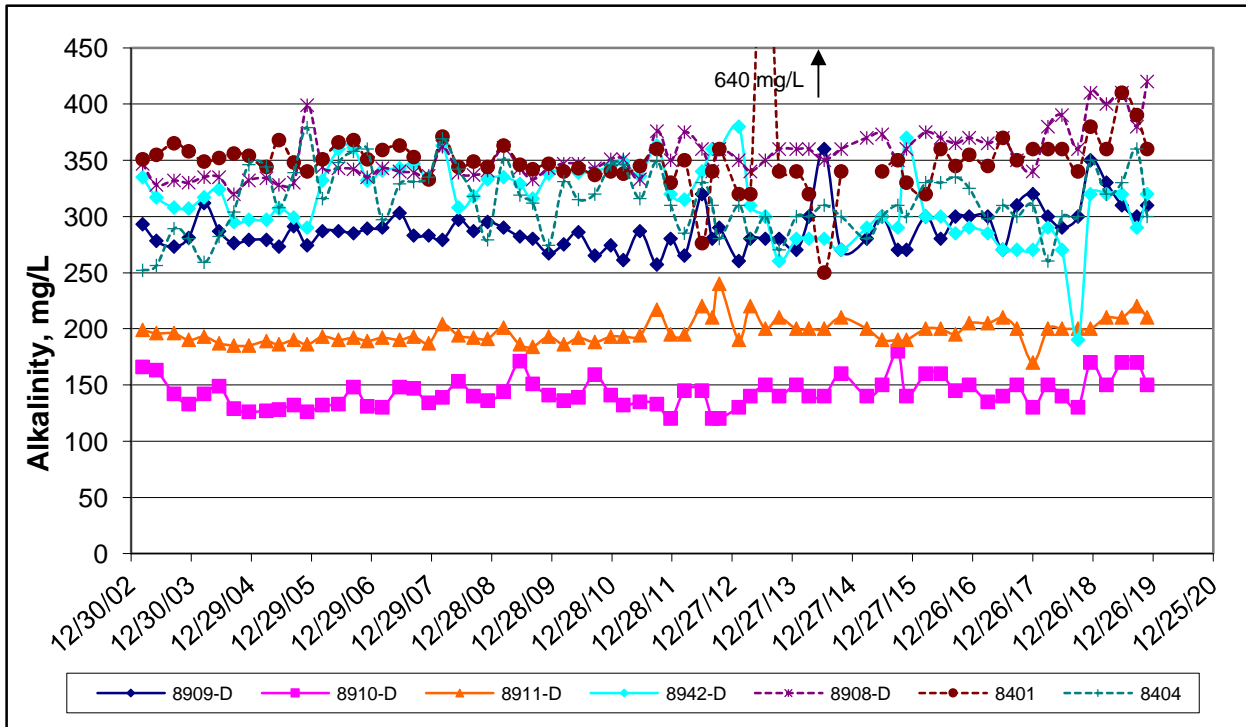
MONITORING WELL TIME-SERIES PLOTS

ALKALINITY

GLACIAL TILL

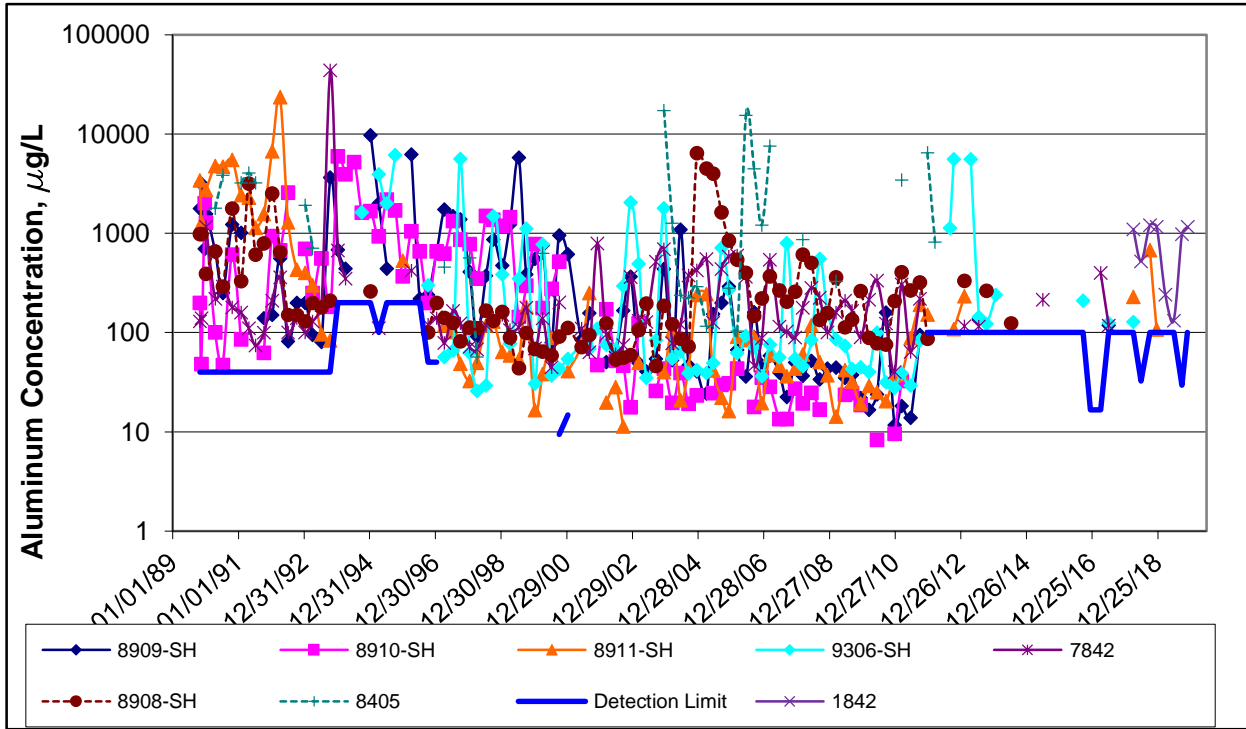


BEDROCK

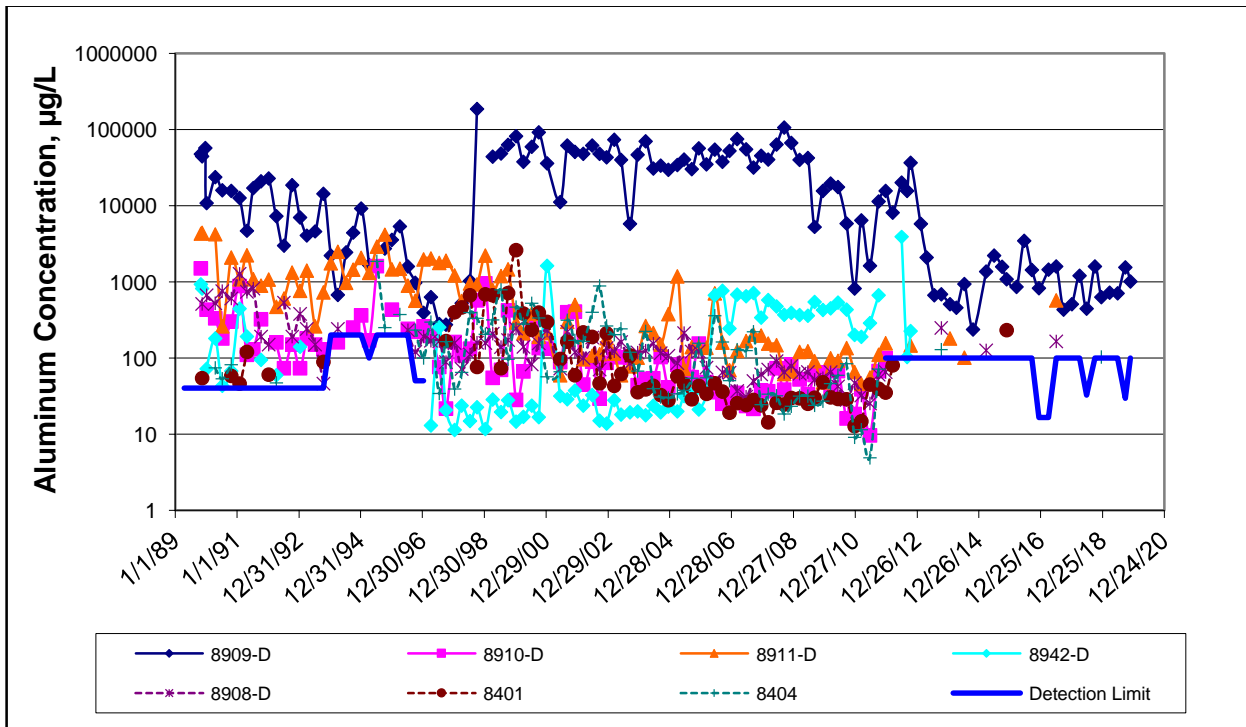


MONITORING WELL TIME-SERIES PLOTS, CONT.
ALUMINUM

GLACIAL TILL



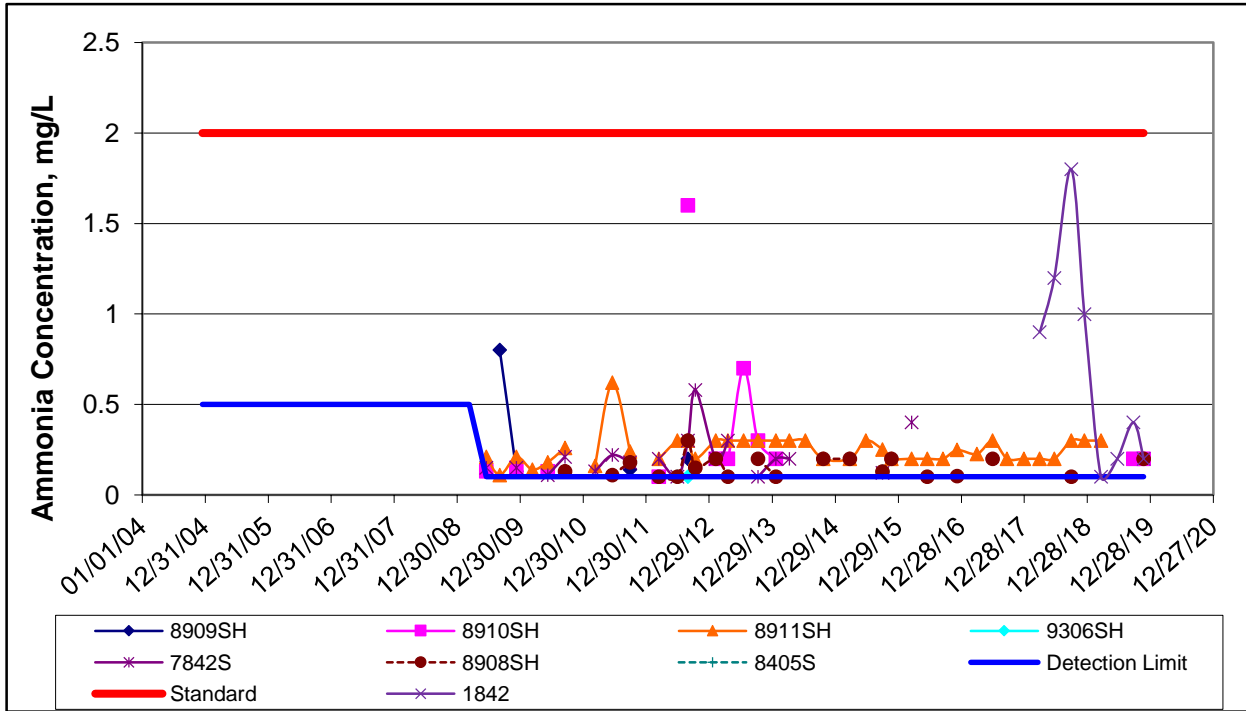
BEDROCK



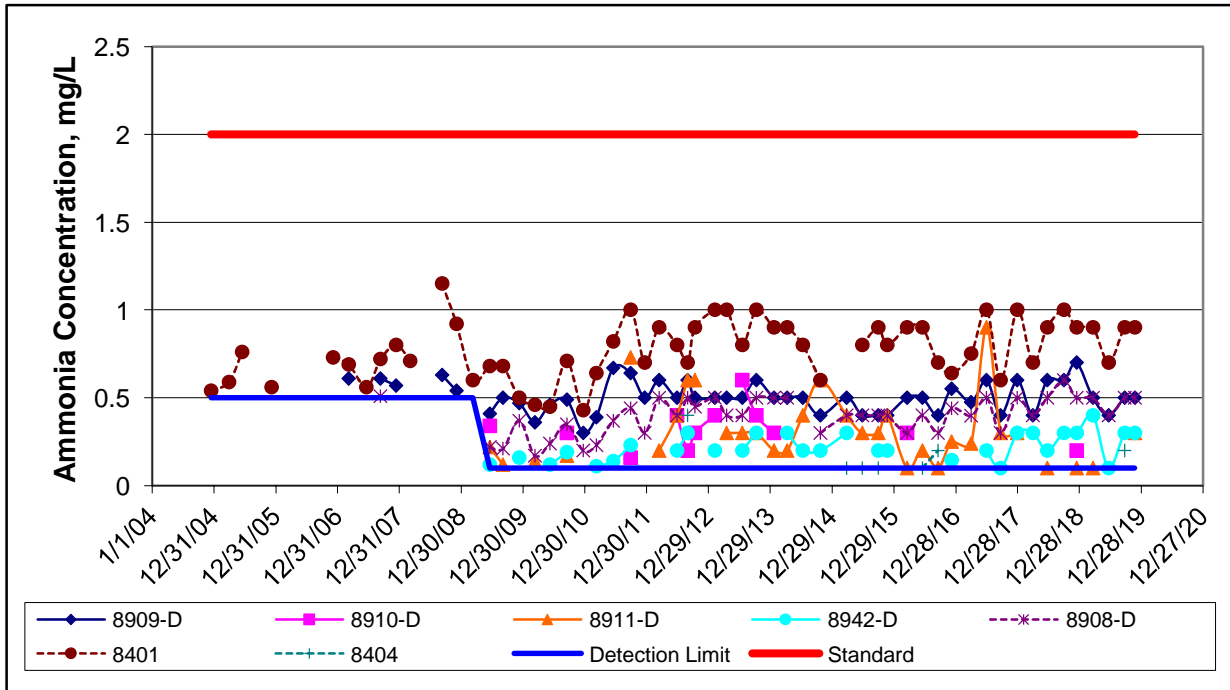
MONITORING WELL TIME-SERIES PLOTS, CONT.

AMMONIA

GLACIAL TILL (Note: Only data above detection has been included in this plot)



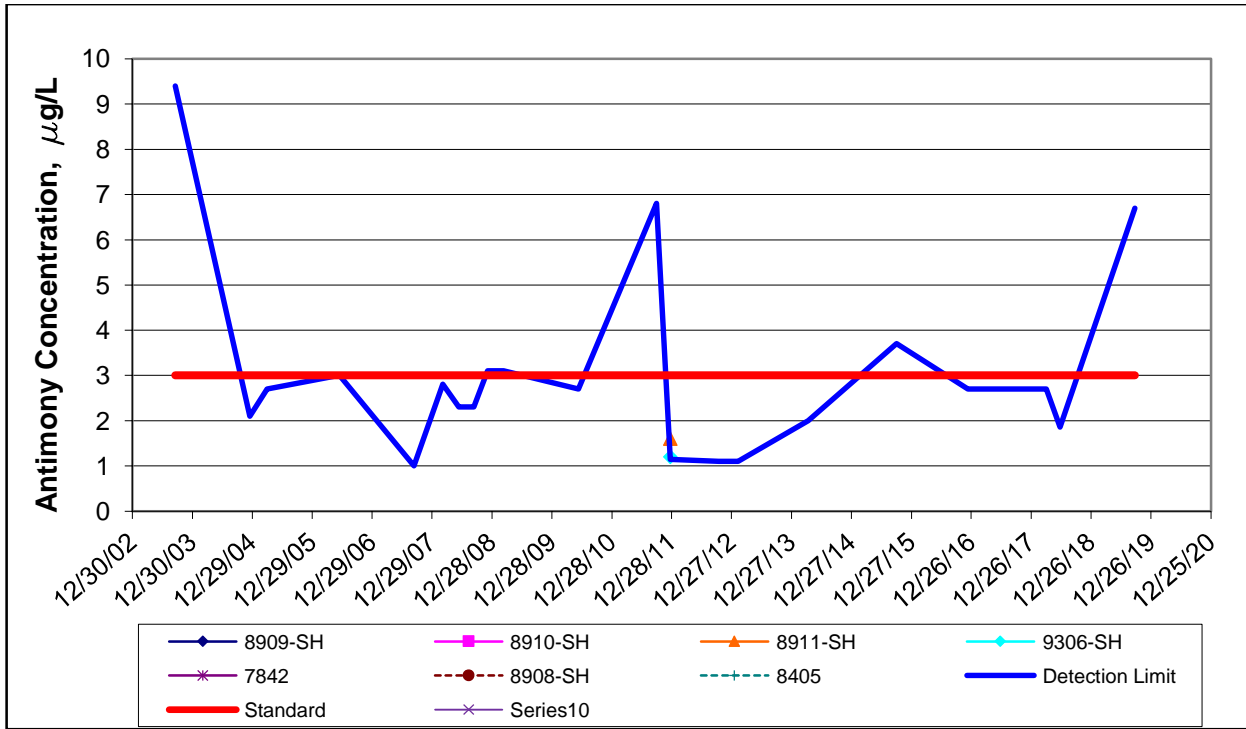
BEDROCK (Note: Only data above detection has been included in this plot)



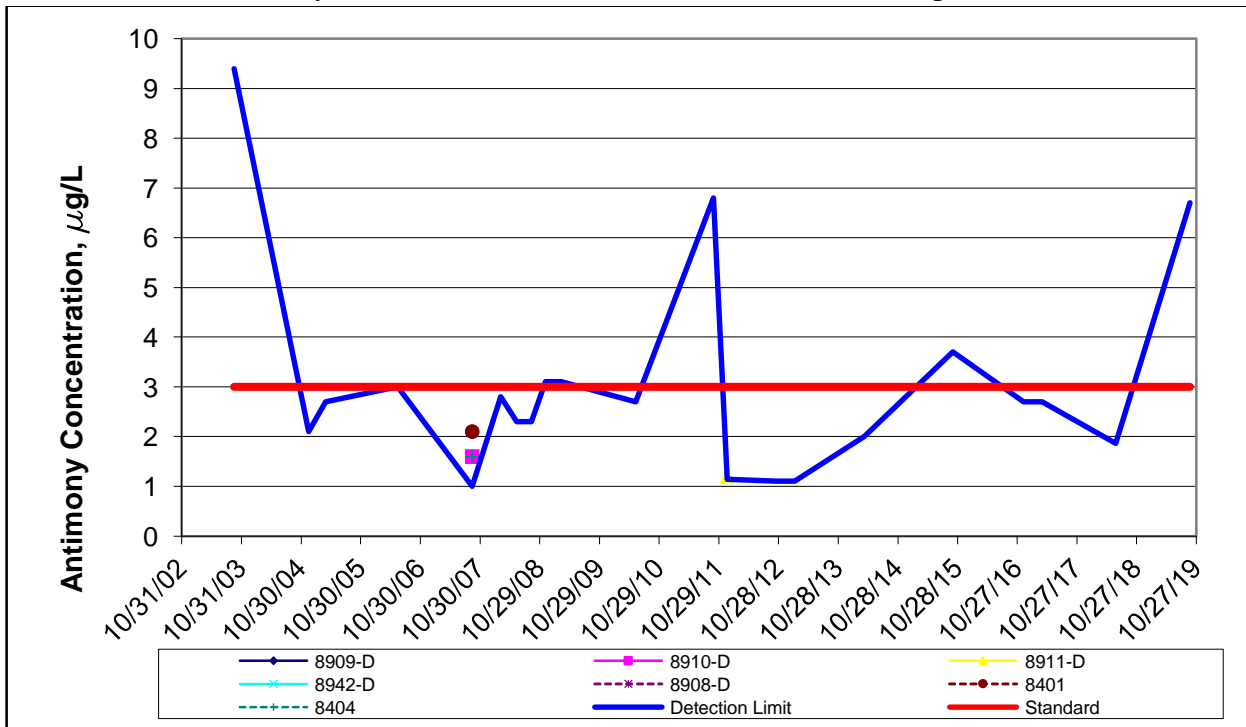
MONITORING WELL TIME-SERIES PLOTS, CONT.

