

2018 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

March 2019

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Attachment 1	NYSDEC 2018 Annual Report Form
Attachment 2	Monthly Inspection Logs
Attachment 3	Leachate Flow Metering Time-Series Plot
Attachment 4	Analytical Results & Water Quality Laboratory Analysis, Usability, and Validation Reports
Attachment 5	Time-Series Plots

1 INTRODUCTION

Lockwood Hills LLC (Lockwood Hills) manages the Lockwood Ash Disposal Site (Lockwood or the Landfill), a primarily coal ash monofill associated with the Greenidge Power Generating Station, an electric generating plant that used to burn coal in the Town of Torrey, Yates County, New York. Lockwood is located on Swarthout Road, across NYS Route 14 from the power plant. 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.

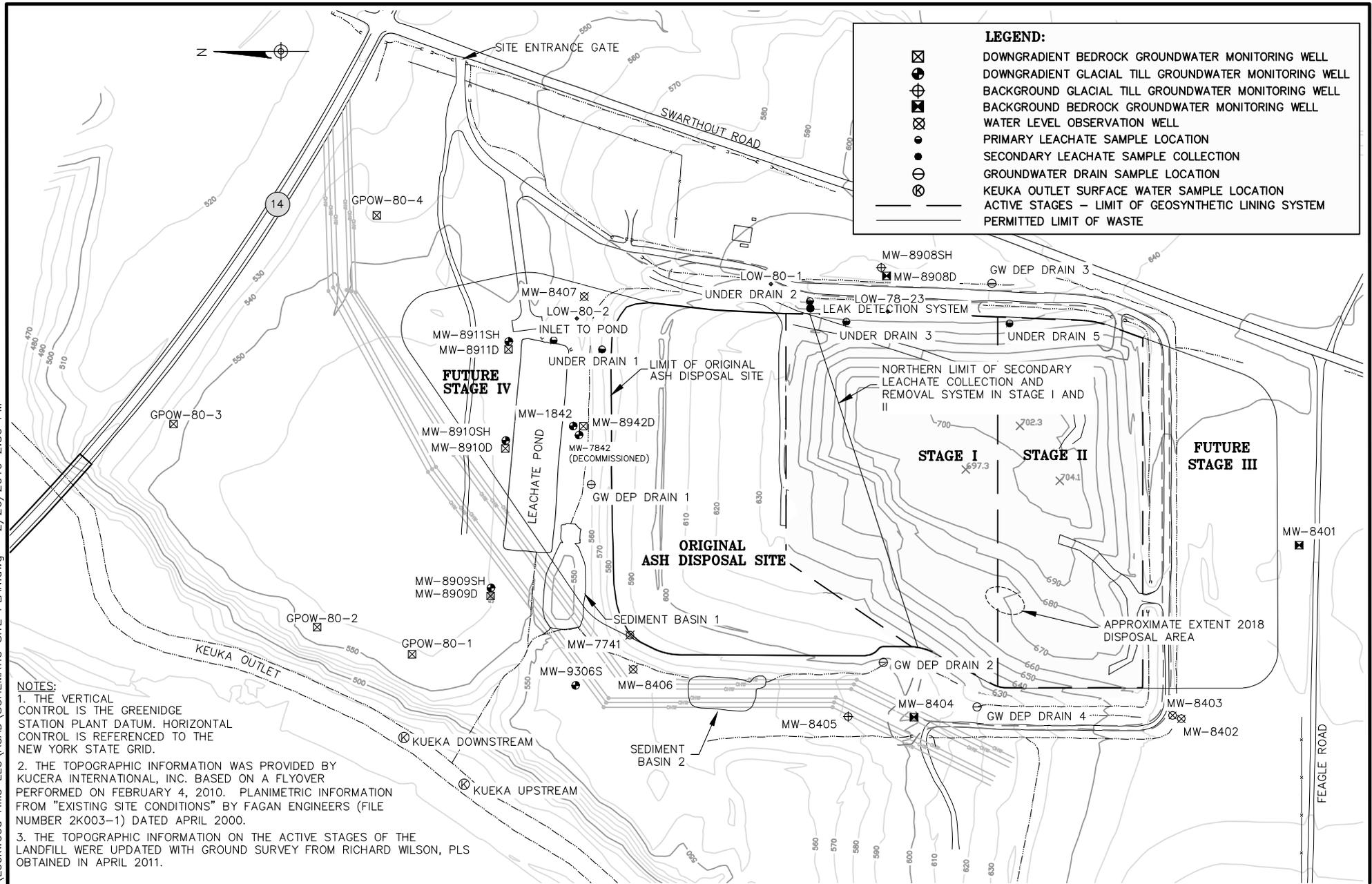
Lockwood Hills agreed to execute a Consent Order (Case No. R8-20140710-47) with the NYSDEC to, in part, segregate stormwater from leachate and treat and dispose of the leachate onsite or at an appropriate offsite facility. The effective date of the Consent Order was February 18, 2015, an amendment to 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 storage and treatment was advanced for anticipated construction in 2019.

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;

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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 WILSON, PLS OBTAINED IN APRIL 2011.



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LOCKWOOD HILLS LLC		SCHEMATIC SITE PLAN LOCKWOOD ASH DISPOSAL SITE			FIGURE 1-1
SCALE: 1"=350'	REVISION # 0				
February 2019		TOWN OF TORREY	YATES COUNTY	NEW YORK	

- 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 2018 NYSDEC Annual Report form has been completed and is included in Attachment 1.

2 OPERATIONS

2.1 GENERAL

According to the monthly site inspection reports, mowing of the landfill slopes occurred during June, July, and August 2018. According to the June monthly inspection report City Hill Construction, Inc. of Penn Yan, New York (City Hill) was contracted to conduct repairs on the sideslope of stormwater channel leading to the newly reconstructed Sediment Basin 2. Vector damage on the landfill side slopes was repaired in July. City Hill returned in August to mow vegetation and remove woody growth from landfill downchutes to reestablish adequate conveyance.

MW-7842 was decommissioned prior to the 2018 first quarter sampling event after unsuccessful repair work occurred in June 2017. This well was replaced with MW-1842, which was installed slightly north and east of MW-7842. The five-foot well screen interval of MW-1842 was set to be consistent with the screened interval of MW-7842, from 16 to 21 feet below ground surface within the glacial till layer. The decommissioning and installation work occurred on January 30th and 31st, 2018 and was detailed in a letter to Greg MacLean of the NYSDEC dated March 2, 2018 titled MW-7842 Replacement. On March 15, 2018 and March 16, 2018, the well was developed in accordance with the specification that was approved by NYSDEC. MW-1842 was sampled and analyzed for each quarter of 2018, the results are discussed in Section 4.5.

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 locations including the Greenidge Station. During the 2018 calendar year, 12 tons or 9 cubic yards of sludge from the Greenidge Station wastewater treatment plant were disposed in the southwest portion of the Landfill at the boundary of Stage I and Stage II in October 2018. Cover soil was stripped from the disposal area in Stage I and II, and stockpiled onsite prior to the wastewater sludge being disposed in the Landfill. The stockpiled cover soil was replaced, graded, and seeded, as such, no available airspace was consumed with the addition of cover soil. Waste quantities were estimated based on truck scale receipt and a historic waste density. No ash waste was disposed in the landfill during 2018.

2.3 ASH DENSITY, CAPACITY, AND SITE LIFE

No field testing of ash density was completed during calendar year 2018. 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 2018. As of December 31, 2018, the remaining airspace is approximately 421,857 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 slightly less than five years.

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.

Leachate from the site is collected and treated in the Leachate Pond, a 130-foot wide, 550-foot long (1.6 acre) basin that can contain up to about 5.5 feet of liquid, with a corresponding capacity of just under 3,000,000 gallons. The Pond has a single, eight-inch diameter leachate inlet pipe on the east bank, and an outlet structure on the west bank.

A time-series plot illustrating daily maximum, minimum, and average flow rates between July 1, 2016, when the leachate flow monitoring system was brought online, through December 31, 2018 is presented in Attachment 3. 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 to be bias high.

The recorded daily average flow rates increased in 2018 compared to 2017 in general. The average daily leachate flow rate for 2018 was 17.6 gallons per minute (± 3.0 std. dev.; $n = 365$ days) with a daily maximum and daily minimum of 155.9 and 6.2 gallons per minute, respectively. A total of 9.2 million gallons of leachate was discharged to the Leachate Pond during 2018 based on the recorded flow meter readings.

All leachate is held within the Pond until the water surface reaches approximately 2.0 feet below the spillway. 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 2018, beginning on February 28th, May 17th, September 5th, and December 12th. Documentation of the Pond Discharge events are included with their respective months in Attachment 2. The February and May events both lasted 14 days. The September event lasted 13 days and the December event lasted nine days. Each event released approximately the same volume of treated leachate.

The primary leachate values 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.

JAMKO Technical Solutions, Inc. of Lyons, New York, was hired to perform the annual primary leachate pipe cleaning which was completed in September 2018. JAMKO reported that Cleanout C/O – 16 could not be located at the time. The remaining Stage I and II and overflow liner collection

lines were reported as being flushed. The daily line cleaning record and proof of payment to JAMKO can be found in Attachment 2 with the Monthly Site Inspection Form for September.

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 rate computed in this fashion during the first, second, third and fourth quarter of this year was 7.2, 4.8, 1.8, and 2.6 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 all of 2018 except for the month of October. 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 quarterly LDS flow measurement taken on September 26 was used for the month of October. The resulting volume of secondary leachate for 2018 is approximately 19,033 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 percent;
- 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 five percent 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 three percent 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 2019 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 \$2,903,435 in 2019 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 three percent inflation rate on all of the post-closure costs and a five percent annual interest rate on allocated funds. The required funding to account for the full 30-year post-closure period was calculated as \$1,793,211 in 2019 dollars. The initial costs for each post-closure item in 2019 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 2018
Environmental Monitoring	\$68,690
Leachate Management	\$18,294
Repair and Maintenance	\$8,698
Monthly Inspections	\$7,125
TOTAL	\$102,807

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. According to recent information provided by ADK via email on January 23, 2018, the annual cost of sampling and laboratory work is approximately \$45,888 after adjusting to 2019 dollars using RSMMeans historical cost indexes. Data validation and quarterly environmental reporting are currently provided by DE for approximately \$22,802. The total annual cost for environmental monitoring is therefore \$68,690 in 2019. 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 placeholder cost for leachate management used in the past was replaced this year with a more accurate estimate based on the proposed leachate management system which is currently under review by the NYSDEC. Initial feedback has been positive, and no major changes are expected. The estimate includes SPDES permit reporting, field services and laboratory analytical costs for batch discharge events, onsite personnel costs, an annualized cost for occasional settling 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 \$18,294 in 2019 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.

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 leachate pond, for verification of proper performance and to prepare and file a site inspection log. Labor is valued at 2019 Daigler Engineering, PC 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 \$594 per month, or \$7,125 per year in 2019 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 \$4,696,646 in 2019 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. A copy of the Letter of Credit is included in Attachment 1. The available credit is equal to 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 2018, 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 second quarter in 2018. This baseline event was third-party validated as required by the Lockwood EMP, Section 3.3.8. Routine sampling was performed during the first, third, 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 second 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 December 12th and 13th, 2018. 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 result for sulfate in MW-9306SH was flagged by the laboratory for a matrix spike percent recovery being below the acceptable range. The affected sulfate data should be considered estimated as bias low. 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,
- Leachate 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. Less frequent and/or less widespread exceedances of the arsenic, selenium, and chloride standards were observed during nearly every quarter. The only unique excursion from the standards observed during 2018 is that of pH in Under Drain 3 in the fourth quarter. However, occasional values of pH below the lower limit of the standard are not unusual at this location. Under Drain 5 was not able to be sampled again in 2018 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. The fourth quarter of 2018 represents the 10th data point from the new Inlet to Pond sampling location. Therefore, the minimum number of data points have been collected to make intra-location statistics robust enough to exclude the historic dataset. Data for this location will no longer be compared to the historic 21” Inlet to Pond data. Comparisons will instead be limited to the data collected after the changes to the leachate sewer were made from this point forward.

Upon review of the time-series plots for the leachate data a few observations can be made. Generally, a relatively small number of intra-location minima and maxima were observed during 2018 as discussed below. For the first quarter of 2018 intra-location minima were observed in

Under Drain 1 for calcium and potassium, and in Under Drain 2 for iron and hardness. During the second quarter an intra-location minimum was observed in the Inlet to Pond for pH. Intra-location maximum values were observed in Under Drain 2 for calcium and chloride, and in Under Drain 3 for magnesium for the second quarter. For the third quarter intra-location maximum values were observed in Under Drain 2 for boron and potassium, and in Under Drain 3 for sodium.

For the fourth quarter of 2018 intra-location maximum values were observed in Under Drain 2 for chloride and potassium. Potassium was at an intra-location maximum value for the second straight quarter. Intra-location maximum and minimum values were also observed in Under Drain 1 for selenium and chloride, respectively. An intra-location maximum value for turbidity and selenium, and an intra-location minimum value for sulfate were observed for the Inlet to Pond during the fourth quarter.

Table 4-2
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2018 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (3/28-29/2018)

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		175	202		194	
Total Dissolved Solids, TDS	500 mg/L	2,190	1,440	3,060	3,840	2,560	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L					25	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L		1,620	16,400	19,400	15,900	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			312,000	629,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		2,300	1,250	346	4,720	
Magnesium, Mg	(35,000 ug/L)	64,800			71,000	58,100	
Manganese, Mn	300 ug/L			365	308	452	
Fe + Mn	500 ug/L		2,595	1,615	654	5,172	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L		12	12	17	35	
Sodium, Na	20,000 ug/L	42,400	31,500	168,000	222,000	141,000	
Sulfate, SO ₄	250,000 ug/L	1,160,000	454,000	1,520,000	1,650,000	1,160,000	
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
 2018 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (6/20-21/2018)

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	37			26	
Total Dissolved Solids, TDS	500 mg/L		1,410	3,380	4,220	2,560	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		45.2			32	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	6,010	3,730	46,100	26,100	20,500	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			350,000	784,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		5,060	2,160		3,520	
Magnesium, Mg	(35,000 ug/L)	173,000	77,800	91,900	117,000	88,400	
Manganese, Mn	300 ug/L		750	1,040	419	638	
Fe + Mn	500 ug/L		5,810	3,200	664	4,158	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L			16		29	
Sodium, Na	20,000 ug/L	94,700	42,000	221,000	259,000	187,000	
Sulfate, SO ₄	250,000 ug/L	1,480,000	499,000	1,720,000	1,710,000	1,280,000	
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 4-4
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2018 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (9/26/2018)

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		248			22	
Total Dissolved Solids, TDS	500 mg/L	2,520	1,280	3,550	4,050	2,730	
Ammonia, NH ₃	2,000 ug/L			2200			
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L						
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	10,800	4,540	51,300	38,400	27,600	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			335,000	554,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L	312	1,910	2,740		1,760	
Magnesium, Mg	(35,000 ug/L)	167,000	76,100	84,200	116,000	81,900	
Manganese, Mn	300 ug/L		788	1,320	361	717	
Fe + Mn	500 ug/L	577	2,698	4,060	569	2,477	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L		20	17	19	16	
Sodium, Na	20,000 ug/L	143,000	43,700	250,000	357,000	292,000	
Sulfate, SO ₄	250,000 ug/L	1,410,000	448,000	1,650,000	1,750,000	1,270,000	
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 4-5
 LOCKWOOD ASH DISPOSAL SITE
 LEACHATE QUALITY SUMMARY
 2018 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (12/12-13/2018)

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				6.3		
Turbidity	< 5 NTU						
Total Dissolved Solids, TDS	500 mg/L	2,210	1,380	3,320	3,960	2,550	
Ammonia, NH ₃	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		38.1				
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	1,010	3,640	33,100	15,800	16,700	
Cadmium, Cd	5 ug/L						
Chloride, Cl ₂	250,000 ug/L			359,000	659,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		4,060	1,630		2,090	
Magnesium, Mg	(35,000 ug/L)	137,000	67,300	67,600	75,100	67,500	
Manganese, Mn	300 ug/L		689	895	446	520	
Fe + Mn	500 ug/L		4,749	2,525	627	2,610	
Mercury, Hg	0.7 ug/L						
Nickel*, Ni	100 ug/L						
Selenium, Se	10 ug/L		37			42	
Sodium, Na	20,000 ug/L	64,200	29,300	159,000	160,000	136,000	
Sulfate, SO ₄	250,000 ug/L	1,000,000	417,000	1,470,000	1,580,000	1,100,000	
Zinc*, Zn	(5,000 ug/L)						

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

** Reported as dry this quarter.

The intra-location maximum values for chloride and potassium coincided with continued upward trends observed in Under Drain 2 during 2018. The intra-location maximum value for sodium in Under Drain 3 also corresponded with an observed increasing trend. Increasing trends were also observed in Under Drain 3 for chloride, conductivity, potassium, and TDS. The intra-location minima for calcium and chloride in Under Drain 1 were associated with observed downward trends. Slight, but steady decreasing trends also continue to be observed in Under Drain 1 for conductivity, manganese, sodium, sulfate, and TDS during 2018.

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 is included in Table 4-2 through Table 4-5, as well as in the leachate quality time-series analysis presented in Attachment 5. Compared to the standards in Table 4-2 through Table 4-5, secondary leachate quality in calendar year 2018 continued to be characterized by elevated levels of TDS, magnesium, sodium, and sulfate throughout the year, as well as, turbidity, boron, and iron which were also detected above the Part 703 GA standard for at least one quarter this year. There were no observed exceedances for arsenic and chloride in 2018 following the 2017 fourth quarter exceedances which were the first ever recorded at this location. 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.

After nine intra-location maximum concentrations were measured in the LDS samples during 2017 with all but two occurring in the fourth quarter, there were none in 2018. Intra-location minima were observed in the LDS for boron, calcium, hardness, magnesium, and potassium during the first quarter of 2018. Calcium appears to be trending downward since approximately 2014.

Elevated concentrations in the fourth quarter of 2017 in boron (intra-location maximum), TDS (third highest), and sodium (second highest) raised question as to whether previously observed upward trending in leachate indicators TDS, boron, sodium, and sulfate, had reemerged. These

four parameters appeared to return to more typical levels in 2018 with no apparent reemergence of an increasing trend.

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.

Other less widespread exceedances of the groundwater standards during the 2018 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.;

- Manganese in MW-8942D – It is not unusual for this well to sporadically exceed the standard for manganese. The first quarter is the only concentration greater than the Part 703 GA standard this year.
- Boron in MW-8910D and MW-8911D – Exceedances of the Part 703 GA standard for boron in these two downgradient bedrock wells are noteworthy since boron is a leachate indicator, but typical of the water quality normally observed at these sampling points.
- Manganese and turbidity for MW-1842 - This well replaced MW-7842 and was sampled for each quarter of 2018. The exceedances will continue to be monitored compared to historical results until ten data points are collected.

Table 4-6 LOCKWOOD ASH DISPOSAL SITE GROUNDWATER QUALITY SUMMARY 2018 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS (3/28-29/2018)																	
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		752				>999	9.0				16	63		225		
Total Dissolved Solids, TDS	500 mg/L		500		890	820	865	865		685			630			1,420	600
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									2,320		1,290				2,310	
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		1,590		1,560		7,000	4,100				1,290	488	337	420		
Magnesium, Mg	(35,000 ug/L)				63,200	61,200	76,100						62,300	49,600	77,200		
Manganese, Mn	300 ug/L						1,090						308				
Fe + Mn	500 ug/L		1,618		1,670		8,090	4,276				1,370	796				
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	75,300			32,100	26,100	90,900	176,000	59,300	85,500		111,000	60,200	37,500		31,900	
Sulfate, SO ₄	250,000 ug/L						322,000			283,000						730,000	
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; baseline parameters measured this quarter.

Table 4-7 LOCKWOOD ASH DISPOSAL SITE GROUNDWATER QUALITY SUMMARY 2018 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS (6/20-21/2018)																	
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				70	15	>999	>999	12				478				
Total Dissolved Solids, TDS	500 mg/L				835	775	660	570				595	675			1,860	1,120
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									2,530		1,470				3,040	
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		444		1,300		5,870	3,230				545	573				
Magnesium, Mg	(35,000 ug/L)				63,700	62,000	60,200						67,700	58,400	113,000	56,700	
Manganese, Mn	300 ug/L						1,620	494									
Fe + Mn	500 ug/L				1,450		7,490	3,724				607	755				
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	85,500			32,400	26,200	132,000	199,000	65,000	76,500		118,000	79,600	38,700	20,300	52,600	25,500
Sulfate, SO ₄	250,000 ug/L				297,000	257,000	296,000			315,000		268,000	264,000			909,000	
Zinc*, Zn	(5,000 ug/L)																

*Baseline only; baseline 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
 2018 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (9/26-27/2018)

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							9.1									
Turbidity	< 5 NTU	13			6		>999	>999	12	103		21	89	16			
Total Dissolved Solids, TDS	500 mg/L	515	560		940	1020	595	895		645		595		620		1,730	765
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									3,050		1,560				3,930	
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				1,050		6,510	6,940				2,370	518				
Magnesium, Mg	(35,000 ug/L)				63,000	66,000	55,000							69,700	63,700	119,000	42,100
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L				1,159		7,540	7,220				2,528	736				
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	84,400			29,600	25,400	59,900	182,000	95,400	102,000		106,000	74,200	39,700	21,200	50,300	267,000
Sulfate, SO ₄	250,000 ug/L				317,000	402,000	292,000			314,000						800,000	
Zinc*, Zn	(5,000 ug/L)																

*Baseline only; routine 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
 2018 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
 (12/12-13/2018)

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							9.2									
Turbidity	< 5 NTU				17	7	>999	>999	8	11		12	246	17	22		
Total Dissolved Solids, TDS	500 mg/L	530	550		855	905	520	1,060		860		640				1,620	610
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									3,340		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				913		3,570	3,180				374	479				
Magnesium, Mg	(35,000 ug/L)				62,200	58,900	52,800							63,400	57,300	92,700	
Manganese, Mn	300 ug/L						386	601									
Fe + Mn	500 ug/L				1,032		3,956	3,781						695			
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	63,900			22,900		42,300	151,000	59,500	85,000		80,500	61,300	29,200		28,900	
Sulfate, SO ₄	250,000 ug/L				265,000	279,000				319,000		252,000				651,000	
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

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 2018. The trends are discussed below.

Groundwater quality during 2018 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 during each quarter of 2018 in downgradient well MW-1842, which replaced MW-7842. Numerous intrawell maxima for nine different parameters were reported. These included iron and potassium in the first quarter; calcium, barium, hardness, manganese, and sodium in the second quarter; alkalinity and ammonia in the third quarter; and alkalinity in the fourth quarter. Alkalinity was an intrawell maximum value for two consecutive quarters and measured concentrations nearly ten times that of the highest value ever measured in MW-78472. Parameters including aluminum, chromium, iron, manganese, pH, and boron remained elevated for the fourth quarter of 2018. The atypical results appear to be related to elevated turbidity values for each quarter and very slow recharge times during sampling as reported by ADK, especially during the third quarter. There is concern that samples collected from the new well are not representative of the formation water it is meant to monitor. Lockwood has authorized ADK to redevelop this well which should improve the situation. The work is expected to be completed by the first quarter sampling event for 2019.

A summary of the intrawell maxima and minima recorded in all other monitoring wells during the 2018 calendar year are as follows:

- Iron in MW-8401 – An intrawell minimum observed the first quarter then tied in the fourth quarter, associated with a shallow, but steady downward trend.
- Turbidity at MW-8404 – An intrawell maximum observed in the first quarter was followed by three consecutive less than detections for the remainder of 2018. No trending is apparent.
- pH in MW-8911SH – An intrawell minimum observed in the first quarter, no trending is apparent.

- Alkalinity in MW-8942D – An intrawell minimum observed in the third quarter, no trending is apparent.
- Ammonia in MW-8908D – An intrawell maximum concentration of ammonia during the third quarter, no trending is apparent at this time.
- Sodium in MW-8909SH – An intrawell maximum observed during the third quarter with no apparent trending at this time.
- Alkalinity in MW-8908D – An intrawell maximum observed in the fourth quarter and appears to have a slight upward trend.
- Ammonia in MW-8909D- An intrawell maximum observed in the fourth quarter, no trending is apparent.
- TDS in MW-8909D- An intrawell maximum was observed in the fourth quarter and may be associated with an upward trend as discussed below.

Relatively high values in downgradient well MW-8911SH for calcium, hardness, iron, magnesium, manganese, and potassium with a slight upward trend was observed during the third quarter of 2018. In the fourth quarter, the values for each of these parameters returned to more typical levels, however the slight upward trends are still apparent. Elevated values were also observed in background well MW-8908SH for the third quarter for calcium, hardness, sulfate, and TDS. In the fourth quarter, the measured concentrations for these parameters also significantly decreased and trending is not apparent at this time.

TDS in downgradient well MW-8909D may be trending upward. Concentrations of TDS in MW-8909D for all four quarters of 2018 were greater than the Part 703 GA Standard culminating with an intrawell maximum value observed in the fourth quarter. This has only happened in one other year (2015) since 2005. In addition, there appears to be a similar slight increasing trend for alkalinity, calcium, hardness, magnesium, and manganese in MW-8909D.

Decreasing trends in downgradient well MW-8910D for boron, chloride, calcium, conductivity, sodium, sulfate and TDS were noted during the first two quarters of 2018. These trends appeared to weaken by the fourth quarter as the levels slightly increased through the latter half of 2018. Still

average concentrations for all of these parameters across the four quarters in 2018 were lower than they have been in half a decade or more.

Decreasing trends for chloride and iron, which corresponded with intrawell minimum values during the second quarter in background well MW-8401 were noted during 2018 and continued into the fourth quarter of 2018. A decreasing trend for sulfate in background well MW-8908SH was noted in the first quarter of 2018 but weakened over the remainder of the year with higher values through the fourth quarter.

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 Leachate Pond discharge location. Table 4-10 summarizes the surface water quality in the Keuka Outlet for the four quarters of 2018. 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, TDS in the second quarter, and iron and TDS in the fourth quarter. Significant decreases between up and downstream samples occurred during the second quarter in copper and nickel, and during the third quarter in iron. Other notable differences (greater than 10%) between upstream and downstream samples during the 2018 sampling events include increases in iron and manganese in the second quarter, and copper in the third quarter. Notable decreases between the upstream and downstream samples include TDS in the first quarter, boron, dissolved oxygen and turbidity in the second quarter and aluminum and TDS in the third quarter.

The Leachate Pond was actively discharging during the fourth quarter surface water sampling event. The relatively small number of significant and notable differences between the upstream and downstream locations support a lack of sustained impact on the Keuka Outlet from activity at the site.

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. 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 level in the newly installed MW-1842 was not representative of the typical groundwater levels during the first quarter of 2018 and was not included in the groundwater level analysis. The atypical groundwater elevation was believed to be due to slow recovery in the well following well development completed days before the measuring event. The water level returned to a more typical level during the second quarter and has since been included in the analysis.

An intrawell minimum water level was reported during the third quarter for MW-8402. An intrawell maximum water level was observed in the fourth quarter for MW-8910SH. The water level was 7.6 feet higher than the representative maximum value observed in December 2006. Bedrock water level observation well MW-8407 remained obstructed through 2018.