ANTIMONY

GLACIAL TILL (Note: Only data above detection has been included in this plot)



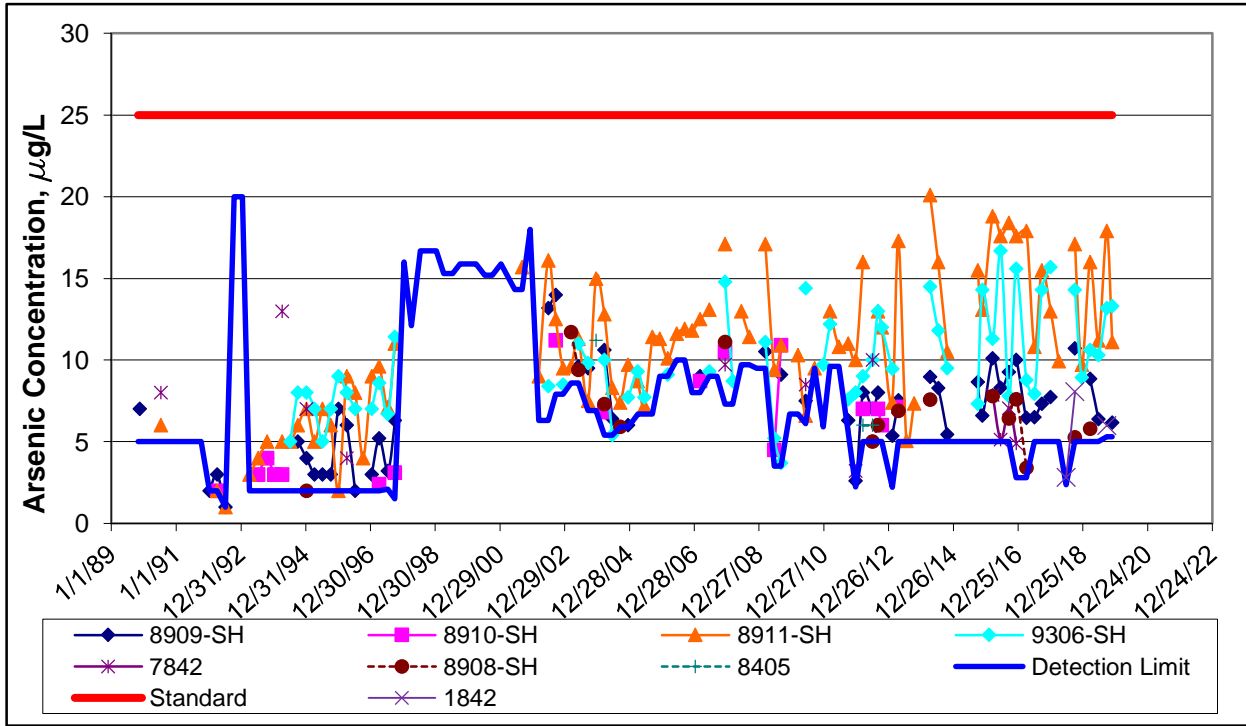
BEDROCK (Note: Only data above detection has been included in this plot)



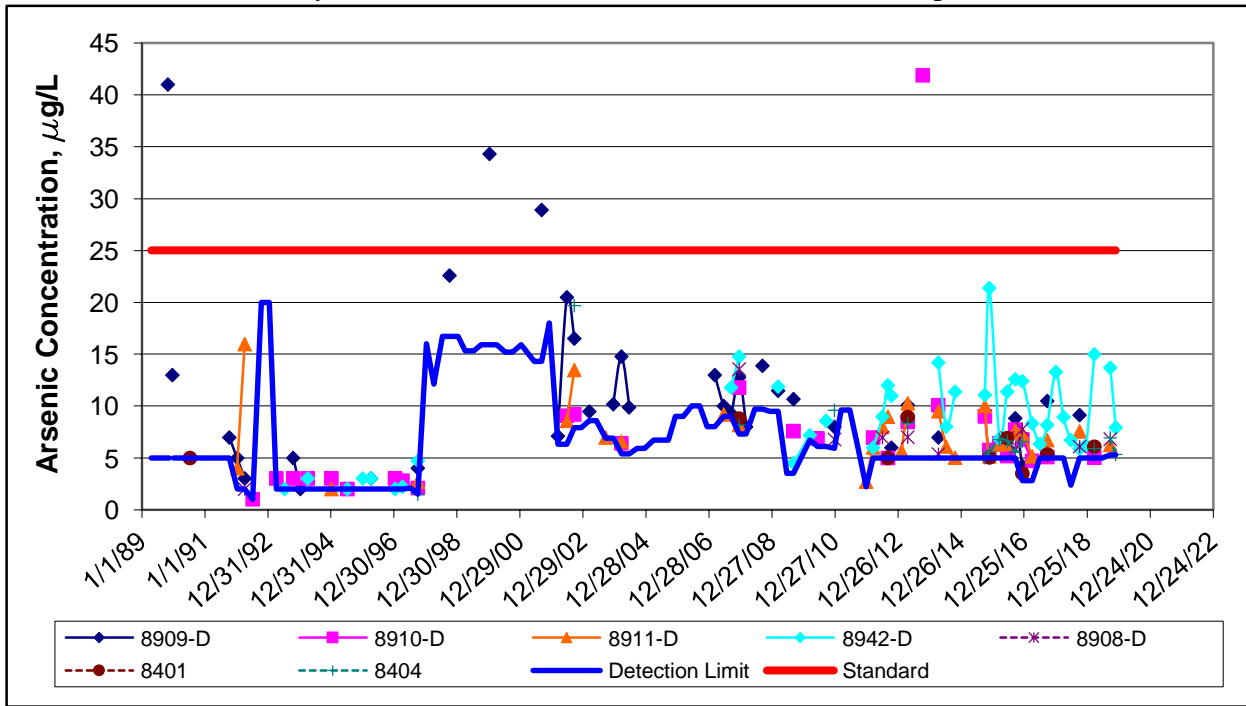
MONITORING WELL TIME-SERIES PLOTS, CONT.

ARSENIC

GLACIAL TILL (Note: Only data above detection has been included in this plot)



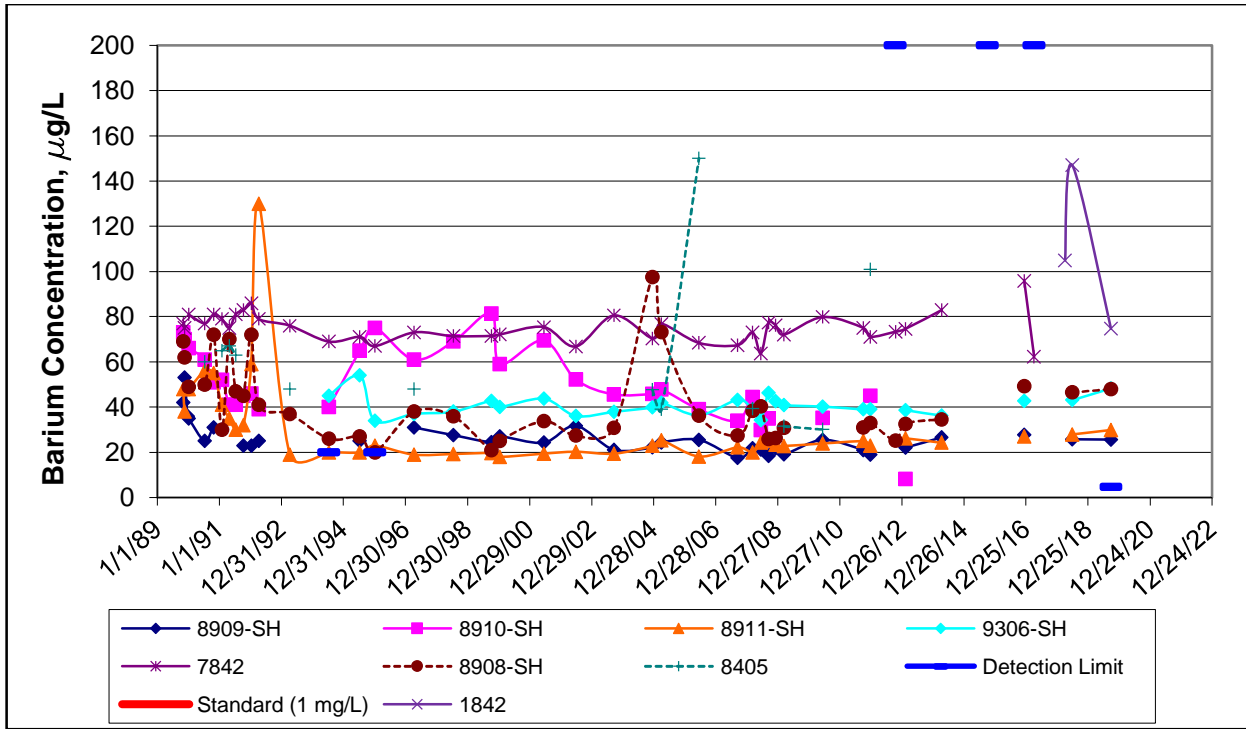
BEDROCK (Note: Only data above detection has been included in this plot)



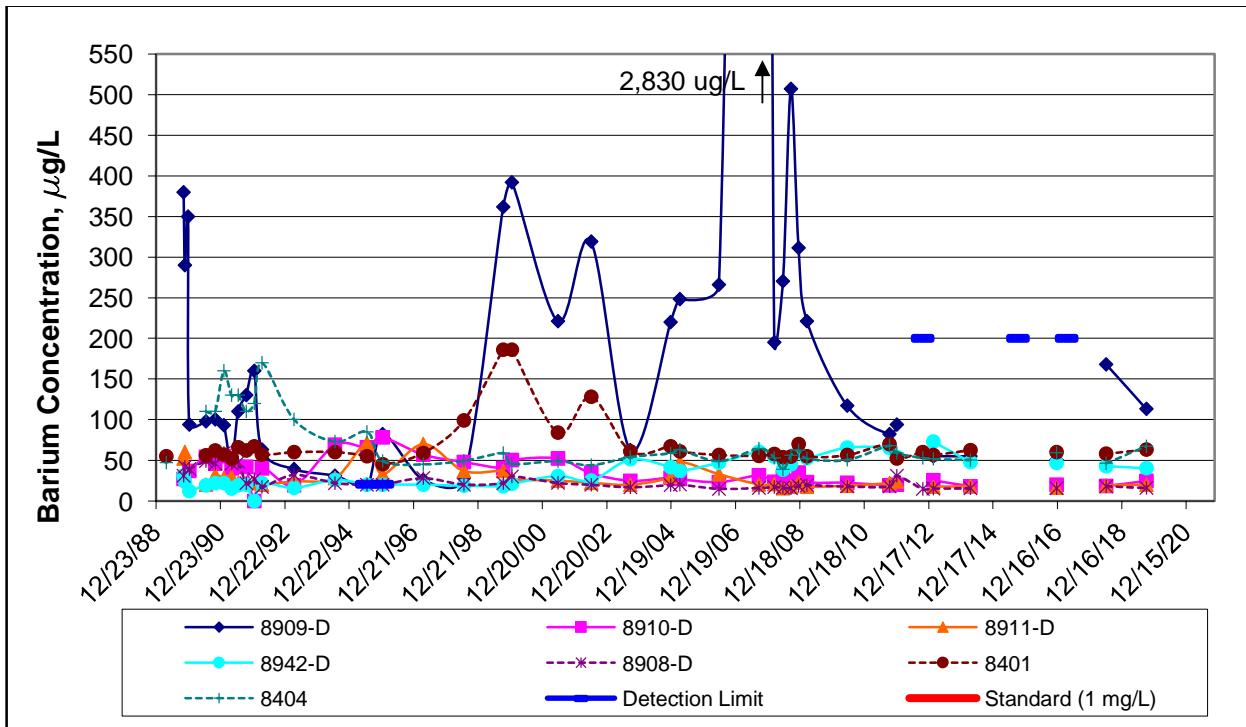
MONITORING WELL TIME-SERIES PLOTS, CONT.

BARIUM

GLACIAL TILL



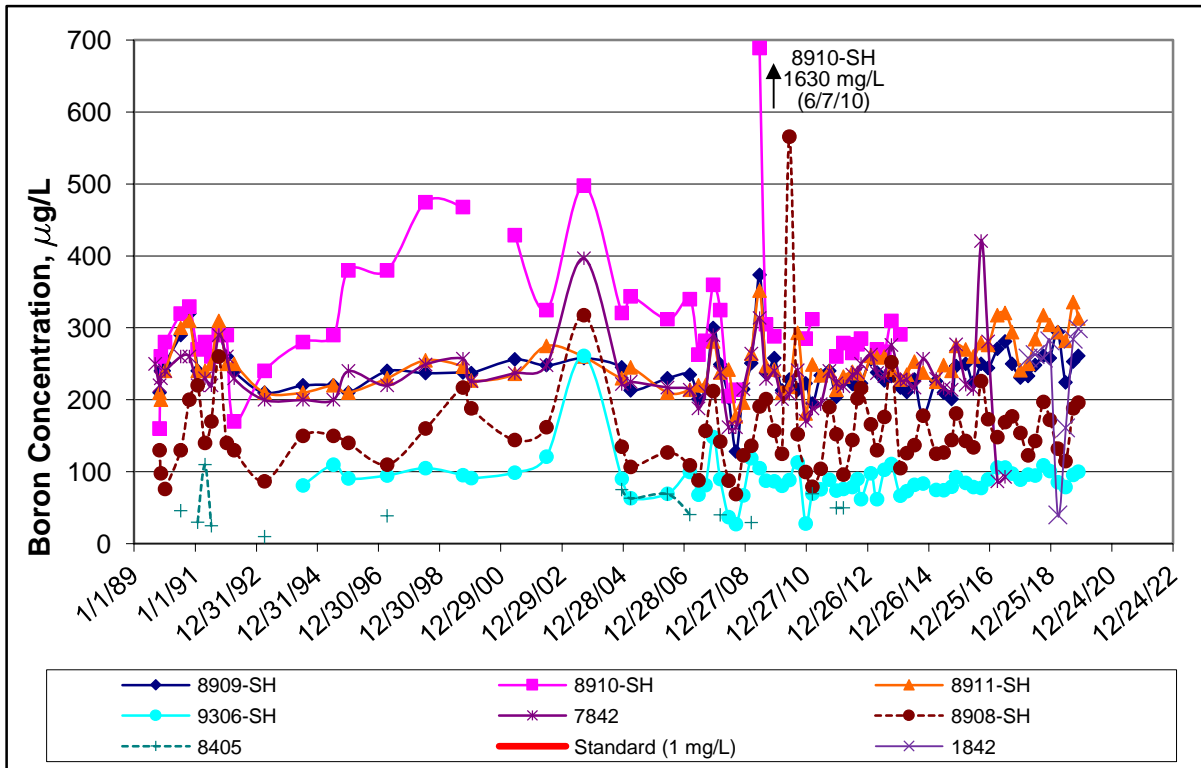
BEDROCK



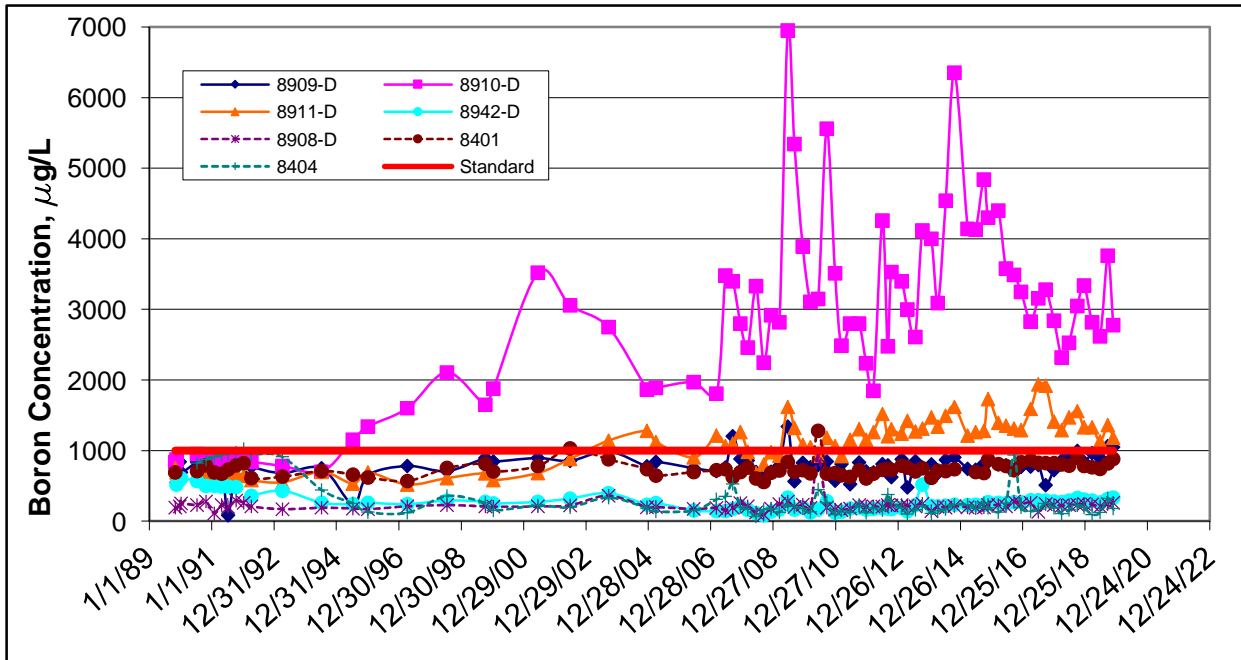
MONITORING WELL TIME-SERIES PLOTS, CONT.

BORON

GLACIAL TILL



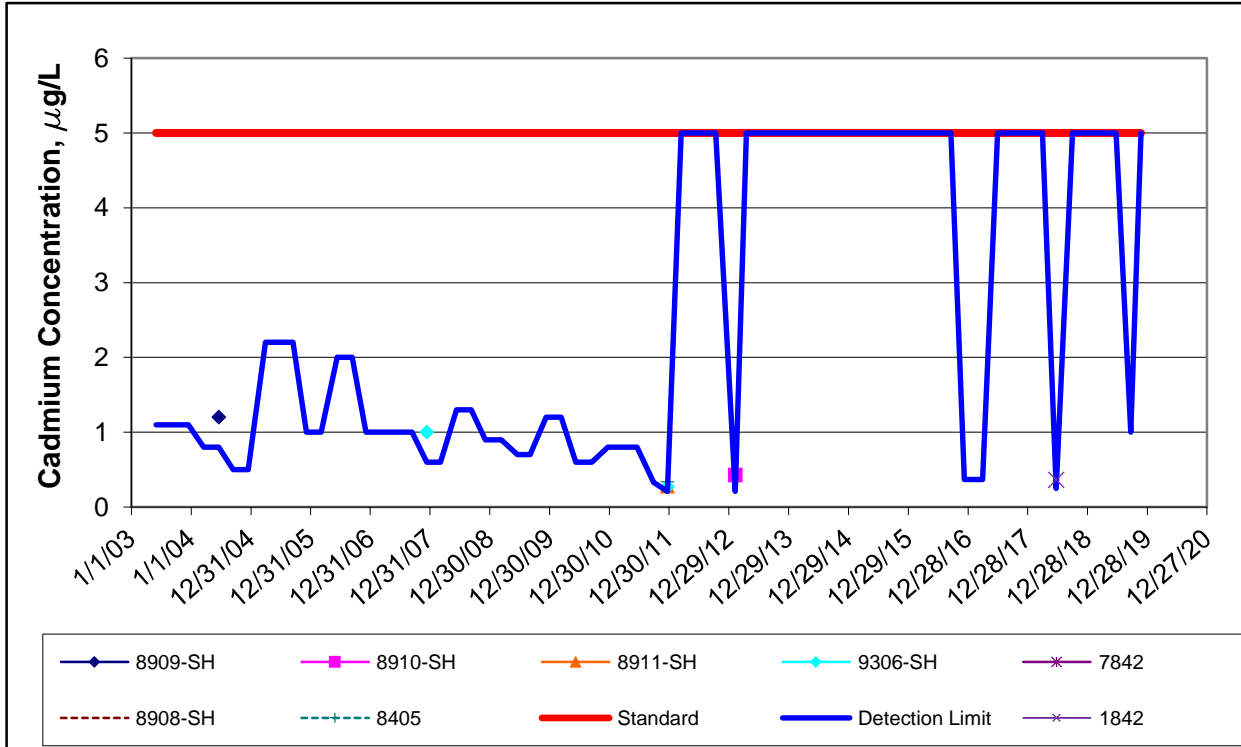
BEDROCK



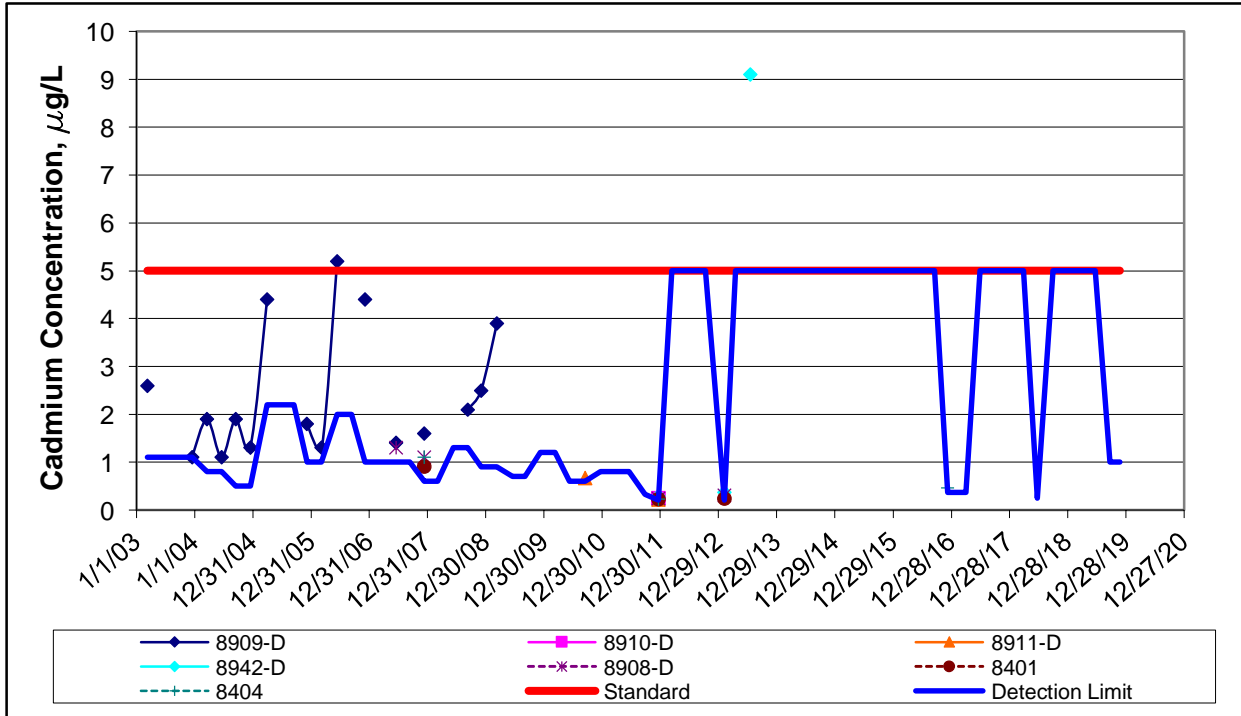
MONITORING WELL TIME-SERIES PLOTS, CONT.

CADMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



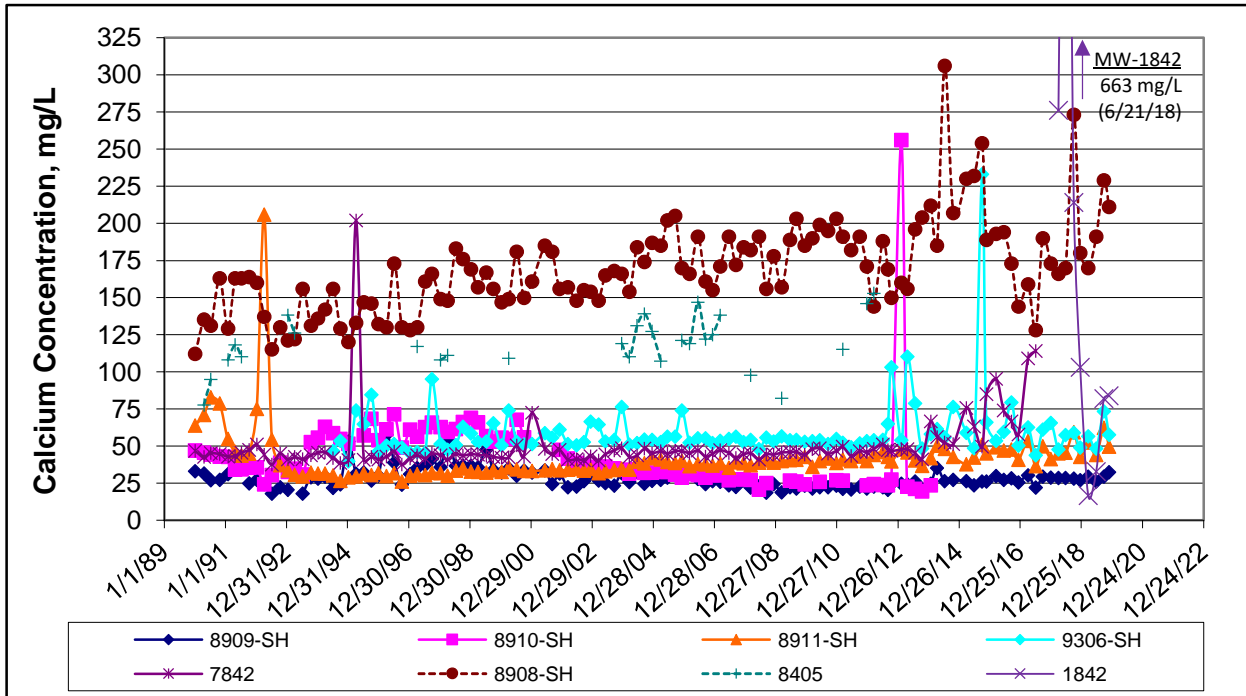
BEDROCK (Note: Only data above detection has been included in this plot)



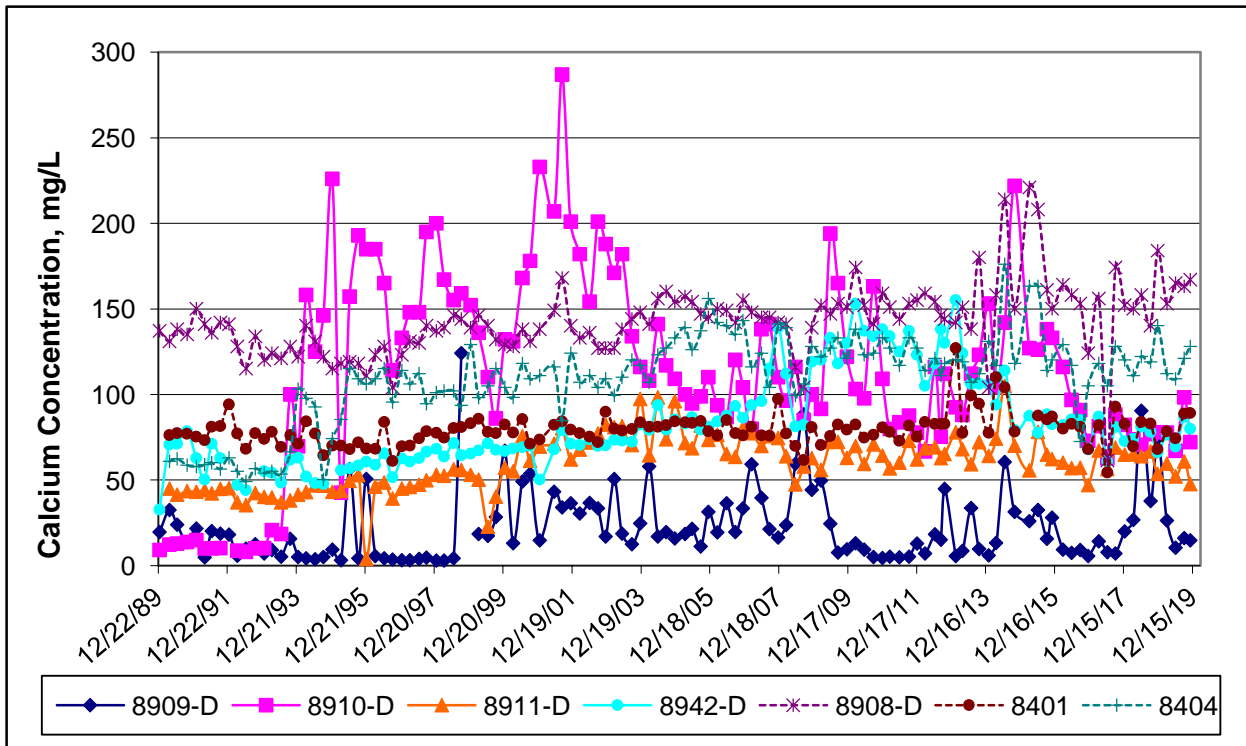
MONITORING WELL TIME-SERIES PLOTS, CONT.

CALCIUM

GLACIAL TILL



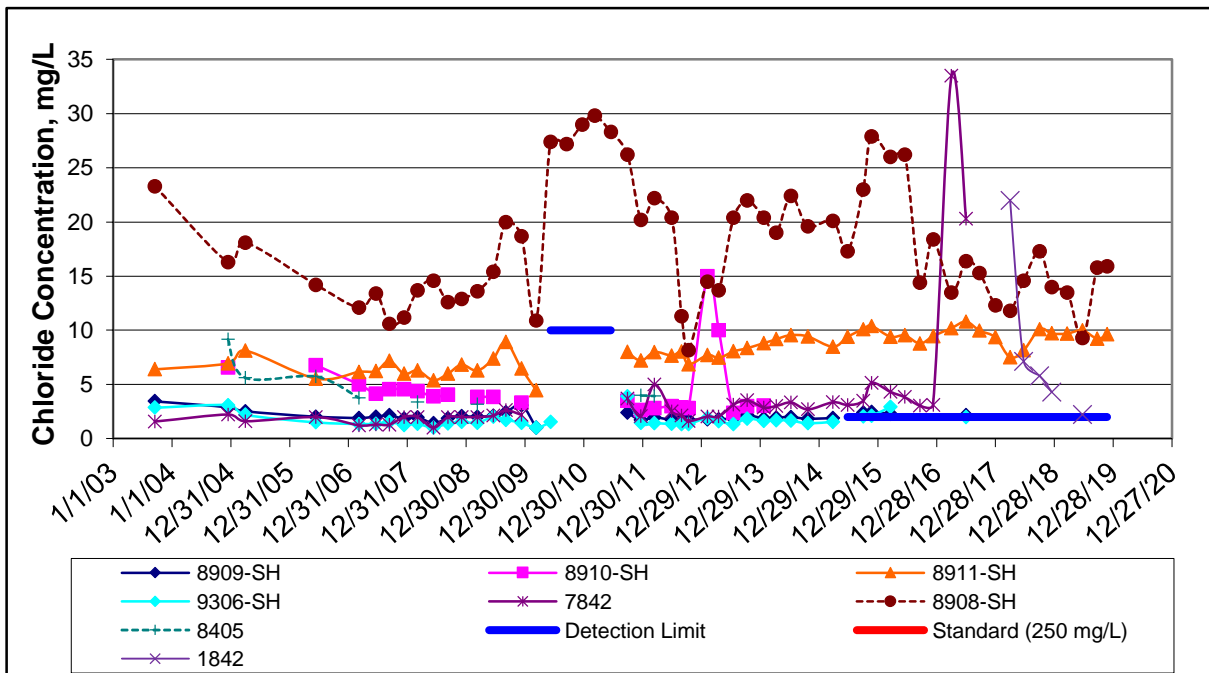
BEDROCK



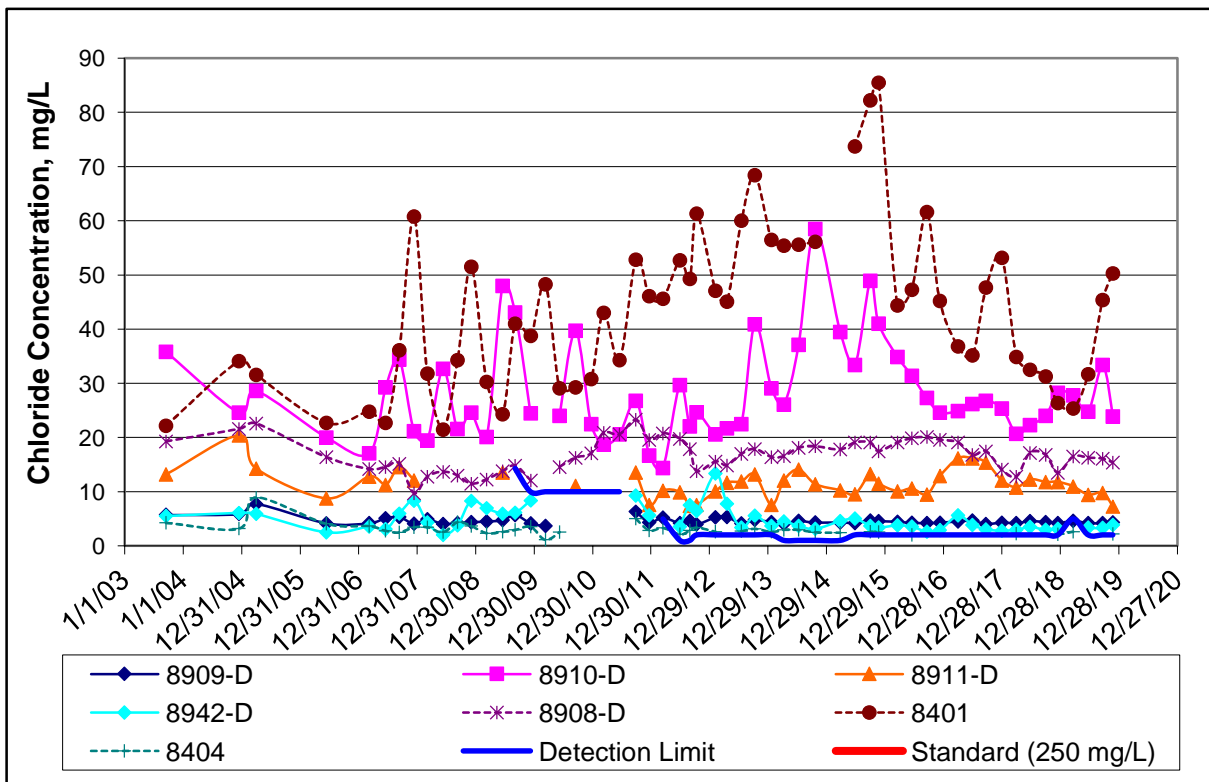
MONITORING WELL TIME-SERIES PLOTS, CONT.

CHLORIDE

GLACIAL TILL

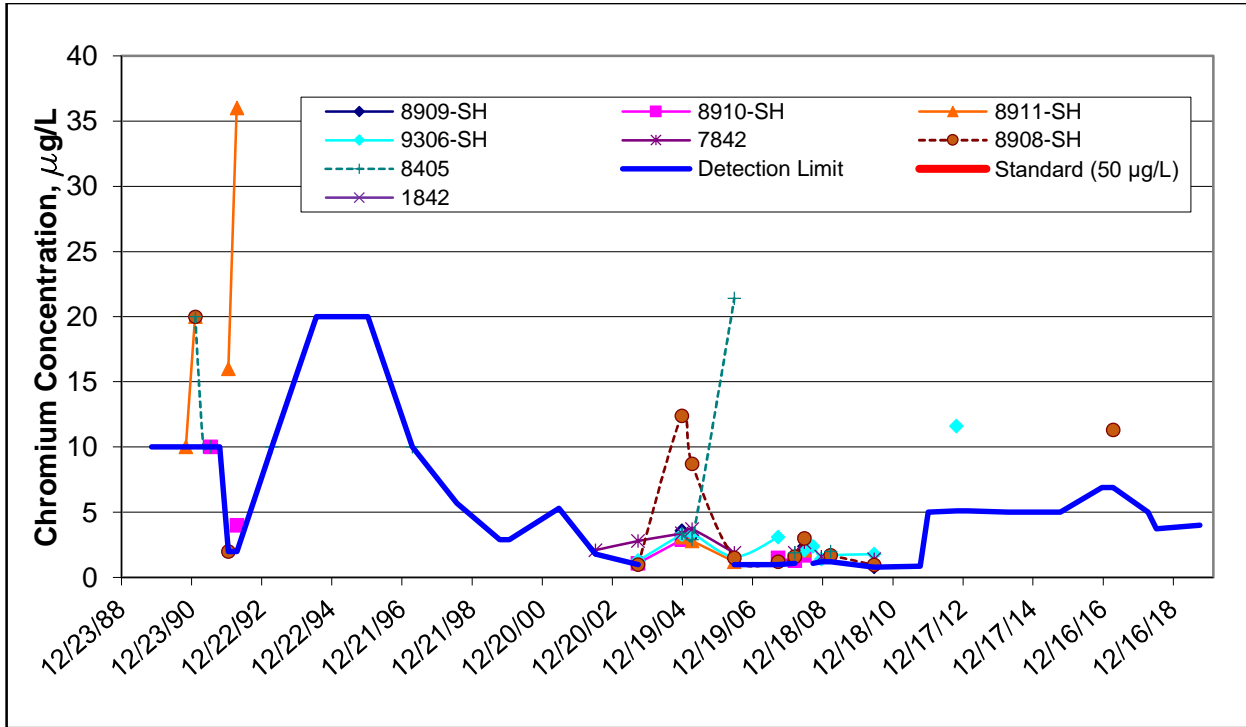


BEDROCK

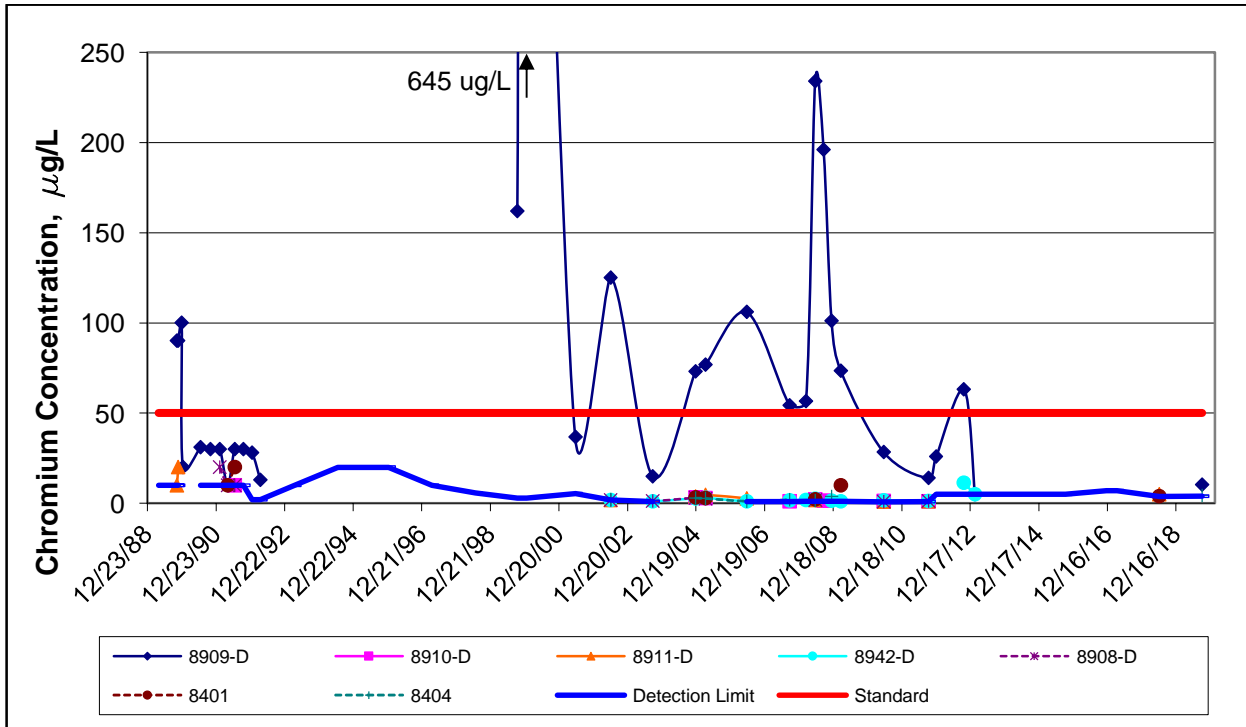


MONITORING WELL TIME-SERIES PLOTS, CONT.
CHROMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)

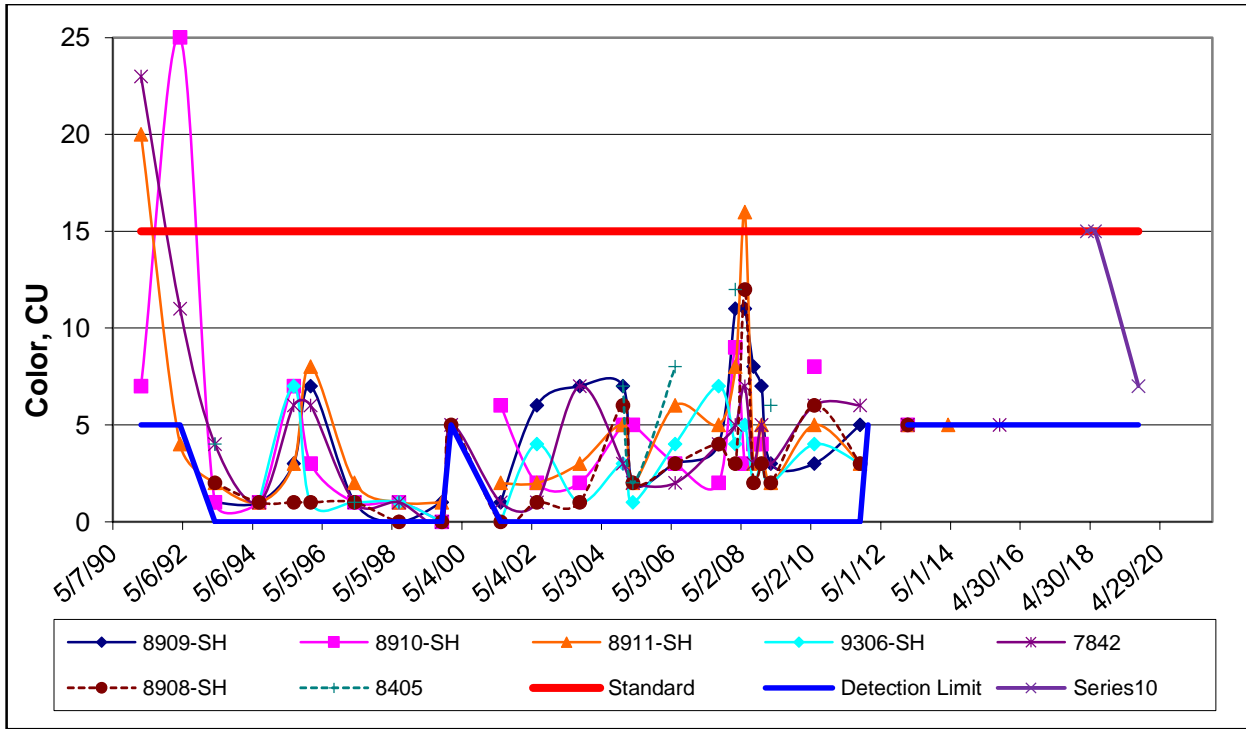


BEDROCK (Note: Only data above detection has been included in this plot)