Figure 4-3 is a comparison between current bedrock and glacial till potentiometric surfaces. Groundwater flow appears to be predominately north in the southern half of the site. In the northern half of the site, groundwater flow takes on a stronger downward gradient and shows a distinct angle towards the Keuka Outlet in the northwestern corner, especially in the glacial till. Vertical gradients for 2018 were generally typical for the site, with some notable exceptions in the fourth quarter. The vertical gradient at the MW-8908 couplet was at a minimum level. This gradient is typically downward similar to the rest of the site, but in the fourth quarter the gradient was upward. The vertical gradient at the MW-1811 couplet was also at an unusually low level in the fourth quarter, due to a relatively low ground water elevation in the shallow glacial till well of the couplet. These vertical gradients are expected to rebound during 2019, as there is no apparent trend. The vertical gradient at the MW-8910 couplet was at a maximum value due to the atypical maximum ground water elevation observed in the shallow glacial till well of the couplet. The water level in MW-8910SH will be monitored to determine if the higher water level is maintained.

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2018 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

Parameter	Units	First Quarter (3/28/2018)				Second Quarter (6/20/2018)			
		Kueka Upstream	Kueka Downstream	Difference	% Increase	Kueka Upstream	Kueka Downstream	Difference	% Increase
Alkalinity	mg/l	180	180			100	104	4	4.0%
Aluminum	ug/l	187	195	8	4.3%	<32.4	<32.4		
Ammonia	mg/l	NM	NM			<0.1	<0.1		
Antimony	ug/l	NM	NM			<1.86	<1.86		
Arsenic	ug/l	<5	<5			<2.37	<2.37		
Barium	ug/l	NM	NM			<200	<200		
Boron	ug/l	<50	<50			74.0	57.7	-16	-22.0%
Cadmium	ug/l	<5	<5			<0.25	<0.25		
Calcium	ug/l	57,100	59,800	2,700	4.7%	37,900	39,000	1,100	2.9%
Chloride	mg/l	61.2	61.9	1	1.1%	36.9	37.0	0.1	0.3%
Chromium	ug/l	NM	NM			<3.73	<3.73		
Color	C.U.	NM	NM			10	10		
Conductivity	µmhos/cm	613	626	13	2.1%	324	327	3	0.9%
Copper	ug/l	6.17	6.51	0.3	5.5%	5.74	3.18	-3	-44.6%
DO	mg/l	8.38	8.64	0.3	3.1%	5.58	4.89	-0.7	-12.4%
Hardness	mg/l	201	210	9	4.5%	137	141	4	2.9%
Iron	ug/l	266	286	20	7.5%	129	143	14	10.9%
Magnesium	ug/l	14,300	14,700	400	2.8%	10,300	10,500	200	1.9%
Manganese	ug/l	<20	<20			10.9	12.9	2	18.3%
Mercury	ug/l	<0.2	<0.2			<0.2	<0.2		
Nickel	ug/l	NM	NM			1.82	0.93	-0.9	-48.9%
pH	SU	7.9	7.9			7.4	7.4		
Potassium	ug/l	3,310	3,400	90	2.7%	<5000	<5000		
Selenium	ug/l	<5	<5			<2.6	<2.6		
Sodium	ug/l	27,500	29,000	1500	5.5%	18,400	18,600	200	1.1%
Sulfate	mg/l	35.4	35.4			22.6	22.7	0.1	0.4%
TDS	mg/l	380	340	-40	-10.5%	155	250	95	61.3%
TOC	mg/l	NM	NM			3.2	3.1	-0.1	-3.1%
Turbidity	NTU	27	35	8	29.6%	12	10	-2.0	-16.7%
Zinc	ug/l	NM	NM			2.07	1.89	-0.2	-8.7%

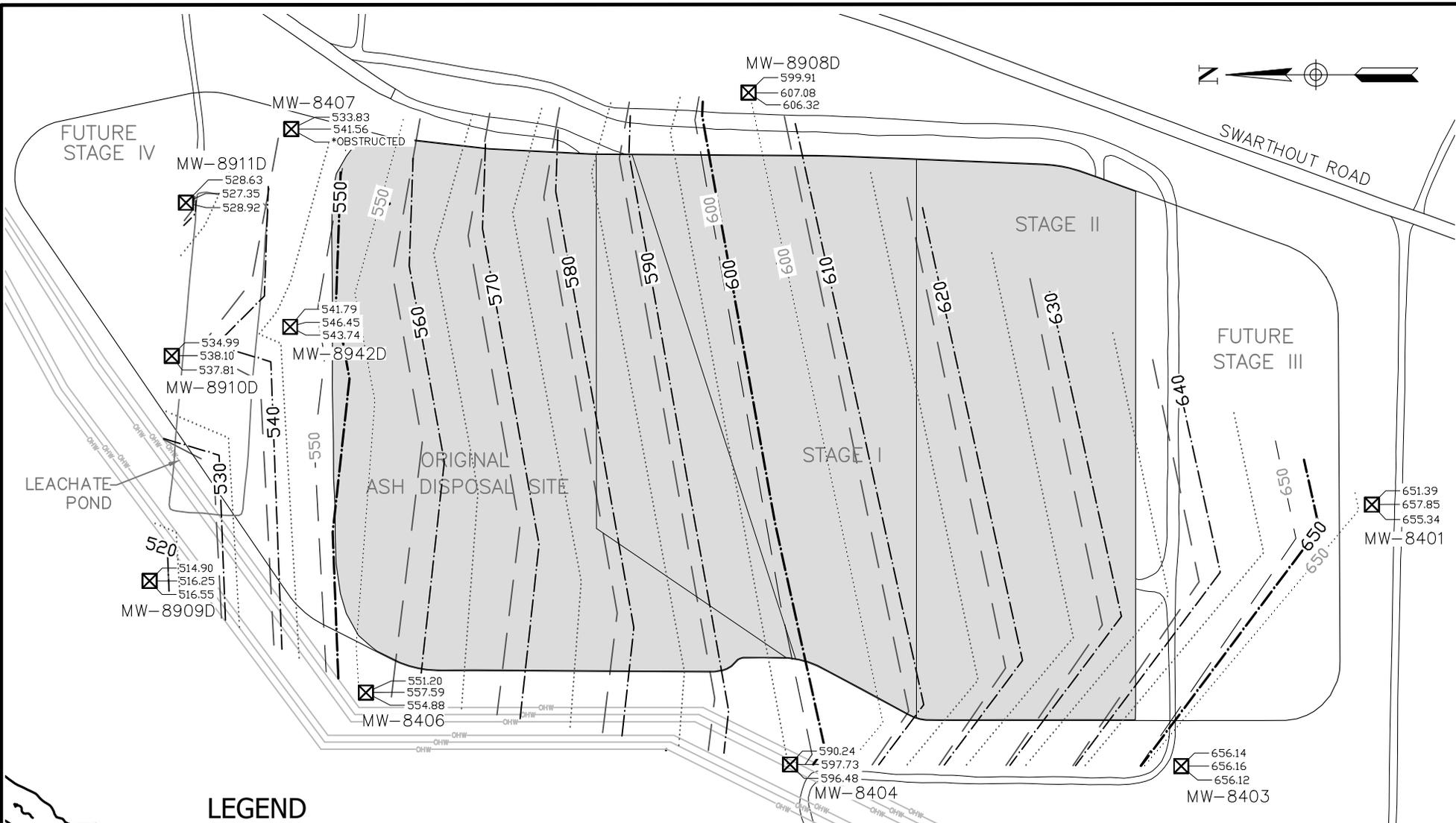
NM = Not Measured, baseline only, routine parameters measured this quarter.

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2018 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

Parameter	Units	Third Quarter (9/26/2018)				Fourth Quarter (12/12/2018)			
		Kueka Upstream	Kueka Downstream	Difference	% Increase	Kueka Upstream	Kueka Downstream	Difference	% Increase
Alkalinity	mg/l	108	110	2	1.9%	112	108	-4	-3.6%
Aluminum	ug/l	42.1J	34.7J	7.4	-21.3%	<100	<100		
Ammonia	mg/l	<0.10	0.10	<0.10		<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	65.1	62.3	-2.8	-4.3%	<50	<50		
Cadmium	ug/l	<5	<5			<5	<5		
Calcium	ug/l	42,700	40200	-2,500	-5.9%	34,100	34,700	600	1.8%
Chloride	mg/l	39.1	39.6	0.5	1.3%	33.1	33.4	0.3	0.9%
Chromium	ug/l	NM	NM			NM	NM		
Color	C.U.	NM	NM			NM	NM		
Conductivity	µmhos/cm	352	361	9	2.6%	328	330	2	0.6%
Copper	ug/l	6.11	7.6	1.5	24.4%	<5	<5		
DO	mg/l	5.88	5.76	-0.12	-2.0%	7.23	7.69	0.5	6.4%
Hardness	mg/l	160	150	-10	-6.3%	130	132	2	1.5%
Iron	ug/l	95.2	70.2	-25.0	-26.3%	94.5	132	38	39.7%
Magnesium	ug/l	12,600	11,900	-700	-5.6%	11,000	11,100	100	0.9%
Manganese	ug/l	10.6J	11.0J	-0.4	3.6%	<20	<20		
Mercury	ug/l	<0.2	<0.2			<0.2	<0.2		
Nickel	ug/l	NM	NM			NM	NM		
pH	SU	8.4	8.4			7.6	7.6		
Potassium	ug/l	3,130	2,860	-270	-8.6%	2,280	2,330	50	2.2%
Selenium	ug/l	<5	<5			<5	<5		
Sodium	ug/l	26,900	25,400	-1,500	-5.6%	15,100	15,200	100	0.7%
Sulfate	mg/l	22.9	23.2	0.3	1.3%	21.8	22.5	1	3.2%
TDS	mg/l	185	160	-25	-13.5%	250	360	110	44.0%
TOC	mg/l	NM	NM			NM	NM		
Turbidity	NTU	<1	8	>8		<1	<1		
Zinc	ug/l	NM	NM			NM	NM		

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

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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 12/12/18)

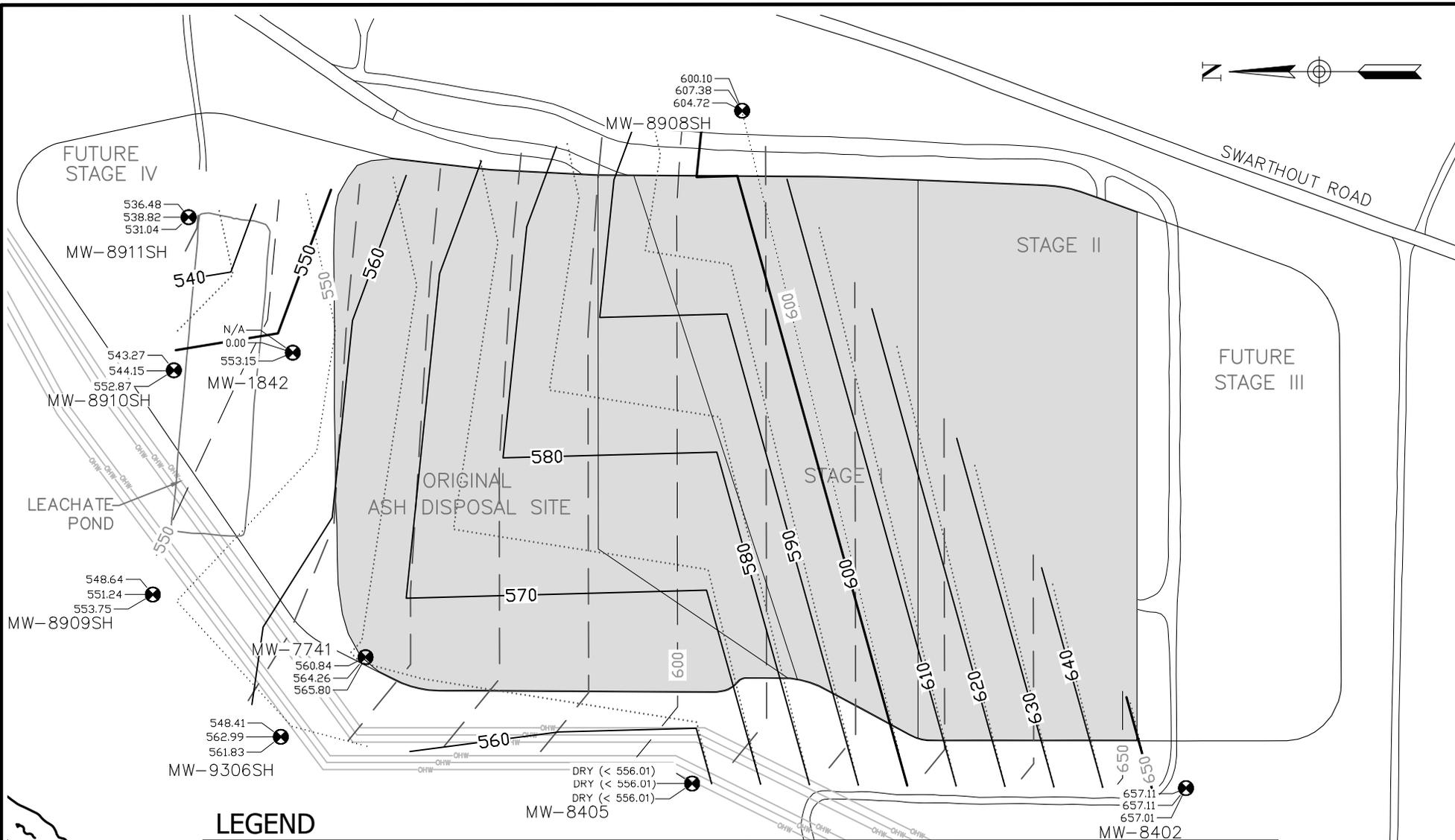
- 600 — CURRENT POTENTIOMETRIC SURFACE
- 600 - REPRESENTATIVE MAXIMUM POTENTIOMETRIC SURFACE
- 600 ····· REPRESENTATIVE MINIMUM POTENTIOMETRIC SURFACE

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

DAIGLER ENGINEERING, P.C.
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072
 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		BEDROCK GROUNDWATER POTENTIOMETRIC SURFACE		FIGURE 4-1
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE		
February 2019		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 12/12/18)

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

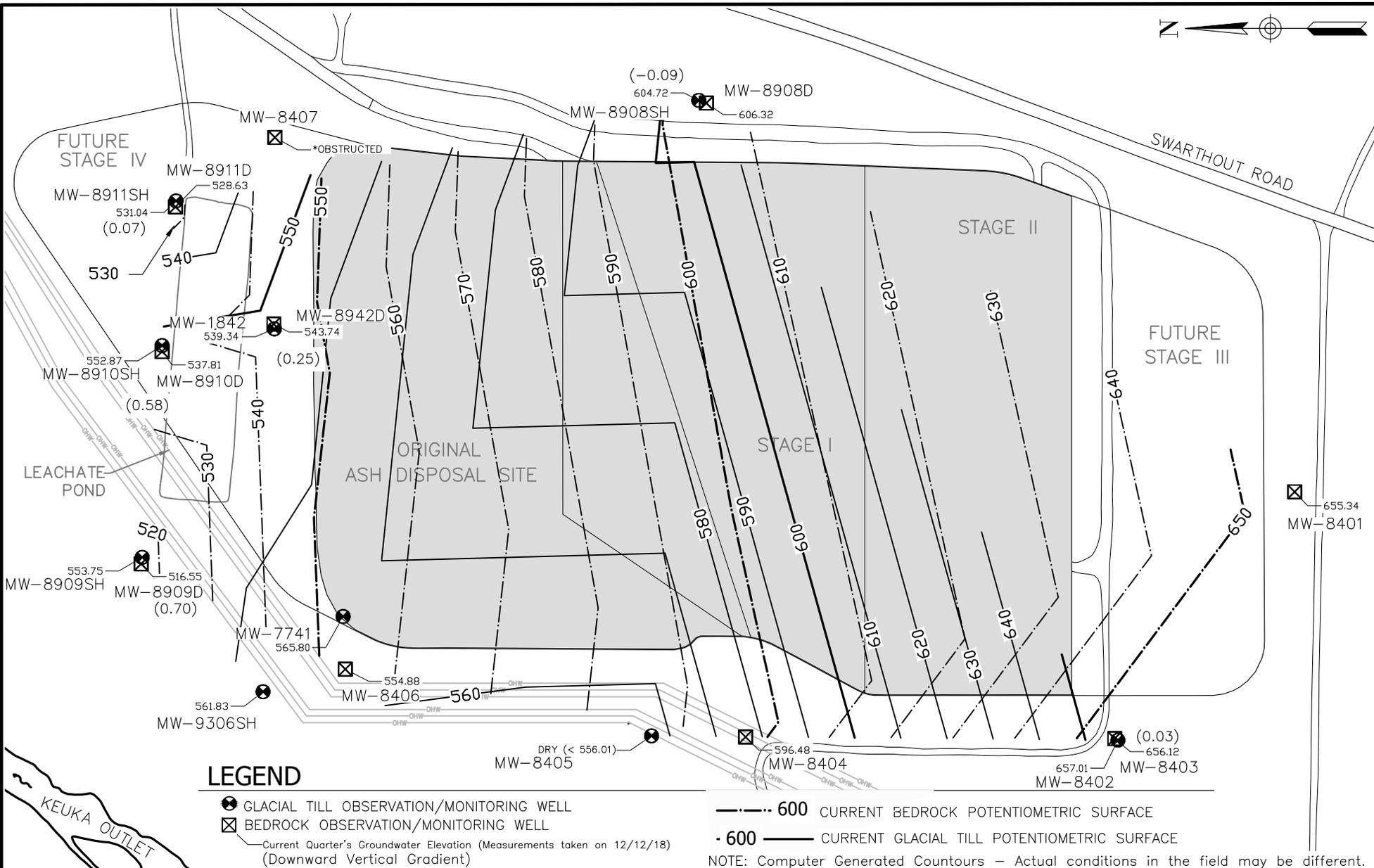
NOTE: Computer Generated Countours - Actual conditions in the field may be different.

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LOCKWOOD HILLS LLC		GLACIAL TILL GROUNDWATER POTENTIOMETRIC SURFACE		
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE		
February 2019		TOWN OF TORREY	YATES COUNTY	NEW YORK

FIGURE 4-2

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LEGEND

- GLACIAL TILL OBSERVATION/MONITORING WELL
- ⊠ BEDROCK OBSERVATION/MONITORING WELL
- Current Quarter's Groundwater Elevation (Measurements taken on 12/12/18) (Downward Vertical Gradient)

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

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

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 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		POTENTIOMETRIC SURFACES FOR FOURTH QUARTER 2018	
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE	
February 2019	TOWN OF TORREY	YATES COUNTY	NEW YORK

FIGURE 4-3

ATTACHMENT 1

NYSDEC 2018 Annual Report Form

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2019.

A. This annual/quarterly report is for the year of operation from January 01, 2018 to December 31, 2018B. Quarterly Report for: Quarter 1 Quarter 2 Quarter 3 Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION			
FACILITY NAME: Lockwood Ash Disposal Site			
FACILITY LOCATION ADDRESS: Swarthout Road	FACILITY CITY: Dresden	STATE: NY	ZIP CODE: 14441
FACILITY TOWN: Torrey	FACILITY COUNTY: Yates	FACILITY PHONE NUMBER:	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Yates County			NYSDEC REGION #: 8
360 PERMIT #: 8-5736-00005/00003-0	DATE ISSUED: 09/05/08	DATE EXPIRES: 09/04/18*	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER: 62N01
FACILITY CONTACT: Dale Irwin	<input type="checkbox"/> public <input checked="" type="checkbox"/> private	CONTACT PHONE NUMBER: (315) 536-2359	CONTACT FAX NUMBER:
CONTACT EMAIL ADDRESS: dirwin@greenidgellc.com			
OWNER INFORMATION			
OWNER NAME: Lockwood Hills LLC	OWNER PHONE NUMBER: (315) 536-2359	OWNER FAX NUMBER:	
OWNER ADDRESS: 590 Plant Road, PO Box 187	OWNER CITY: Dresden	STATE: NY	ZIP CODE: 14441
OWNER CONTACT: Dale Irwin	OWNER CONTACT EMAIL ADDRESS: dirwin@greenidgellc.com		
OPERATOR INFORMATION			
OPERATOR NAME: <input checked="" type="checkbox"/> same as owner			<input type="checkbox"/> public <input checked="" type="checkbox"/> private
PREFERENCES			
Preferred address to receive correspondence: <input type="checkbox"/> Other (provide):	<input type="checkbox"/> Facility location address	<input checked="" type="checkbox"/> Owner address	
Preferred email address: <input type="checkbox"/> Other (provide):	<input checked="" type="checkbox"/> Facility Contact	<input type="checkbox"/> Owner Contact	
Preferred individual to receive correspondence: <input type="checkbox"/> Other (provide):	<input checked="" type="checkbox"/> Facility Contact	<input type="checkbox"/> Owner Contact	

Did you operate in 2018? Yes; Complete this form.

No; Complete and submit Sections 1 and 22. 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>.

Reprinted (12/18)

* Lockwood Hills has submitted a timely and sufficient application for renewal of the permit. The existing permit does not expire until the department has made a final decision on the renewal application, pursuant to section 401(2) of the State Administrative Procedure Act.

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?

9 _____ Cubic Yards of Airspace

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

1.3 _____ 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?

421,857 _____ Cubic Yards of Airspace

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

5 _____ Years 0 _____ Months

at 100,000 _____ 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

X _____ 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?

2,450,000 _____ Cubic Yards of Airspace

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

25 _____ Years 10 _____ Months

at 109,250 _____ 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

X _____ Estimated future disposal

_____ Permit limit

Other (explain): _____

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?

n/a _____ 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?

n/a _____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

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

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 29.8 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	539,437											
February	570,226											
March	918,445											
April	960,579											
May	952,693											
June	822,688											
July	729,762											
August	710,352											
September	722,508											
October	847,094											
November	673,156											
December	754,764											
ANNUAL	9,201,704											

	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 29.8 Acres	Cell 2 Acres	Cell 3 Acres	Cell 4 Acres	Cell 5 Acres	Cell 6 Acres
January							539,437					
February							570,226					
March							918,445					
April							960,579					
May							952,693					
June							822,688					
July							729,762					
August							710,352					
September							722,508					
October							847,094					
November							673,156					
December							754,764					
ANNUAL							9,201,704					

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:

See Attachment 2: Monthly Inspection Logs. Documentation of Annual Line Cleaning is included at end of Attachment 2.

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:

See 2018 Annual Report, Section 4 and Attachment 4 and 5.

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:

See 2018 Annual Report, Section 4 and Attachment 4 and 5.

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

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: \$ 0

Total quantity treated: 19,033 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 15.8 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	1,572											
February	1,775											
March	1,769											
April	1,522											
May	2,162											
June	1,712											
July	1,278											
August	1,179											
September	951											
October	884											
November	2,853											
December	1,375											
ANNUAL	19,033											

	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 15.8 Acres	Cell 2 ___ Acres	Cell 3 ___ Acres	Cell 4 ___ Acres	Cell 5 ___ Acres	Cell 6 ___ Acres
January							1,572					
February							1,775					
March							1,769					
April							1,522					
May							2,162					
June							1,712					
July							1,278					
August							1,179					
September							951					
October							884					
November							2,853					
December							1,375					
ANNUAL							19,033					

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	n/a					
Total Beneficial Use Determination Materials	n/a					

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = n/a

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:

100 % 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)				12				
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				12				

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:

100 % 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 (See Attached List of NYS Planning Units)	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)	Greenidge Station Wastewater Treatment Plant	NY	Yates	Yates County	12
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): 12					

* 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):					n/a

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):					n/a

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):					n/a
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):					n/a

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):					n/a

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):					n/a

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):					n/a

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
2018					12				12	I & II
2017								91	91	I & II
2016								605	605	I & II
2015			195					6,942	7,137	I & II
2014									0	--
2013									0	--
2012									0	--
2011			18,567		352*				18,919	I & II
2010			87,311		215*				87,562	I & II
Next Page										
WIP Cumulative Total										

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

*285 tons of waste in 2011 and 131 tons of waste in 2010 formerly classified as sewage treatment plant sludge was reclassified as industrial waste based on the descriptions provided in Section 6 of this table.

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
2009			88,308		272				88,580	I & II
2008			97,145		198				97,343	I & II
2007			103,359		250				103,609	I & II
2006			43,779		447				44,226	I & II
2005			49,216		826				50,042	I & II
2004			42,483		317				42,800	I & II
2003			68,687		394				69,081	I & II
2002			58,581						58,581	I & II
2001			53,513						53,513	I & II
Next Page										
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
2000			60,057						60,057	I & II
1979-1999			Unknown						1,246,091	I & II and OADS
WIP Cumulative Total									2,028,249	I & II, OADS**

Overall in place volume 1,565,775 cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____ Volume for OADS is included. OADS is closed.

**OADS = Original Ash Disposal Site

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 2

Original* section used (years) from 1979 to 1992

Next* section used (years) from 1992 to present

Section Footprint 14.1 acres

Section Footprint 19.3 acres

Capped with approved final cover system Yes No

Capped with approved final cover system Yes No

Percent capped 100%

Percent capped 0%

Waste in Place: 625,000 Tons 542,000 Cubic Yards, if known

Waste in Place: 1,403,200 Tons 1,024,000 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: n/a

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 n/a

Estimate of Gas Flared Candlestick Flare _____ cubic feet

Gas To Energy

Number of Internal Combustion Engines: n/a

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 n/a 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 n/a 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: _____

Reprinted (12/18)

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:

n/a

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	n/a					

* 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:

Reprinted (12/18)

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 2018 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 15 - 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:

See 2018 Annual Report, Section 4 and Attachments 4 and 5.

SECTION 16 - 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:

See 2018 Annual Report, Section 4 and Attachment 5

SECTION 17 - 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:

See 2018 Annual Report, Section 4.

SECTION 18 - 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:

See 2018 Annual Report, Attachment 4 Second Quarter.

SECTION 19 - 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:

See 2018 Annual Report, Section 4.

SECTION 20 - 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 21 - 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.

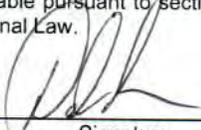
SECTION 22 - SIGNATURE AND DATE BY OWNER OR OPERATOR

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.

 _____ Signature	<u>2/25/2019</u> _____ Date
Dale Irwin _____ Name (Print or Type)	President/CEO _____ Title (Print or Type)
dirwin@greenidgellc.com _____ Email (Print or Type)	
590 Plant Road _____ Address	Dresden _____ City
New York, 14441 _____ State and Zip	(315) 536 - 2359 ext. 3423 _____ Phone Number

ATTACHMENTS: YES NO
(Please check appropriate line)



Silicon Valley Bank

OUR STANDBY L/C NO. SVBSF009520

DATE: FEBRUARY 07, 2019

ADVICE OF AMENDMENT NUMBER: 3

BENEFICIARY:

REGIONAL DIRECTOR, REGION 8, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

ACCOUNT OF:

ATLAS CAPITAL RESOURCES LP
C/O ATLAS HOLDINGS
ONE SOUND SHORE DRIVE, SUITE 203
GREENWICH, CT 06830

LADIES AND GENTLEMEN,

WE HAVE BEEN REQUESTED TO AMEND THE ABOVE REFERENCED LETTER OF CREDIT AS FOLLOWS:

VALUE OF THE LC IS DECREASED BY USD 241,104.00 TO USD 4,696,646.00

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

THIS AMENDMENT IS AN INTEGRAL PART OF THE ORIGINAL LETTER OF CREDIT AND MUST BE ATTACHED THERETO.