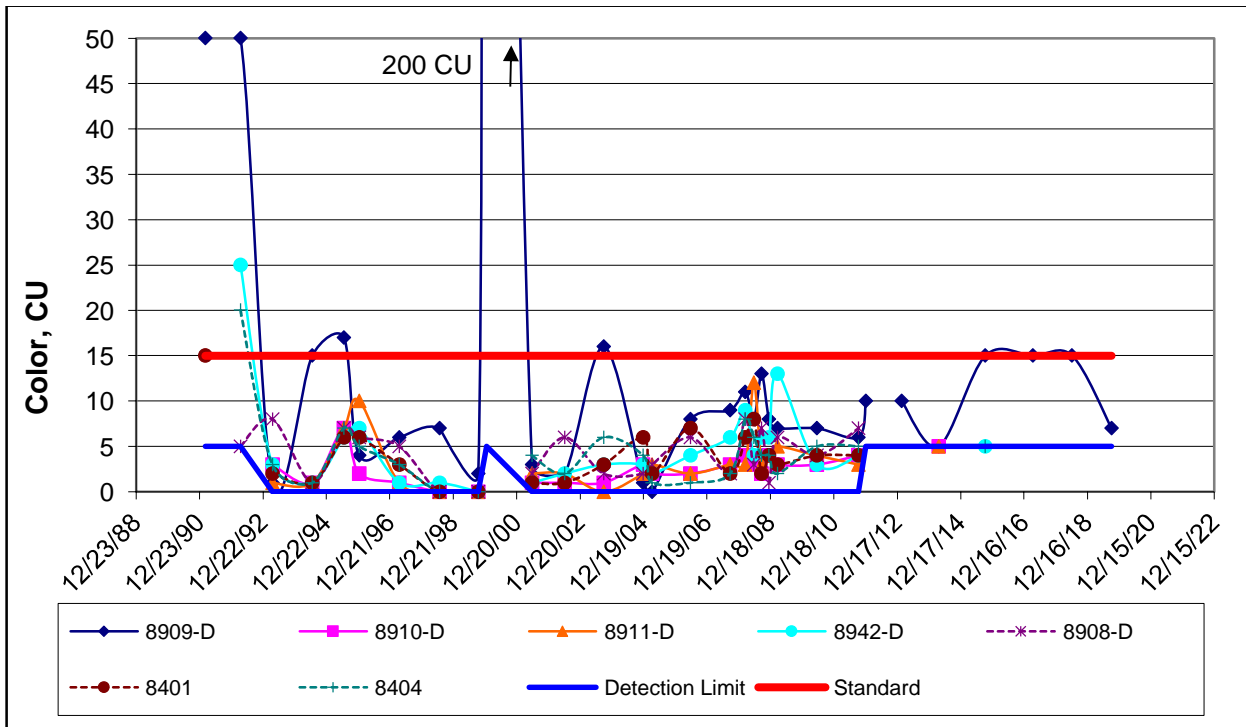


MONITORING WELL TIME-SERIES PLOTS, CONT.
COLOR

GLACIAL TILL

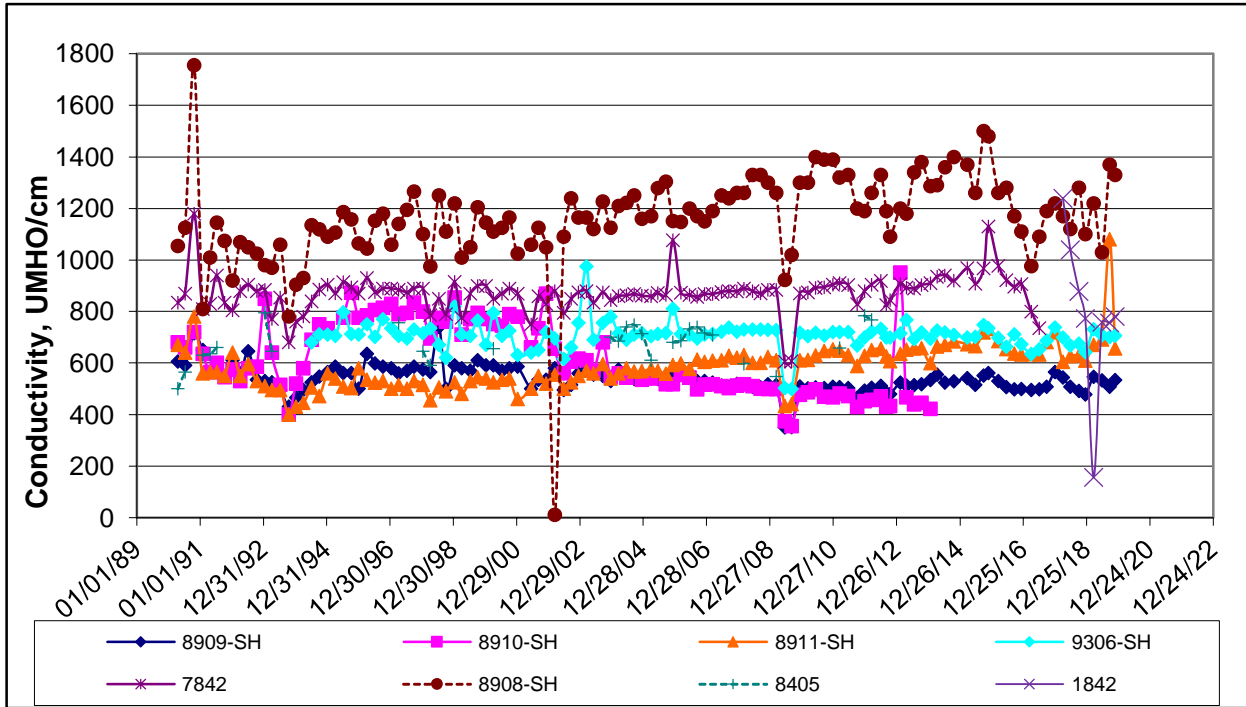


BEDROCK

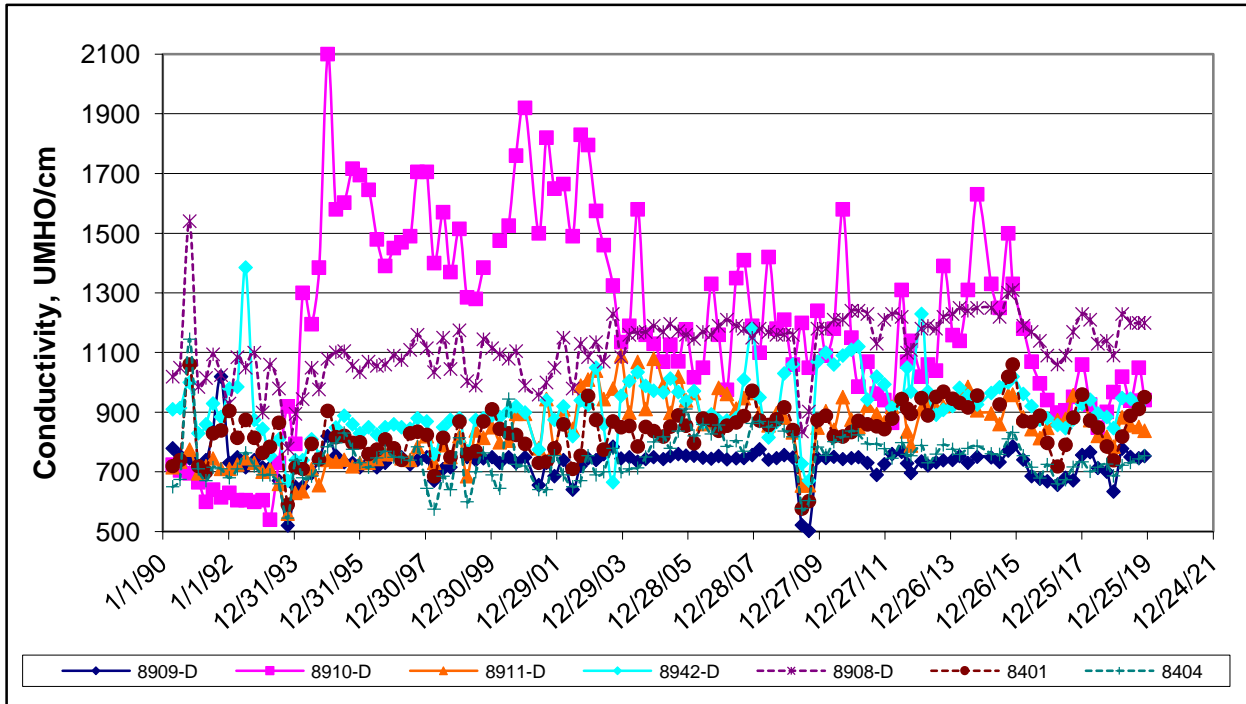


MONITORING WELL TIME-SERIES PLOTS, CONT.
CONDUCTIVITY

GLACIAL TILL



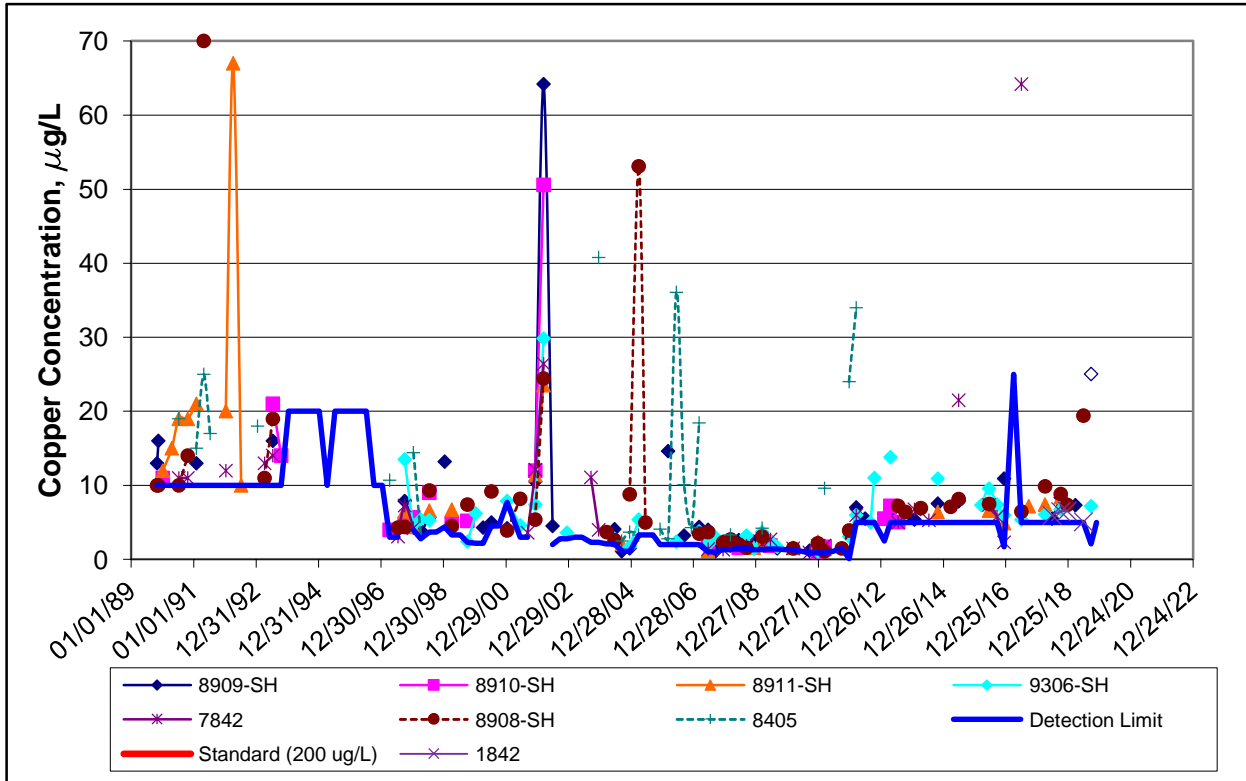
BEDROCK



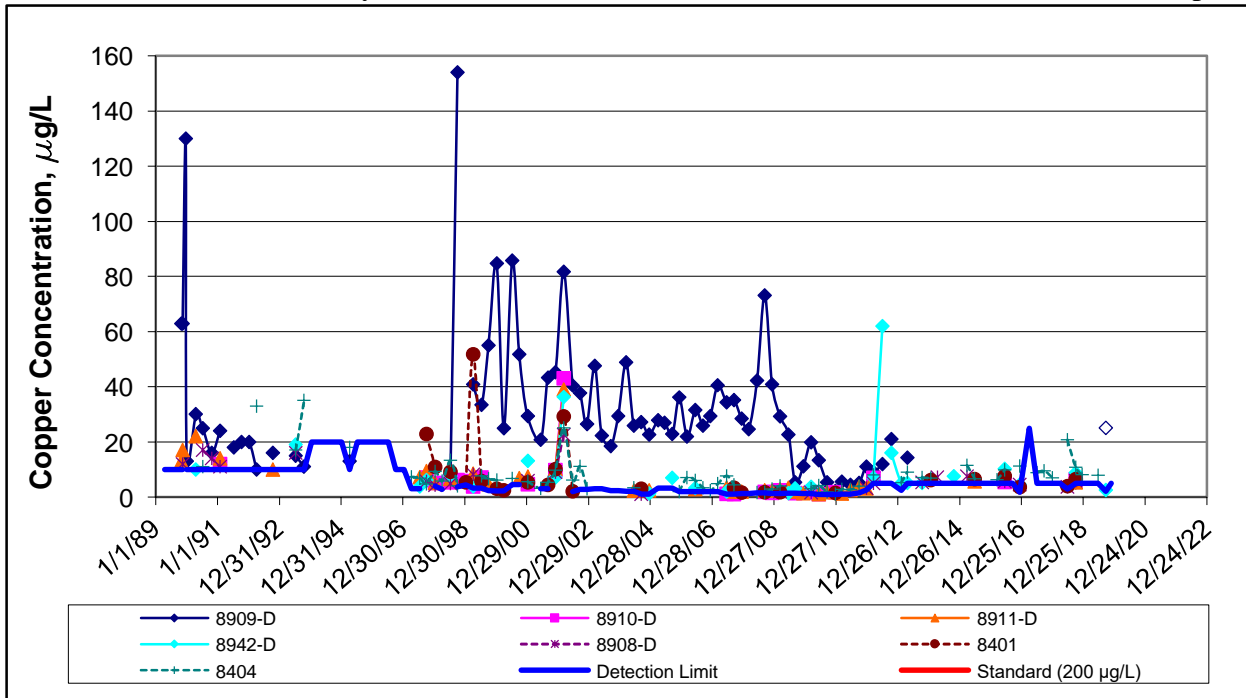
MONITORING WELL TIME-SERIES PLOTS, CONT.

COPPER

GLACIAL TILL (Note: Only data above detection has been included in this plot)

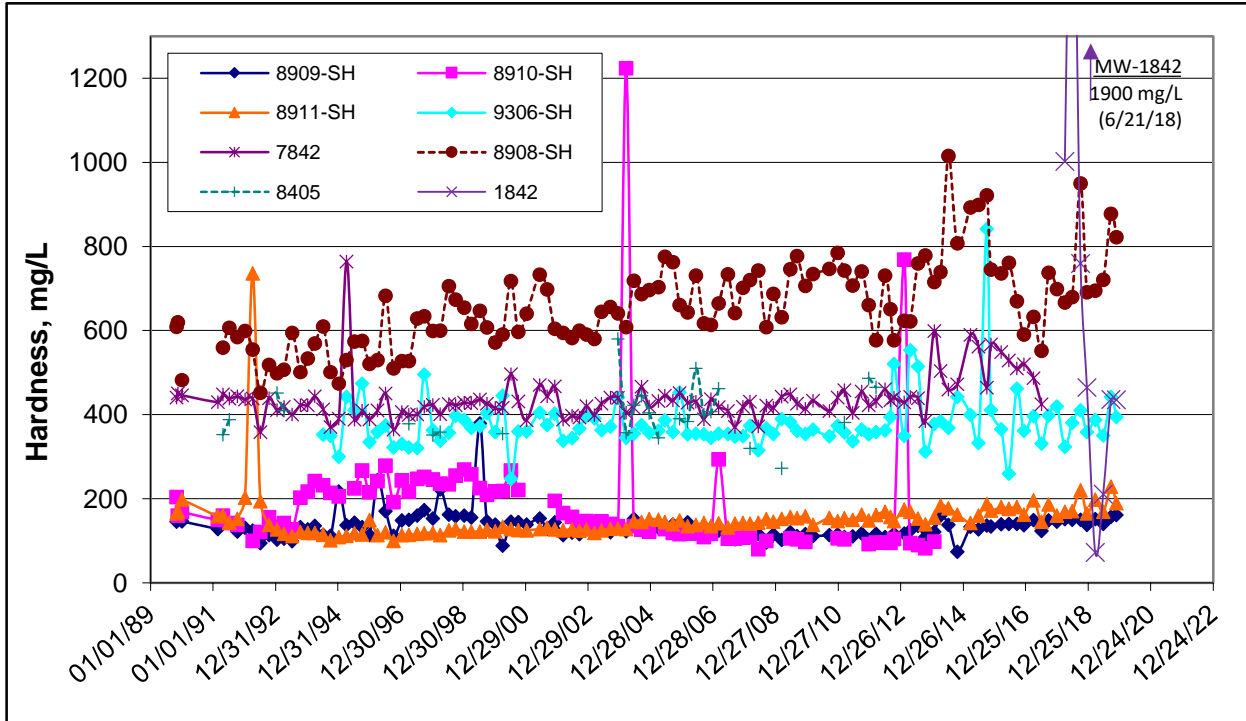


BEDROCK (Note: Only data above detection has been included in this plot)

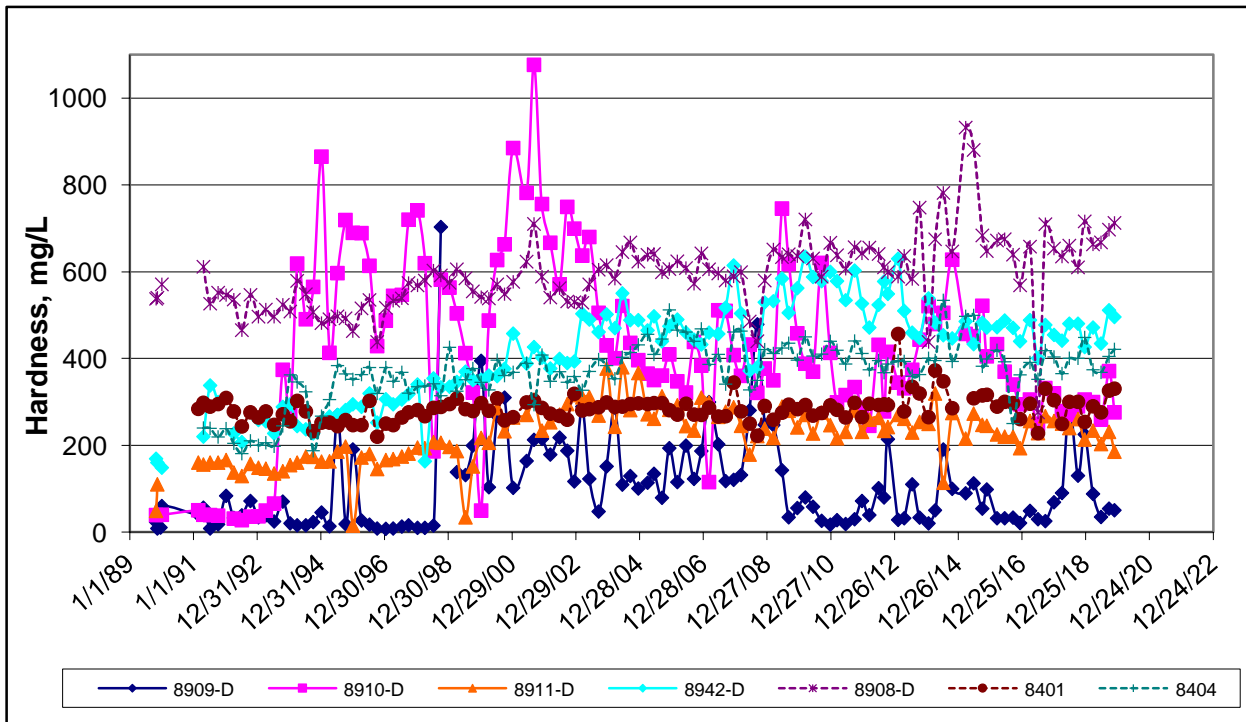


MONITORING WELL TIME-SERIES PLOTS, CONT.
HARDNESS

GLACIAL TILL



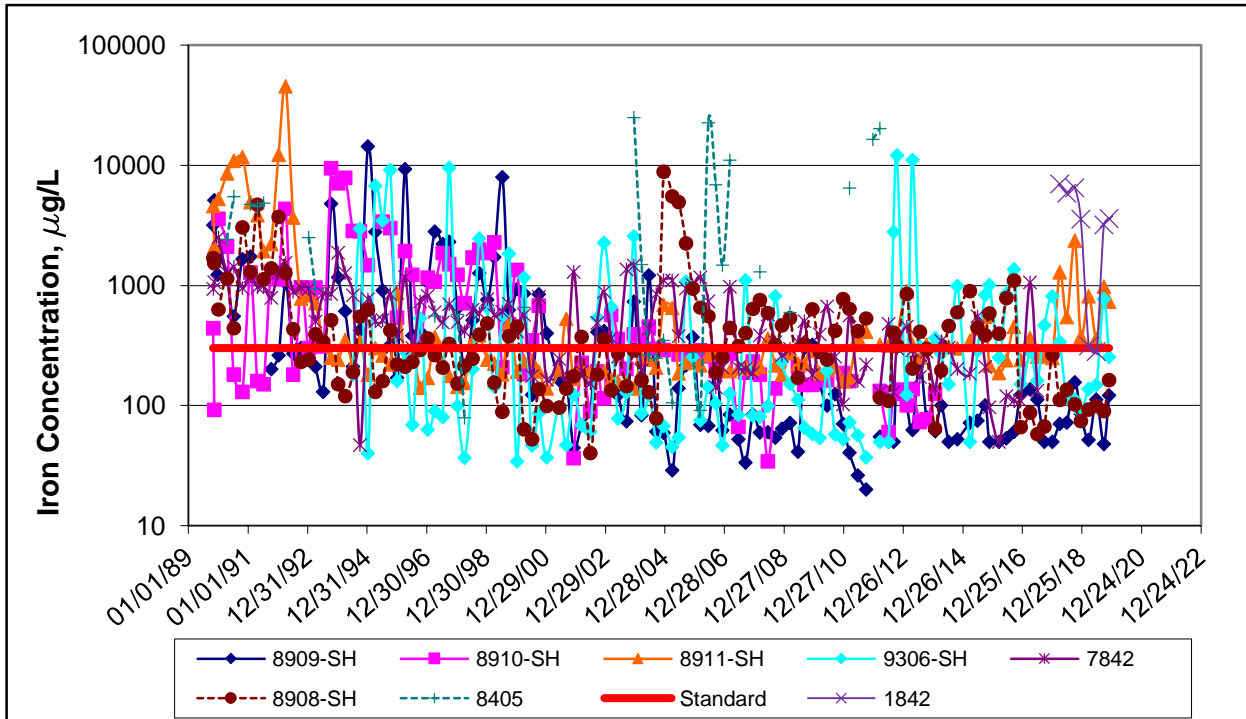
BEDROCK



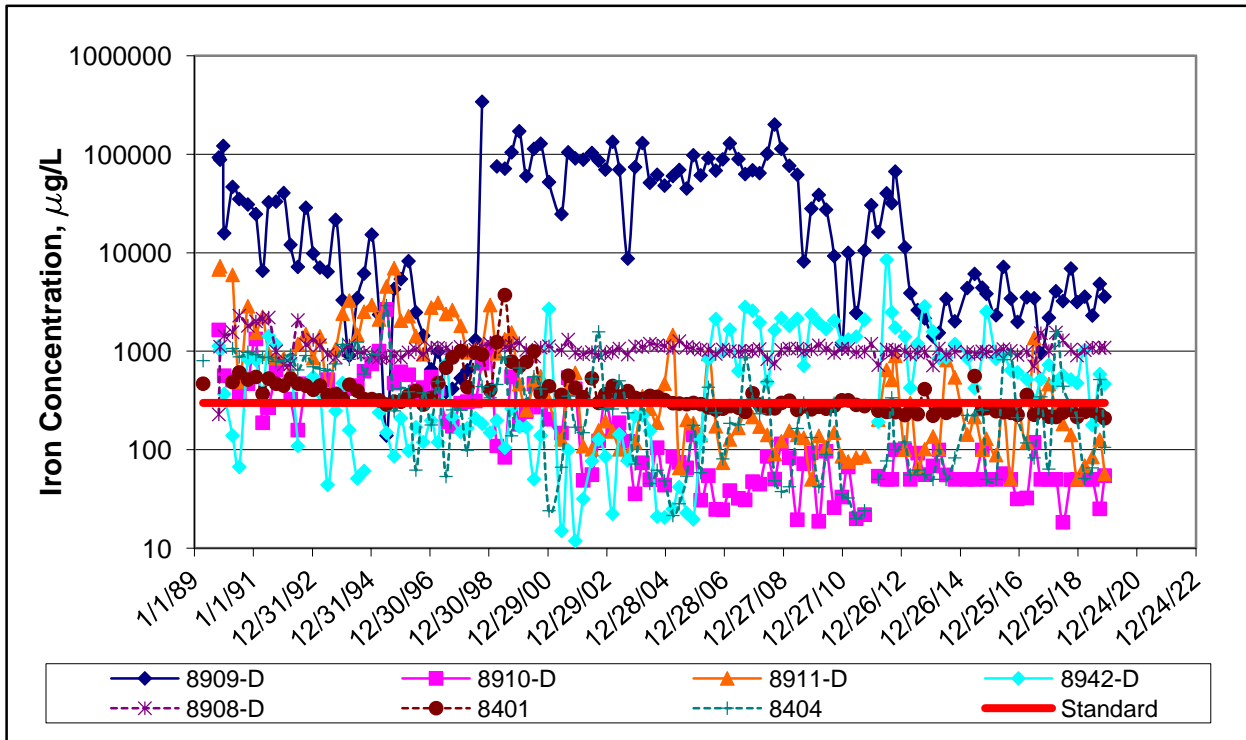
MONITORING WELL TIME-SERIES PLOTS, CONT.

IRON

GLACIAL TILL

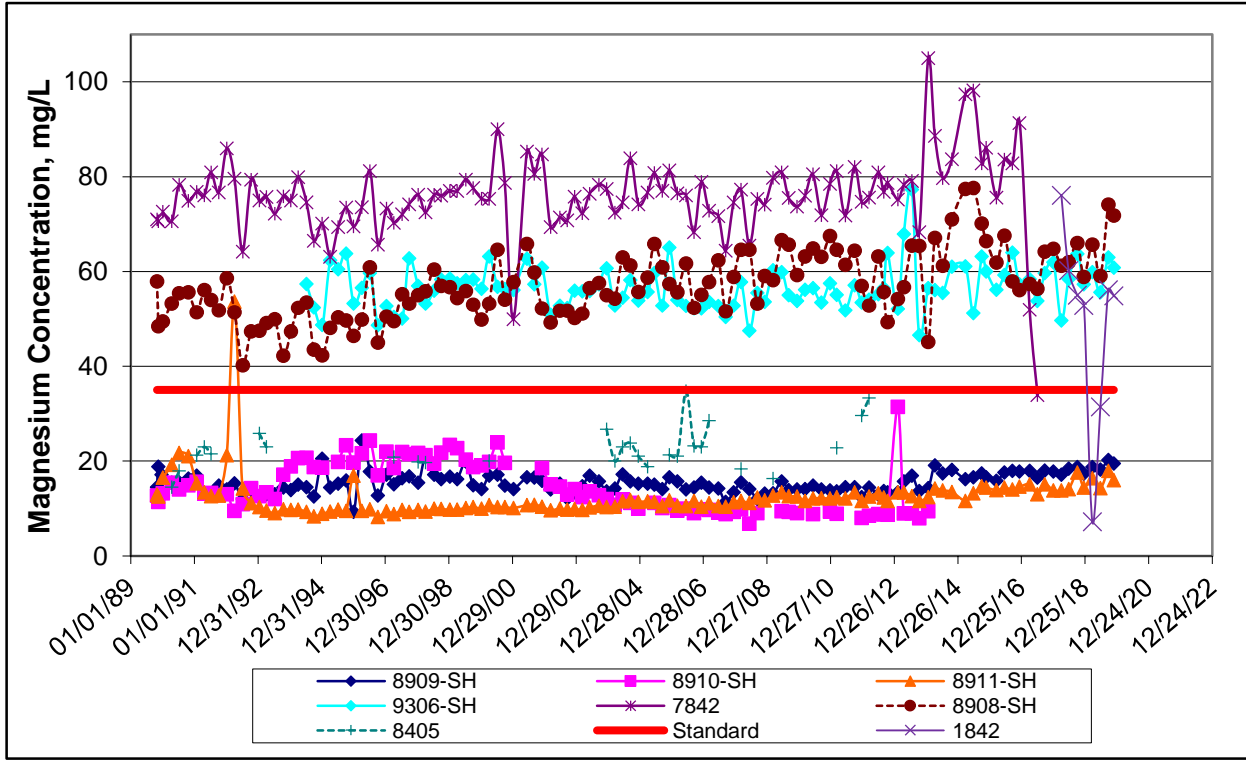


BEDROCK

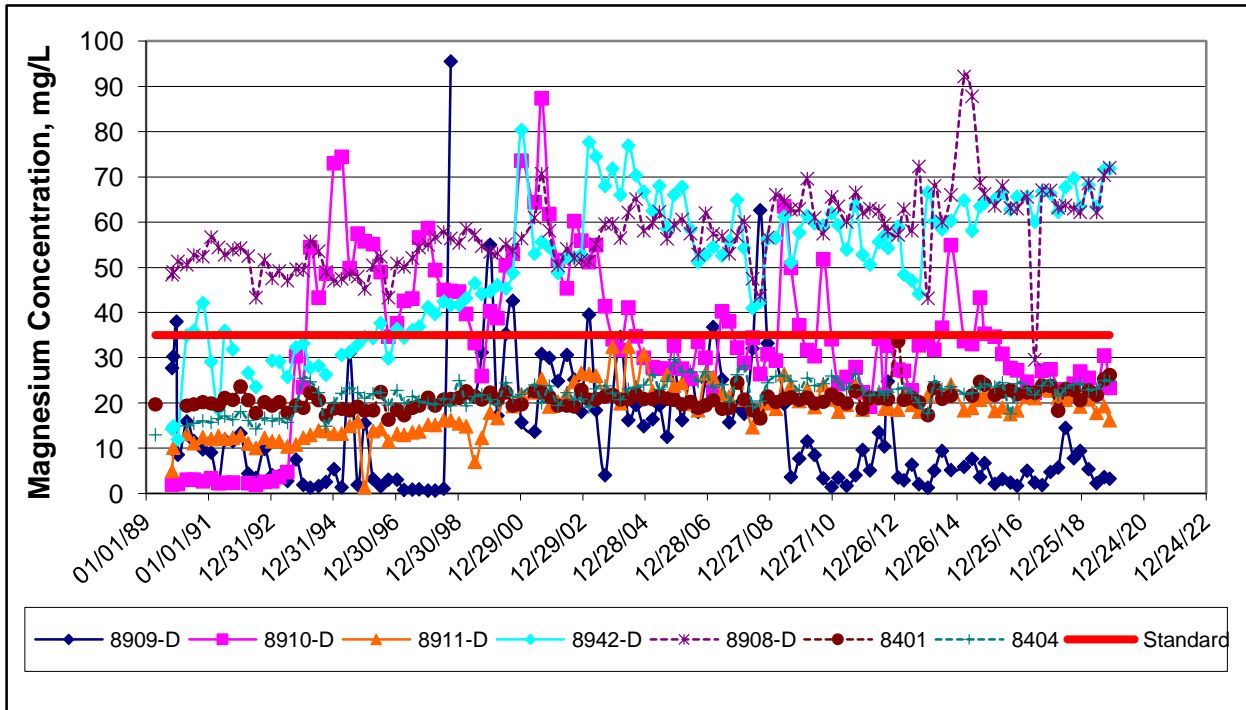


MONITORING WELL TIME-SERIES PLOTS, CONT.
MAGNESIUM

GLACIAL TILL

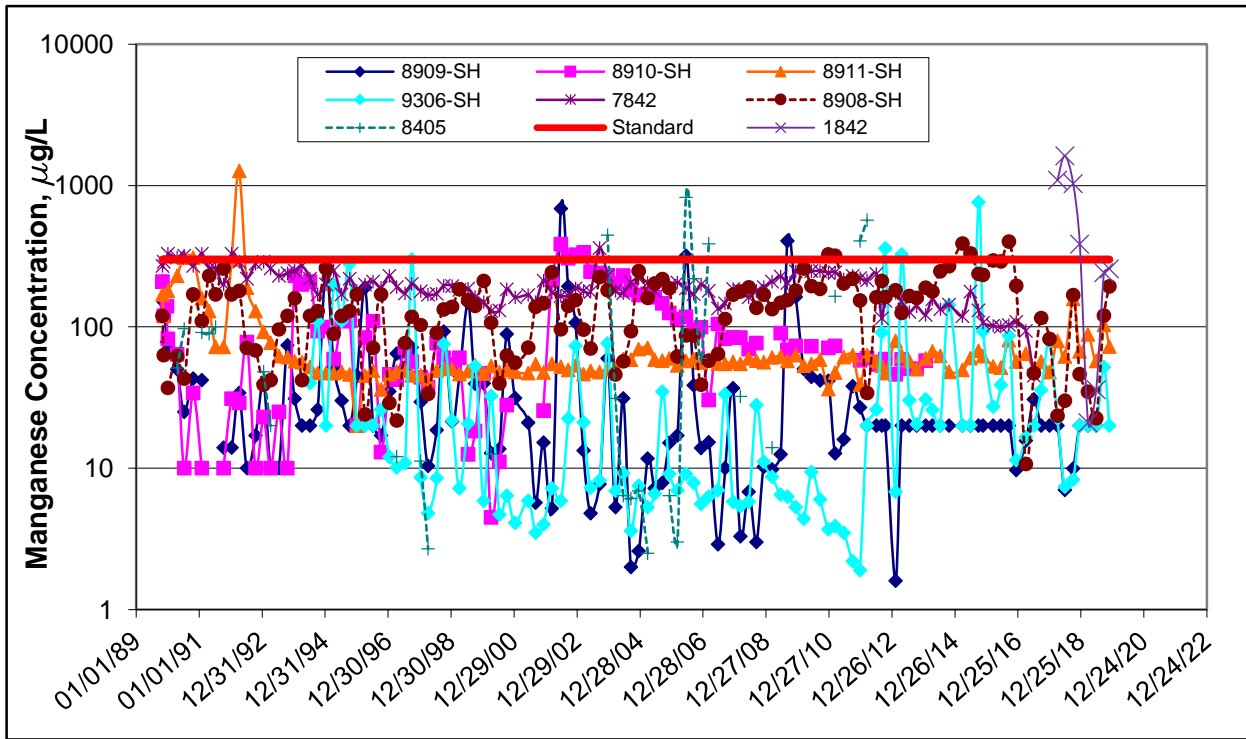


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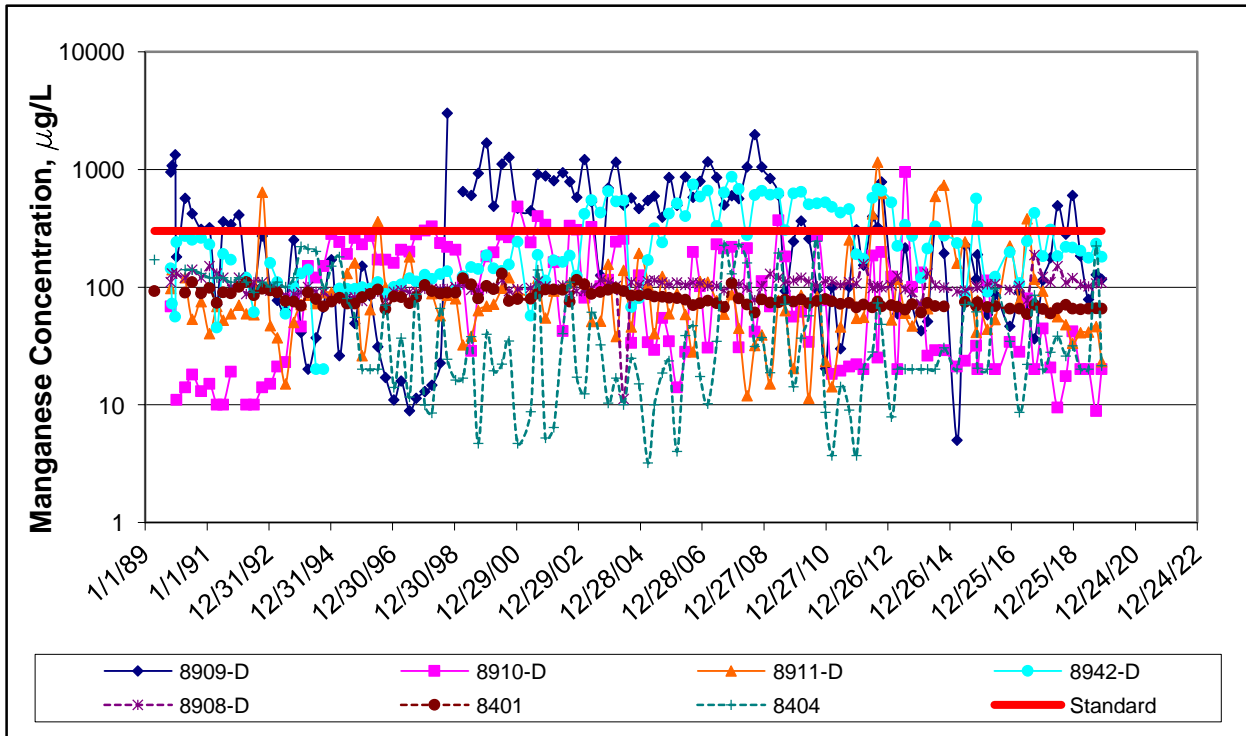


MONITORING WELL TIME-SERIES PLOTS, CONT.
MANGANESE

GLACIAL TILL

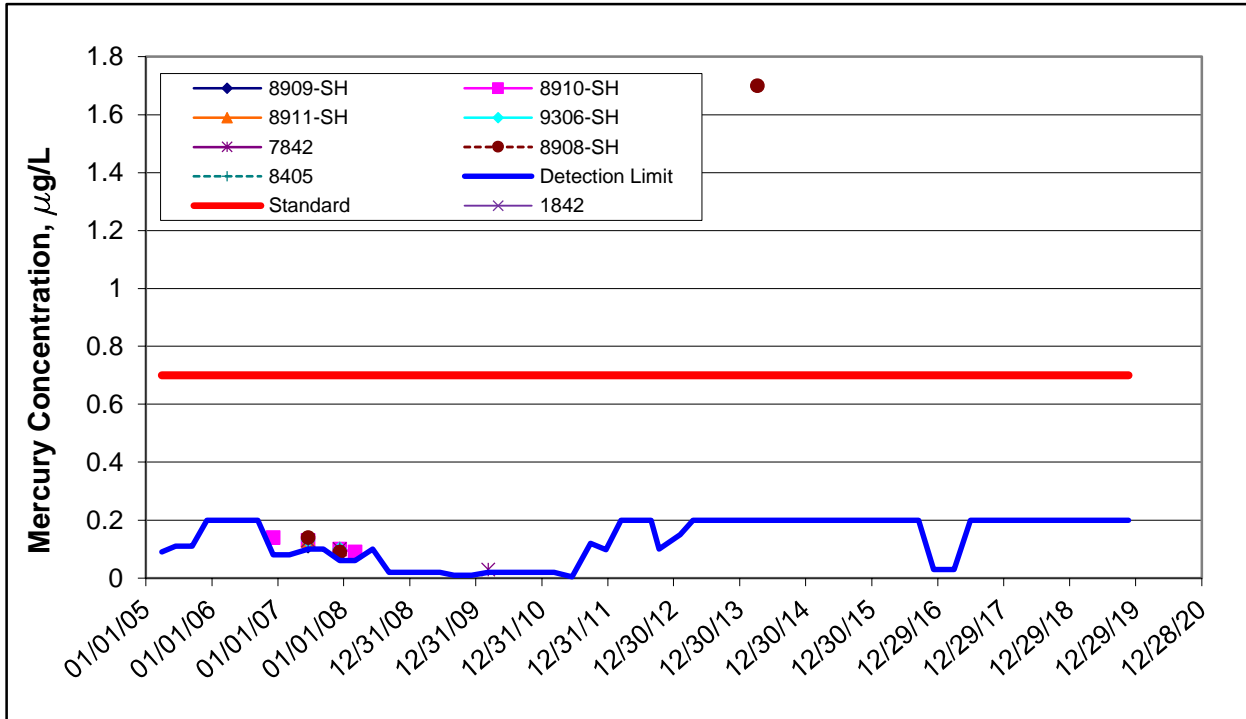


BEDROCK

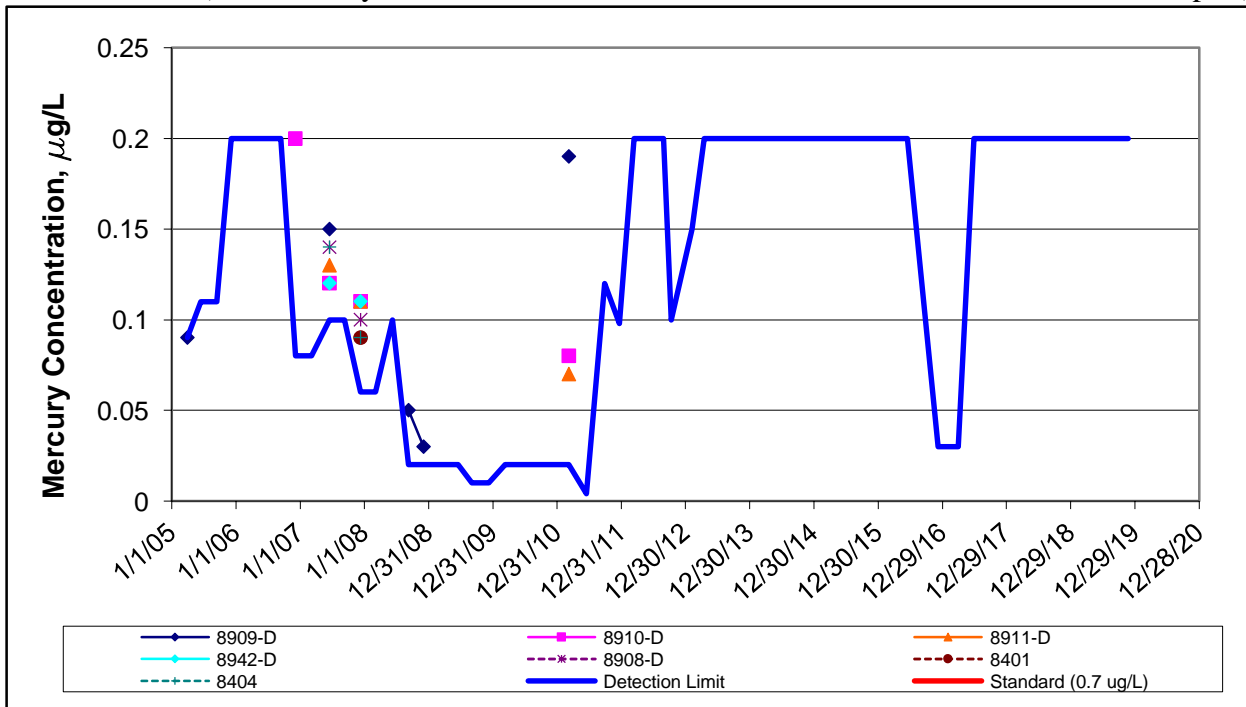


MONITORING WELL TIME-SERIES PLOTS, CONT.
MERCURY

GLACIAL TILL (Note: Only data above detection has been included in this plot)



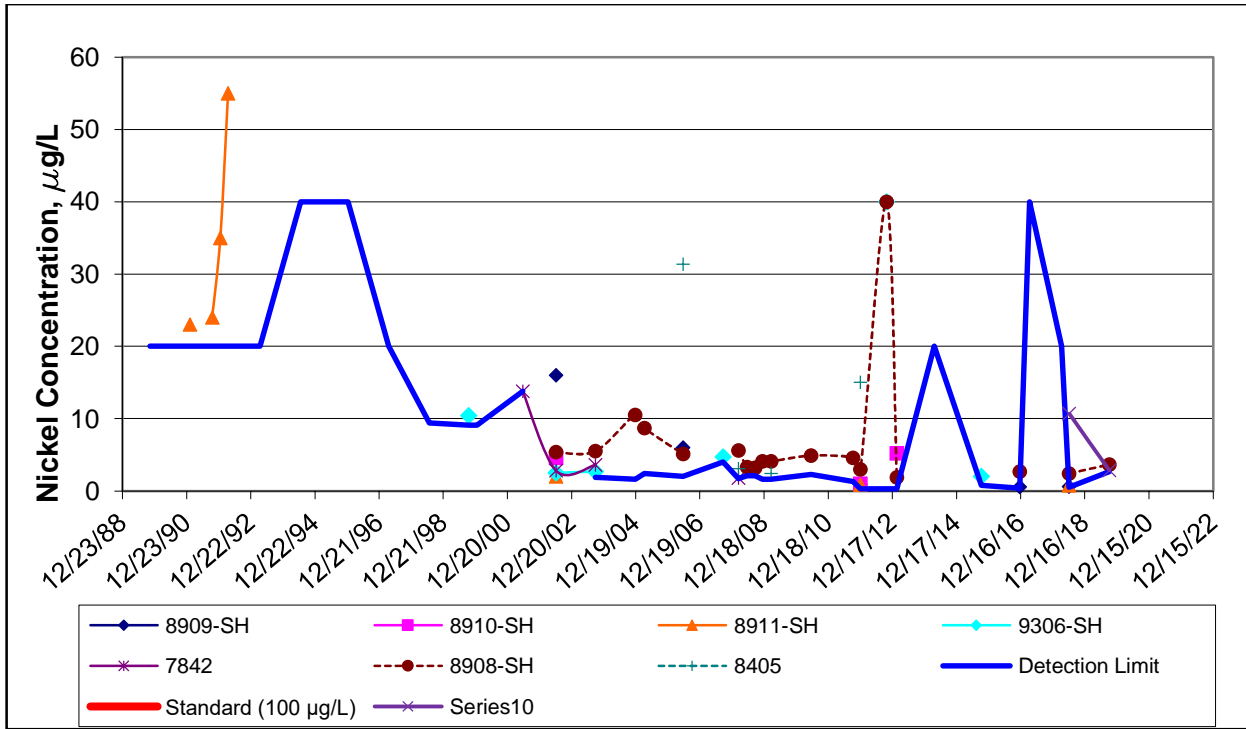
BEDROCK (Note: Only data above detection has been included in this plot)