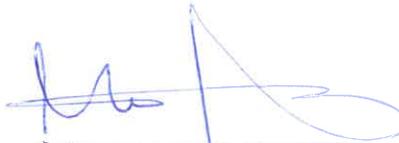
PLEASE BE ADVISED THAT THIS LETTER OF CREDIT AMENDMENT IS SUBJECT TO YOUR (BENEFICIARY'S) CONSENT. PLEASE SIGN THE ATTACHED COPY WHERE APPLICABLE AND RETURN IT TO US AT THE ADDRESS INDICATED BELOW.

SILICON VALLEY BANK,



AUTHORIZED SIGNATURE

Manuel Banuelos



AUTHORIZED SIGNATURE

Evelio Barairo



Silicon Valley Bank

OUR STANDBY L/C NO. SVBSF009520

DATE: FEBRUARY 07, 2019

ADVICE OF AMENDMENT NUMBER: 3

ACCEPTED :

REGIONAL DIRECTOR, REGION 8, NEW YORK
STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

REJECTED :

REGIONAL DIRECTOR, REGION 8, NEW YORK
STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

AUTHORIZED SIGNATURE

NAME: _____

TITLE: _____

DATE SIGNED: _____

PHONE NO.: _____

AUTHORIZED SIGNATURE

NAME: _____

TITLE: _____

DATE SIGNED: _____

PHONE NO.: _____

UPS CampussShip: View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. GETTING YOUR SHIPMENT TO UPS

Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampussShip and select UPS Locations.

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampussShip packages.

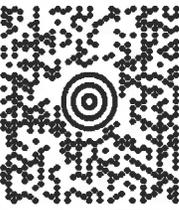
Hand the package to any UPS driver in your area.

UPS Access Point™
 CASUN-LOCKR-UPS CC - SUNNYVALE
 1276 REAMWOOD AVE
 SUNNYVALE, CA 94089

UPS Access Point™
 THE UPS STORE
 2700 MISSION COLLEGE BLVD
 SANTA CLARA, CA 95054

UPS Access Point™
 THE UPS STORE
 181 E TASMAN DR
 SAN JOSE, CA 95134

FOLD HERE

EVELIO BARAIRO SILICON VALLEY BANK 3003 TASMAN DR SANTA CLARA CA 95054	0.0 LBS	LTR	1 OF 1
SHIP TO: REGIONAL DIRECTOR, REGION 8, 0000000000000000 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 6274 EAST AVON-LIMA ROAD AVON NY 14414-9516			
		NY 144 9-05 	
UPS NEXT DAY AIR			
TRACKING #: 1Z E94 183 01 9891 6628			
			
BILLING: P/P			
Reference # 1: CB007CL Reference # 2: SVBSFP009520-AMENDMENT NO. 3 <small>CS 21.0.21 WNTNVS90 09.04.01/2019</small>			
			



Silicon Valley Bank

OUR STANDBY L/C NO. SVBSF009520

DATE: MARCH 02, 2018

ADVICE OF AMENDMENT NUMBER: 2

BENEFICIARY:

REGIONAL DIRECTOR, REGION 8, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

ACCOUNT OF:

ATLAS CAPITAL RESOURCES LP
C/O ATLAS HOLDINGS
ONE SOUND SHORE DRIVE, SUITE 203
GREENWICH, CT 06830

LADIES AND GENTLEMEN,

WE HAVE BEEN REQUESTED TO AMEND THE ABOVE REFERENCED LETTER OF CREDIT AS FOLLOWS:

VALUE OF LC IS INCREASED BY USD 391,529.00 TO USD 4,937,750.00

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

THIS AMENDMENT IS AN INTEGRAL PART OF THE ORIGINAL LETTER OF CREDIT AND MUST BE ATTACHED THERETO.

SILICON VALLEY BANK,


AUTHORIZED SIGNATURE

Linda Wu


AUTHORIZED SIGNATURE

Evelio Barairo

UPS CampussShip: View/Print Label

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. GETTING YOUR SHIPMENT TO UPS

Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point™(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampussShip and select UPS Locations.
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampussShip packages.
Hand the package to any UPS driver in your area.

UPS Access Point™
CASUN-LOCKR-UPS CC - SUNNVALE
2700 MISSION COLLEGE BLVD
SUNNVALE, CA 94089

UPS Access Point™
THE UPS STORE
SANTA CLARA, CA 95054

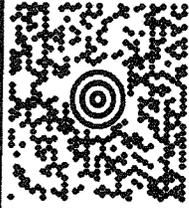
UPS Access Point™
THE UPS STORE
SAN JOSE, CA 95134

EVELIO BARAIRO
SILICON VALLEY BANK
3003 TASMAN DR
SANTA CLARA, CA 95054

0.0 LBS LTR 1 OF 1

SHIP TO:

REGIONAL DIRECTOR, REGION 8,
0000000000000
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON NY 14414-9516

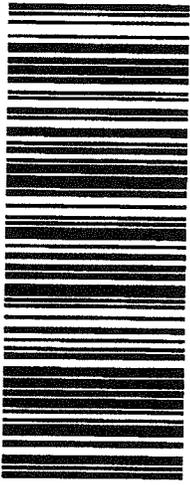


NY 144 9-05

UPS NEXT DAY AIR

1

TRACKING #: 1Z E94 183 01 9708 4323



BILLING: P/P

Reference # 1: CB007CL
Reference # 2: SVBSF009520-AMENDMENT NO. 2
CS 20.0.32 VAN/NS0 97.0A.01/2018





Silicon Valley Bank

DATE: FEBRUARY 22, 2017

ISSUING BANK:
SILICON VALLEY BANK
3003 TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210
SANTA CLARA, CALIFORNIA 95054

TO:
ATLAS CAPITAL RESOURCES LP
C/O ATLAS HOLDINGS
ONE SOUND SHORE DRIVE, SUITE 203
GREENWICH, CT 06830

LETTER OF CREDIT NO.:	SVBSF009520
FOR THE ACCOUNT OF:	ATLAS CAPITAL RESOURCES LP
IN FAVOR OF:	REGIONAL DIRECTOR, REGION 8, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
IN THE AMOUNT OF:	USD4,546,221.00

We hereby confirm that the abovementioned Letter of Credit was valid for all of the year 2016 for USD4,546,221.00

If you have any question regarding this Letter of Credit, please contact Daniel Ng at (408) 450 5001 or email address dng@svb.com, always quoting our Letter of Credit no. SVBSF009520.

Yours Sincerely,

Daniel Ng
Sr. Trade Finance Business Advisor
Global Trade Finance

ATTACHMENT 2

Monthly Inspection Logs

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of inspection 1-3-18 Time 2:20

Weather Conditions Snow/Ice

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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)

None

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Leachate Flow

- 12.9 GAL/Min

- 3.0 ft - Pond Level

- 400 MG - Flow / 180 sec.

[Signature]

Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of Inspection 2-1-18 Time 1:50

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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)

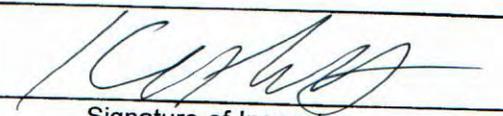
(Handwritten signature)

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Leachate Flow
- 11.8 Gal/hr
- 4.4 ft Pond Cur
- 500 ML Flow 100 -



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: SAMPLE TYPE: SAMPLING COMPANY:
NAME OF SAMPLER:

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

POND DRAINAGE AUTHORIZATION

NAME: *Ken Scott* DATE: *2/28/18*
SIGNATURE: *[Signature]* OTHER/NOTES: *overflow!*

POND DISCHARGE DATA

START OF DISCHARGE			
DATE:	<i>2/28/18</i>	TIME:	<i>8:26 AM</i>
POND LEVEL (FT):	<i>5.4 FT.</i>	POND VOLUME (GAL):	<i>3.12</i>
FIELD pH:	<i>7.31</i>		
END OF DISCHARGE			
DATE:	<i>2/11/18</i>	TIME:	<i>1:40 PM</i>
POND LEVEL (FT):	<i>2.25</i>	POND VOLUME (GAL):	<i>1.10</i>
FIELD pH	<i>7.19</i>		

COMPOSITE SAMPLE START DATE:
COMPOSITE SAMPLE END DATE:

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): *2,020,000* 0
OF DISCHARGE DAYS *14*
MAX GAL/DAY: *144,286 gpd*
AVG GAL/DAY: #DIV/0!
AVG CUFT/DAY DISCHARGE: #DIV/0!
FLOW RATE OF KEUKA OUTLET (CFS)

WEEKLY pH SUMMARY		
	Date	pH

610,000 cu/ft/min

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of inspection 3-1-18 Time 8:40a

Weather Conditions _____

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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife. |

ACCESS

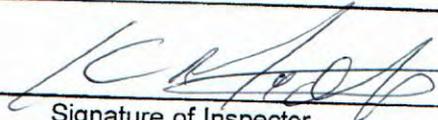
- | | | | |
|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing,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

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Leachate Flow
GA/min
Pond Level
Flow/180


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of inspection 4-30-18 Time 10:00 AM

Weather Conditions RAIN

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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)

*Notified City Hill construction
That slopes need repair in
channel to new leachate pond -*

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of Inspection 5-31-18 Time 9:50 Am

Weather Conditions Cloudy / RAIN

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 type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input 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 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 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)

Slope Repairs scheduled with
City Hall 6-11-18

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Lockwood pond release

5-17-18

Close - 5-30-18


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: 5-9-18 SAMPLE TYPE: Pre-discharge SAMPLING COMPANY: Adirondack
NAME OF SAMPLER: Kevin Ambrose
FIELD pH: (6-9) 7.56 Tot Fe: (<4.0) 0.065 Tot Mn: (<3.0) ND Tot Zn: (<2.0) ND
NH3: Tot As: (<0.1) ND TSS: (<50.0) 1.3 Tot Se: (<0.07) 0.022

POND DRAINAGE AUTHORIZATION

NAME: Kevin Scott DATE: 6-4-18
SIGNATURE: [Signature] OTHER/NOTES:

POND DISCHARGE DATA

START OF DISCHARGE	5-17-18				
DATE:	5-17-18	TIME:	1:22 pm		
POND LEVEL (FT):	4 ft	POND VOLUME (GAL):	2.1 million		
FIELD pH:	7.8				
END OF DISCHARGE	5-30-18				
DATE:	5-30-18	TIME:	11:30 AM		
POND LEVEL (FT):	1 ft	POND VOLUME (GAL):	5,000		
FIELD pH	7.5				

COMPOSITE SAMPLE START DATE: 5-9-18
COMPOSITE SAMPLE END DATE: 5-29-18

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): 2.1 million
OF DISCHARGE DAYS: 14
MAX GAL/DAY: 142,857
AVG GAL/DAY: 142,857
AVG CUFT/DAY DISCHARGE:
FLOW RATE OF KEUKA OUTLET (CFS) 540,000

WEEKLY pH SUMMARY		
	Date	pH

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K-Scott

Date of Inspection 6-29-18 Time 9:15

Weather Conditions Sun - Hot

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 type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|--------------------------|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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)

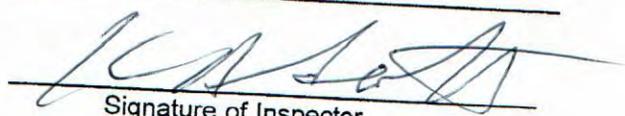
None

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

City Hill - Mowing
City Hill - Repaired slope
Area to new drainage basin
Performed discharge event this
month -


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Saff

Date of Inspection 7-27-18 Time 9:50

Weather Conditions Rain/Sun

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 type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|--------------------------|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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

at the site.

- 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)

None

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

City Hall - completed mowing
of all slopes.

inspect "vector" holes and
repair


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector K. Scott

Date of Inspection 8/31/18 Time 9:30

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 type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. |

OPERATION CONTROL

- | | | | |
|--------------------------|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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)

None

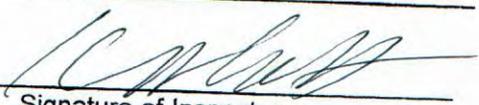
Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Contracted Jamko to schedule
Annual fire clean-out

Contracted City Hall to schedule
mowing + tree removal


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Seifert

Date of Inspection 9/12/18 Time 10:45

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. |

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)

Sedimentation Pond is being
drained.

Harold Selt

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: 8/31/18 SAMPLE TYPE: Grab SAMPLING COMPANY: Adirondack
NAME OF SAMPLER: K. Ambler
FIELD pH: (6-9) 8.3 Tot Fe: (<4.0) ND Tot Mn: (<3.0) 0.022 Tot Zn: (<2.0) ND
NH3: ND Tot As: (<0.1) ND TSS: (<50.0) 2.6 Tot Se: (<0.07) ND

POND DRAINAGE AUTHORIZATION

NAME: Ken Scott DATE: 9/5/18
SIGNATURE: [Signature] OTHER/NOTES: Sunny/Hot

POND DISCHARGE DATA

<u>START OF DISCHARGE</u>		9/5/18			
DATE:		9/5/18	TIME:	9:15 AM	
POND LEVEL (FT):		4 ft	POND VOLUME (GAL):	2.1 num	
FIELD pH:		8.20			
<u>END OF DISCHARGE</u>					
DATE:		9/13/18	TIME:	2:15 pm	
POND LEVEL (FT):		1 ft	POND VOLUME (GAL):	3.000	
FIELD pH		8.12			

COMPOSITE SAMPLE START DATE: 9/6/18
COMPOSITE SAMPLE END DATE: 9/9/18

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): 22 mill 0
OF DISCHARGE DAYS: 13
MAX GAL/DAY: 142,857
AVG GAL/DAY: 142,800
AVG CUFT/DAY DISCHARGE:
FLOW RATE OF KEUKA OUTLET (CFS) 530,000

WEEKLY pH SUMMARY

Date	pH
9/5/18	8.20
9/10/18	7.54
9/13/18	8.12



932 Sohn Alloway Road
 Lyons, New York 14489
 (315) 871-4420 tel
 (315) 871-4430 fax
 www.jamkocorp.com

Daily Line Cleaning Record

Project No.: 6240
 Client: Greenidge Generation LLC

Site Location: Dresden
 Jamko Technician(s): Bade, Plotts

Page: 1 of 3
 Date: 9/17/18
 Weather: clear

Location Cell / Street	Line Segment MH # to MH #		Pipe Diameter	Pipe Type	Total Length Linear Footage	Total Linear Footage Cleaned	No. of Passes	Water Used Total Gallons	Total Gallons Leachate Vac.
Stage II	C/O - AO	Boundry	6"	PVC	Flushed				
Stage II	C/O - O	Boundry	5"	PVC	Flushed				
Stage II	C/O - 1	Boundry	6"	PVC	Flushed				
Stage II	C/O - 2	Boundry	6"	PVC	Flushed				
Stage II	C/O - 3	Boundry	6"	PVC	Flushed				
Stage II	C/O - 4	Boundry	6"	PVC	Flushed				
Stage I	C/O - 5	Boundry	6"	PVC	Flushed				
Stage I	C/O - 6	Boundry	6"	PVC	Flushed				
Stage I	C/O - 7	Boundry	6"	PVC	Flushed				
Stage I	C/O - 8	Boundry	6"	PVC	Flushed				
Stage I	C/O - 9	Boundry	6"	PVC	Flushed				
Stage I	C/O - 10	Boundry	6"	PVC	Flushed				
Stage I	C/O - 11	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 12	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 13	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 14	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 15	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 16	Could NOT Locate		PVC	Flushed				
Stage I	C/O - 17	Overfill Liner	6"	PVC	Flushed				
Stage I	C/O - 18	Overfill Liner	6"	PVC	Flushed				



Jamko Technical Solutions, Inc.
 932 Sohn-Alloway Rd
 Lyons, NY 14489

	Invoice #
9/18/2018	2555

Bill To

Greenidge Generation
 590 Plant Rd
 Dresden, NY 14441

Remit payment to:
 Jamko Technical Solutions, Inc.
 932 Sohn Alloway Rd
 Lyons, NY 14489

Tax ID #16-1602188		NYS Certified WBE		P.O. No.	Payment Terms	Due Date
					Net 30	10/18/2018
Item	Quantity	Description		Rate	Amount	
Pipe Cleaning/Jetting Mobilization	11	Pipe Cleaning/Jetting - Leachate System Cleaning		275.00	3,025.00T	
	1	Mobilization Fee		635.00	635.00T	

A 2% service charge will apply on all balances due over 30 days. 24% APR will apply on all invoices including any legal and or fees associated with collections.

Comments:

Subtotal	\$3,660.00
Sales Tax (8.0%)	\$292.80
Total	\$3,952.80
Payments/Credits	\$0.00
Balance Due	\$3,952.80

Approved
 10-1-18

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Seaton

Date of Inspection 10/25/18 Time 9:30

Weather Conditions Clear

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

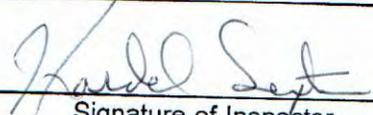
14. All required equipment is on-site and operational.
15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
16. Compaction tests have been performed during the last month. **Note:** If tests have been performed, dates 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)



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 11/28/18 Time 9:45

Weather Conditions Cold / 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 type="checkbox"/> | <input checked="" 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.

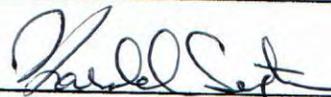
CORRECTIVE ACTIONS:
(Note Item #'s)

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Calibrated Sediment Pond Inlet
Flow meter - 16.562 - (No adjustment
needed)
Pond level at 4.6'. Ordered a
pre discharge test by Adinondack


Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

**LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION**

GEM312-ALOW

Inspector Harold Sept

Date of Inspection 12/19/18 Time 13:10

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. |

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)

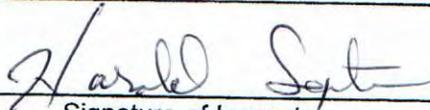
Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

OTHER COMMENTS:

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

Conducting Sampling Plan to Investigate
Solids Settling during Pond Discharge
Events

Draining sediment Pond.


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: 11/30/18 SAMPLE TYPE: Grab SAMPLING COMPANY: Adiron Jack Env. Serv
NAME OF SAMPLER: Kevin Ambrose
FIELD pH: (6-9) 8.0 Tot Fe: (<4.0) 0.05 Tot Mn: (<3.0) 0.020 Tot Zn: (<2.0) 0.01
NH3: Tot As: (<0.1) 0.005 TSS: (<50.0) 1.0 Tot Se: (<0.07) 0.005

POND DRAINAGE AUTHORIZATION

NAME: Harold Sexton DATE: 12/12/18
SIGNATURE: Harold Sexton OTHER/NOTES:

POND DISCHARGE DATA

START OF DISCHARGE					
DATE:	12/12			TIME:	10:15
POND LEVEL (FT):	5.1'			POND VOLUME (GAL):	2,800,000
FIELD pH:	6.8				
END OF DISCHARGE					
DATE:	12/21			TIME:	10:58
POND LEVEL (FT):	1.2			POND VOLUME (GAL):	575,000
FIELD pH	6.98 (7.0)				

COMPOSITE SAMPLE START DATE: 12/12/18
COMPOSITE SAMPLE END DATE: 12/13/18

DISCHARGE SUMMARY

DISCHARGE SUMMARY		WEEKLY pH SUMMARY	
TOTAL DISCHARGE (GAL):	2,225,000		
# OF DISCHARGE DAYS	9 days	Date	pH
MAX GAL/DAY:	350,000 / day	12/13	7.0
AVG GAL/DAY:	247,000 / day	12/16	7.2
AVG CUFT/DAY DISCHARGE:		12/18	6.8
FLOW RATE OF KEUKA OUTLET (CFS)	385,000		

LOCKWOOD ASH DISPOSAL SITE

Monthly

DAILY LEACHATE FLOW MEASUREMENTS

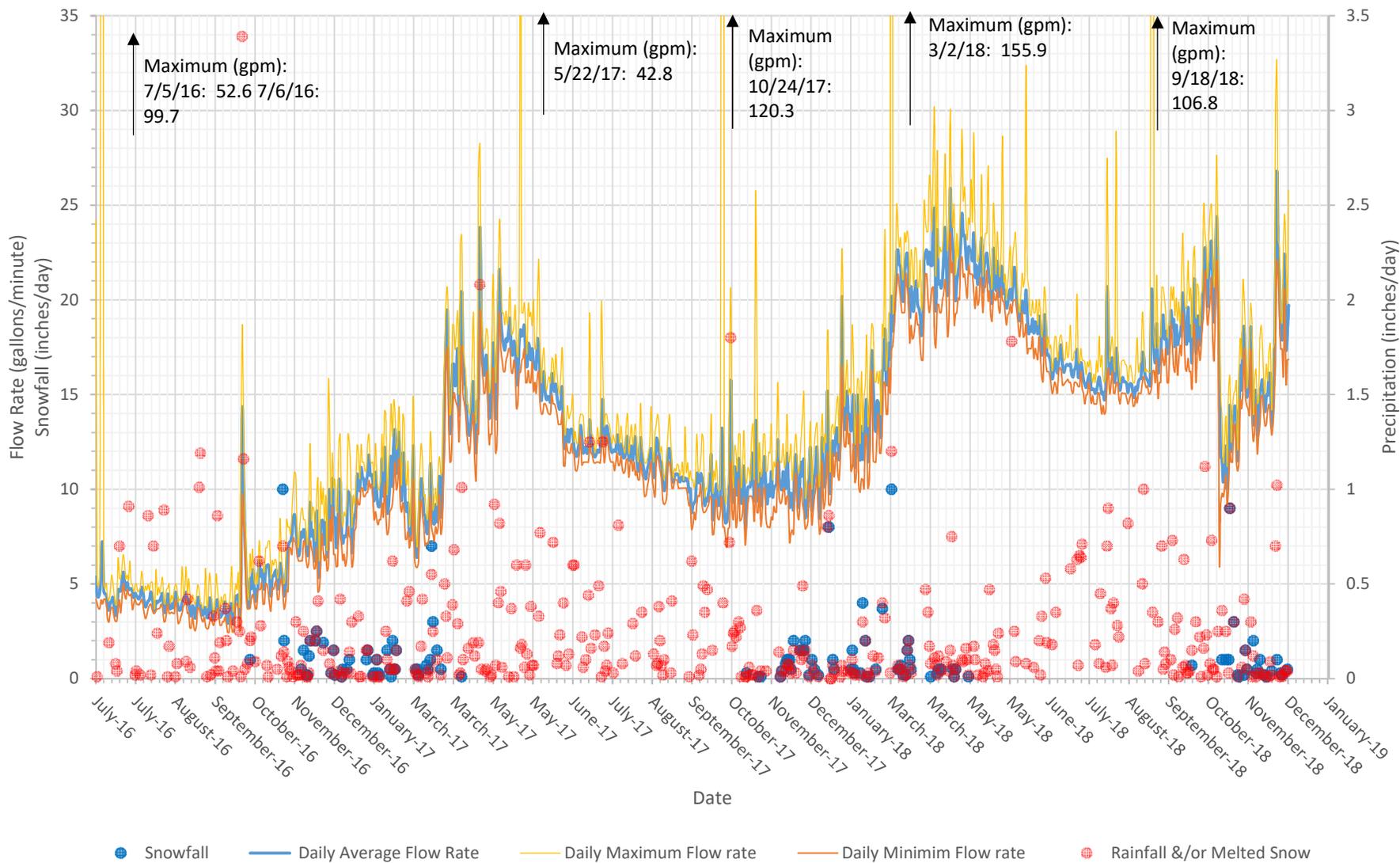
DATE	TIME	PRIMARY		SECONDARY	
		VOLUME (mL)	TIME (sec)	VOLUME (mL)	TIME (sec)
1/12/16	11:45	650	3	350	180
2/24/16	10:45	750	3	400	180
3/14/16	9:20	650	3	300	180
4/14/16	11:30	800	3	250	180
5/21/16	11:45	600	3	325	180
<hr/>					
6/27/17	2:10			800	180
7/27/17	1:30			600	180
8/30/17	3:10			350	180
9/28/17	4:00			400	180
10/27/17	2:35			450	180
11/29/17	3:30			300	180
12/2/17	2:00	0	0		
1-2-18	1:45			400	180
2-1-18	2:40			500	180
3-1-18	1:50			450	180
4-1-18	3:10			400	180
5-1-18	2:45			350	180
6-1-18	4:00			450	180
7-1-18	2:50	PH -	7.54	325	180
8-1-18	10:50	PH	8.01	300	180
9-1-18	1:35	PH -	7.54	250	180
11/27/18	11:10	PH -	6.65	150	180
12/20/18	9:16	PH	7.42	350	180

KS
MS

ATTACHMENT 3

**Leachate Flow Metering
Time-Series Plot**

Leachate Flow Rates from OCF Flow Monitor



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 20, 2018

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

Work Order No: 180330001

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 3/30/2018 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, appearing to read "K. Trafalski".

Krzysztof Trafalski
Laboratory Manager

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 180330001

Date: 20-Apr-18

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: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 3/29/2018 10:25:00 AM
Lab Sample ID: 180330001-001
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)	7.9			S.U.		3/29/2018 10:25:00 AM
Temperature (E170.1)	10			deg C		3/29/2018 10:25:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		3/29/2018 10:25:00 AM

ICP METALS - EPA 200.7

Analyst: **KH**

(Prep: SW3010A - 4/2/2018)

Aluminum	1100	100		µg/L	1	4/6/2018 1:57:00 PM
Antimony	ND	60.0		µg/L	1	4/6/2018 1:57:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 1:57:00 PM
Barium	105	10.0		µg/L	1	4/6/2018 1:57:00 PM
Boron	258	50.0		µg/L	1	4/6/2018 1:57:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 1:57:00 PM
Calcium	276000	100		µg/L	2	4/6/2018 2:01:00 PM
Chromium	ND	5.00		µg/L	1	4/6/2018 1:57:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 1:57:00 PM
Iron	7000	50.0		µg/L	1	4/6/2018 1:57:00 PM
Magnesium	76100	50.0		µg/L	1	4/6/2018 1:57:00 PM
Manganese	1090	20.0		µg/L	1	4/6/2018 1:57:00 PM
Nickel	ND	20.0		µg/L	1	4/6/2018 1:57:00 PM
Potassium	93700	50.0		µg/L	1	4/6/2018 1:57:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 1:57:00 PM
Sodium	90900	100		µg/L	2	4/6/2018 2:01:00 PM
Zinc	13.2	10.0		µg/L	1	4/6/2018 1:57:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **KH**

Total Hardness (As CaCO3)	1002	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:06:07 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	22.0	5.00		mg/L	5	4/17/2018 6:31:04 PM
Sulfate	322	10.0		mg/L	5	4/17/2018 6:31:04 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **CC**

Alkalinity, Total (As CaCO3)	250	10		mg/L CaCO3	1	4/12/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 3/29/2018 10:25:00 AM
Lab Sample ID: 180330001-001
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)	0.9	0.1		mg/L	1	4/6/2018 11:04:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	1240	1		µmhos/cm	1	4/9/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	865	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 3/29/2018 11:25:00 AM
Lab Sample ID: 180330001-002
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.		3/29/2018 11:25:00 AM
Temperature (E170.1)	10			deg C		3/29/2018 11:25:00 AM
Turbidity (E180.1)	752	1.0		NTU		3/29/2018 11:25:00 AM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 2:07:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 2:07:00 PM
Boron	106	50.0		µg/L	1	4/6/2018 2:07:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 2:07:00 PM
Calcium	111000	50.0		µg/L	1	4/6/2018 2:07:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 2:07:00 PM
Iron	1590	50.0		µg/L	1	4/6/2018 2:07:00 PM
Magnesium	21600	50.0		µg/L	1	4/6/2018 2:07:00 PM
Manganese	27.9	20.0		µg/L	1	4/6/2018 2:07:00 PM
Potassium	923	50.0		µg/L	1	4/6/2018 2:07:00 PM
Selenium	ND	5.00	N	µg/L	1	4/6/2018 2:07:00 PM
Sodium	9170	50.0		µg/L	1	4/6/2018 2:07:00 PM

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

Total Hardness (As CaCO3)	365	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:07:51 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	2.23	2.00		mg/L	2	4/17/2018 6:48:10 PM
Sulfate	115	4.00		mg/L	2	4/17/2018 6:48:10 PM

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

Alkalinity, Total (As CaCO3)	260	10		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 11:06:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 3/29/2018 11:25:00 AM
Lab Sample ID: 180330001-002
Matrix: GROUNDWATER

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

Specific Conductance	702	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	500	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 3/29/2018 11:55:00 AM
Lab Sample ID: 180330001-003
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.		3/29/2018 11:55:00 AM
Temperature (E170.1)	9			deg C		3/29/2018 11:55:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		3/29/2018 11:55:00 AM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 2:27:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 2:27:00 PM
Boron	221	50.0		µg/L	1	4/6/2018 2:27:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 2:27:00 PM
Calcium	150000	50.0		µg/L	1	4/6/2018 2:27:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 2:27:00 PM
Iron	1560	50.0		µg/L	1	4/6/2018 2:27:00 PM
Magnesium	63200	50.0		µg/L	1	4/6/2018 2:27:00 PM
Manganese	110	20.0		µg/L	1	4/6/2018 2:27:00 PM
Potassium	2700	50.0		µg/L	1	4/6/2018 2:27:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 2:27:00 PM
Sodium	32100	50.0		µg/L	1	4/6/2018 2:27:00 PM

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

Total Hardness (As CaCO3)	635	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:12:52 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	12.8	5.00		mg/L	5	4/17/2018 7:05:15 PM
Sulfate	242	10.0		mg/L	5	4/17/2018 7:05:15 PM

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

Alkalinity, Total (As CaCO3)	380	10		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 11:10:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 3/29/2018 11:55:00 AM
Lab Sample ID: 180330001-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	1210	1		µmhos/cm	1	4/9/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	890	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 3/29/2018 12:50:00 PM
Lab Sample ID: 180330001-004
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.		3/29/2018 12:50:00 PM
Temperature (E170.1)	9			deg C		3/29/2018 12:50:00 PM
Turbidity (E180.1)	2	1.0		NTU		3/29/2018 12:50:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 3:01:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 3:01:00 PM
Boron	123	50.0		µg/L	1	4/6/2018 3:01:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:01:00 PM
Calcium	166000	50.0		µg/L	1	4/6/2018 3:01:00 PM
Copper	9.87	5.00		µg/L	1	4/6/2018 3:01:00 PM
Iron	111	50.0		µg/L	1	4/6/2018 3:01:00 PM
Magnesium	61200	50.0		µg/L	1	4/6/2018 3:01:00 PM
Manganese	23.5	20.0		µg/L	1	4/6/2018 3:01:00 PM
Potassium	2250	50.0		µg/L	1	4/6/2018 3:01:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:01:00 PM
Sodium	26100	50.0		µg/L	1	4/6/2018 3:01:00 PM

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

Total Hardness (As CaCO3)	667	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:14:33 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	11.8	5.00		mg/L	5	4/17/2018 7:39:26 PM
Sulfate	218	10.0		mg/L	5	4/17/2018 7:39:26 PM

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

Alkalinity, Total (As CaCO3)	380	10		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 11:14:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 3/29/2018 12:50:00 PM
Lab Sample ID: 180330001-004
Matrix: GROUNDWATER

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

Specific Conductance	1170	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	820	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 3/28/2018 3:45:00 PM
Lab Sample ID: 180330001-005
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.		3/28/2018 3:45:00 PM
Temperature (E170.1)	10			deg C		3/28/2018 3:45:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		3/28/2018 3:45:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	1190	100		µg/L	1	4/6/2018 3:04:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 3:04:00 PM
Boron	858	50.0		µg/L	1	4/6/2018 3:04:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:04:00 PM
Calcium	26600	50.0		µg/L	1	4/6/2018 3:04:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 3:04:00 PM
Iron	4100	50.0		µg/L	1	4/6/2018 3:04:00 PM
Magnesium	5690	50.0		µg/L	1	4/6/2018 3:04:00 PM
Manganese	176	20.0		µg/L	1	4/6/2018 3:04:00 PM
Potassium	1430	50.0		µg/L	1	4/6/2018 3:04:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:04:00 PM
Sodium	176000	500		µg/L	10	4/6/2018 3:08:00 PM

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

Total Hardness (As CaCO3)	90	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:19:35 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	4.17	2.00		mg/L	2	4/18/2018 4:18:33 PM
Sulfate	87.0	10.0	N+	mg/L	5	4/17/2018 7:56:31 PM

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

Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:16:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 3/28/2018 3:45:00 PM
Lab Sample ID: 180330001-005
Matrix: GROUNDWATER

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

Specific Conductance	767	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CS**

TDS (Residue, Filterable)	865	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 3/28/2018 4:30:00 PM
Lab Sample ID: 180330001-006
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)	8.1			S.U.		3/28/2018 4:30:00 PM
Temperature (E170.1)	10			deg C		3/28/2018 4:30:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 4:30:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 3:11:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 3:11:00 PM
Boron	233	50.0		µg/L	1	4/6/2018 3:11:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:11:00 PM
Calcium	28400	50.0		µg/L	1	4/6/2018 3:11:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 3:11:00 PM
Iron	70.3	50.0		µg/L	1	4/6/2018 3:11:00 PM
Magnesium	17100	50.0		µg/L	1	4/6/2018 3:11:00 PM
Manganese	ND	20.0		µg/L	1	4/6/2018 3:11:00 PM
Potassium	1970	50.0		µg/L	1	4/6/2018 3:11:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:11:00 PM
Sodium	59300	100		µg/L	2	4/6/2018 3:20:00 PM

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

Total Hardness (As CaCO3)	151	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:21:16 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	4/17/2018 8:30:42 PM
Sulfate	118	4.00		mg/L	2	4/17/2018 8:30:42 PM

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

Alkalinity, Total (As CaCO3)	160	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:17:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 3/28/2018 4:30:00 PM
Lab Sample ID: 180330001-006
Matrix: GROUNDWATER

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

Specific Conductance	543	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	415	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 3/28/2018 3:30:00 PM
Lab Sample ID: 180330001-007
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)	7.6			S.U.		3/28/2018 3:30:00 PM
Temperature (E170.1)	11			deg C		3/28/2018 3:30:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 3:30:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 3:26:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 3:26:00 PM
Boron	2320	50.0		µg/L	1	4/6/2018 3:26:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:26:00 PM
Calcium	73800	50.0		µg/L	1	4/6/2018 3:26:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 3:26:00 PM
Iron	ND	50.0		µg/L	1	4/6/2018 3:26:00 PM
Magnesium	23000	50.0		µg/L	1	4/6/2018 3:26:00 PM
Manganese	20.6	20.0		µg/L	1	4/6/2018 3:26:00 PM
Potassium	2920	50.0		µg/L	1	4/6/2018 3:26:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:26:00 PM
Sodium	85500	100		µg/L	2	4/6/2018 3:31:00 PM

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

Total Hardness (As CaCO3)	279	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:22:57 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	20.7	5.00		mg/L	5	4/17/2018 9:22:27 PM
Sulfate	283	10.0		mg/L	5	4/17/2018 9:22:27 PM

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

Alkalinity, Total (As CaCO3)	150	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:19:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 3/28/2018 3:30:00 PM
Lab Sample ID: 180330001-007
Matrix: GROUNDWATER

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

Specific Conductance	927	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CS**

TDS (Residue, Filterable)	685	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 3/28/2018 2:15:00 PM
Lab Sample ID: 180330001-008
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.		3/28/2018 2:15:00 PM
Temperature (E170.1)	11			deg C		3/28/2018 2:15:00 PM
Turbidity (E180.1)	16	1.0		NTU		3/28/2018 2:15:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 3:35:00 PM
Arsenic	ND	5.00		µg/L	1	4/6/2018 3:35:00 PM
Boron	1290	50.0		µg/L	1	4/6/2018 3:35:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:35:00 PM
Calcium	64900	50.0		µg/L	1	4/6/2018 3:35:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 3:35:00 PM
Iron	258	50.0		µg/L	1	4/6/2018 3:35:00 PM
Magnesium	21200	50.0		µg/L	1	4/6/2018 3:35:00 PM
Manganese	60.5	20.0		µg/L	1	4/6/2018 3:35:00 PM
Potassium	3190	50.0		µg/L	1	4/6/2018 3:35:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:35:00 PM
Sodium	111000	500		µg/L	10	4/6/2018 3:39:00 PM

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

Total Hardness (As CaCO3)	250	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:24:39 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	10.8	2.00		mg/L	2	4/17/2018 9:39:39 PM
Sulfate	246	20.0		mg/L	10	4/18/2018 4:30:08 PM

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

Alkalinity, Total (As CaCO3)	200	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:25:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 3/28/2018 2:15:00 PM
Lab Sample ID: 180330001-008
Matrix: GROUNDWATER

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

Specific Conductance	874	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	490	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 3/29/2018 9:35:00 AM
Lab Sample ID: 180330001-009
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.		3/29/2018 9:35:00 AM
Temperature (E170.1)	11			deg C		3/29/2018 9:35:00 AM
Turbidity (E180.1)	63	1.0		NTU		3/29/2018 9:35:00 AM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	230	100		µg/L	1	4/6/2018 3:46:00 PM
Arsenic	9.93	5.00		µg/L	1	4/6/2018 3:46:00 PM
Boron	250	50.0		µg/L	1	4/6/2018 3:46:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 3:46:00 PM
Calcium	45000	50.0		µg/L	1	4/6/2018 3:46:00 PM
Copper	7.40	5.00		µg/L	1	4/6/2018 3:46:00 PM
Iron	1290	50.0		µg/L	1	4/6/2018 3:46:00 PM
Magnesium	13800	50.0		µg/L	1	4/6/2018 3:46:00 PM
Manganese	79.7	20.0		µg/L	1	4/6/2018 3:46:00 PM
Potassium	1650	50.0		µg/L	1	4/6/2018 3:46:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 3:46:00 PM
Sodium	60200	100		µg/L	2	4/6/2018 4:34:00 PM

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

Total Hardness (As CaCO3)	169	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:26:21 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	7.50	2.00		mg/L	2	4/17/2018 9:56:45 PM
Sulfate	200	4.00		mg/L	2	4/17/2018 9:56:45 PM

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

Alkalinity, Total (As CaCO3)	100	10		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 11:27:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 3/29/2018 9:35:00 AM
Lab Sample ID: 180330001-009
Matrix: GROUNDWATER

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

Specific Conductance	604	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CS**

TDS (Residue, Filterable)	435	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 3/29/2018 10:10:00 AM
Lab Sample ID: 180330001-010
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.		3/29/2018 10:10:00 AM
Temperature (E170.1)	10			deg C		3/29/2018 10:10:00 AM
Turbidity (E180.1)	4	1.0		NTU		3/29/2018 10:10:00 AM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/6/2018 4:39:00 PM
Arsenic	8.96	5.00		µg/L	1	4/6/2018 4:39:00 PM
Boron	267	50.0		µg/L	1	4/6/2018 4:39:00 PM
Cadmium	ND	5.00		µg/L	1	4/6/2018 4:39:00 PM
Calcium	73900	50.0		µg/L	1	4/6/2018 4:39:00 PM
Copper	ND	5.00		µg/L	1	4/6/2018 4:39:00 PM
Iron	488	50.0		µg/L	1	4/6/2018 4:39:00 PM
Magnesium	62300	50.0		µg/L	1	4/6/2018 4:39:00 PM
Manganese	308	20.0		µg/L	1	4/6/2018 4:39:00 PM
Potassium	2600	50.0		µg/L	1	4/6/2018 4:39:00 PM
Selenium	ND	5.00		µg/L	1	4/6/2018 4:39:00 PM
Sodium	37500	50.0		µg/L	1	4/6/2018 4:39:00 PM

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

Total Hardness (As CaCO3)	441	5		mg/L CaCO3	1	4/6/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:28:03 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	2.94	2.00		mg/L	2	4/18/2018 4:41:44 PM
Sulfate	245	10.0		mg/L	5	4/17/2018 10:13:50 PM

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

Alkalinity, Total (As CaCO3)	290	10		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 11:29:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 3/29/2018 10:10:00 AM
Lab Sample ID: 180330001-010
Matrix: GROUNDWATER

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

Specific Conductance	943	1		µmhos/cm	1	4/9/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	630	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 3/28/2018 2:00:00 PM
Lab Sample ID: 180330001-011
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)	7.1			S.U.		3/28/2018 2:00:00 PM
Temperature (E170.1)	9			deg C		3/28/2018 2:00:00 PM
Turbidity (E180.1)	225	1.0		NTU		3/28/2018 2:00:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	128	100		µg/L	1	4/9/2018 5:47:30 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 5:47:30 PM
Boron	96.1	50.0		µg/L	1	4/9/2018 5:47:30 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 5:47:30 PM
Calcium	47700	50.0		µg/L	1	4/9/2018 5:47:30 PM
Copper	6.07	5.00		µg/L	1	4/9/2018 5:47:30 PM
Iron	337	50.0		µg/L	1	4/9/2018 5:47:30 PM
Magnesium	49600	50.0		µg/L	1	4/9/2018 5:47:30 PM
Manganese	22.5	20.0		µg/L	1	4/9/2018 5:47:30 PM
Potassium	2290	50.0		µg/L	1	4/9/2018 5:47:30 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 5:47:30 PM
Sodium	17600	50.0		µg/L	1	4/9/2018 5:47:30 PM

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

Total Hardness (As CaCO3)	323	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:29:46 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	4/17/2018 10:30:55 PM
Sulfate	70.6	4.00		mg/L	2	4/17/2018 10:30:55 PM

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

Alkalinity, Total (As CaCO3)	330	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:31:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 3/28/2018 2:00:00 PM
Lab Sample ID: 180330001-011
Matrix: GROUNDWATER

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

Specific Conductance	699	1		µmhos/cm	1	4/10/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CS**

TDS (Residue, Filterable)	415	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 3/28/2018 3:45:00 PM
Lab Sample ID: 180330001-012
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.		3/28/2018 3:45:00 PM
Temperature (E170.1)	10			deg C		3/28/2018 3:45:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		3/28/2018 3:45:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	1200	100		µg/L	1	4/9/2018 5:57:57 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 5:57:57 PM
Boron	855	50.0		µg/L	1	4/9/2018 5:57:57 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 5:57:57 PM
Calcium	25500	50.0		µg/L	1	4/9/2018 5:57:57 PM
Copper	ND	5.00		µg/L	1	4/9/2018 5:57:57 PM
Iron	3980	50.0		µg/L	1	4/9/2018 5:57:57 PM
Magnesium	5370	50.0		µg/L	1	4/9/2018 5:57:57 PM
Manganese	164	20.0		µg/L	1	4/9/2018 5:57:57 PM
Potassium	1180	50.0		µg/L	1	4/9/2018 5:57:57 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 5:57:57 PM
Sodium	161000	500		µg/L	10	4/9/2018 6:03:11 PM

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

Total Hardness (As CaCO3)	86	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:31:28 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	4.16	2.00		mg/L	2	4/18/2018 4:53:19 PM
Sulfate	92.7	10.0		mg/L	5	4/17/2018 10:48:00 PM

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

Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:33:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 3/28/2018 3:45:00 PM
Lab Sample ID: 180330001-012
Matrix: GROUNDWATER

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

Specific Conductance	763	1		µmhos/cm	1	4/10/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	685	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 3/28/2018 6:40:00 PM
Lab Sample ID: 180330001-013
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)	5.78	0.10		mg/L		3/28/2018 6:40:00 PM
Flow, GPD	647			gal/day		3/28/2018 6:40:00 PM
pH (E150.1)	7.3			S.U.		3/28/2018 6:40:00 PM
Temperature (E170.1)	8			deg C		3/28/2018 6:40:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 6:40:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 6:08:19 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 6:08:19 PM
Boron	2310	50.0		µg/L	1	4/9/2018 6:08:19 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 6:08:19 PM
Calcium	256000	500		µg/L	10	4/9/2018 6:13:46 PM
Copper	ND	5.00		µg/L	1	4/9/2018 6:08:19 PM
Iron	420	50.0		µg/L	1	4/9/2018 6:08:19 PM
Magnesium	77200	50.0		µg/L	1	4/9/2018 6:08:19 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 6:08:19 PM
Potassium	4630	50.0		µg/L	1	4/9/2018 6:08:19 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 6:08:19 PM
Sodium	31900	50.0		µg/L	1	4/9/2018 6:08:19 PM

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

Total Hardness (As CaCO3)	957	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:33:09 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	65.9	10.0		mg/L	10	4/17/2018 11:05:06 PM
Sulfate	730	20.0		mg/L	10	4/17/2018 11:05:06 PM

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

Alkalinity, Total (As CaCO3)	370	10		mg/L CaCO3	1	4/11/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 3/28/2018 6:40:00 PM
Lab Sample ID: 180330001-013
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	4/6/2018 11:35:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	1880	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	1420	5		mg/L	1	3/30/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 3/28/2018 1:10:00 PM
Lab Sample ID: 180330001-014
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)	5.23	0.10		mg/L		3/28/2018 1:10:00 PM
Flow, GPD	114			gal/day		3/28/2018 1:10:00 PM
pH (E150.1)	7.3			S.U.		3/28/2018 1:10:00 PM
Temperature (E170.1)	11			deg C		3/28/2018 1:10:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 1:10:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 6:18:59 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 6:18:59 PM
Boron	343	50.0		µg/L	1	4/9/2018 6:18:59 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 6:18:59 PM
Calcium	156000	500		µg/L	10	4/9/2018 6:24:16 PM
Copper	ND	5.00		µg/L	1	4/9/2018 6:18:59 PM
Iron	ND	50.0		µg/L	1	4/9/2018 6:18:59 PM
Magnesium	64800	50.0		µg/L	1	4/9/2018 6:18:59 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 6:18:59 PM
Potassium	1920	50.0		µg/L	1	4/9/2018 6:18:59 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 6:18:59 PM
Sodium	42400	50.0		µg/L	1	4/9/2018 6:18:59 PM

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

Total Hardness (As CaCO3)	656	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:34:50 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	32.1	20.0		mg/L	20	4/17/2018 11:22:12 PM
Sulfate	1160	40.0		mg/L	20	4/17/2018 11:22:12 PM

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

Alkalinity, Total (As CaCO3)	540	10		mg/L CaCO3	1	4/11/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 3/28/2018 1:10:00 PM
Lab Sample ID: 180330001-014
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	4/6/2018 11:37:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	2550	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	2190	5		mg/L	1	3/30/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 3/29/2018 1:45:00 PM
Lab Sample ID: 180330001-015
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)	5.75	0.10		mg/L		3/29/2018 1:45:00 PM
Flow, GPD	7609			gal/day		3/29/2018 1:45:00 PM
pH (E150.1)	7.5			S.U.		3/29/2018 1:45:00 PM
Temperature (E170.1)	11			deg C		3/29/2018 1:45:00 PM
Turbidity (E180.1)	175	1.0		NTU		3/29/2018 1:45:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 6:45:20 PM
Arsenic	19.9	5.00		µg/L	1	4/9/2018 6:45:20 PM
Boron	1620	50.0		µg/L	1	4/9/2018 6:45:20 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 6:45:20 PM
Calcium	106000	50.0		µg/L	1	4/9/2018 6:45:20 PM
Copper	ND	5.00		µg/L	1	4/9/2018 6:45:20 PM
Iron	2300	50.0		µg/L	1	4/9/2018 6:45:20 PM
Magnesium	27100	50.0		µg/L	1	4/9/2018 6:45:20 PM
Manganese	295	20.0		µg/L	1	4/9/2018 6:45:20 PM
Potassium	6570	50.0		µg/L	1	4/9/2018 6:45:20 PM
Selenium	12.3	5.00		µg/L	1	4/9/2018 6:45:20 PM
Sodium	31500	50.0		µg/L	1	4/9/2018 6:45:20 PM

LOW LEVEL MERCURY - EPA 1631E Analyst: **WB**
 (Prep: 1631E - 4/2/2018)

Mercury	ND	0.5		ng/L	1	4/3/2018
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HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	376	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:39:54 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	23.1	10.0		mg/L	10	4/18/2018 1:05:59 AM
Sulfate	454	20.0		mg/L	10	4/18/2018 1:05:59 AM

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

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 3/29/2018 1:45:00 PM
Lab Sample ID: 180330001-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	670	10		mg/L CaCO3	1	4/12/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	4/6/2018 11:39:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	1810	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	1440	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 3/29/2018 1:25:00 PM
Lab Sample ID: 180330001-016
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)	5.26	0.10		mg/L		3/29/2018 1:25:00 PM
Flow, GPD	4565			gal/day		3/29/2018 1:25:00 PM
pH (E150.1)	7.6			S.U.		3/29/2018 1:25:00 PM
Temperature (E170.1)	12			deg C		3/29/2018 1:25:00 PM
Turbidity (E180.1)	202	1.0		NTU		3/29/2018 1:25:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 6:56:01 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 6:56:01 PM
Boron	16400	50.0		µg/L	1	4/9/2018 6:56:01 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 6:56:01 PM
Calcium	209000	500		µg/L	10	4/9/2018 7:01:24 PM
Copper	ND	5.00		µg/L	1	4/9/2018 6:56:01 PM
Iron	1250	50.0		µg/L	1	4/9/2018 6:56:01 PM
Magnesium	30300	50.0		µg/L	1	4/9/2018 6:56:01 PM
Manganese	365	20.0		µg/L	1	4/9/2018 6:56:01 PM
Potassium	47900	50.0		µg/L	1	4/9/2018 6:56:01 PM
Selenium	11.8	5.00		µg/L	1	4/9/2018 6:56:01 PM
Sodium	168000	500		µg/L	10	4/9/2018 7:01:24 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	647	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:41:35 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	312	20.0		mg/L	20	4/18/2018 1:40:20 AM
Sulfate	1520	40.0		mg/L	20	4/18/2018 1:40:20 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **CC**

Alkalinity, Total (As CaCO3)	330	10		mg/L CaCO3	1	4/12/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 3/29/2018 1:25:00 PM
Lab Sample ID: 180330001-016
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)	1.3	0.1		mg/L	1	4/6/2018 11:41:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	3570	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	3060	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 3/29/2018 12:55:00 PM
Lab Sample ID: 180330001-017
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)	5.27	0.10		mg/L		3/29/2018 12:55:00 PM
Flow, GPD	476			gal/day		3/29/2018 12:55:00 PM
pH (E150.1)	6.6			S.U.		3/29/2018 12:55:00 PM
Temperature (E170.1)	13			deg C		3/29/2018 12:55:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/29/2018 12:55:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	231	100		µg/L	1	4/9/2018 7:06:47 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 7:06:47 PM
Boron	19400	50.0		µg/L	1	4/9/2018 7:06:47 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 7:06:47 PM
Calcium	409000	500		µg/L	10	4/9/2018 7:12:11 PM
Copper	5.50	5.00		µg/L	1	4/9/2018 7:06:47 PM
Iron	346	50.0		µg/L	1	4/9/2018 7:06:47 PM
Magnesium	71000	50.0		µg/L	1	4/9/2018 7:06:47 PM
Manganese	308	20.0		µg/L	1	4/9/2018 7:06:47 PM
Potassium	71100	50.0		µg/L	1	4/9/2018 7:06:47 PM
Selenium	16.8	5.00		µg/L	1	4/9/2018 7:06:47 PM
Sodium	222000	500		µg/L	10	4/9/2018 7:12:11 PM

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

Total Hardness (As CaCO3)	131	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:43:16 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	629	20.0		mg/L	20	4/18/2018 1:57:26 AM
Sulfate	1650	40.0		mg/L	20	4/18/2018 1:57:26 AM

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

Alkalinity, Total (As CaCO3)	250	10		mg/L CaCO3	1	4/12/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 3/29/2018 12:55:00 PM
Lab Sample ID: 180330001-017
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)	0.2	0.1		mg/L	1	4/6/2018 11:43:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	4550	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	3840	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 21" Inlet To Pond
Collection Date: 3/29/2018 2:00:00 PM
Lab Sample ID: 180330001-018
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)	5.89	0.10		mg/L		3/29/2018 2:00:00 PM
Flow, GPD	15,218			gal/day		3/29/2018 2:00:00 PM
pH (E150.1)	7.6			S.U.		3/29/2018 2:00:00 PM
Temperature (E170.1)	11			deg C		3/29/2018 2:00:00 PM
Turbidity (E180.1)	194	1.0		NTU		3/29/2018 2:00:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 7:17:35 PM
Arsenic	25.0	5.00		µg/L	1	4/9/2018 7:17:35 PM
Boron	15900	50.0		µg/L	1	4/9/2018 7:17:35 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 7:17:35 PM
Calcium	317000	500		µg/L	10	4/9/2018 7:22:59 PM
Copper	ND	5.00		µg/L	1	4/9/2018 7:17:35 PM
Iron	4720	50.0		µg/L	1	4/9/2018 7:17:35 PM
Magnesium	58100	50.0		µg/L	1	4/9/2018 7:17:35 PM
Manganese	452	20.0		µg/L	1	4/9/2018 7:17:35 PM
Potassium	49900	50.0		µg/L	1	4/9/2018 7:17:35 PM
Selenium	34.6	5.00		µg/L	1	4/9/2018 7:17:35 PM
Sodium	141000	500		µg/L	10	4/9/2018 7:22:59 PM

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 4/2/2018)