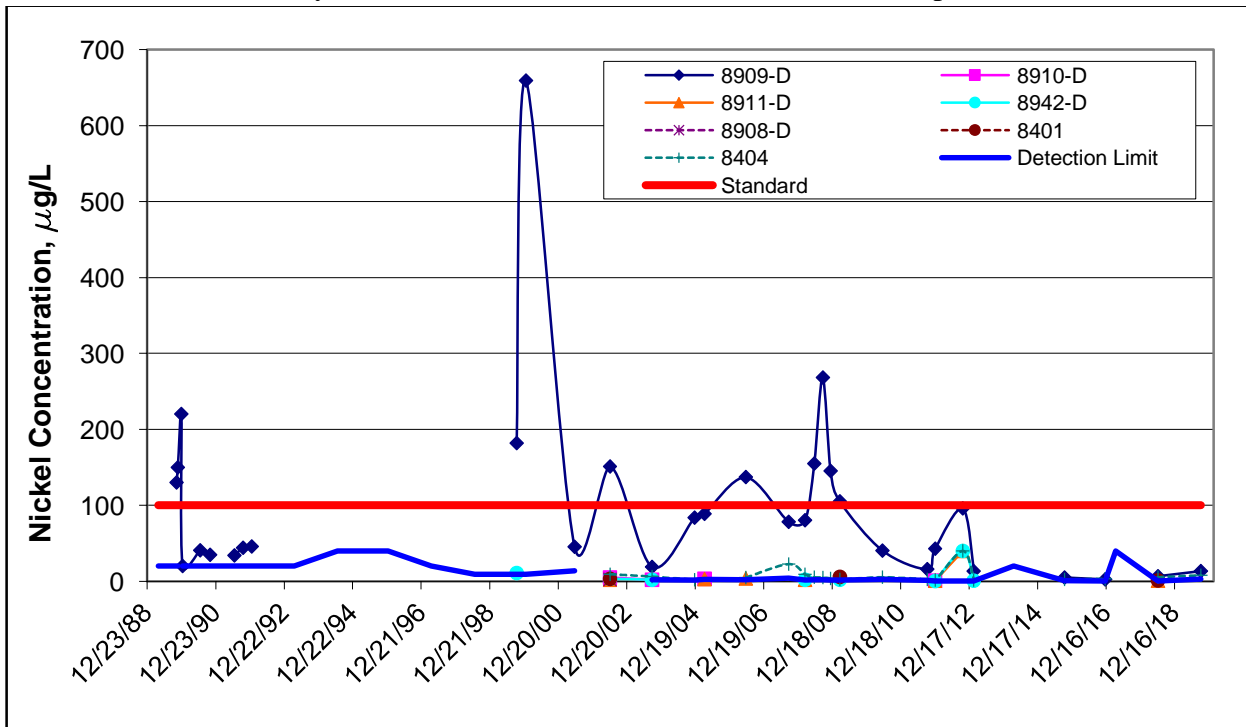
MONITORING WELL TIME-SERIES PLOTS, CONT.

NICKEL

GLACIAL TILL (Note: Only data above detection has been included in this plot)



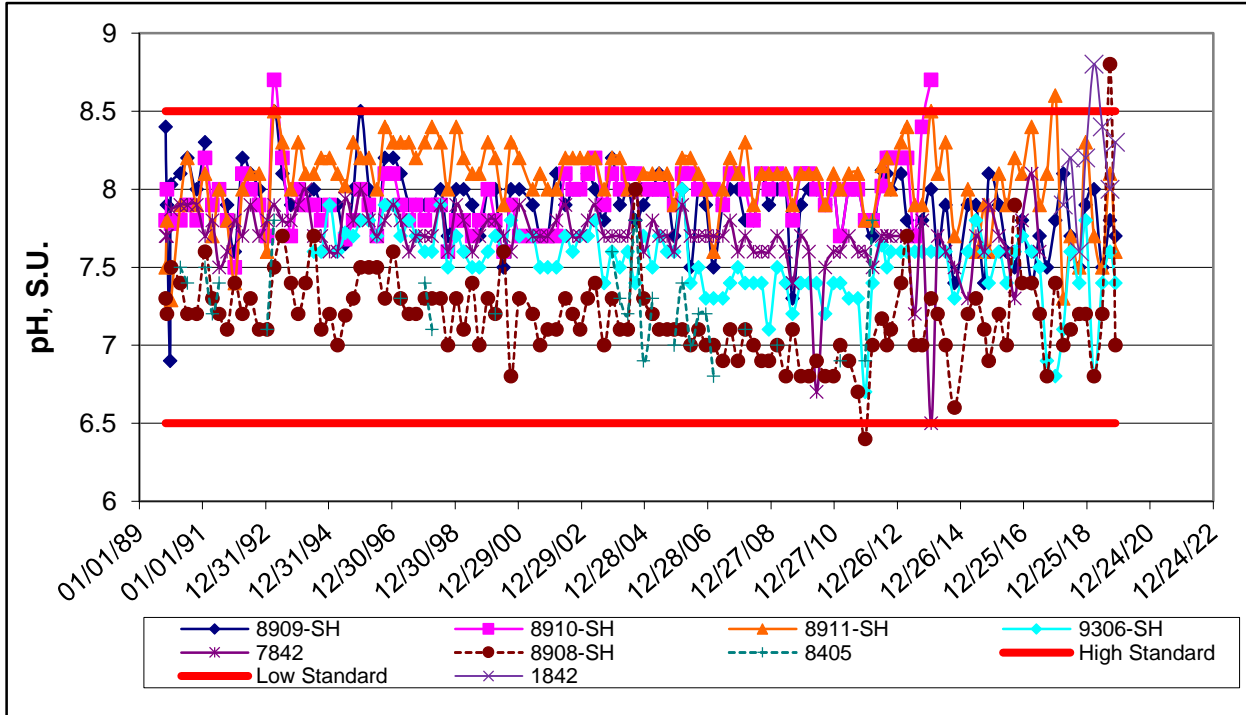
BEDROCK (Note: Only data above detection has been included in this plot)



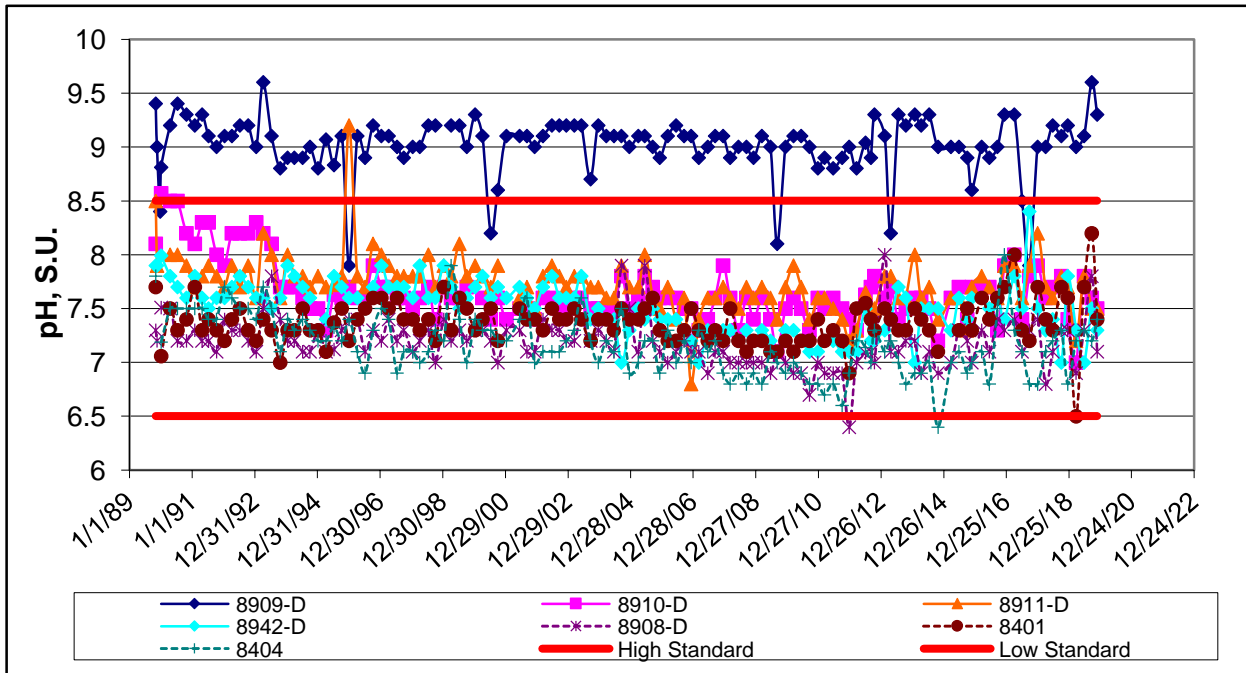
MONITORING WELL TIME-SERIES PLOTS, CONT.

pH

GLACIAL TILL



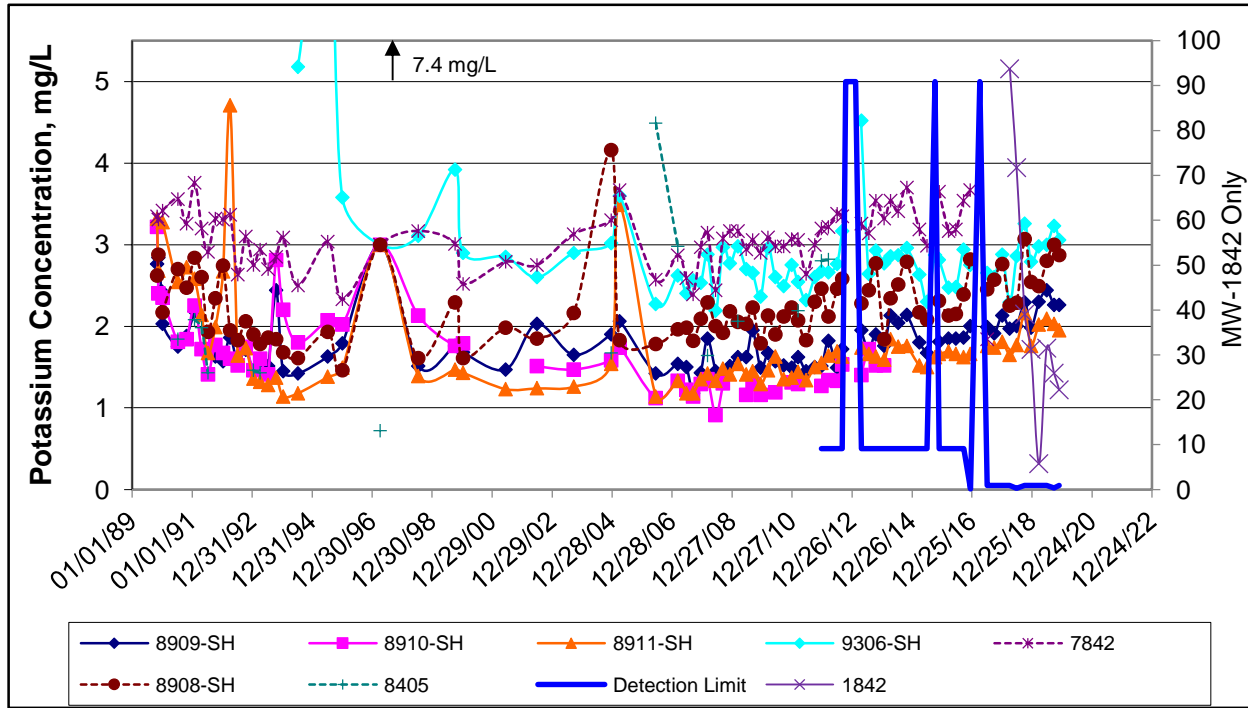
BEDROCK



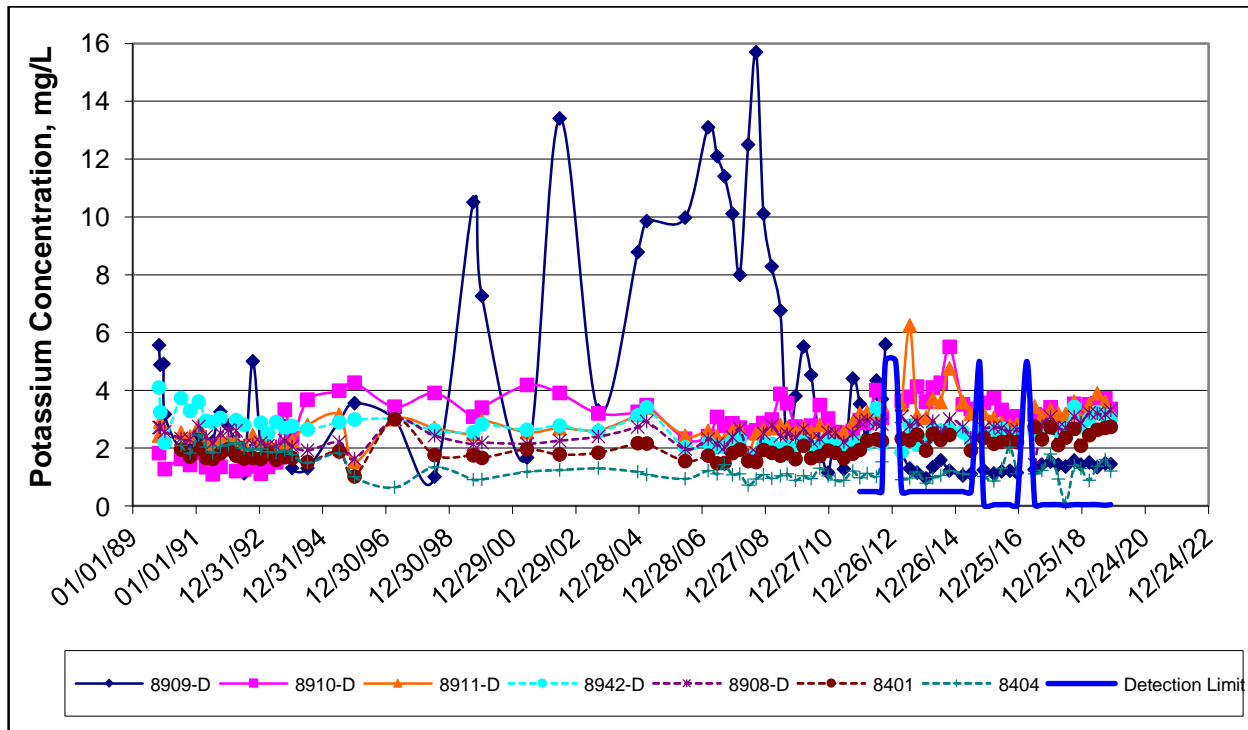
MONITORING WELL TIME-SERIES PLOTS, CONT.

POTASSIUM

GLACIAL TILL

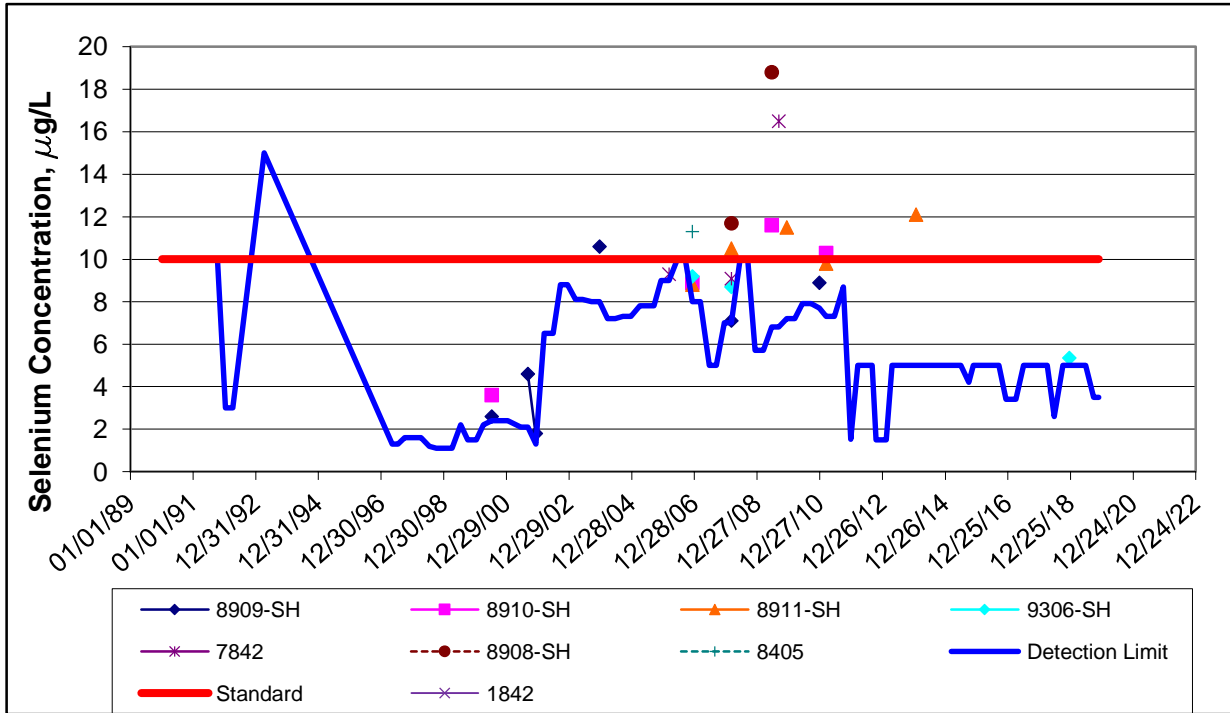


BEDROCK

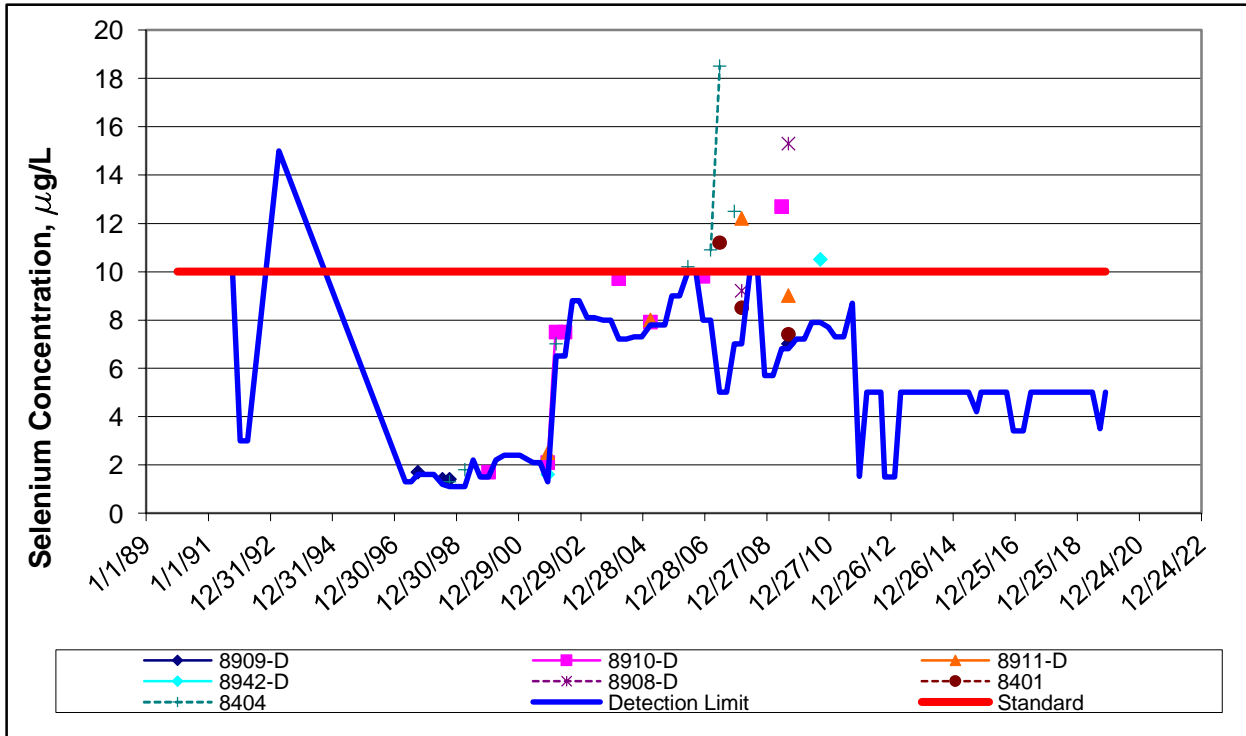


MONITORING WELL TIME-SERIES PLOTS, CONT.
SELENIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



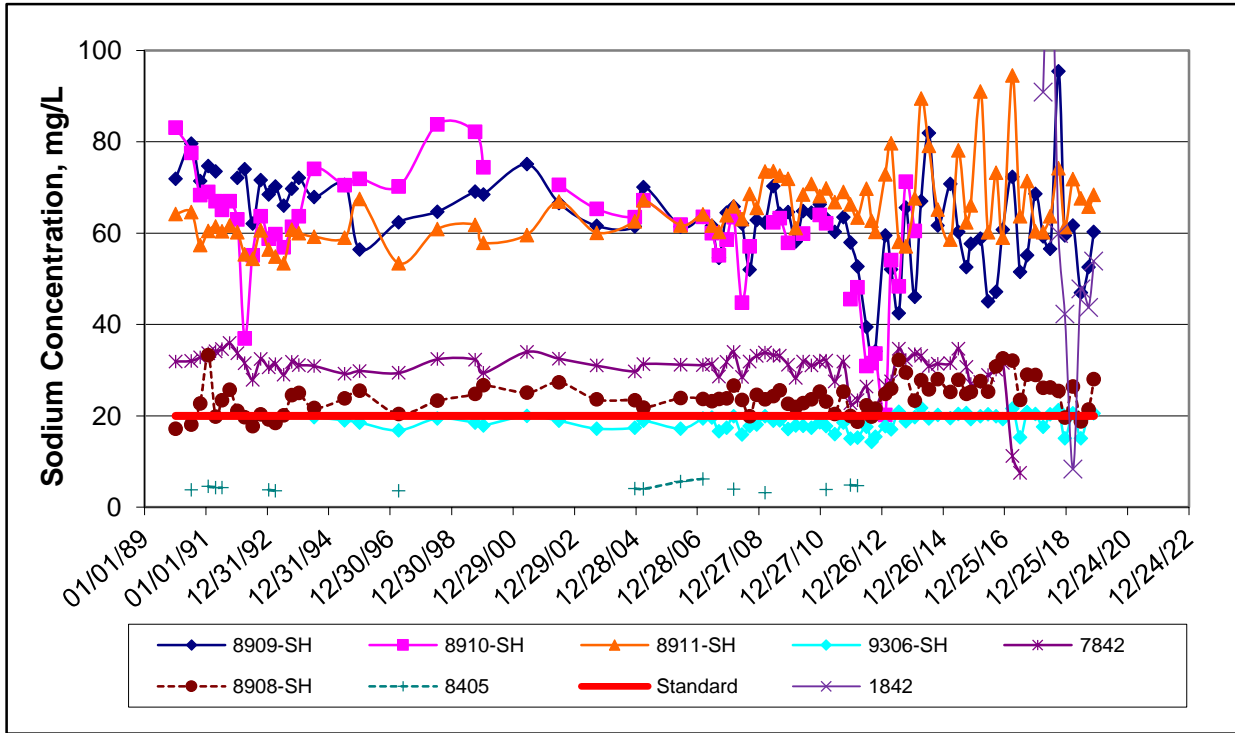
BEDROCK (Note: Only data above detection has been included in this plot)