Mercury	ND	0.5		ng/L	1	4/3/2018
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1030	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:44:57 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	206	20.0		mg/L	20	4/18/2018 2:14:31 AM
Sulfate	1160	40.0		mg/L	20	4/18/2018 2:14:31 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **CC**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 21" Inlet To Pond
Collection Date: 3/29/2018 2:00:00 PM
Lab Sample ID: 180330001-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	490	10		mg/L CaCO3	1	4/12/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.3	0.1		mg/L	1	4/6/2018 11:49:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	3100	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	2560	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 3/28/2018 3:15:00 PM
Lab Sample ID: 180330001-019
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)	8.38	0.10		mg/L		3/28/2018 3:15:00 PM
pH (E150.1)	7.9			S.U.		3/28/2018 3:15:00 PM
Temperature (E170.1)	6			deg C		3/28/2018 3:15:00 PM
Turbidity (E180.1)	27	1.0		NTU		3/28/2018 3:15:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	187	100		µg/L	1	4/9/2018 7:28:24 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 7:28:24 PM
Boron	ND	50.0		µg/L	1	4/9/2018 7:28:24 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 7:28:24 PM
Calcium	57100	50.0		µg/L	1	4/9/2018 7:28:24 PM
Copper	6.17	5.00		µg/L	1	4/9/2018 7:28:24 PM
Iron	266	50.0		µg/L	1	4/9/2018 7:28:24 PM
Magnesium	14300	50.0		µg/L	1	4/9/2018 7:28:24 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 7:28:24 PM
Potassium	3310	50.0		µg/L	1	4/9/2018 7:28:24 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 7:28:24 PM
Sodium	27500	50.0		µg/L	1	4/9/2018 7:28:24 PM

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

Total Hardness (As CaCO3)	201	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:46:38 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	61.2	2.00		mg/L	2	4/18/2018 2:31:37 AM
Sulfate	35.4	4.00		mg/L	2	4/18/2018 2:31:37 AM

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

Alkalinity, Total (As CaCO3)	180	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:53:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 3/28/2018 3:15:00 PM
Lab Sample ID: 180330001-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	613	1		µmhos/cm	1	4/10/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	380	5		mg/L	1	3/30/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 3/28/2018 2:50:00 PM
Lab Sample ID: 180330001-020
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)	8.64	0.10		mg/L		3/28/2018 2:50:00 PM
pH (E150.1)	7.9			S.U.		3/28/2018 2:50:00 PM
Temperature (E170.1)	5			deg C		3/28/2018 2:50:00 PM
Turbidity (E180.1)	35	1.0		NTU		3/28/2018 2:50:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	195	100		µg/L	1	4/9/2018 7:49:26 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 7:49:26 PM
Boron	ND	50.0		µg/L	1	4/9/2018 7:49:26 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 7:49:26 PM
Calcium	59800	50.0		µg/L	1	4/9/2018 7:49:26 PM
Copper	6.51	5.00		µg/L	1	4/9/2018 7:49:26 PM
Iron	286	50.0		µg/L	1	4/9/2018 7:49:26 PM
Magnesium	14700	50.0		µg/L	1	4/9/2018 7:49:26 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 7:49:26 PM
Potassium	3400	50.0		µg/L	1	4/9/2018 7:49:26 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 7:49:26 PM
Sodium	29000	50.0		µg/L	1	4/9/2018 7:49:26 PM

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

Total Hardness (As CaCO3)	210	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:48:19 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	61.9	2.00		mg/L	2	4/18/2018 2:48:42 AM
Sulfate	35.4	4.00		mg/L	2	4/18/2018 2:48:42 AM

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

Alkalinity, Total (As CaCO3)	180	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:55:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 3/28/2018 2:50:00 PM
Lab Sample ID: 180330001-020
Matrix: SURFACE WATER

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

Specific Conductance	626	1		µmhos/cm	1	4/10/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011Analyst: **CS**

TDS (Residue, Filterable)	340	5		mg/L	1	3/30/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 3/28/2018 3:15:00 PM
Lab Sample ID: 180330001-021
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)	8.38	0.10		mg/L		3/28/2018 3:15:00 PM
pH (E150.1)	7.9			S.U.		3/28/2018 3:15:00 PM
Temperature (E170.1)	6			deg C		3/28/2018 3:15:00 PM
Turbidity (E180.1)	27	1.0		NTU		3/28/2018 3:15:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	245	100		µg/L	1	4/9/2018 8:10:16 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 8:10:16 PM
Boron	ND	50.0		µg/L	1	4/9/2018 8:10:16 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 8:10:16 PM
Calcium	63300	50.0		µg/L	1	4/9/2018 8:10:16 PM
Copper	7.32	5.00		µg/L	1	4/9/2018 8:10:16 PM
Iron	295	50.0		µg/L	1	4/9/2018 8:10:16 PM
Magnesium	15400	50.0		µg/L	1	4/9/2018 8:10:16 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 8:10:16 PM
Potassium	4400	50.0		µg/L	1	4/9/2018 8:10:16 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 8:10:16 PM
Sodium	32000	50.0		µg/L	1	4/9/2018 8:10:16 PM

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

Total Hardness (As CaCO3)	222	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:53:27 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	61.2	2.00		mg/L	2	4/18/2018 3:05:47 AM
Sulfate	35.3	4.00		mg/L	2	4/18/2018 3:05:47 AM

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

Alkalinity, Total (As CaCO3)	180	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 11:57:00 AM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 3/28/2018 3:15:00 PM
Lab Sample ID: 180330001-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	616	1		µmhos/cm	1	4/11/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	400	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 3/28/2018 7:00:00 PM
Lab Sample ID: 180330001-022
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)	7.26	0.10		mg/L		3/28/2018 7:00:00 PM
pH (E150.1)	7.1			S.U.		3/28/2018 7:00:00 PM
Temperature (E170.1)	7			deg C		3/28/2018 7:00:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 7:00:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 8:36:33 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 8:36:33 PM
Boron	17900	50.0		µg/L	1	4/9/2018 8:36:33 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 8:36:33 PM
Calcium	371000	500		µg/L	10	4/9/2018 8:52:32 PM
Copper	5.36	5.00		µg/L	1	4/9/2018 8:36:33 PM
Iron	128	50.0		µg/L	1	4/9/2018 8:36:33 PM
Magnesium	62300	50.0		µg/L	1	4/9/2018 8:36:33 PM
Manganese	67.6	20.0		µg/L	1	4/9/2018 8:36:33 PM
Potassium	58100	50.0		µg/L	1	4/9/2018 8:36:33 PM
Selenium	16.6	5.00		µg/L	1	4/9/2018 8:36:33 PM
Sodium	167000	500		µg/L	10	4/9/2018 8:52:32 PM

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

Total Hardness (As CaCO3)	1183	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 10:55:10 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	185	20.0		mg/L	20	4/18/2018 4:15:33 AM
Sulfate	1060	40.0		mg/L	20	4/18/2018 4:15:33 AM

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

Alkalinity, Total (As CaCO3)	290	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 12:02:00 PM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 3/28/2018 7:00:00 PM
Lab Sample ID: 180330001-022
Matrix: SURFACE WATER

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

Specific Conductance	2770	1		µmhos/cm	1	4/11/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	2260	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 3/29/2018 1:30:00 PM
Lab Sample ID: 180330001-023
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)	6.62	0.10		mg/L		3/29/2018 1:30:00 PM
pH (E150.1)	7.0			S.U.		3/29/2018 1:30:00 PM
Temperature (E170.1)	16			deg C		3/29/2018 1:30:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/29/2018 1:30:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 8:57:59 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 8:57:59 PM
Boron	ND	50.0		µg/L	1	4/9/2018 8:57:59 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 8:57:59 PM
Calcium	ND	50.0		µg/L	1	4/9/2018 8:57:59 PM
Copper	ND	5.00		µg/L	1	4/9/2018 8:57:59 PM
Iron	ND	50.0		µg/L	1	4/9/2018 8:57:59 PM
Magnesium	ND	50.0		µg/L	1	4/9/2018 8:57:59 PM
Manganese	ND	20.0		µg/L	1	4/9/2018 8:57:59 PM
Potassium	ND	50.0		µg/L	1	4/9/2018 8:57:59 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 8:57:59 PM
Sodium	710	50.0		µg/L	1	4/9/2018 8:57:59 PM

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

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 11:00:14 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	4/18/2018 4:32:55 AM
Sulfate	ND	4.00		mg/L	2	4/18/2018 4:32:55 AM

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

Alkalinity, Total (As CaCO3)	1	1		mg/L CaCO3	1	4/12/2018
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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	4/6/2018 12:04:00 PM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 3/29/2018 1:30:00 PM
Lab Sample ID: 180330001-023
Matrix: GROUNDWATER

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

Specific Conductance	2	1		µmhos/cm	1	4/11/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CS**

TDS (Residue, Filterable)	ND	5		mg/L	1	4/2/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LLHg Field Blank
Collection Date: 3/29/2018 1:50:00 PM
Lab Sample ID: 180330001-024
Matrix: FIELD BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E
(Prep: 1631E - 4/2/2018)

Analyst: **WB**

Mercury	ND	0.5		ng/L	1	4/3/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 3/28/2018 6:20:00 PM
Lab Sample ID: 180330001-025
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.		3/28/2018 6:20:00 PM
Temperature (E170.1)	11			deg C		3/28/2018 6:20:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/28/2018 6:20:00 PM

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

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 9:08:20 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 9:08:20 PM
Boron	803	50.0		µg/L	1	4/9/2018 9:08:20 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 9:08:20 PM
Calcium	69700	50.0		µg/L	1	4/9/2018 9:08:20 PM
Copper	ND	5.00		µg/L	1	4/9/2018 9:08:20 PM
Iron	217	50.0		µg/L	1	4/9/2018 9:08:20 PM
Magnesium	18300	50.0		µg/L	1	4/9/2018 9:08:20 PM
Manganese	59.3	20.0		µg/L	1	4/9/2018 9:08:20 PM
Potassium	2100	50.0		µg/L	1	4/9/2018 9:08:20 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 9:08:20 PM
Sodium	75300	500		µg/L	10	4/9/2018 9:13:37 PM

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

Total Hardness (As CaCO3)	249	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 11:01:55 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	34.9	2.00		mg/L	2	4/18/2018 4:50:01 AM
Sulfate	75.1	4.00		mg/L	2	4/18/2018 4:50:01 AM

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

Alkalinity, Total (As CaCO3)	360	10		mg/L CaCO3	1	4/11/2018
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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	4/6/2018 12:06:00 PM
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 3/28/2018 6:20:00 PM
Lab Sample ID: 180330001-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	873	1		µmhos/cm	1	4/11/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	460	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 3/29/2018 12:35:00 PM
Lab Sample ID: 180330001-026
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)	8.09	0.10		mg/L		3/29/2018 12:35:00 PM
Flow, GPD	761			gal/day		3/29/2018 12:35:00 PM
pH (E150.1)	7.1			S.U.		3/29/2018 12:35:00 PM
Temperature (E170.1)	6			deg C		3/29/2018 12:35:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		3/29/2018 12:35:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 4/2/2018)

Aluminum	ND	100		µg/L	1	4/9/2018 9:18:44 PM
Arsenic	ND	5.00		µg/L	1	4/9/2018 9:18:44 PM
Boron	137	50.0		µg/L	1	4/9/2018 9:18:44 PM
Cadmium	ND	5.00		µg/L	1	4/9/2018 9:18:44 PM
Calcium	127000	50.0		µg/L	1	4/9/2018 9:18:44 PM
Copper	5.48	5.00		µg/L	1	4/9/2018 9:18:44 PM
Iron	50.0	50.0		µg/L	1	4/9/2018 9:18:44 PM
Magnesium	27800	50.0		µg/L	1	4/9/2018 9:18:44 PM
Manganese	152	20.0		µg/L	1	4/9/2018 9:18:44 PM
Potassium	2620	50.0		µg/L	1	4/9/2018 9:18:44 PM
Selenium	ND	5.00		µg/L	1	4/9/2018 9:18:44 PM
Sodium	11000	50.0		µg/L	1	4/9/2018 9:18:44 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	432	5		mg/L CaCO3	1	4/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 4/2/2018)

Mercury	ND	0.0002		mg/L	1	4/3/2018 11:03:37 AM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	5.77	5.00		mg/L	5	4/18/2018 5:07:07 AM
Sulfate	230	10.0		mg/L	5	4/18/2018 5:07:07 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **CC**

Alkalinity, Total (As CaCO3)	310	10		mg/L CaCO3	1	4/12/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT: Lockwood Hills LLC
Work Order: 180330001
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 3/29/2018 12:35:00 PM
Lab Sample ID: 180330001-026
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	4/6/2018 12:12:00 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: TSZ
Specific Conductance	930	1		µmhos/cm	1	4/11/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	600	5		mg/L	1	4/2/2018

Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	GW Dep Drain 2
Work Order:	180330001	Collection Date:	3/28/2018
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	180330001-027
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		3/28/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	GW Dep Drain 4
Work Order:	180330001	Collection Date:	3/29/2018
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	180330001-028
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	Dry			NA		3/29/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	Under Drain 5
Work Order:	180330001	Collection Date:	3/28/2018
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	180330001-029
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		3/28/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8910-SH
Work Order:	180330001	Collection Date:	3/28/2018
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	180330001-030
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	Poor Recovery			NA		3/28/2018
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Adirondack Environmental Services, Inc

Date: 20-Apr-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8405
Work Order:	180330001	Collection Date:	3/28/2018
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	180330001-031
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

Observation	Dry			NA		3/28/2018
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CHAIN OF CUSTODY RECORD

AES Work Order#:

180330001

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Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: Paul Beist Kevin Ambra				
Client Phone No:		PO #:			Samplers Signature: Paul Beist				
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 (PB)	1842 7842	3/29/18	10:25	<input checked="" type="radio"/> P	GW		G	4	Lockwood Ash LF Quarterly
002	8404	3/29/18	11:25	<input checked="" type="radio"/> P	GW		G	4	Field pH, Temp, Turbidity
003	8908-D	3/29/18	11:55	<input checked="" type="radio"/> P	GW		G	4	
004	8908-SH	3/29/18	12:50	<input checked="" type="radio"/> A	GW		G	4	
005	8909-D	3/28/18	3:45	<input checked="" type="radio"/> A	GW		G	4	
006	8909-SH	3/28/18	4:30	<input checked="" type="radio"/> P	GW		G	4	
007	8910-D	3/28/18	3:30	<input checked="" type="radio"/> P	GW		G	4	
008	8911-D	3/28/18	2:15	<input checked="" type="radio"/> A	GW		G	4	
009	8911-SH	3/29/18	9:35	<input checked="" type="radio"/> P	GW		G	4	
010	8942-D	3/29/18	10:10	<input checked="" type="radio"/> P	GW		G	4	
011	9306-SH	3/28/18	2:00	<input checked="" type="radio"/> A	GW		G	4	
012	GW Dup 8909-D	3/28/18	3:45	<input checked="" type="radio"/> 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="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) <i>Paul Beist</i>		Received by: (Signature)			Date	Time			
					3/29/18	7:25			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
		<i>Kevin Ambra</i>			3/30/18	8:09 am			
Sample Temperature Ambient <input checked="" type="radio"/> Chilled Chilling Process begun Notes: 4°C		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:				



180330001



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CHAIN OF CUSTODY RECORD

AES Work Order#:

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Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: Paul Buist				
Client Phone No:		PO #:			Samplers Signature: Paul Buist				
Client Fax No:					Kegun Ambr				
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	3/28/18	6:40	A Ⓟ	GW		G	4	Lockwood Q Field pH, Temp, Turb, Field Flow Reading, DO
014	Leak Detection Syst.	3/29/18	1:10	A Ⓟ	GW		G	4	"
015	Under Drain 1	3/29/18	1:45	A Ⓟ	GW		G	5	"
016	Under Drain 2	3/29/18	1:25	A Ⓟ	GW		G	4	"
017	Under Drain 3	3/29/18	12:55	A Ⓟ	GW		G	4	"
018	21" Inlet to Pond	3/29/18	2:00	A Ⓟ	GW		G	5	"
019	Keuka Upstream	3/28/18	3:15	A Ⓟ	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream	3/28/18	2:50	A Ⓟ	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup	3/28/18	3:15	A Ⓟ	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab	3/28/18	7:00	A Ⓟ	SF		G	4	Lockwood Quarterly +DO
023	Field Blank	3/29/18	1:30	A Ⓟ	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank	3/29/18	1:50	A Ⓟ	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) Paul Buist		Received by: (Signature)			Date	Time			
					3/29/18	7:25			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
		Kareem			3/30/18	8:09am			
Sample Temperature: Ambient <u>Chilled</u> Chilling Process begun		Properly Preserved <u>Y</u> N			Received Within Holding Times <u>Y</u> N				
Notes: <u>4°C</u>		Notes: _____			Notes: _____				



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CHAIN OF CUSTODY RECORD

AES Work Order#:

180330001

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Client Name: Lockwood Hills LLC		Address:						
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Quarterly			Samplers Name: Paul Bist			
Client Phone No:		PO #:			Samplers Signature: Paul Bist			
Client Fax No:					Kevin [Signature]			
AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm	Sample Type			# of Cont's	Analysis
				Matrix	C	G		
025	8401	3/28/18	6:20	(P)	GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026	GW Dep Drain 3	3/29/18	12:35	(A)	GW		4	+ Field Flow Reading, DO
027	GW Dep Drain 2	3/28/18	/	(A)	GW		0	Observation Only
028	GW Dep Drain 4	3/28/18	/	(A)	GW		0	Observation Only
029	Under Drain 5	3/28/18	/	(A)	GW		0	Observation Only
030	8910-SH	3/28/18	/	(A)	GW		0	Observation Only
031	8405	3/28/18	/	(A)	GW		0	Observation Only
				(P)				
				(A)				
				(P)				
				(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 type="checkbox"/> Normal <input type="checkbox"/> 2 -Day <input type="checkbox"/> 5 Day								
Relinquished By: (Signature) [Signature]		Received by: (Signature)			Date	Time		
					3/29/18	7:25		
Relinquished by: (Signature)		Received by: (Signature)			Date	Time		
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time		
		[Signature]			3/30/18	8:09am		
Sample Temperature Ambient <u>Chilled</u> Chilling Process begun		Properly Preserved <u>Y</u> N			Received Within Holding Times <u>Y</u> N			
Notes: <u>40c</u>		Notes: _____			Notes: _____			



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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

- (a) Neither **Adirondack Environmental Services, Inc.**, nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.**'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.
- (d) In no event shall **Adirondack Environmental Services, Inc.**, its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Lockwood Ash Disposal Site First Quarter 2018

Collection Date	Sample ID	Depth	Elevation	Units
3/28/2018	8908-D	6.27	606.70	feet
3/28/2018	8909-D	44.95	516.95	feet
3/28/2018	8910-D	20.47	537.87	feet
3/28/2018	8911-D	28.28	528.63	feet
3/28/2018	8942-D	15.92	543.03	feet
3/28/2018	8908-SH	5.42	607.35	feet
3/28/2018	8909-SH	10.96	550.67	feet
3/28/2018	8910-SH	14.74	543.81	feet
3/28/2018	8911-SH	18.40	538.52	feet
3/28/2018	9306-SH	5.50	560.72	feet
3/28/2018	7741	22.47	565.58	feet
3/28/2018	1842	19.86	539.34	feet
3/28/2018	8406	13.47	556.08	feet
3/28/2018	8407	Obstructed	-	feet
3/28/2018	8401	5.81	654.48	feet
3/28/2018	8402	7.05	657.04	feet
3/28/2018	8403	7.94	656.13	feet
3/28/2018	8404	6.20	596.53	feet
3/28/2018	8405	DRY	DRY	feet

SECOND 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

September 2018

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

September 2018

Site Name: Lockwood Ash Disposal Site

Laboratory Receipt Date: 6/22/18

Sample Data Group: 1842

Client Sample ID	Laboratory Sample ID	Sample Matrix	Analyte Types
1842	180622008-001	Water	Total Metals, Field Parameters, Conventional Parameters
8401	180622008-002	Water	Total Metals, Field Parameters, Conventional Parameters
8404	180622008-003	Water	Total Metals, Field Parameters, Conventional Parameters
8908-D	180622008-004	Water	Total Metals, Field Parameters, Conventional Parameters
8908-SH	180622008-005	Water	Total Metals, Field Parameters, Conventional Parameters
8909-D	180622008-006	Water	Total Metals, Field Parameters, Conventional Parameters
8909-SH	180622008-007	Water	Total Metals, Field Parameters, Conventional Parameters
8910-D	180622008-008	Water	Total Metals, Field Parameters, Conventional Parameters
8911-D	180622008-010	Water	Total Metals, Field Parameters, Conventional Parameters
8911-SH	180622008-011	Water	Total Metals, Field Parameters, Conventional Parameters
8942-D	180622008-012	Water	Total Metals, Field Parameters, Conventional Parameters
9306-SH	180622008-013	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dup 8909D	180622008-014	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 1	180622008-015	Water	Total Metals, Field Parameters, Conventional Parameters
Leak Detection System	180622008-016	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 1	180622008-017	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 2	180622008-018	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 3	180622008-019	Water	Total Metals, Field Parameters, Conventional Parameters
Inlet to Pond	180622008-020	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Upstream	180622008-021	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Downstream	180622008-022	Water	Total Metals, Field Parameters, Conventional Parameters
Surface Water Dup	180622008-023	Water	Total Metals, Field Parameters, Conventional Parameters
Pond Grab	180622008-024	Water	Total Metals, Field Parameters, Conventional Parameters

Field Blank	180622008-025	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 3	180622008-026	Water	Total Metals, Field Parameters, Conventional Parameters
LLHG Field Blank	180622008-027	Water	Total Mercury

DATA VALIDATION REPORT
Review of Baseline Parameter Analytical Data

Lockwood Ash Disposal Site

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List of Attachments

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 one field blank¹ 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 between June 20-21, 2018. 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 17 environmental samples taken on June 20th. The remaining nine samples were taken on June 21st, 2018. These samples included a field blank, up and downstream surface water samples from the Keuka Outlet, and a surface water field duplicate. 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, thereby the

¹ The field blank and low-level mercury field blank were counted as separate samples on the Chain of Custody form, but are considered one sample for the purpose of this report.

85% completeness requirement for sample collection per the SAP was exceeded; 29 samples were collected or observed dry out of 30 required samples.

All samples for the event were shipped together and received by the laboratory on June 22nd, 2018. 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 and GW Dep Drain 1 for the July 2, 2018 analytical run, and the Leak Detection System and GW Dep Drain 3 for the July 3, 2018 run. Data were examined for completeness, computation and transcriptional errors, and application of program QA/QC data.

The field data for GW Dep Drain 1, GW Dep Drain 3, the Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, Inlet to Pond, Pond Grab, and the Keuka Outlet samples were incomplete in the Sample Results presented in Attachment 2. GW Dep Drain 3 only listed flow and the other samples only listed dissolved oxygen, while the field data log shows that all required field measurements (i.e., pH, temperature, turbidity, dissolved oxygen, and flow for the GW Drain and leachate samples) were collected. The field data log is included in Attachment 1.

One error was noted for the GW Dep Drain 3, the flow was recorded on the field data log as 0.2 liters per minute and was incorrectly converted to 200 gallons per day on the data summary sheet. The flow should be 76 gallons per day. The reported flowrate was corrected on the data summary sheet and is located in Attachment 2. Another error was noted for Under Drain 1, the hardness was incorrectly calculated as 395 mg/L CaCO₃. The hardness should be 1,060 mg/L CaCO₃, the hardness was corrected on the data summary sheet in Attachment 2. 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.

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 (7.10 SU) for June 20, 2018. 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 June 20th but not June 21st. 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, one AA run, and one CVAFS run were included in the data package. The ICP-AES runs occurred on July 2nd and 3rd, 2018, while the AA run occurred on June 25th, 2018 and the CVAFS run occurred on June 26th, 2018.. The CVAFS run only consisted of the low-level mercury field blank, the Inlet to Pond 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	144.8 / 147.3	60
Arsenic	15.9 / 16.3	10
Barium	1,147.1 / 1,127.6	200
Cadmium	119.15 / 123.4	5
Chromium	27.5 / 26.6	10
Copper	39.6 / 39.2	25
Iron	4,530.2 / 4,691.1	100
Manganese	1,151.7 / 1,209.3	15
Nickel	467.0 / 506.8	40
Selenium	13.5 / 13.7	5
Zinc	1,492.0 / 1,574.3	20

*July 2/July 3 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). All relevant ICV/CCV recoveries were within the acceptable limits (90% - 110%).

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 less than two times the CRDL were flagged as useable estimates as a result of this deficiency.

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 were below the acceptable percent recovery range in the final CRI for the July 2, 2018 run at 83.7%. The results for selenium were above the acceptable percent recovery range for the initial and final CRI at 117 and 118% for the July 2, 2018 run. The results for zinc were above the acceptable percent recovery range for the final CRI at 117% for the July 3, 2018 run. 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:

- Chromium concentrations in 8401, 8911-D, GW-Dup 8909-D, which were qualified as bias low (J-); and,
- Zinc concentrations in Under Drain 2, Under Drain 3, Inlet to Pond, Keuka Upstream, Keuka Downstream, Surface Water Dup, and the field blank, which were qualified as bias high (J+).

None of the associated selenium 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 the 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 CRA run at 0.2 µg/L had a reported percent recovery of 193% which was greater than the acceptable upper limit of 130%. The unidentified standard run at 2.0 µg/L, which was not reported in the quality control data summary but could be used as the CRA standard given that it is within the proper range, had a percent recovery within the acceptable limits of 101%. No data was qualified as the standard with the proper concentration at 2.0 ug/L had a reasonable percent recovery.

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. EPA Method 1631 does not require ICBs and CCBs and none were provided with the CVAFS QC summary data set.

All ICB/CCB and preparation blank quality control samples produced negative instrument readings that were greater than or equal to the -IDL, for mercury in the AA run.

In the ICP-AES analytical run on July 2, 2018, two of the CCBs had boron concentrations greater than the IDL but less than the CRDL. For the July 3, 2018 run, concentrations greater than the IDL, but less than the CRDL were reported for boron in the ICB and all of the five following CCBs. Also, barium, nickel, and potassium all had at least one CCB with a detection above the IDL, but below the CRDL during the July 3, 2018 run. 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 on Form I 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 Surface Water Dup and the Field Blank were the only affected results for boron. The Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, Inlet to Pond, Keuka Upstream, Keuka Downstream, Surface Water Dup, Pond Grab, Field Blank, and GW Dep Drain 3 were affected by the failing CCBs for barium. The Keuka Upstream, Keuka Downstream, Surface Water Dup, Field Blank, and GW Dep Drain 3 were affected by the failing CCB for potassium. The Leak Detection System, Under Drain 1, Under Drain 2, and Under Drain 3 were affected by the failing CCB for nickel.

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. All analytes in the preparation blanks for this SDG were reported as less than the IDL on the QC summary sheets. However, there appears to have been an error in the QC summary sheet for mercury. The raw data for the AA run included in the laboratory data package reported a mercury concentration of 0.38 µg/L in the method blank. This concentration is greater than the CRDL. All associated analytical sample results for mercury were less than the IDL. Therefore, this failing result did not result in any qualifications.

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. The aluminum result for the July 2, 2018 initial ICS-A and the July 3, 2018 final ICS-A were the only results of the four ICS-A samples (i.e., initial and final for the July 2, 2018 run and initial and final for the July 3, 2018 run), for the four interfering compounds that met the state or federal criterion. It is noted by the laboratory 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 base on these failing QC results.

Analytical results for the ICS-AB solution results for iron were outside the acceptable percent recoveries (80% - 120%) in all eight ICS samples, with reported percent recoveries between 58.9 and 64.8%.

Nine client samples in the SDG (1842, GW Dep Drain 1, Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, Inlet to Pond, Pond Grab, and GW Dep Drain 3) 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 all nine client samples.

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.

Barium concentrations in the final ICS-A samples for both the July 2nd run and the July 3rd run were greater than the IDL. Sodium concentrations in both the initial and final ICS-A samples for

the July 3rd run were greater than the IDL, as well. Finally, antimony concentrations were greater than the IDL for all four ICS-AB samples. The sodium results for the Leak Detection System, Under Drain 2, Under Drain 3, Inlet to Pond, and the Pond Grab were above the linear range. Therefore, the reported results are from a 1:10 dilution. The interferent (calcium) concentration in the 1:10 dilution is no longer at an interfering level. Thus, these results do not require qualification. The remaining associated barium, antimony, and sodium results 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

One pre-digestion matrix spike was performed per 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 8401 sample and GW Dep Drain 3 sample were used to prepare the matrix spikes for the July 2, 2018 and July 3, 2018 runs, respectively. 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 8401 and GW Dep Drain 3 client sample results were qualified as usable estimates due to the omitted matrix spikes. All of the matrix spike recoveries were within the acceptable limits.

The 8404 and Field Blank client samples were used for the AA matrix spikes. According to HW-3c, it is not appropriate to use a field blank for the matrix spike, but no special qualifications are

detailed for when this situation occurs. The laboratory narrative stated that the Field Blank was inadvertently used for the matrix spike. Under Drain 1 was used for the CVAFS matrix spike. All of the mercury matrix spike results were acceptable.

3.5 DUPLICATE SAMPLES

One duplicate was prepared in the laboratory per run/day. For the July 2, 2018 run, client sample 8401 was used for the ICP-AES laboratory duplicate sample and GW Dep Drain 3 was used for the July 3, 2018 run. The calcium percent RPD for GW Dep Drain 3 was 21.1%, greater than the acceptable limit of 20%, and the sample and duplicate calcium results exceeded five times the CRDL. The calcium result for GW Dep Drain 3 was qualified as estimated, "J". All other appropriate criteria with respect to the duplicate samples were met.

Client sample 8404 and the Field Blank were used for the AA laboratory duplicates. According to HW-3c, it is not appropriate to use a field blank for the duplicate analysis, but no special qualifications are detailed for when this situation occurs. The laboratory narrative stated that the Field Blank was inadvertently used for the laboratory duplicate analysis. Duplicate sample analysis was not performed on a client sample for the CVAFS run, but a matrix spike duplicate was provided. The matrix spike and matrix spike duplicate resulted in an acceptable RDP.

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 SDG package in attachment 3. All field duplicate results are acceptable.

3.6 LABORATORY CONTROL SAMPLE

One ICP-AES laboratory control sample (LCS) was analyzed with each day/run at proper concentrations. Two mercury LCS were also ran, one 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. One serial dilution was prepared per ICP-AES run/day.

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 July 2, 2018 run, the client sample 8401 was subject to serial dilution, for the July 3, 2018 run, the client sample GW Dep Drain 3 was subject to serial dilution. The laboratory narrative stated that potassium for sample 8401, and magnesium, potassium, and sodium for sample GW Dep Drain 3 did not meet the 10% RPD criteria. The QC summary sheets for serial dilution only reported an RPD greater than 10% for magnesium in GW Dep Drain 3. The laboratory reported that the serial dilution RPD are calculated on the QC Summary sheet only when all of the sample results listed are greater than the CRDL. 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 results in 8401 and the magnesium, potassium, and sodium results in GW Dep Drain 3 were flagged as usable estimates based on these failing serial dilution results.

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 IDL certification (dated 12/18/17 and updated 9/18/17) provided with the data package was updated approximately nine months prior to the sampling event and, therefore, is acceptable per state guidance and but not the SAP. The date of IDL certification for AA, dated 12/20/17 and updated 12/5/2017, is acceptable per state guidance and but not the SAP, as well.

Another non-compliance issue of note is the IDL for selenium is 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 included in the attachments following the non-metals standard IA-IN Forms. The groundwater duplicate (8909D) result for total organic carbon had an RPD of 25.8 %. The TOC results for 8909D and its duplicate GW-Dup 8909-D 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 one LCS, or reference standard, on June 27, 2018 for 10 samples, and one at the beginning and end of the day on June 28, 2018 for the remaining 15 samples. The laboratory performed one matrix spike and matrix spike duplicate pair per day. No laboratory duplicate results were included in the data package. One method blank was performed on June 27, 2018 and two method blanks were performed on June 28, 2018. All quality control samples were within acceptable limits, the method blank results were listed at the detection limit. No qualifications were made based on these observations.

4.2 AMMONIA

All samples for this event were analyzed in two ammonia runs, one on June 29, 2018 and one on July 2, 2018. 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 three reported duplicate results (one with the June 29, 2018 run and two with the July 2, 2018 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. Also, CRI sample results were reported for each day/run on the QC summary sheets.

Reported quality control results were acceptable except for the CRI samples and the matrix spike result for sample 1842. The matrix spike and matrix spike duplicate percent recoveries for 1842 were greater than the acceptable limit of 110% at 126% and 127%, respectively. The ammonia result for client sample 1842 was qualified as estimated high (J+). The percent recoveries on both the June 29, 2018 and July 2, 2018 CRI samples were greater than the acceptable range of 80 - 115%, with a percent recovery of 128% and 124%, 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 high (J+) based on this failing QC result.

4.3 COLOR

All samples for this event were analyzed in a single run for color. Two duplicate samples were performed for the SDG and one method blank. 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.

4.4 CONDUCTIVITY

Client samples were analyzed for conductivity in two runs performed on June 29, 2018 and one on July 5, 2018. The site's SAP requires an LCS to be analyzed every ten client samples, but only one LCS was analyzed per run. Also, one duplicate was performed for the entire data package of 26 client samples instead of one in 20 client samples as required per the site's SAP. No data were qualified as a result of these deficiencies in frequency. 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 July 3, 2018 and July 5, 2018. The instrument calibration, initial and continuing calibration verifications, initial and continuing calibration blanks, and method blank 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 three matrix spikes with one matrix spike duplicate pair. Two laboratory duplicates were performed, as well; therefore, the frequency requirements for this 26-client sample data package were met. 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 three matrix spikes and the RPD for both the laboratory duplicates were all within their acceptable ranges. The matrix spike percent recovery for 8910-D was 88% and was flagged by the laboratory as less than the laboratories acceptable limit of 90%. The percent recovery is within the SAP's lower acceptable limit of 75%, therefore no data was qualified based on the 8910-D matrix spike result. The duplicate RPD for sulfate was greater than the laboratory limit for sample 1842, at 15.0%. The RPD is within the SAP's acceptable limit of 20%, therefore no data was qualified based on the 1842 laboratory duplicate 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. One passing reference sample (LCS) was performed each day/run for a total of two for the data package. No data was qualified based on the lower than required frequency of LCS QC samples.

4.7 TOTAL ORGANIC CARBON

The client samples were analyzed in two runs. 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. Three matrix spikes, three LCSs, and three laboratory duplicates were performed for the laboratory data package, which met the frequency requirements.

The percent recoveries and RPDs of the matrix spikes and duplicates, respectively, and were all within acceptable limits. Two of the LCS percent recoveries were within acceptable limits, but one LCS associated with the July 5, 2018 run resulted in less than 90% as requested by the Site's SAP. The failing LCS had a percent recovery of 88.9%. The laboratory's lower acceptable limit of 85.4% was met and the result was not flagged by the laboratory. All detected results from the July 5, 2018 run are to be qualified as estimated low (J-) and the less than detection results are to be qualified as estimated (UJ).

An initial and a mid-run CRI check standard were performed on the July 5, 2018 run, and a mid-run CRI check standard was performed on the July 6, 2018 run. The mid-run CRI check standard performed on July 5, 2018 resulted in a percent recovery of 142%, which was within the laboratory's acceptable range of 50-150%. However, the acceptable range per the Site's SAP is between 90 and 110%. As a result, all total organic carbon sample results above, but less than five times the reporting limit are qualified as estimated high (J+) for the samples associated with the CRI performed on July 5, 2018.

Due to the conflicting bias on the failing QC results all samples in the July 5, 2018 run are to be qualified as estimated with no bias.

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
June 2018 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	NH ₄	TOC	
UNITS		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	
1842	All J ²				147J ⁺⁵					5,870J ⁻⁴										1.2J ⁺¹¹	9.1J ¹⁵	
8401	All J ²			785J ⁷				3.87J ⁻¹³				2,306J ⁹									2.3J ^{14,15}	
8404	All J ²																				2.9J ^{14,15}	
8908-D	All J ²																				2.1J ^{14,15}	
8908-SH	All J ²																				2.2J ^{14,15}	
8909-D	All J ²																				3.5J ^{10,14,15}	
8909-SH	All J ²																				1.0UJ ¹⁵	
8910-D	All J ²																				1.0UJ ¹⁵	
8911-D	All J ²							5.02J ⁻¹³												0.1J ⁺¹⁴	1.0UJ ¹⁵	
8911-SH	All J ²																			0.2J ⁺¹⁴	1.0UJ ¹⁵	
8942-D	All J ²																			0.2J ⁺¹⁴	1.0UJ ¹⁵	
9306-SH	All J ²			94.6J ¹⁶																	1.0UJ ¹⁵	
GW Dep Drain 1	All J ²				26.5J ⁺⁵					100UJ ⁴											1.1J ^{14,15}	
GW Dup (8909-D)	All J ²							4.6J ⁻¹³													2.7J ^{10,14,15}	
Leak Detect Syst	All J ²				200U ^{3,5}					287J ⁻⁴						40U ³				0.4J ⁺¹⁴	2.2J ^{14,15}	
Under Drain 1	All J ²				200U ^{3,5}					5,060J ⁻⁴					42,000J ⁺⁵	40U ³					1.2J ^{14,15}	
Under Drain 2	All J ²				200U ^{3,5}					2,160J ⁻⁴						40U ³			5.91J ⁺¹⁴		1.2J ^{14,15}	
Under Drain 3	All J ²				200U ^{3,5}					245J ⁻⁴						40U ³			8.04J ⁺¹⁴		1.1J ^{14,15}	
GW Dep Drain 3	All J ²			252J ⁷	200U ^{3,5}	299,000J ⁸				16.6J ⁻⁴		5,000U ^{3,9}	56,700J ⁹		25,500J ^{+5,9}							
Inlet to Pond	All J ²				200U ^{3,5}					3,520J ⁻⁴										3.00J ⁺¹⁴	0.3J ⁺¹⁴	1.0UJ ¹⁵
Keuka Downstream	All J ²			57.7J ¹⁶	200U ³							5,000U ³								1.89J ⁺¹⁴		
Keuka Upstream	All J ²			74.0J ¹⁶	200U ³							5,000U ³								2.07J ⁺¹⁴	3.1J ^{14,15}	
Surface Water Dup	All J ²			50U ³	200U ³							5,000U ³								2.07J ⁺¹⁴		
Pond Grab	All J ²				200UJ ^{3,5}					165J ⁻⁴												
Field Blank/LLHG	All J ²			50U ³	200U ³							5,000U ³								2.45J ⁺¹⁴		

FOOTNOTES: (When more than one qualification applies, the most stringent qualification or combination of qualifications is used, as shown.)

¹Includes temperature, pH, & turbidity

⁵ICS-A or ICS-AB Indicates False Positive

⁹Serial Dilution > 10%, but < 100%

¹³CRI/CRA Check Standard Recovery < 85%

²No Reference Standard Measurements

⁶Matrix Spike Recovery >125%; Post-digestion %R ≤ 125%

¹⁰Field Duplicate RDP > 20%

¹⁴CRI Check Standard Recovery > 115%

³ICB or Associated CCB ≥ IDL, but < CRDL

⁷No Matrix Spike

¹¹Matrix Spike Recovery > 110%

¹⁵Laboratory Check Standard %R < 90%

⁴ICS between 50 - 79% Recovery

⁸Laboratory Duplicate RDP > 20%

¹²Field Duplicate Difference > CRDL

¹⁶No CRI Analysis

ATTACHMENT 1

Field Data Report & Chain of Custody

Lockwood Ash Landfill								Date: 6/20/18		
Well ID	SWL	pH	Temp	Turbidity	D.O.	Flow	Time	Comments	GW Dup	SF Dup
7741	23.8	NA	NA	NA	NA	NA				
1842	7.16	8.2	14	7999	NA	NA	10:51	6/20/18		
8401	6.81	7.4	13	<1	NA	NA	10:25	6/20/18		
8402	7.03	NA	NA	NA	NA	NA				
8403	7.94	NA	NA	NA	NA	NA				
8404	8.40	7.2	12	<1	NA	NA	9:40	6/20/18		
8405	-	D	R	Y	NA	NA				
8406	14.53	NA	NA	NA	NA	NA				
8407	17.07*	NA	NA	NA	NA	NA		*Obstructed		
8908-D	7.77	7.1	12	70	NA	NA	11:20	6/20/18		
8908-SH	7.15	7.1	12	15	NA	NA	12:05	6/20/18		
8909-D	45.49	9.2	14	>999	NA	NA	3:05	13L	X	
8909-SH	12.31	7.7	13	12	NA	NA	2:30			
8910-D	22.08	7.7	14	<1	NA	NA	4:40			
8910-SH	16.67	Inadequate	Recovery		NA	NA				
8911-D	28.44	7.6	14	<1	NA	NA	5:45			
8911-SH	19.46	7.7	13	478	NA	NA	9:40	6/20/18		
8942-D	16.58	7.4	14	<1	NA	NA	10:40	6/20/18		
9306-SH	6.35	7.6	11	<1	NA	NA	9:00	6/20/18		
GW DD 1	NA	7.1	13	3	5.48	1.3 LPM	12:10	6/20/18		
GW DD 2	NA	D	R	Y						
GW DD 3	NA	7.8	16	2	5.93	0.2 LPM	0905	6/20/18		
GW DD 4	NA	D	R	Y						
Leak Det.	NA	7.5	14	6	5.21	0.2 LPM	0955	6/20/18		
UnDr. 1	NA	7.4	13	37	5.95	30 LPM	1155	6/20/18		
UnDr. 2	NA	7.4	14	3	5.04	12 LPM	0930	6/20/18		
UnDr. 3	NA	6.9	15	3	4.67	0.5 LPM	0920	6/20/18		
Inlet to Pond	NA	7.5	14	26	6.21	30 LPM	1130	6/20/18		
UnDr. 5	NA	D	R	Y						
Keuka US	NA	7.4	21	12	5.58	NA	1055	6/20/18		X
Keuka DS	NA	7.4	21	10	4.89	NA	1030	6/20/18		
Pond Grab	NA	8.1	24	<1	6.47	NA	1105	6/20/18		
Field Blank	NA	7.0	20°C	<1	6.23	NA	12:30	6/20/18		

2154 → 3104



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CHAIN OF CUSTODY RECORD

AES Work Order#:

180622008

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: Paul Brust			
Client Phone No:		PO #:				Samplers Signature: Paul Brust			
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	6/21/18	7:50	A P	GW		G	5	Lockwood Ash LF Annual
002	8401	6/21/18	10:25	A P	GW		G	5	Field pH, Temp, Turbidity
003	8404	6/21/18	9:40	A P	GW		G	5	
004	8908-D	6/21/18	11:20	A P	GW		G	5	
005	8908-SH	6/21/18	12:05	A P	GW		G	5	
006	8909-D	6/20/18	3:05	A P	GW		G	5	
007	8909-SH	6/20/18	2:30	A P	GW		G	5	
008	8910-D	6/20/18	4:40	A P	GW		G	5	
009	8910-SH	6/20/18	—	A P	GW		G	5	Observation Only
010	8911-D	6/20/18	5:45	A P	GW		G	5	
011	8911-SH	6/21/18	9:40	A P	GW		G	5	
012	8942-D	6/21/18	10:40	A P	GW		G	5	

Shipment Arrived Via:
 FedEx UPS Client AES Other: _____

Turnaround Time Requested:
 1 Day 3 Day Normal
 2-Day 5 Day

Special Instructions/Remarks:
 Page 1 of 3

Relinquished by: (Signature) <i>Paul Brust</i>	Received by: (Signature)	Date 6/22/18	Time 3:05
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by: <i>[Signature]</i>	Date 6/22/18	Time 8:21am

Sample Temperature Ambient <input checked="" type="checkbox"/> Chilled Chilling Process begun Notes: 4°C	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:
--	---	--



180622008



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CHAIN OF CUSTODY RECORD

AES Work Order#:

180622008

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Client Name: Lockwood Hills LLC		Address:							
Send Report to: Dale Irwin		Project Name (Location): Lockwood Ash LF Annual				Samplers Name: Paul Burt			
Client Phone No:		PO #:				Samplers Signature: Paul Burt			
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	6/21/18	9:00	<input checked="" type="checkbox"/> A <input type="checkbox"/> P	GW		G	5	Lockwood Ash LF Annual
014	GW Dup 8909-0	6/20/18	3:05	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	5	Field pH, Temp, Turbidity
015	GW Dup Drain 1	6/20/18	12:10	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	5	+ Field Flow Reading, DO
016	Leak Detection Syst.	6/20/18	9:55	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	5	+ Field Flow Reading, DO
017	Under Drain 1	6/20/18	11:55	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	6	+ Field Flow Reading, DO
018	Under Drain 2	6/20/18	9:30	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	5	+ Field Flow Reading, DO
019	Under Drain 3	6/20/18	9:00	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	5	+ Field Flow Reading, DO
020	Inlet to Pond	6/20/18	11:30	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	6	+ Field Flow Reading, DO
021	Keuka Upstream	6/20/18	10:55	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	SF		G	5	Lockwood Annual + DO
022	Keuka Downstream	6/20/18	10:30	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	SF		G	5	Lockwood Annual +DO
023	Surface Water Dup	6/20/18	10:55	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	SF		G	5	Lockwood Annual +DO
024	Pond Grab	6/20/18	12:45	<input type="checkbox"/> A <input checked="" type="checkbox"/> P	GW		G	6	Lockwood Annual +DO
Shipment Arrived Via: FedEx UPS Chemt <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) Paul Burt		Received by: (Signature)				Date 6/22/18		Time 8:05	
Relinquished by: (Signature)		Received by: (Signature)				Date		Time	
Relinquished by: (Signature)		Received for Laboratory by: Kalle				Date 6/22/18		Time 8:21 am	
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: _____			



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CHAIN OF CUSTODY RECORD

AES Work Order#: 180622008

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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>Paul Burt</i>				
Client Phone No:		PO #:			Samplers Signature: <i>Paul Burt</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>	Field Blank	<i>6/20/18</i>	<i>12:30</i>	A <input checked="" type="radio"/> P	GW		G	5	Lockwood Ash LF Annual Field pH, Temp, Turbidity, D.O.
<i>026</i>	GW Dep Drain 3	<i>6/20/18</i>	<i>9:05</i>	A <input checked="" type="radio"/> P	GW		G	5	+Field Flow Reading
<i>027</i>	LLHG Field Blank	<i>6/20/18</i>	<i>11:20</i>	A <input checked="" type="radio"/> P	GW		G	1	EPA 1631
<i>028</i>	GW Dep Drain 2	<i>6/20/18</i>	/	A <input checked="" type="radio"/> P	GW			0	Observation Only
<i>029</i>	GW Dep Drain 4	<i>6/20/18</i>	/	A <input checked="" type="radio"/> P	GW			0	Observation Only
<i>030</i>	Under Drain 5	<i>6/20/18</i>	/	A <input checked="" type="radio"/> P	GW			0	Observation Only
<i>031</i>	8405	<i>6/20/18</i>	/	A <input checked="" type="radio"/> P	GW			0	Observation Only
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
				A <input type="radio"/> P					
Shipment Arrived Via: FedEx UPS Client <input checked="" type="radio"/> 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) <i>Paul Burt</i>		Received by: (Signature)			Date	Time			
					<i>6/20/18</i>	<i>8:05</i>			
Relinquished by: (Signature)		Received by: (Signature)			Date	Time			
Relinquished by: (Signature)		Received for Laboratory by:			Date	Time			
		<i>Kay</i>			<i>6/22/18</i>	<i>8:21am</i>			
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: <i>4°C</i>		Notes: _____			Notes: _____				

Attachment 2
Sample Data Group 1842

Sample Results

Adirondack Environmental Services, Inc

Date: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 1842
Collection Date: 6/21/2018 10:50:00 AM
Lab Sample ID: 180622008-001
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)	8.2			S.U.		6/21/2018 10:50:00 AM
Temperature (E170.1)	14			deg C		6/21/2018 10:50:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		6/21/2018 10:50:00 AM

MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:28:38 PM
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ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/25/2018)

Aluminum	521	200		µg/L	1	7/2/2018 2:23:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 2:23:00 PM
Arsenic	2.81	10.0	J	µg/L	1	7/2/2018 2:23:00 PM
Barium	147	200	J	µg/L	1	7/2/2018 2:23:00 PM
Boron	263	50.0		µg/L	1	7/2/2018 2:23:00 PM
Cadmium	0.36	5.00	J	µg/L	1	7/2/2018 2:23:00 PM
Calcium	663000	50000		µg/L	10	7/2/2018 2:28:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 2:23:00 PM
Copper	5.92	25.0	J	µg/L	1	7/2/2018 2:23:00 PM
Iron	5870	100	J	µg/L	1	7/2/2018 2:23:00 PM
Magnesium	60200	5000		µg/L	1	7/2/2018 2:23:00 PM
Manganese	1620	15.0		µg/L	1	7/2/2018 2:23:00 PM
Nickel	10.7	40.0	J	µg/L	1	7/2/2018 2:23:00 PM
Potassium	71700	5000		µg/L	1	7/2/2018 2:23:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 2:23:00 PM
Sodium	132000	50000		µg/L	10	7/2/2018 2:28:00 PM
Zinc	9.86	20.0	J	µg/L	1	7/2/2018 2:23:00 PM

BAMA
9/17/18

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1900	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	7.11	5.00		mg/L	5	7/3/2018 4:33:25 PM
Sulfate	296	10.0		mg/L	5	7/3/2018 4:33:25 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 1842
Work Order: 180622008	Collection Date: 6/21/2018 10:50:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-001
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	230	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	1.2	0.1	JX+	mg/L	1	6/29/2018 11:05:40 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1040	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	680	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	9.1	1.0	J	mg/L	1	7/5/2018 11:59:00 AM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	15	5		cpu@pH7	1	6/22/2018 2:55:00 PM

BAM
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** 8401
Work Order: 180622008 **Collection Date:** 6/21/2018 10:25:00 AM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-002
PO#: **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)	7.3		J	S.U.		6/21/2018 10:25:00 AM
Temperature (E170.1)	13		J	deg C		6/21/2018 10:25:00 AM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/21/2018 10:25:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 1:30:21 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/2/2018 2:31:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 2:31:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 2:31:00 PM
Barium	57.9	200	J	µg/L	1	7/2/2018 2:31:00 PM
Boron	785	50.0		µg/L	1	7/2/2018 2:31:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 2:31:00 PM
Calcium	83800	5000		µg/L	1	7/2/2018 2:31:00 PM
Chromium	3.87	10.0	J-	µg/L	1	7/2/2018 2:31:00 PM
Copper	3.98	25.0	J	µg/L	1	7/2/2018 2:31:00 PM
Iron	240	100		µg/L	1	7/2/2018 2:31:00 PM
Magnesium	23100	5000		µg/L	1	7/2/2018 2:31:00 PM
Manganese	65.9	15.0		µg/L	1	7/2/2018 2:31:00 PM
Nickel	1.18	40.0	J	µg/L	1	7/2/2018 2:31:00 PM
Potassium	2360	5000	J	µg/L	1	7/2/2018 2:31:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 2:31:00 PM
Sodium	85500	50000		µg/L	10	7/2/2018 2:36:00 PM
Zinc	ND	20.0		µg/L	1	7/2/2018 2:31:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	300	5		mg/L CaCO3	1	7/2/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	32.5	5.00		mg/L	5	7/3/2018 5:07:36 PM
Sulfate	64.9	10.0		mg/L	5	7/3/2018 5:07:36 PM

BAM
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8401
Work Order: 180622008	Collection Date: 6/21/2018 10:25:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-002
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	360	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.9	0.1		mg/L	1	6/29/2018 11:10:38 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	849	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	475	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.3	1.0	J	mg/L	1	7/5/2018 12:15:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 2:55:00 PM

BAMA
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8404
Collection Date: 6/21/2018 9:40:00 AM
Lab Sample ID: 180622008-003
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.		6/21/2018 9:40:00 AM
Temperature (E170.1)	12			deg C		6/21/2018 9:40:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		6/21/2018 9:40:00 AM

Handwritten: 444, BAM, 9/17/18

MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:32:01 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 3:49:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 3:49:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 3:49:00 PM
Barium	46.2	200	J	µg/L	1	7/2/2018 3:49:00 PM
Boron	162	50.0		µg/L	1	7/2/2018 3:49:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 3:49:00 PM
Calcium	122000	5000		µg/L	1	7/2/2018 3:49:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 3:49:00 PM
Copper	20.8	25.0	J	µg/L	1	7/2/2018 3:49:00 PM
Iron	444	100		µg/L	1	7/2/2018 3:49:00 PM
Magnesium	23300	5000		µg/L	1	7/2/2018 3:49:00 PM
Manganese	36.1	15.0		µg/L	1	7/2/2018 3:49:00 PM
Nickel	5.43	40.0	J	µg/L	1	7/2/2018 3:49:00 PM
Potassium	990	5000	J	µg/L	1	7/2/2018 3:49:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 3:49:00 PM
Sodium	11400	5000		µg/L	1	7/2/2018 3:49:00 PM
Zinc	6.61	20.0	J	µg/L	1	7/2/2018 3:49:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	400	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	ND	2.00		mg/L	2	7/3/2018 5:24:42 PM
Sulfate	117	4.00		mg/L	2	7/3/2018 5:24:42 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8404
Work Order: 180622008	Collection Date: 6/21/2018 9:40:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-003
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:12:16 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	715	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	405	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.9	1.0	J	mg/L	1	7/5/2018 12:31:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH6	1	6/22/2018 2:55:00 PM

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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 - Tentatively Identified Compound-Estimated Conc.
	E - Value above quantitation range-Estimate	

Adirondack Environmental Services, Inc

Date: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8908-D
Collection Date: 6/21/2018 11:20:00 AM
Lab Sample ID: 180622008-004
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)	7.1			S.U.		6/21/2018 11:20:00 AM
Temperature (E170.1)	12			deg C		6/21/2018 11:20:00 AM
Turbidity (E180.1)	70	1.0	J	NTU		6/21/2018 11:20:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 1:37:02 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/2/2018 3:54:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 3:54:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 3:54:00 PM
Barium	18.1	200	J	µg/L	1	7/2/2018 3:54:00 PM
Boron	230	50.0		µg/L	1	7/2/2018 3:54:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 3:54:00 PM
Calcium	158000	5000		µg/L	1	7/2/2018 3:54:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 3:54:00 PM
Copper	3.68	25.0	J	µg/L	1	7/2/2018 3:54:00 PM
Iron	1300	100		µg/L	1	7/2/2018 3:54:00 PM
Magnesium	63700	5000		µg/L	1	7/2/2018 3:54:00 PM
Manganese	150	15.0		µg/L	1	7/2/2018 3:54:00 PM
Nickel	ND	40.0		µg/L	1	7/2/2018 3:54:00 PM
Potassium	2700	5000	J	µg/L	1	7/2/2018 3:54:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 3:54:00 PM
Sodium	32400	5000		µg/L	1	7/2/2018 3:54:00 PM
Zinc	ND	20.0		µg/L	1	7/2/2018 3:54:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	680	5		mg/L CaCO3	1	7/2/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	17.2	5.00		mg/L	5	7/3/2018 5:41:47 PM
Sulfate	297	10.0		mg/L	5	7/3/2018 5:41:47 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8908-D
Work Order: 180622008	Collection Date: 6/21/2018 11:20:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-004
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	390	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	6/29/2018 11:13:54 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1130	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	835	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.1	1.0	J	mg/L	1	7/5/2018 12:46:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 2:55:00 PM