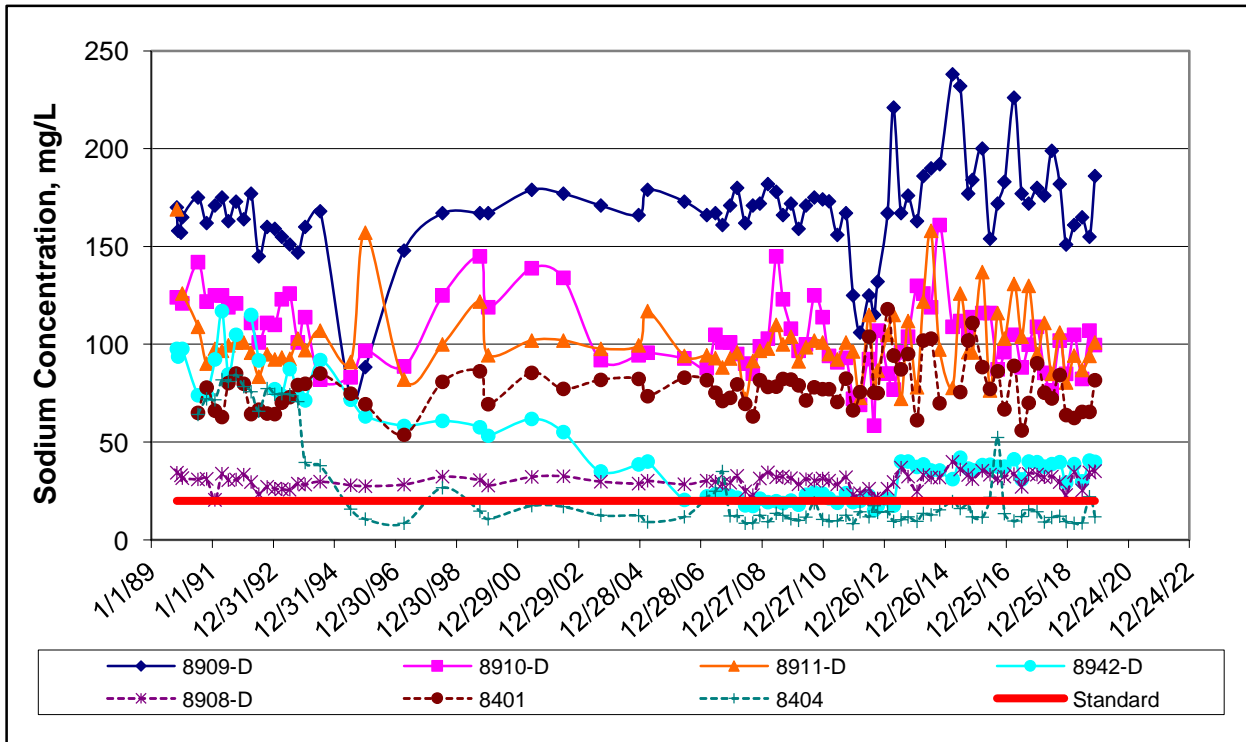
MONITORING WELL TIME-SERIES PLOTS, CONT.

SODIUM

GLACIAL TILL



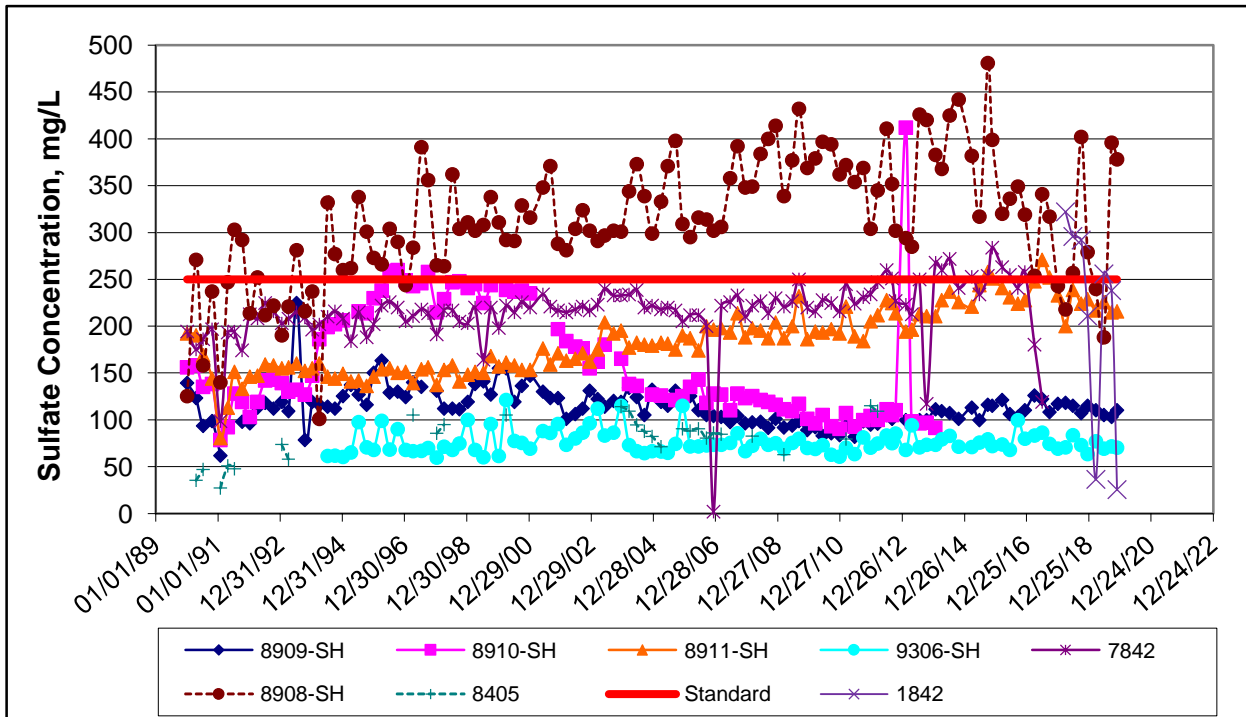
BEDROCK



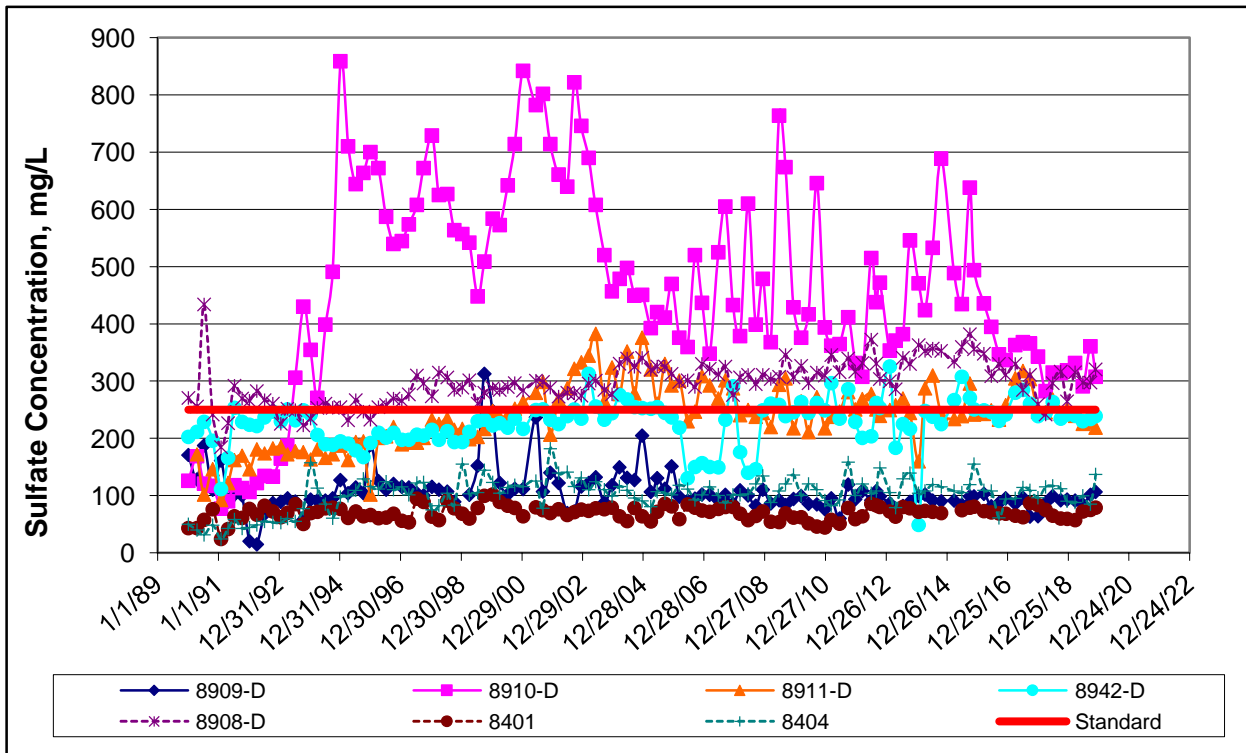
MONITORING WELL TIME-SERIES PLOTS, CONT.

SULFATE

GLACIAL TILL

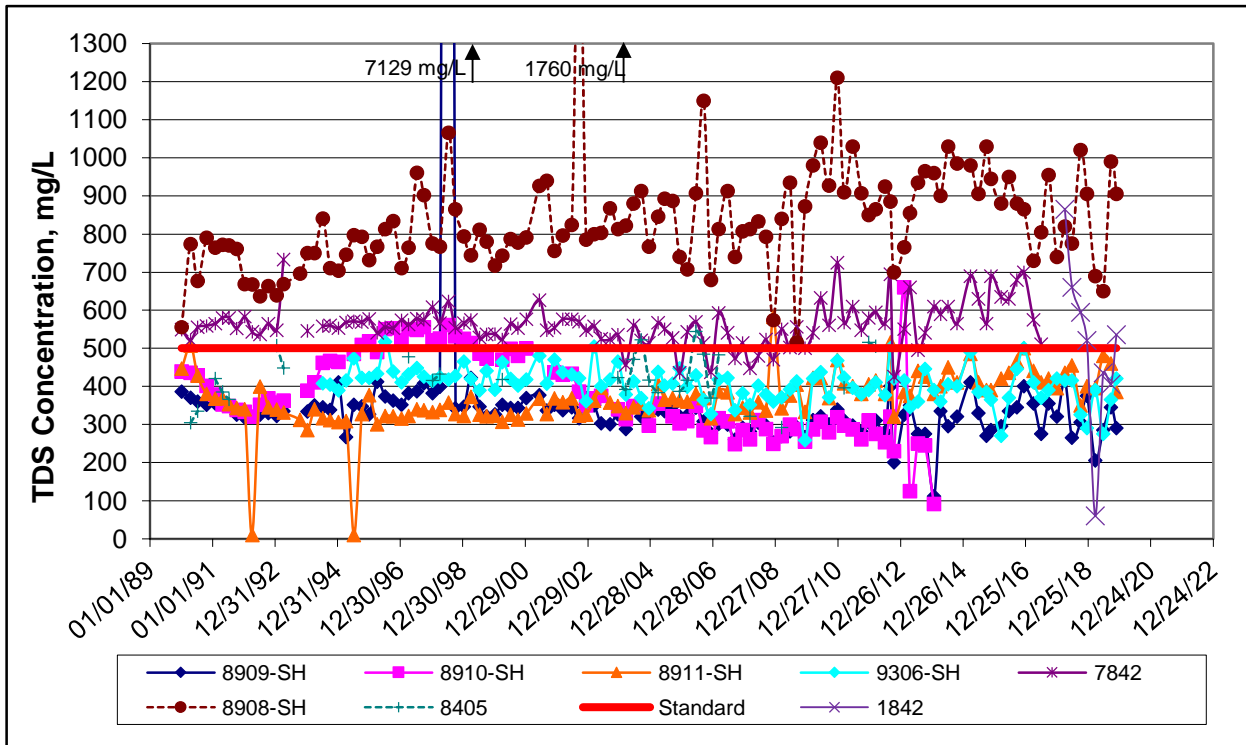


BEDROCK

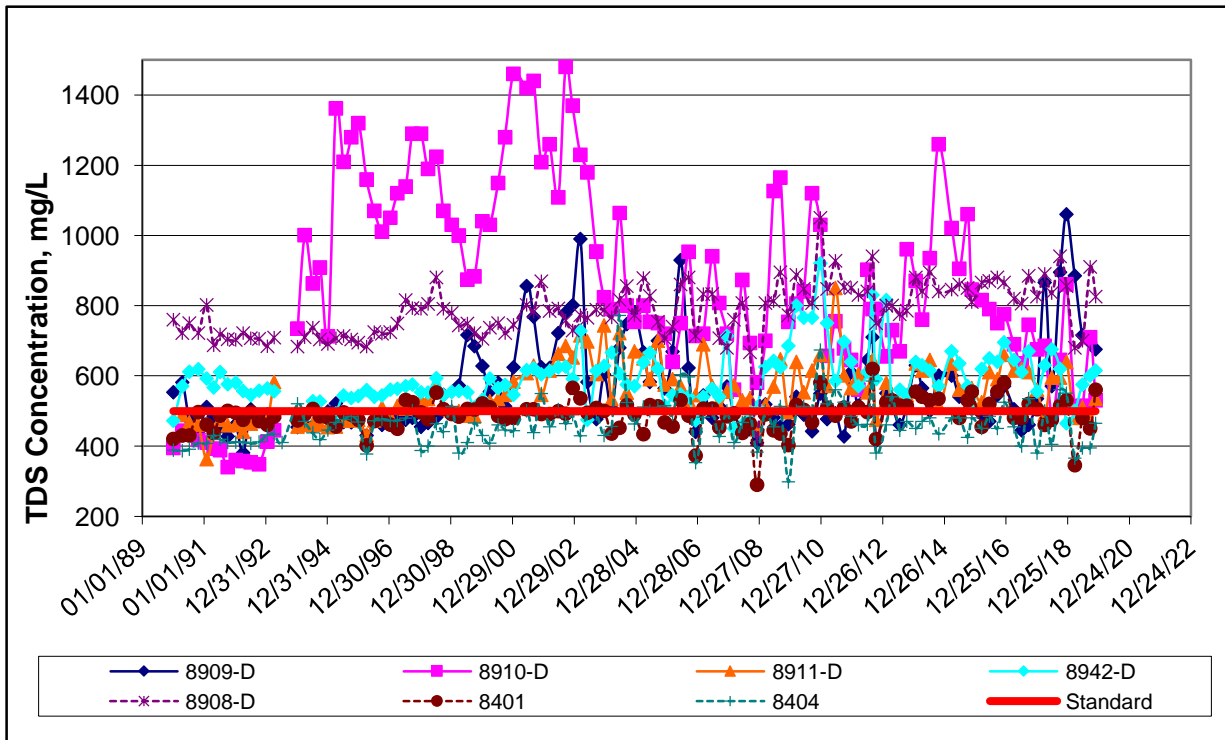


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL DISSOLVED SOLIDS

GLACIAL TILL

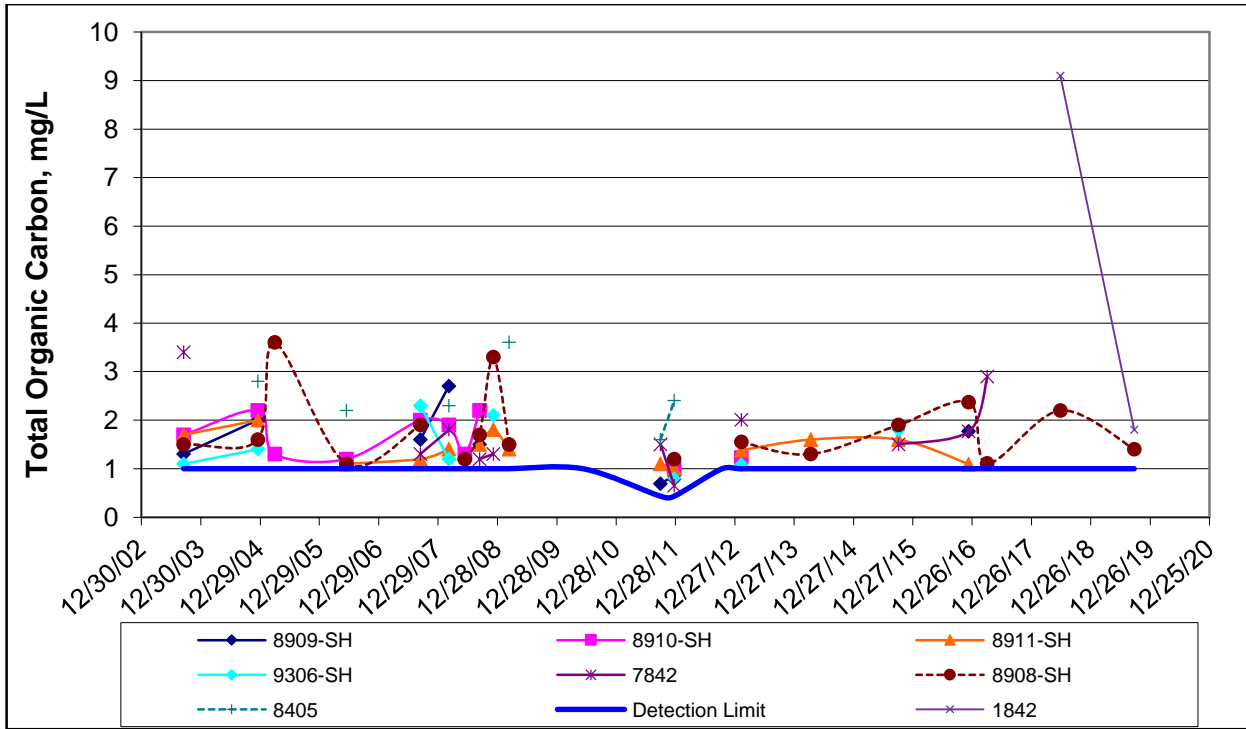


BEDROCK

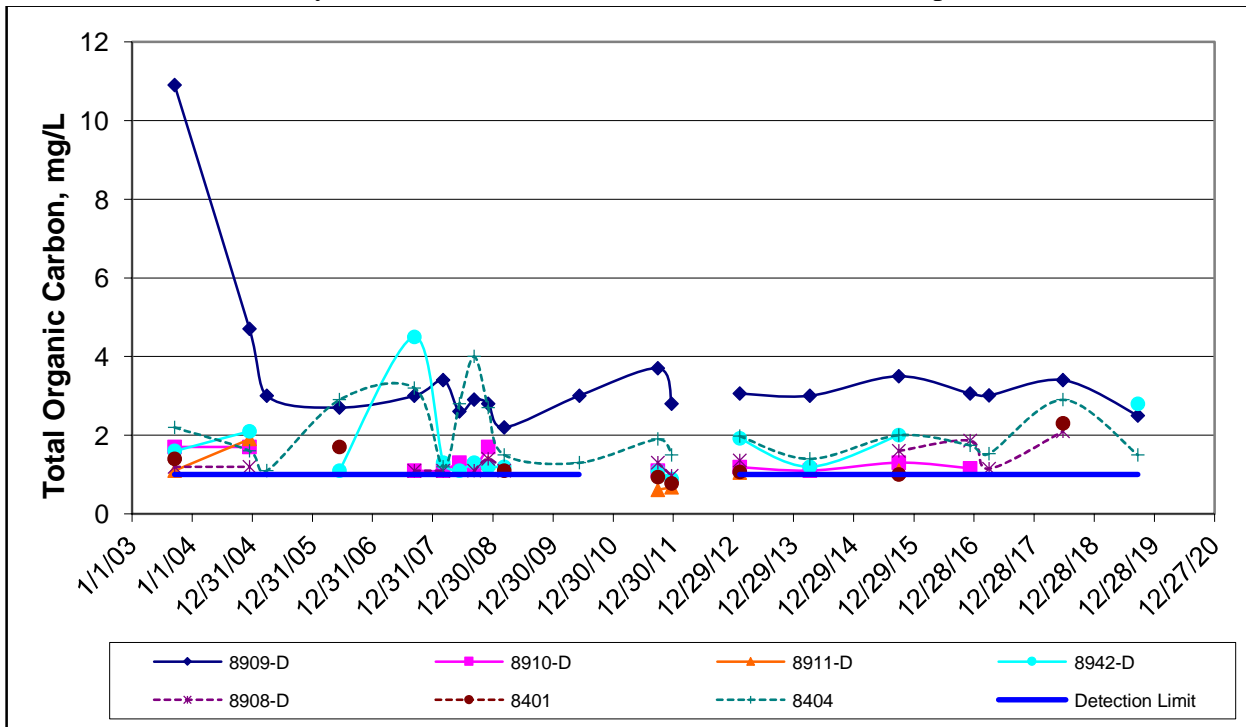


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL ORGANIC CARBON

GLACIAL TILL (Note: Only data above detection has been included in this plot)