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9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8908-SH
Collection Date: 6/21/2018 12:05:00 PM
Lab Sample ID: 180622008-005
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)	7.1			S.U.		6/21/2018 12:05:00 PM
Temperature (E170.1)	12			deg C		6/21/2018 12:05:00 PM
Turbidity (E180.1)	15	1.0	J	NTU		6/21/2018 12:05:00 PM

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9/17/18*

MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:42:05 PM
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ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 3:59:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 3:59:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 3:59:00 PM
Barium	46.5	200	J	µg/L	1	7/2/2018 3:59:00 PM
Boron	143	50.0		µg/L	1	7/2/2018 3:59:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 3:59:00 PM
Calcium	170000	5000		µg/L	1	7/2/2018 3:59:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 3:59:00 PM
Copper	9.82	25.0	J	µg/L	1	7/2/2018 3:59:00 PM
Iron	135	100		µg/L	1	7/2/2018 3:59:00 PM
Magnesium	62000	5000		µg/L	1	7/2/2018 3:59:00 PM
Manganese	30.1	15.0		µg/L	1	7/2/2018 3:59:00 PM
Nickel	2.42	40.0	J	µg/L	1	7/2/2018 3:59:00 PM
Potassium	2280	5000	J	µg/L	1	7/2/2018 3:59:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 3:59:00 PM
Sodium	26200	5000		µg/L	1	7/2/2018 3:59:00 PM
Zinc	7.15	20.0	J	µg/L	1	7/2/2018 3:59:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	680	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	14.6	5.00		mg/L	5	7/3/2018 5:58:53 PM
Sulfate	257	10.0		mg/L	5	7/3/2018 5:58:53 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8908-SH
Work Order: 180622008	Collection Date: 6/21/2018 12:05:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-005
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	390	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:15:31 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1120	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	775	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.2	1.0	J	mg/L	1	7/5/2018 1:02:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH6	1	6/22/2018 3:10:00 PM

BANK
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC Client Sample ID: 8909-D
 Work Order: 180622008 Collection Date: 6/20/2018 3:05:00 PM
 Reference: Lockwood Ash Landfill / Annual Lab Sample ID: 180622008-006
 PO#: 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)	9.2			S.U.		6/20/2018 3:05:00 PM
Temperature (E170.1)	14			deg C		6/20/2018 3:05:00 PM
Turbidity (E180.1)	> 999	1.0	J	NTU		6/20/2018 3:05:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 1:43:45 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	442	200		µg/L	1	7/2/2018 4:05:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 4:05:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 4:05:00 PM
Barium	168	200	J	µg/L	1	7/2/2018 4:05:00 PM
Boron	934	50.0		µg/L	1	7/2/2018 4:05:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 4:05:00 PM
Calcium	90400	5000		µg/L	1	7/2/2018 4:05:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 4:05:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 4:05:00 PM
Iron	3230	100		µg/L	1	7/2/2018 4:05:00 PM
Magnesium	14500	5000		µg/L	1	7/2/2018 4:05:00 PM
Manganese	494	15.0		µg/L	1	7/2/2018 4:05:00 PM
Nickel	6.63	40.0	J	µg/L	1	7/2/2018 4:05:00 PM
Potassium	1360	5000	J	µg/L	1	7/2/2018 4:05:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 4:05:00 PM
Sodium	199000	50000		µg/L	10	7/2/2018 4:09:00 PM
Zinc	8.89	20.0	J	µg/L	1	7/2/2018 4:05:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	290	5		mg/L CaCO3	1	7/2/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	4.57	2.00		mg/L	2	7/3/2018 7:07:55 PM
Sulfate	99.0	4.00		mg/L	2	7/3/2018 7:07:55 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8909-D
Work Order: 180622008	Collection Date: 6/20/2018 3:05:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-006
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	290	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.6	0.1		mg/L	1	6/29/2018 11:17:09 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	713	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	570	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.5	1.0	J	mg/L	1	7/5/2018 1:18:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	15	5		cpu@pH7	1	6/22/2018 3:10:00 PM

*Blank
9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8909-SH
Work Order: 180622008	Collection Date: 6/20/2018 2:30:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-007
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)	7.7		J	S.U.		6/20/2018 2:30:00 PM
Temperature (E170.1)	13		J	deg C		6/20/2018 2:30:00 PM
Turbidity (E180.1)	12	1.0	J	NTU		6/20/2018 2:30:00 PM

MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:45:27 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 4:12:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 4:12:00 PM
Arsenic	3.90	10.0	J	µg/L	1	7/2/2018 4:12:00 PM
Barium	25.8	200	J	µg/L	1	7/2/2018 4:12:00 PM
Boron	248	50.0		µg/L	1	7/2/2018 4:12:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 4:12:00 PM
Calcium	28500	5000		µg/L	1	7/2/2018 4:12:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 4:12:00 PM
Copper	5.50	25.0	J	µg/L	1	7/2/2018 4:12:00 PM
Iron	72.2	100	J	µg/L	1	7/2/2018 4:12:00 PM
Magnesium	18400	5000		µg/L	1	7/2/2018 4:12:00 PM
Manganese	7.01	15.0	J	µg/L	1	7/2/2018 4:12:00 PM
Nickel	0.59	40.0	J	µg/L	1	7/2/2018 4:12:00 PM
Potassium	2000	5000	J	µg/L	1	7/2/2018 4:12:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 4:12:00 PM
Sodium	65000	50000		µg/L	10	7/2/2018 4:16:00 PM
Zinc	1.91	20.0	J	µg/L	1	7/2/2018 4:12:00 PM

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HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	150	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	ND	2.00		mg/L	2	7/3/2018 7:25:07 PM
Sulfate	115	4.00		mg/L	2	7/3/2018 7:25:07 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8909-SH
Collection Date: 6/20/2018 2:30:00 PM
Lab Sample ID: 180622008-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	170	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:22:04 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	507	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	265	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:10:00 PM

*BAMA
9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** 8910-D
Work Order: 180622008 **Collection Date:** 6/20/2018 4:40:00 PM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-008
PO#: **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)	7.7		J	S.U.		6/20/2018 4:40:00 PM
Temperature (E170.1)	14		J	deg C		6/20/2018 4:40:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/20/2018 4:40:00 PM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 1:47:08 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/2/2018 4:28:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 4:28:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 4:28:00 PM
Barium	18.2	200	J	µg/L	1	7/2/2018 4:28:00 PM
Boron	2530	50.0		µg/L	1	7/2/2018 4:28:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 4:28:00 PM
Calcium	70500	5000		µg/L	1	7/2/2018 4:28:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 4:28:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 4:28:00 PM
Iron	18.4	100	J	µg/L	1	7/2/2018 4:28:00 PM
Magnesium	21700	5000		µg/L	1	7/2/2018 4:28:00 PM
Manganese	9.47	15.0	J	µg/L	1	7/2/2018 4:28:00 PM
Nickel	ND	40.0		µg/L	1	7/2/2018 4:28:00 PM
Potassium	2940	5000	J	µg/L	1	7/2/2018 4:28:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 4:28:00 PM
Sodium	76500	50000		µg/L	10	7/2/2018 4:33:00 PM
Zinc	ND	20.0		µg/L	1	7/2/2018 4:28:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: SM
Total Hardness (As CaCO3)	270	5		mg/L CaCO3	1	7/2/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	22.3	5.00		mg/L	5	7/3/2018 7:42:12 PM
Sulfate	315	10.0	J	mg/L	5	7/3/2018 7:42:12 PM

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9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8910-D
Work Order: 180622008	Collection Date: 6/20/2018 4:40:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-008
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	140	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:23:42 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	849	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	490	5		mg/L	1	6/22/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018 2:56:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:10:00 PM

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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: 25-Jul-18

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8910-SH
Work Order:	180622008	Collection Date:	6/20/2018
Reference:	Lockwood Ash Landfill / Annual	Lab Sample ID:	180622008-009
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>Poor Recovery</i>			NA		6/20/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8911-D
Collection Date: 6/20/2018 5:45:00 PM
Lab Sample ID: 180622008-010
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		J	S.U.		6/20/2018 5:45:00 PM
Temperature (E170.1)	14		J	deg C		6/20/2018 5:45:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/20/2018 5:45:00 PM

MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:48:50 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 4:49:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 4:49:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 4:49:00 PM
Barium	19.3	200	J	µg/L	1	7/2/2018 4:49:00 PM
Boron	1470	50.0		µg/L	1	7/2/2018 4:49:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 4:49:00 PM
Calcium	63900	5000		µg/L	1	7/2/2018 4:49:00 PM
Chromium	5.02	10.0	J	µg/L	1	7/2/2018 4:49:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 4:49:00 PM
Iron	184	100		µg/L	1	7/2/2018 4:49:00 PM
Magnesium	20700	5000		µg/L	1	7/2/2018 4:49:00 PM
Manganese	55.9	15.0		µg/L	1	7/2/2018 4:49:00 PM
Nickel	0.70	40.0	J	µg/L	1	7/2/2018 4:49:00 PM
Potassium	3180	5000	J	µg/L	1	7/2/2018 4:49:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 4:49:00 PM
Sodium	118000	50000		µg/L	10	7/2/2018 4:52:00 PM
Zinc	1.91	20.0	J	µg/L	1	7/2/2018 4:49:00 PM

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9/17/18

HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	240	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	12.3	5.00		mg/L	5	7/3/2018 8:16:23 PM
Sulfate	268	10.0		mg/L	5	7/3/2018 8:16:23 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: 8911-D
Work Order: 180622008	Collection Date: 6/20/2018 5:45:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-010
PO#:	Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: CC
Alkalinity, Total (As CaCO3)	200	10		mg/L CaCO3	1	6/27/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.1	0.1	J+	mg/L	1	6/29/2018 11:25:19 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	821	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	595	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0	4J	mg/L	1	7/5/2018 3:11:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:10:00 PM

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9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8911-SH
Collection Date: 6/21/2018 9:40:00 AM
Lab Sample ID: 180622008-011
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)	7.7		J	S.U.		6/21/2018 9:40:00 AM
Temperature (E170.1)	13		J	deg C		6/21/2018 9:40:00 AM
Turbidity (E180.1)	478	1.0	J	NTU		6/21/2018 9:40:00 AM

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9/17/18

MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:50:32 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 4:57:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 4:57:00 PM
Arsenic	7.76	10.0	J	µg/L	1	7/2/2018 4:57:00 PM
Barium	27.9	200	J	µg/L	1	7/2/2018 4:57:00 PM
Boron	284	50.0		µg/L	1	7/2/2018 4:57:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 4:57:00 PM
Calcium	45600	5000		µg/L	1	7/2/2018 4:57:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 4:57:00 PM
Copper	5.26	25.0	J	µg/L	1	7/2/2018 4:57:00 PM
Iron	545	100		µg/L	1	7/2/2018 4:57:00 PM
Magnesium	14100	5000		µg/L	1	7/2/2018 4:57:00 PM
Manganese	61.7	15.0		µg/L	1	7/2/2018 4:57:00 PM
Nickel	0.78	40.0	J	µg/L	1	7/2/2018 4:57:00 PM
Potassium	1770	5000	J	µg/L	1	7/2/2018 4:57:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 4:57:00 PM
Sodium	79600	50000		µg/L	10	7/2/2018 5:02:00 PM
Zinc	1.94	20.0	J	µg/L	1	7/2/2018 4:57:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	170	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	8.18	5.00		mg/L	5	7/3/2018 8:33:28 PM
Sulfate	239	10.0		mg/L	5	7/3/2018 8:33:28 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8911-SH
Collection Date: 6/21/2018 9:40:00 AM
Lab Sample ID: 180622008-011
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
						Analyst: DAA
ALKALINITY TO PH 4.5 - SM 2320B-2011						
Alkalinity, Total (As CaCO3)	100	10		mg/L CaCO3	1	6/28/2018
						Analyst: PL
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						
Nitrogen, Ammonia (As N)	0.2	0.1	J+	mg/L	1	6/29/2018 11:27:00 AM
						Analyst: CA
CONDUCTANCE AT 25C - SM 2510B-2011						
Specific Conductance	626	1		µmhos/cm	1	6/29/2018
						Analyst: CS
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						
TDS (Residue, Filterable)	455	5		mg/L	1	6/25/2018
						Analyst: NK
TOTAL ORGANIC CARBON - SM 5310C-2011						
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018 3:44:00 PM
						Analyst: NK
COLOR (PLATINUM-COBALT) - SM 2120B-2011						
Color	5	5		cpu@pH7	1	6/22/2018 3:10:00 PM

BAMA
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8942-D
Collection Date: 6/21/2018 10:40:00 AM
Lab Sample ID: 180622008-012
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)	7.4		J	S.U.		6/21/2018 10:40:00 AM
Temperature (E170.1)	14		J	deg C		6/21/2018 10:40:00 AM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/21/2018 10:40:00 AM

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9/17/18*

MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:52:14 PM
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ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 5:06:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 5:06:00 PM
Arsenic	6.74	10.0	J	µg/L	1	7/2/2018 5:06:00 PM
Barium	42.8	200	J	µg/L	1	7/2/2018 5:06:00 PM
Boron	290	50.0		µg/L	1	7/2/2018 5:06:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 5:06:00 PM
Calcium	81100	5000		µg/L	1	7/2/2018 5:06:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 5:06:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 5:06:00 PM
Iron	573	100		µg/L	1	7/2/2018 5:06:00 PM
Magnesium	87700	5000		µg/L	1	7/2/2018 5:06:00 PM
Manganese	182	15.0		µg/L	1	7/2/2018 5:06:00 PM
Nickel	ND	40.0		µg/L	1	7/2/2018 5:06:00 PM
Potassium	2690	5000	J	µg/L	1	7/2/2018 5:06:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 5:06:00 PM
Sodium	38700	5000		µg/L	1	7/2/2018 5:06:00 PM
Zinc	ND	20.0		µg/L	1	7/2/2018 5:06:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	480	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	3.47	2.00		mg/L	2	7/5/2018 4:12:20 PM
Sulfate	264	10.0		mg/L	5	7/3/2018 8:50:34 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: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** 8942-D
Work Order: 180622008 **Collection Date:** 6/21/2018 10:40:00 AM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-012
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)	270	10		mg/L CaCO3	1	6/28/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1	J+	mg/L	1	6/29/2018 11:28:39 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	897	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	675	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018 4:00:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:10:00 PM

*BAMA
9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 9306-SH
Collection Date: 6/21/2018 9:00:00 AM
Lab Sample ID: 180622008-013
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)	7.6		J	S.U.		6/21/2018 9:00:00 AM
Temperature (E170.1)	11		J	deg C		6/21/2018 9:00:00 AM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/21/2018 9:00:00 AM

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MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:53:57 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/2/2018 5:10:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 5:10:00 PM
Arsenic	7.21	10.0	J	µg/L	1	7/2/2018 5:10:00 PM
Barium	43.1	200	J	µg/L	1	7/2/2018 5:10:00 PM
Boron	94.6	50.0	J	µg/L	1	7/2/2018 5:10:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 5:10:00 PM
Calcium	57300	5000		µg/L	1	7/2/2018 5:10:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 5:10:00 PM
Copper	5.48	25.0	J	µg/L	1	7/2/2018 5:10:00 PM
Iron	115	100		µg/L	1	7/2/2018 5:10:00 PM
Magnesium	58400	5000		µg/L	1	7/2/2018 5:10:00 PM
Manganese	7.39	15.0	J	µg/L	1	7/2/2018 5:10:00 PM
Nickel	ND	40.0		µg/L	1	7/2/2018 5:10:00 PM
Potassium	2860	5000	J	µg/L	1	7/2/2018 5:10:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 5:10:00 PM
Sodium	20300	5000		µg/L	1	7/2/2018 5:10:00 PM
Zinc	4.25	20.0	J	µg/L	1	7/2/2018 5:10:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	380	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	ND	2.00		mg/L	2	7/3/2018 9:07:39 PM
Sulfate	83.4	4.00		mg/L	2	7/3/2018 9:07:39 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 9306-SH
Collection Date: 6/21/2018 9:00:00 AM
Lab Sample ID: 180622008-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
						Analyst: DAA
ALKALINITY TO PH 4.5 -SM 2320B-2011						
Alkalinity, Total (As CaCO3)	336	4		mg/L CaCO3	1	6/28/2018
						Analyst: PL
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:30:17 AM
						Analyst: CA
CONDUCTANCE AT 25C - SM 2510B-2011						
Specific Conductance	666	1		µmhos/cm	1	6/29/2018
						Analyst: CS
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						
TDS (Residue, Filterable)	415	5		mg/L	1	6/25/2018
						Analyst: NK
TOTAL ORGANIC CARBON - SM 5310C-2011						
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018 4:15:00 PM
						Analyst: NK
COLOR (PLATINUM-COBALT) - SM 2120B-2011						
Color	ND	5		cpu@pH7	1	6/22/2018 3:10:00 PM

*BAM**
9/11/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: GW-Dup 8909-D
 Collection Date: 6/20/2018 3:05:00 PM
 Lab Sample ID: 180622008-014
 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)	9.2		J	S.U.		6/20/2018 3:05:00 PM
Temperature (E170.1)	14		J	deg C		6/20/2018 3:05:00 PM
Turbidity (E180.1)	> 999	1.0	J	NTU		6/20/2018 3:05:00 PM

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9/17/18

MERCURY - EPA 245.1 REV 3.0

Analyst: AVB

(Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 1:55:38 PM
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ICP METALS - EPA 200.7

Analyst: SM

(Prep: SW3010A - 6/25/2018)

Aluminum	447	200		µg/L	1	7/2/2018 5:13:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 5:13:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 5:13:00 PM
Barium	162	200	J	µg/L	1	7/2/2018 5:13:00 PM
Boron	918	50.0		µg/L	1	7/2/2018 5:13:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 5:13:00 PM
Calcium	85200	5000		µg/L	1	7/2/2018 5:13:00 PM
Chromium	4.60	10.0	J-	µg/L	1	7/2/2018 5:13:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 5:13:00 PM
Iron	3080	100		µg/L	1	7/2/2018 5:13:00 PM
Magnesium	12000	5000		µg/L	1	7/2/2018 5:13:00 PM
Manganese	469	15.0		µg/L	1	7/2/2018 5:13:00 PM
Nickel	6.05	40.0	J	µg/L	1	7/2/2018 5:13:00 PM
Potassium	1330	5000	J	µg/L	1	7/2/2018 5:13:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 5:13:00 PM
Sodium	163000	50000		µg/L	10	7/2/2018 5:17:00 PM
Zinc	8.60	20.0	J	µg/L	1	7/2/2018 5:13:00 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: SM

Total Hardness (As CaCO3)	260	5		mg/L CaCO3	1	7/2/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: CS

Chloride	3.79	2.00		mg/L	2	7/3/2018 9:24:44 PM
Sulfate	96.2	4.00		mg/L	2	7/3/2018 9:24:44 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW-Dup 8909-D
Collection Date: 6/20/2018 3:05:00 PM
Lab Sample ID: 180622008-014
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 - SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	270	10		mg/L CaCO3	1	6/28/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.6	0.1		mg/L	1	6/29/2018 11:31:55 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	671	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	595	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.7	1.0	J	mg/L	1	7/5/2018 4:31:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	15	5		cpu@pH6	1	6/22/2018 3:15:00 PM

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9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 6/20/2018 12:10:00 PM
Lab Sample ID: 180622008-015
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)	5.48	0.10		mg/L		6/20/2018 12:10:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 1:57:19 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/2/2018 5:21:00 PM
Antimony	ND	60.0		µg/L	1	7/2/2018 5:21:00 PM
Arsenic	ND	10.0		µg/L	1	7/2/2018 5:21:00 PM
Barium	26.5	200	J+	µg/L	1	7/2/2018 5:21:00 PM
Boron	3040	50.0		µg/L	1	7/2/2018 5:21:00 PM
Cadmium	ND	5.00		µg/L	1	7/2/2018 5:21:00 PM
Calcium	469000	50000		µg/L	10	7/2/2018 5:32:00 PM
Chromium	ND	10.0		µg/L	1	7/2/2018 5:21:00 PM
Copper	ND	25.0		µg/L	1	7/2/2018 5:21:00 PM
Iron	100-ND	100	UJ	µg/L	1	7/2/2018 5:21:00 PM
Magnesium	113000	5000		µg/L	1	7/2/2018 5:21:00 PM
Manganese	ND	15.0		µg/L	1	7/2/2018 5:21:00 PM
Nickel	5.39	40.0	J	µg/L	1	7/2/2018 5:21:00 PM
Potassium	6900	5000		µg/L	1	7/2/2018 5:21:00 PM
Selenium	ND	5.00		µg/L	1	7/2/2018 5:21:00 PM
Sodium	52600	50000		µg/L	10	7/2/2018 5:32:00 PM
Zinc	ND	20.0		µg/L	1	7/2/2018 5:21:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	1600	5		mg/L CaCO3	1	7/2/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	83.5	20.0		mg/L	20	7/3/2018 10:51:51 PM
Sulfate	909	40.0		mg/L	20	7/3/2018 10:51:51 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	410	10		mg/L CaCO3	1	6/28/2018

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9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 6/20/2018 12:10:00 PM
Lab Sample ID: 180622008-015
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)	ND	0.1		mg/L	1	6/29/2018 11:33:32 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1990	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	1860	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.1	1.0	J	mg/L	1	7/5/2018 4:47:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH7	1	6/22/2018 3:15:00 PM

*BAMA
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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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 6/20/2018 9:55:00 AM
Lab Sample ID: 180622008-016
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)	5.21	0.10		mg/L		6/20/2018 9:55:00 AM
MERCURY - EPA 245.1 REV 3.0						
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 2:02:22 PM
ICP METALS - EPA 200.7						
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/3/2018 1:26:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 1:26:00 PM
Arsenic	4.70	10.0	J	µg/L	1	7/3/2018 1:26:00 PM
Barium	200 40.4	200	U	µg/L	1	7/3/2018 1:26:00 PM
Boron	6010	50.0		µg/L	1	7/3/2018 1:26:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 1:26:00 PM
Calcium	362000	50000		µg/L	10	7/3/2018 1:30:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 1:26:00 PM
Copper	3.85	25.0	J	µg/L	1	7/3/2018 1:26:00 PM
Iron	287	100	J-	µg/L	1	7/3/2018 1:26:00 PM
Magnesium	173000	5000		µg/L	1	7/3/2018 1:26:00 PM
Manganese	187	15.0		µg/L	1	7/3/2018 1:26:00 PM
Nickel	40 4.84	40.0	U	µg/L	1	7/3/2018 1:26:00 PM
Potassium	20300	5000		µg/L	1	7/3/2018 1:26:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 1:26:00 PM
Sodium	94700	50000		µg/L	10	7/3/2018 1:30:00 PM
Zinc	ND	20.0		µg/L	1	7/3/2018 1:26:00 PM
HARDNESS - EPA 200.7 REV 4.4						
						Analyst: SM
Total Hardness (As CaCO3)	1616	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						
						Analyst: CS
Chloride	160	20.0		mg/L	20	7/3/2018 11:09:06 PM
Sulfate	1480	40.0		mg/L	20	7/3/2018 11:09:06 PM
ALKALINITY TO PH 4.5 - SM 2320B-2011						
						Analyst: DAA
Alkalinity, Total (As CaCO3)	490	10		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: Leak Detection Syst.
Work Order: 180622008	Collection Date: 6/20/2018 9:55:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-016
PO#:	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)	0.4	0.1	J+	mg/L	1	6/29/2018 11:35:09 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2950	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	2780	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.2	1.0	J	mg/L	1	7/5/2018 5:53:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH7	1	6/22/2018 3:15:00 PM

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9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 1
Collection Date: 6/20/2018 11:55:00 AM
Lab Sample ID: 180622008-017
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)	5.95	0.10		mg/L		6/20/2018 11:55:00 AM
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 2:04:03 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/3/2018 1:40:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 1:40:00 PM
Arsenic	45.2	10.0		µg/L	1	7/3/2018 1:40:00 PM
Barium	200 55.8	200	<i>u</i>	µg/L	1	7/3/2018 1:40:00 PM
Boron	3730	50.0		µg/L	1	7/3/2018 1:40:00 PM
Cadmium	0.68	5.00	J	µg/L	1	7/3/2018 1:40:00 PM
Calcium	297000	50000		µg/L	10	7/3/2018 1:48:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 1:40:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 1:40:00 PM
Iron	5060	100	J-	µg/L	1	7/3/2018 1:40:00 PM
Magnesium	77800	5000		µg/L	1	7/3/2018 1:40:00 PM
Manganese	750	15.0		µg/L	1	7/3/2018 1:40:00 PM
Nickel	40 4.31	40.0	<i>u</i>	µg/L	1	7/3/2018 1:40:00 PM
Potassium	14900	5000		µg/L	1	7/3/2018 1:40:00 PM
Selenium	4.99	5.00	J	µg/L	1	7/3/2018 1:40:00 PM
Sodium	42000	5000	J+	µg/L	1	7/3/2018 1:40:00 PM
Zinc	ND	20.0		µg/L	1	7/3/2018 1:40:00 PM
LOW LEVEL MERCURY - EPA 1631E (Prep: 1631E - 6/25/2018)						Analyst: SM
Mercury	ND	0.5		ng/L	1	6/26/2018
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	395	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	29.1	5.00		mg/L	5	7/3/2018 11:26:11 PM
Sulfate	499	10.0		mg/L	5	7/3/2018 11:26:11 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 - Tentitively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** Under Drain 1
Work Order: 180622008 **Collection Date:** 6/20/2018 11:55:00 AM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-017
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)	650	10		mg/L CaCO3	1	6/28/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	6/29/2018 11:36:47 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1740	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	1410	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.2	1.0	J	mg/L	1	7/5/2018 6:08:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH6	1	6/22/2018 3:15:00 PM