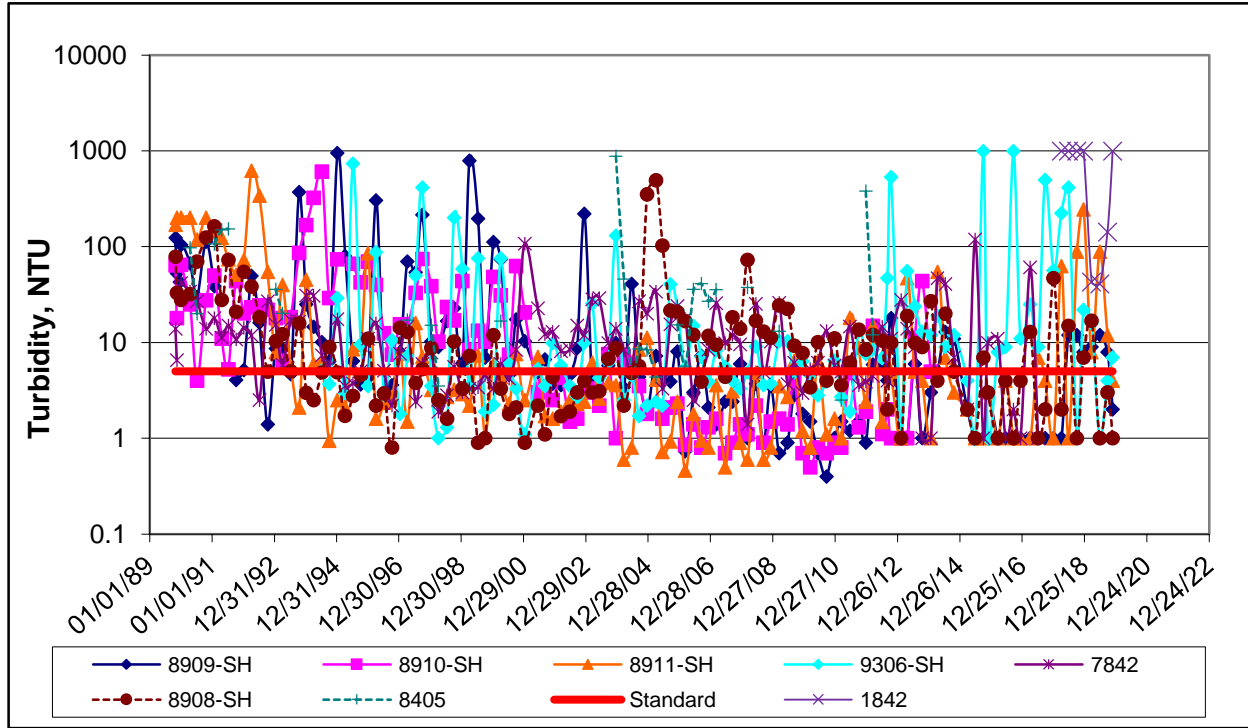


BEDROCK (Note: Only data above detection has been included in this plot)

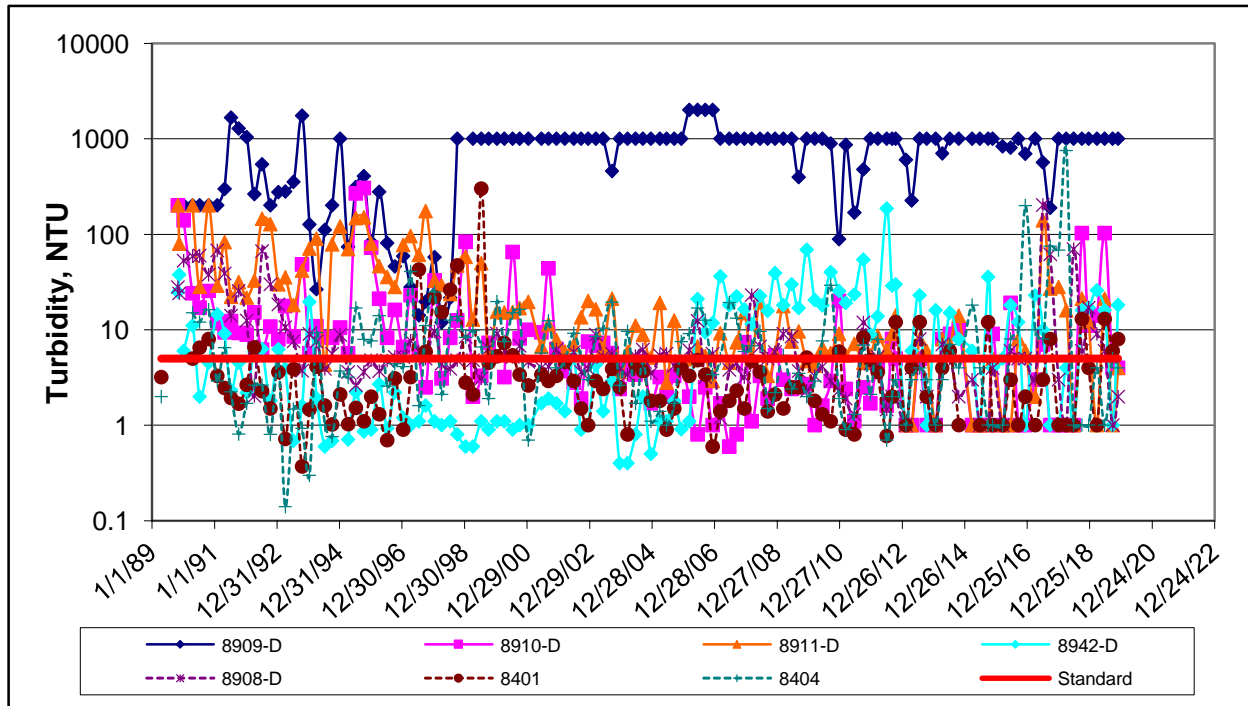


MONITORING WELL TIME-SERIES PLOTS, CONT.
TURBIDITY

GLACIAL TILL



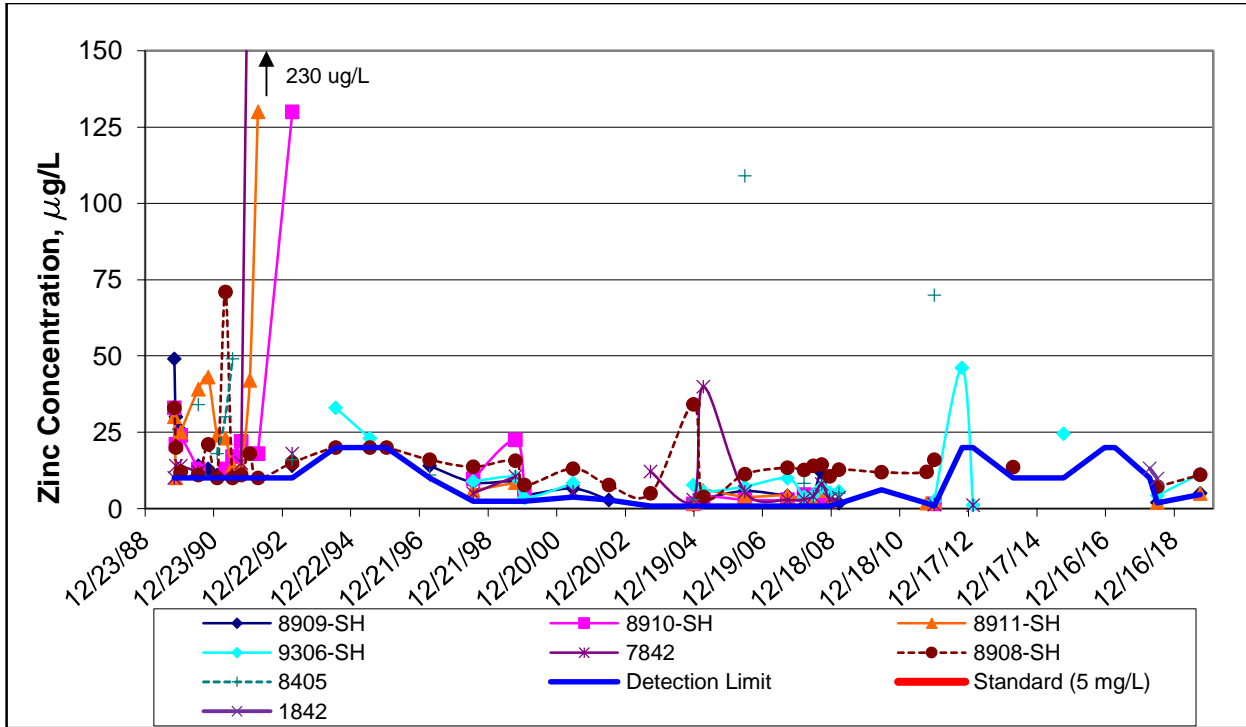
BEDROCK



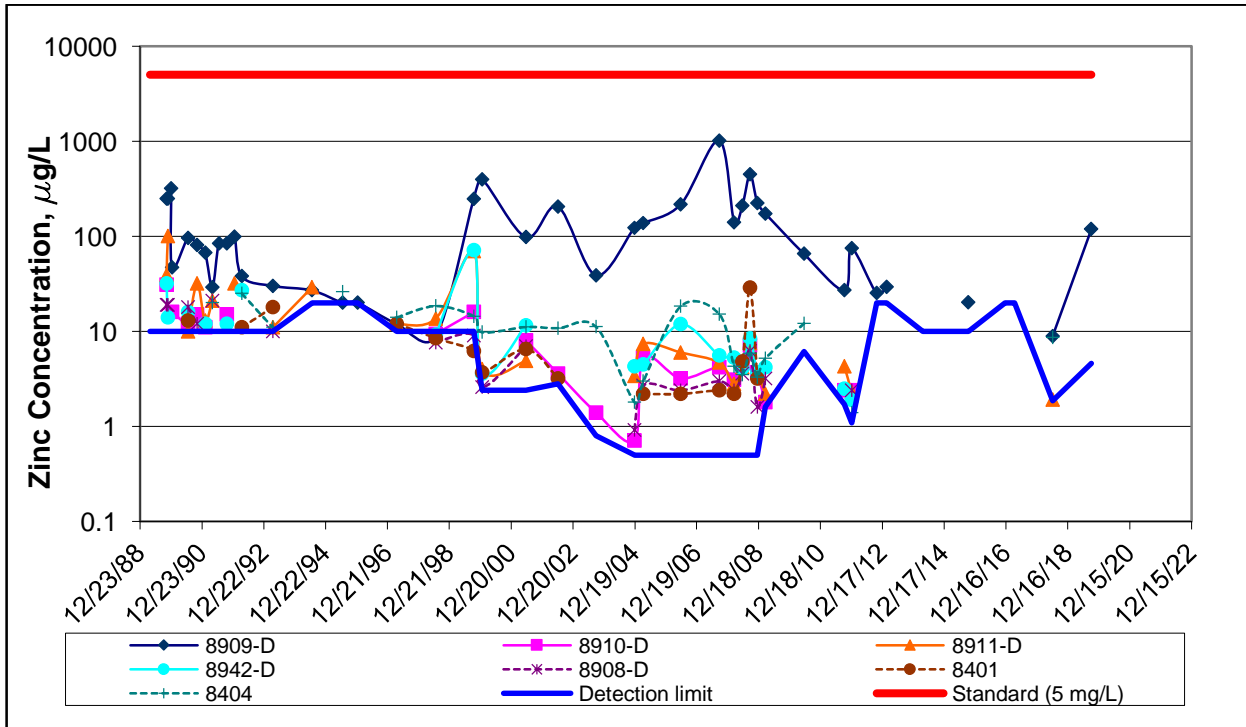
MONITORING WELL TIME-SERIES PLOTS, CONT.

ZINC

GLACIAL TILL



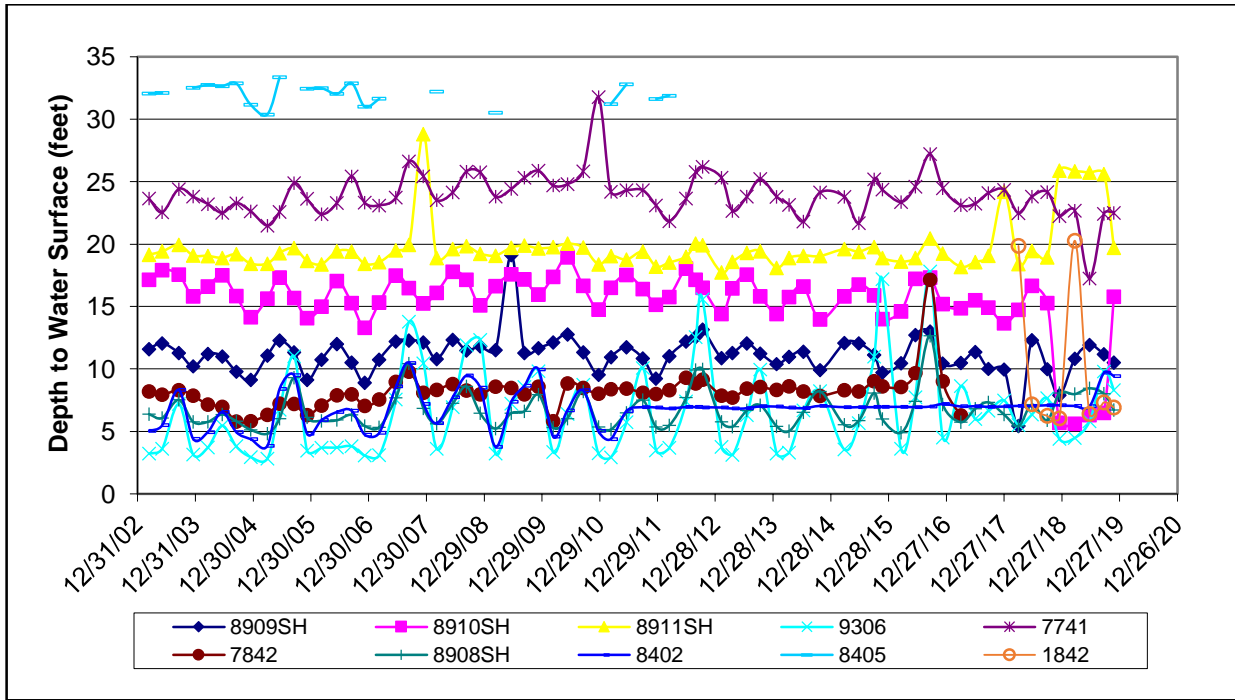
BEDROCK



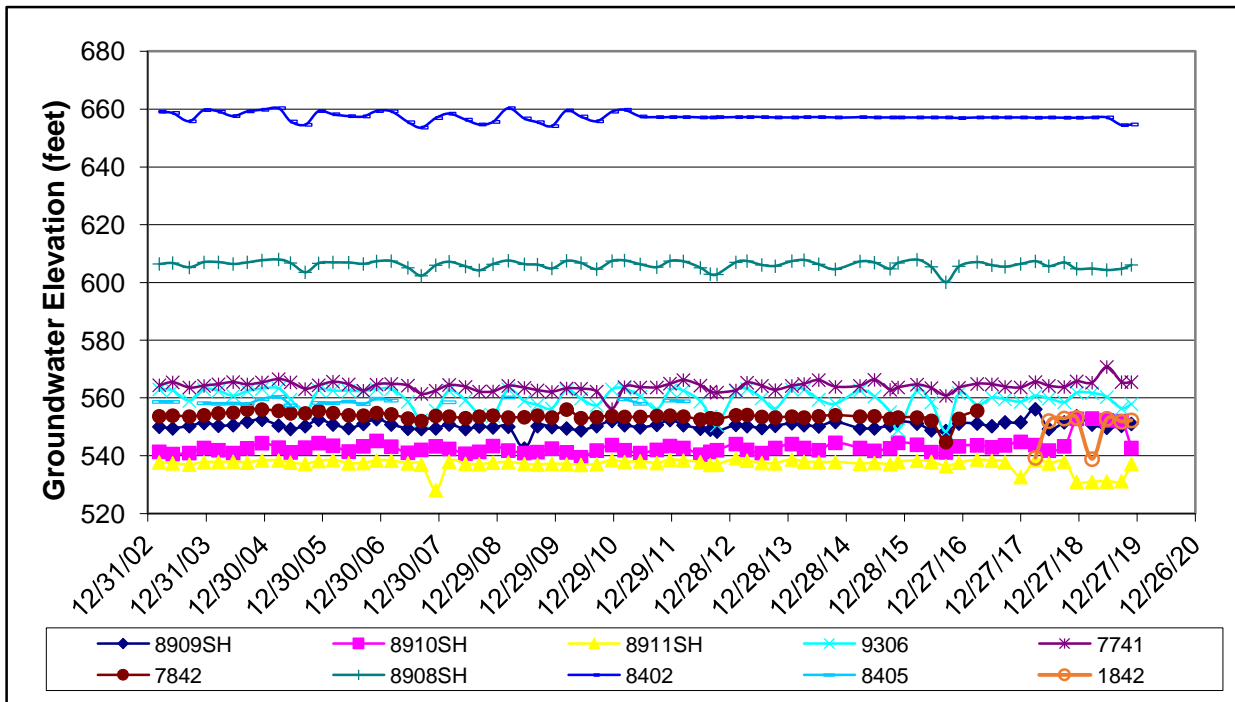
STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS

GLACIAL TILL

DEPTH TO WATER SURFACE



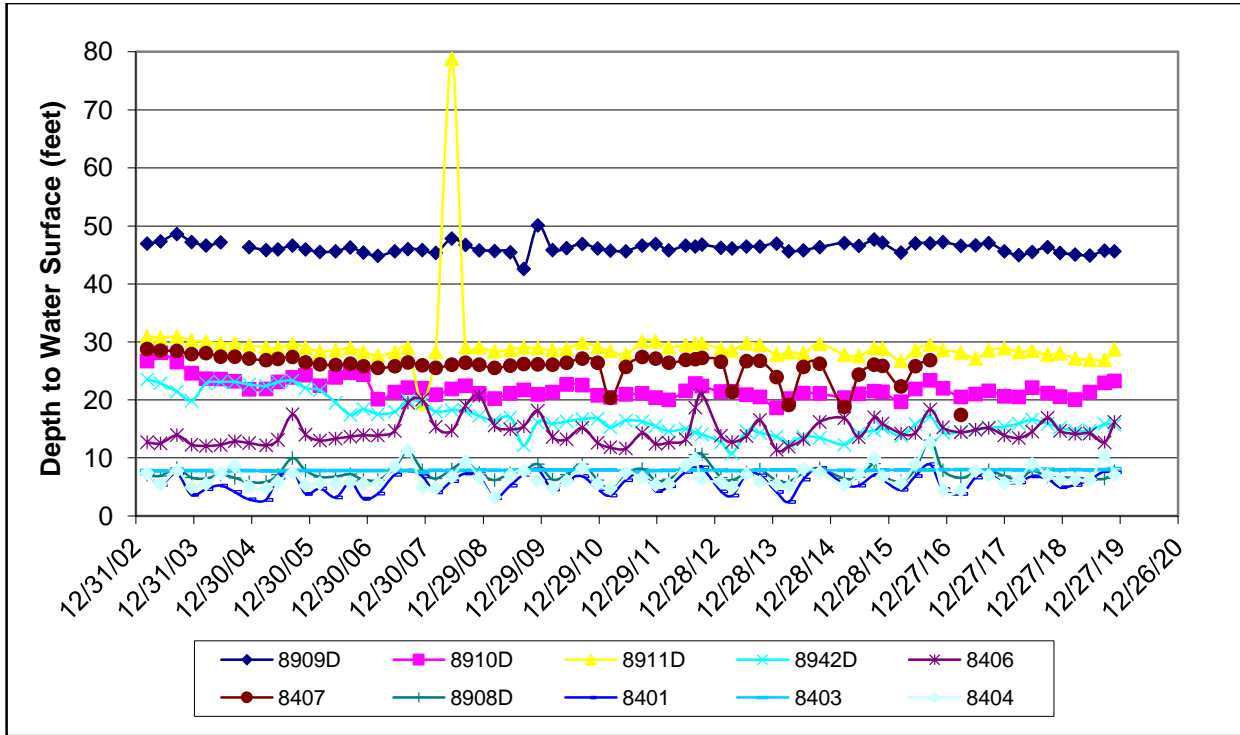
GROUNDWATER ELEVATION



STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS

BEDROCK

DEPTH TO WATER SURFACE



GROUNDWATER ELEVATION