JAMA
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 2
Collection Date: 6/20/2018 9:30:00 AM
Lab Sample ID: 180622008-018
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)	5.04	0.10		mg/L		6/20/2018 9:30:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 2:05:43 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/3/2018 1:58:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 1:58:00 PM
Arsenic	13.0	10.0		µg/L	1	7/3/2018 1:58:00 PM
Barium	200-21.9	200	u	µg/L	1	7/3/2018 1:58:00 PM
Boron	46100	500		µg/L	10	7/3/2018 2:02:00 PM
Cadmium	0.28	5.00	J	µg/L	1	7/3/2018 1:58:00 PM
Calcium	662000	50000		µg/L	10	7/3/2018 2:02:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 1:58:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 1:58:00 PM
Iron	2160	100	J-	µg/L	1	7/3/2018 1:58:00 PM
Magnesium	91900	5000		µg/L	1	7/3/2018 1:58:00 PM
Manganese	1040	15.0		µg/L	1	7/3/2018 1:58:00 PM
Nickel	40-4.75	40.0	u	µg/L	1	7/3/2018 1:58:00 PM
Potassium	83600	50000		µg/L	10	7/3/2018 2:02:00 PM
Selenium	15.7	5.00		µg/L	1	7/3/2018 1:58:00 PM
Sodium	221000	50000		µg/L	10	7/3/2018 2:02:00 PM
Zinc	5.91	20.0	J+	µg/L	1	7/3/2018 1:58:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	2032	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	350	20.0		mg/L	20	7/3/2018 11:43:17 PM
Sulfate	1720	40.0		mg/L	20	7/3/2018 11:43:17 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	320	10		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: Under Drain 2
Work Order: 180622008	Collection Date: 6/20/2018 9:30:00 AM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-018
PO#:	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)	1.9	0.1		mg/L	1	7/2/2018 11:18:25 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	3530	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	3390	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.2	1.0	J	mg/L	1	7/5/2018 6:24:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:15:00 PM

BAMA
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 3
Collection Date: 6/20/2018 9:20:00 AM
Lab Sample ID: 180622008-019
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)	4.67	0.10		mg/L		6/20/2018 9:20:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 2:07:24 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/3/2018 2:26:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 2:26:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 2:26:00 PM
Barium	200-20.4	200	<i>u</i>	µg/L	1	7/3/2018 2:26:00 PM
Boron	26100	500		µg/L	10	7/3/2018 2:35:00 PM
Cadmium	0.31	5.00	<i>J</i>	µg/L	1	7/3/2018 2:26:00 PM
Calcium	734000	50000		µg/L	10	7/3/2018 2:35:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 2:26:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 2:26:00 PM
Iron	245	100	<i>J-</i>	µg/L	1	7/3/2018 2:26:00 PM
Magnesium	117000	5000		µg/L	1	7/3/2018 2:26:00 PM
Manganese	419	15.0		µg/L	1	7/3/2018 2:26:00 PM
Nickel	40-10.3	40.0	<i>u</i>	µg/L	1	7/3/2018 2:26:00 PM
Potassium	108000	50000		µg/L	10	7/3/2018 2:35:00 PM
Selenium	8.83	5.00		µg/L	1	7/3/2018 2:26:00 PM
Sodium	259000	50000		µg/L	10	7/3/2018 2:35:00 PM
Zinc	8.04	20.0	<i>J+</i>	µg/L	1	7/3/2018 2:26:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	2316	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	784	20.0		mg/L	20	7/4/2018 12:00:23 AM
Sulfate	1710	40.0		mg/L	20	7/4/2018 12:00:23 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	340	10		mg/L CaCO3	1	6/28/2018

*BAMA
9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Under Drain 3
Collection Date: 6/20/2018 9:20:00 AM
Lab Sample ID: 180622008-019
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	7/2/2018 11:20:06 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	4840	1		µmhos/cm	1	6/29/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	4220	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	1.1	1.0	J	mg/L	1	7/5/2018 6:40:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:15:00 PM

Blank
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Inlet to Pond
 Collection Date: 6/20/2018 11:30:00 AM
 Lab Sample ID: 180622008-020
 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)	6.21	0.10		mg/L		6/20/2018 11:30:00 AM
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 2:09:05 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/3/2018 2:56:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 2:56:00 PM
Arsenic	32.2	10.0		µg/L	1	7/3/2018 2:56:00 PM
Barium	38.5	200	U	µg/L	1	7/3/2018 2:56:00 PM
Boron	20500	50.0		µg/L	1	7/3/2018 2:56:00 PM
Cadmium	0.54	5.00	J	µg/L	1	7/3/2018 2:56:00 PM
Calcium	526000	50000		µg/L	10	7/3/2018 3:02:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 2:56:00 PM
Copper	5.36	25.0	J	µg/L	1	7/3/2018 2:56:00 PM
Iron	3520	100	J-	µg/L	1	7/3/2018 2:56:00 PM
Magnesium	88400	5000		µg/L	1	7/3/2018 2:56:00 PM
Manganese	638	15.0		µg/L	1	7/3/2018 2:56:00 PM
Nickel	3.98	40.0	J	µg/L	1	7/3/2018 2:56:00 PM
Potassium	75800	5000		µg/L	1	7/3/2018 2:56:00 PM
Selenium	28.8	5.00		µg/L	1	7/3/2018 2:56:00 PM
Sodium	187000	50000		µg/L	10	7/3/2018 3:02:00 PM
Zinc	3.00	20.0	J+	µg/L	1	7/3/2018 2:56:00 PM
LOW LEVEL MERCURY - EPA 1631E (Prep: 1631E - 6/25/2018)						Analyst: SM
Mercury	ND	0.5		ng/L	1	6/26/2018
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	1682	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	186	20.0		mg/L	20	7/4/2018 12:17:28 AM
Sulfate	1280	40.0		mg/L	20	7/4/2018 12:17:28 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: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** Inlet to Pond
Work Order: 180622008 **Collection Date:** 6/20/2018 11:30:00 AM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-020
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)	490	10		mg/L CaCO3	1	6/28/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.3	0.1	J+	mg/L	1	7/2/2018 11:21:45 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	3000	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	2580	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0	UJ	mg/L	1	7/5/2018 7:47:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	5	5		cpu@pH7	1	6/22/2018 3:25:00 PM

BAM
9/17/18

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 6/20/2018 10:55:00 AM
Lab Sample ID: 180622008-021
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)	5.58	0.10		mg/L		6/20/2018 10:55:00 AM
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 2:10:46 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/3/2018 3:05:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:05:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 3:05:00 PM
Barium	21.0	200	J	µg/L	1	7/3/2018 3:05:00 PM
Boron	74.0	50.0	J	µg/L	1	7/3/2018 3:05:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:05:00 PM
Calcium	37900	5000		µg/L	1	7/3/2018 3:05:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:05:00 PM
Copper	5.74	25.0	J	µg/L	1	7/3/2018 3:05:00 PM
Iron	129	100		µg/L	1	7/3/2018 3:05:00 PM
Magnesium	10300	5000		µg/L	1	7/3/2018 3:05:00 PM
Manganese	10.9	15.0	J	µg/L	1	7/3/2018 3:05:00 PM
Nickel	1.82	40.0	J	µg/L	1	7/3/2018 3:05:00 PM
Potassium	2010	5000	J	µg/L	1	7/3/2018 3:05:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:05:00 PM
Sodium	18400	5000		µg/L	1	7/3/2018 3:05:00 PM
Zinc	2.07	20.0	J	µg/L	1	7/3/2018 3:05:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	137	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	38.9	2.00		mg/L	2	7/4/2018 12:51:38 AM
Sulfate	22.6	4.00		mg/L	2	7/4/2018 12:51:38 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	100	10		mg/L CaCO3	1	6/28/2018

*BAMA
9/17/18*

200

5,000

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 6/20/2018 10:55:00 AM
Lab Sample ID: 180622008-021
Matrix: SURFACE WATER

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	7/2/2018 11:23:23 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	324	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	155	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.1	1.0	J	mg/L	1	7/5/2018 8:20:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	10	5		cpu@pH7	1	6/22/2018 3:25:00 PM

*BAMA
9/17/18*

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 6/20/2018 10:30:00 AM
Lab Sample ID: 180622008-022
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)	4.89	0.10		mg/L		6/20/2018 10:30:00 AM
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 2:12:28 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/3/2018 3:10:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:10:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 3:10:00 PM
Barium	200-29.1	200	UJ	µg/L	1	7/3/2018 3:10:00 PM
Boron	57.7	50.0	UJ	µg/L	1	7/3/2018 3:10:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:10:00 PM
Calcium	39000	5000		µg/L	1	7/3/2018 3:10:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:10:00 PM
Copper	3.18	25.0	J	µg/L	1	7/3/2018 3:10:00 PM
Iron	143	100		µg/L	1	7/3/2018 3:10:00 PM
Magnesium	10500	5000		µg/L	1	7/3/2018 3:10:00 PM
Manganese	12.5	15.0	J	µg/L	1	7/3/2018 3:10:00 PM
Nickel	0.93	40.0	J	µg/L	1	7/3/2018 3:10:00 PM
Potassium	5,000-2010	5000	UJ	µg/L	1	7/3/2018 3:10:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:10:00 PM
Sodium	18600	5000		µg/L	1	7/3/2018 3:10:00 PM
Zinc	1.89	20.0	J+	µg/L	1	7/3/2018 3:10:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	141	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	37.0	2.00		mg/L	2	7/4/2018 2:01:24 AM
Sulfate	22.7	4.00		mg/L	2	7/4/2018 2:01:24 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	104	4		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 6/20/2018 10:30:00 AM
Lab Sample ID: 180622008-022
Matrix: SURFACE WATER

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	7/2/2018 11:25:00 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	327	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	250	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.1	1.0		mg/L	1	7/6/2018 12:24:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	10	5		cpu@pH7	1	6/22/2018 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Surface Water Dup
 Collection Date: 6/20/2018 10:55:00 AM
 Lab Sample ID: 180622008-023
 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)	5.57	0.10		mg/L		6/20/2018 10:55:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 2:14:10 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/3/2018 3:15:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:15:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 3:15:00 PM
Barium	200 22.2	200	u	µg/L	1	7/3/2018 3:15:00 PM
Boron	50 49.8	50.0	u	µg/L	1	7/3/2018 3:15:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:15:00 PM
Calcium	38400	5000		µg/L	1	7/3/2018 3:15:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:15:00 PM
Copper	6.82	25.0	J	µg/L	1	7/3/2018 3:15:00 PM
Iron	134	100		µg/L	1	7/3/2018 3:15:00 PM
Magnesium	10400	5000		µg/L	1	7/3/2018 3:15:00 PM
Manganese	11.3	15.0	J	µg/L	1	7/3/2018 3:15:00 PM
Nickel	1.97	40.0	J	µg/L	1	7/3/2018 3:15:00 PM
Potassium	5000 2010	5000	u	µg/L	1	7/3/2018 3:15:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:15:00 PM
Sodium	18600	5000		µg/L	1	7/3/2018 3:15:00 PM
Zinc	2.07	20.0	J+	µg/L	1	7/3/2018 3:15:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	139	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	37.0	2.00		mg/L	2	7/4/2018 2:18:46 AM
Sulfate	22.7	4.00		mg/L	2	7/4/2018 2:18:46 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	96	4		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Surface Water Dup
Collection Date: 6/20/2018 10:55:00 AM
Lab Sample ID: 180622008-023
Matrix: SURFACE WATER

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	7/2/2018 11:29:54 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	331	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	185	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	3.0	1.0		mg/L	1	7/6/2018 12:56:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	10	5		cpu@pH7	1	6/22/2018 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: Pond Grab
Collection Date: 6/20/2018 12:45:00 PM
Lab Sample ID: 180622008-024
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)	6.41	0.10		mg/L	1	6/20/2018 12:45:00 PM
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 6/25/2018)						Analyst: AVB
Mercury	ND	0.20		µg/L	1	6/25/2018 2:15:53 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 6/25/2018)						Analyst: SM
Aluminum	ND	200		µg/L	1	7/3/2018 3:20:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:20:00 PM
Arsenic	3.79	10.0	J	µg/L	1	7/3/2018 3:20:00 PM
Barium	200 20900	200	U	µg/L	1	7/3/2018 3:20:00 PM
Boron	20900	50.0		µg/L	1	7/3/2018 3:20:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:20:00 PM
Calcium	333000	50000		µg/L	10	7/3/2018 3:32:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:20:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 3:20:00 PM
Iron	165	100	J-	µg/L	1	7/3/2018 3:20:00 PM
Magnesium	95800	5000		µg/L	1	7/3/2018 3:20:00 PM
Manganese	57.2	15.0		µg/L	1	7/3/2018 3:20:00 PM
Nickel	0.69	40.0	J	µg/L	1	7/3/2018 3:20:00 PM
Potassium	83500	5000		µg/L	1	7/3/2018 3:20:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:20:00 PM
Sodium	186000	50000		µg/L	10	7/3/2018 3:32:00 PM
Zinc	ND	20.0		µg/L	1	7/3/2018 3:20:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	1227	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	219	20.0		mg/L	20	7/4/2018 2:35:52 AM
Sulfate	1330	40.0		mg/L	20	7/4/2018 2:35:52 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	84	2		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: Pond Grab
Work Order: 180622008	Collection Date: 6/20/2018 12:45:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-024
PO#:	Matrix: SURFACE WATER

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	7/2/2018 11:34:48 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2700	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	2420	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	8.3	1.0		mg/L	1	7/6/2018 1:28:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	15	5		cpu@pH7	1	6/22/2018 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: 25-Jul-18

CLIENT: Lockwood Hills LLC **Client Sample ID:** Field Blank
Work Order: 180622008 **Collection Date:** 6/21/2018 12:30:00 PM
Reference: Lockwood Ash Landfill / Annual **Lab Sample ID:** 180622008-025
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)	6.23	0.10		mg/L		6/21/2018 12:30:00 PM
pH (E150.1)	7.0		J	S.U.		6/21/2018 12:30:00 PM
Temperature (E170.1)	20		J	deg C		6/21/2018 12:30:00 PM
Turbidity (E180.1)	< 1	1.0	J	NTU		6/21/2018 12:30:00 PM

BAMA 9/17/18

MERCURY - EPA 245.1 REV 3.0 Analyst: AVB
 (Prep: E245.1 - 6/25/2018)

Mercury	ND	0.20		µg/L	1	6/25/2018 2:17:36 PM
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ICP METALS - EPA 200.7 Analyst: SM
 (Prep: SW3010A - 6/25/2018)

Aluminum	ND	200		µg/L	1	7/3/2018 3:39:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:39:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 3:39:00 PM
Barium	700 4.00	200	u	µg/L	1	7/3/2018 3:39:00 PM
Boron	5040.6	50.0	u	µg/L	1	7/3/2018 3:39:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:39:00 PM
Calcium	125	5000	J	µg/L	1	7/3/2018 3:39:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:39:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 3:39:00 PM
Iron	12.5	100	J	µg/L	1	7/3/2018 3:39:00 PM
Magnesium	ND	5000		µg/L	1	7/3/2018 3:39:00 PM
Manganese	ND	15.0		µg/L	1	7/3/2018 3:39:00 PM
Nickel	ND	40.0		µg/L	1	7/3/2018 3:39:00 PM
Potassium	5,000 30.2	5000	u	µg/L	1	7/3/2018 3:39:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:39:00 PM
Sodium	83.2	5000	J	µg/L	1	7/3/2018 3:39:00 PM
Zinc	2.45	20.0	J+	µg/L	1	7/3/2018 3:39:00 PM

HARDNESS - EPA 200.7 REV 4.4 Analyst: SM

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	7/3/2018
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: CS

Chloride	ND	2.00		mg/L	2	7/4/2018 3:27:07 AM
Sulfate	ND	4.00		mg/L	2	7/4/2018 3:27:07 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: 25-Jul-18

CLIENT: Lockwood Hills LLC	Client Sample ID: Field Blank
Work Order: 180622008	Collection Date: 6/21/2018 12:30:00 PM
Reference: Lockwood Ash Landfill / Annual	Lab Sample ID: 180622008-025
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		mg/L CaCO3	1	6/28/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	7/2/2018 11:36:26 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	25	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	7/6/2018 1:44:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	ND	5		cpu@pH7	1	6/22/2018 3:40:00 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: GW Dep Drain 3
 Collection Date: 6/20/2018 9:05:00 AM
 Lab Sample ID: 180622008-026
 Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Flow, GPD	76 200			gal/day		6/20/2018 9:05:00 AM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 6/25/2018)						
Mercury	ND	0.20		µg/L	1	6/25/2018 2:26:02 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 6/25/2018)						
Aluminum	ND	200		µg/L	1	7/3/2018 3:45:00 PM
Antimony	ND	60.0		µg/L	1	7/3/2018 3:45:00 PM
Arsenic	ND	10.0		µg/L	1	7/3/2018 3:45:00 PM
Barium	200 50.9	200	J	µg/L	1	7/3/2018 3:45:00 PM
Boron	252	50.0	J	µg/L	1	7/3/2018 3:45:00 PM
Cadmium	ND	5.00		µg/L	1	7/3/2018 3:45:00 PM
Calcium	299000	50000	J	µg/L	10	7/3/2018 3:52:00 PM
Chromium	ND	10.0		µg/L	1	7/3/2018 3:45:00 PM
Copper	ND	25.0		µg/L	1	7/3/2018 3:45:00 PM
Iron	16.6	100	J	µg/L	1	7/3/2018 3:45:00 PM
Magnesium	56700	5000	J	µg/L	1	7/3/2018 3:45:00 PM
Manganese	18.2	15.0		µg/L	1	7/3/2018 3:45:00 PM
Nickel	1.86	40.0	J	µg/L	1	7/3/2018 3:45:00 PM
Potassium	5,000 8090	5000	J	µg/L	1	7/3/2018 3:45:00 PM
Selenium	ND	5.00		µg/L	1	7/3/2018 3:45:00 PM
Sodium	25500	5000	J+	µg/L	1	7/3/2018 3:45:00 PM
Zinc	ND	20.0		µg/L	1	7/3/2018 3:45:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	980	5		mg/L CaCO3	1	7/3/2018
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	3.71	2.00		mg/L	2	7/4/2018 3:44:13 AM
Sulfate	184	4.00		mg/L	2	7/4/2018 3:44:13 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	440	10		mg/L CaCO3	1	6/28/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 6/20/2018 9:05:00 AM
Lab Sample ID: 180622008-026
Matrix: SURFACE WATER

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	7/2/2018 11:38:04 AM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1310	1		µmhos/cm	1	7/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CS
TDS (Residue, Filterable)	1120	5		mg/L	1	6/25/2018
TOTAL ORGANIC CARBON - SM 5310C-2011						Analyst: NK
Total Organic Carbon	2.7	1.0		mg/L	1	7/6/2018 2:00:00 PM
COLOR (PLATINUM-COBALT) - SM 2120B-2011						Analyst: NK
Color	10	5		cpu@pH7	1	6/22/2018 3:40:00 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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: LLHG Field Blank
Collection Date: 6/20/2018 11:20:00 AM
Lab Sample ID: 180622008-027
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: SM
(Prep: 1631E - 6/25/2018)						
Mercury	ND	0.5		ng/L	1	6/26/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 2
Collection Date: 6/20/2018
Lab Sample ID: 180622008-028
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		6/20/2018
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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 - Tentatively Identified Compound-Estimated Conc.

Adirondack Environmental Services, Inc

Date: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 6/20/2018
Lab Sample ID: 180622008-029
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		6/20/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Reference: Lockwood Ash Landfill / Annual
 PO#:

Client Sample ID: Under Drain 5
 Collection Date: 6/20/2018
 Lab Sample ID: 180622008-030
 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		6/20/2018

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: 25-Jul-18

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Reference: Lockwood Ash Landfill / Annual
PO#:

Client Sample ID: 8405
Collection Date: 6/20/2018
Lab Sample ID: 180622008-031
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		6/20/2018
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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.

Attachment 3

Sample Data Group 1842

Quality Control Documentation

Adirondack Environmental Services, Inc

Date: 25-Jul-18

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

PDS	SeqNo: 2432968	TestNo: E200.7	RunNo: 160682
	Sampl ID: 180622008-002 (8401)	Units: µg/L	Analysis Date: 7/2/2018
	PrepDate: PrepRef:(SW3010A)	LowLimit	HighLimit

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4015	200	4000	0	100	75	125	0	0	0	
Antimony	934.3	60.0	1000	0	93.4	75	125	0	0	0	
Arsenic	75.68	10.0	80	0	94.6	75	125	0	0	0	
Barium	3951	200	4000	57.93	97.3	75	125	0	0	0	
Cadmium	96.73	5.00	100	0	96.7	75	125	0	0	0	
Chromium	418.1	10.0	400	3.873	104	75	125	0	0	0	
Copper	527.8	25.0	500	3.976	105	75	125	0	0	0	
Iron	2116	100	2000	239.9	93.8	75	125	0	0	0	
Manganese	1004	15.0	1000	65.93	93.8	75	125	0	0	0	
Nickel	989.8	40.0	1000	1.179	98.9	75	125	0	0	0	
Selenium	19.89	5.00	20	0	99.4	75	125	0	0	0	
Zinc	991.4	20.0	1000	0	99.1	75	125	0	0	0	

SD	SeqNo: 2432972	TestNo: E200.7	RunNo: 160682
	Sampl ID: 180622008-002 (8401)	Units: µg/L	Analysis Date: 7/2/2018
	PrepDate: PrepRef:(SW3010A)	LowLimit	HighLimit

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	ND	50.0	0	0	0	0	0	0	0	0	
Barium	56.29	1000	0	0	0	0	0	57.93	0	0	J
Boron	839.2	250	0	0	0	0	0	784.9	6.69	0	
Cadmium	ND	25.0	0	0	0	0	0	0	0	0	
Calcium	85080	25000	0	0	0	0	0	83750	1.57	0	
Chromium	ND	50.0	0	0	0	0	0	3.873	0	0	
Copper	34.09	120	0	0	0	0	0	3.976	0	0	J
Iron	259.8	500	0	0	0	0	0	239.9	0	0	J
Magnesium	22310	25000	0	0	0	0	0	23120	0	0	J
Manganese	69.4	75.0	0	0	0	0	0	65.93	0	0	J
Nickel	ND	200	0	0	0	0	0	1.179	0	0	
Potassium	1809	25000	0	0	0	0	0	2356	26.27	0	E

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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

SD	SeqNo: 2433646	PrepDate:	TestNo: E200.7	RunNo: 160718							
	Samp ID: 180622008-026 (GW Dep Drain 3)	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 7/3/2018							
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	16.62	0	0	
Magnesium	48280	25000	0	0	0	0	0	56730	16.1	0	E
Manganese	18.12	75.0	0	0	0	0	0	18.2	0	0	J
Nickel	ND	200	0	0	0	0	0	1.859	0	0	
Potassium	2181	25000	0	0	0	0	0	3092	34.55	0	E
Selenium	ND	25.0	0	0	0	0	0	0	0	0	
Sodium	17910	25000	0	0	0	0	0	25480	34.89	0	E
Zinc	ND	100	0	0	0	0	0	0	0	0	

MBLK	SeqNo: 2432958	PrepDate:	TestNo: E200.7	RunNo: 160682							
	Samp ID: MBLK	PrepRef:(SW3010A)	Units: µg/L	Analysis Date: 7/2/2018							
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
 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
 Page 3 of 43

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

DUP	SeqNo: 2433642	PrepDate: 6/25/2018	RunNo: 160718
	Samp ID: 180622008-026	PrepRef:	Analysis Date: 7/3/2018
		TestNo: E200.7	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	10.0	0	0	0	0	0	0	0	0	20
Copper	7.543	25.0	0	0	0	0	0	0	0	0	20
Iron	19.57	100	0	0	0	0	0	16.62	0	0	20
Magnesium	57240	5000	0	0	0	0	0	56730	0.893	0	20
Manganese	18.27	15.0	0	0	0	0	0	18.2	0.384	0	20
Nickel	1.883	40.0	0	0	0	0	0	1.859	0	0	20
Potassium	3145	5000	0	0	0	0	0	3092	0	0	20
Selenium	ND	5.00	0	0	0	0	0	0	0	0	20
Sodium	25680	5000	0	0	0	0	0	25480	0.790	0	20
Zinc	1.203	20.0	0	0	0	0	0	0	0	0	20

DUP	SeqNo: 2433643	PrepDate: 6/25/2018	RunNo: 160718
	Samp ID: 180622008-026	PrepRef:	Analysis Date: 7/3/2018
		TestNo: E200.7	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	241900	50000	0	0	0	0	0	299100	21.1	20	Z

CCB	SeqNo: 2432957	PrepDate:	RunNo: 160682
	Samp ID: CCB-1	PrepRef:	Analysis Date: 7/2/2018
		TestNo: E200.7	Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	11.31	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	0.3911	200	0	0	0	0	0	0	0	0	
Beryllium	0.1468	5.00	0	0	0	0	0	0	0	0	
Boron	1.589	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.00128	5.00	0	0	0	0	0	0	0	0	
Calcium	12.03	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	1.113	25.0	0	0	0	0	0	0	0	0	
Iron	0.462	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

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2432971	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	14.15	100	0	0	0	0	0	0	0	0	
Magnesium	3.512	5000	0	0	0	0	0	0	0	0	
Manganese	0.02088	15.0	0	0	0	0	0	0	0	0	
Molybdenum	ND	50.0	0	0	0	0	0	0	0	0	
Nickel	0.0983	40.0	0	0	0	0	0	0	0	0	
Potassium	ND	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	ND	5000	0	0	0	0	0	0	0	0	
Strontium	3.521	20.0	0	0	0	0	0	0	0	0	
Thallium	ND	10.0	0	0	0	0	0	0	0	0	
Tin	0.0071	50.0	0	0	0	0	0	0	0	0	
Titanium	1.304	50.0	0	0	0	0	0	0	0	0	
Vanadium	0.103	50.0	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2432986	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.3042	200	0	0	0	0	0	0	0	0	
Antimony	0.5968	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	
Beryllium	0.1857	5.00	0	0	0	0	0	0	0	0	
Boron	6.376	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.08807	5.00	0	0	0	0	0	0	0	0	
Calcium	6.368	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.01509	50.0	0	0	0	0	0	0	0	0	
Copper	0.2285	25.0	0	0	0	0	0	0	0	0	
Iron	0.03368	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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

CCB	SeqNo: 2432986	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	3.027	100	0	0	0	0	0	0	0	0	
Magnesium	ND	5000	0	0	0	0	0	0	0	0	
Manganese	0.09646	15.0	0	0	0	0	0	0	0	0	
Molybdenum	1.284	50.0	0	0	0	0	0	0	0	0	
Nickel	0.2432	40.0	0	0	0	0	0	0	0	0	
Potassium	ND	5000	0	0	0	0	0	0	0	0	
Selenium	ND	5.00	0	0	0	0	0	0	0	0	
Silver	0.265	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	0.6206	50.0	0	0	0	0	0	0	0	0	
Titanium	1.373	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	
Zinc	0.03647	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2432999	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	18.7	200	0	0	0	0	0	0	0	0	
Antimony	0.8097	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	0.2784	200	0	0	0	0	0	0	0	0	
Beryllium	0.1324	5.00	0	0	0	0	0	0	0	0	
<u>Boron</u>	6.008 > MDL	50.0	0	0	0	0	0	0	0	0	
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	6.085	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	0.02853	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.02957	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

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2433005	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CCB-5	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	13.94	100	0	0	0	0	0	0	0	0	
Magnesium	ND	5000	0	0	0	0	0	0	0	0	
Manganese	0.03671	15.0	0	0	0	0	0	0	0	0	
Molybdenum	0.2954	50.0	0	0	0	0	0	0	0	0	
Nickel	0.1301	40.0	0	0	0	0	0	0	0	0	
Potassium	ND	5000	0	0	0	0	0	0	0	0	
Selenium	0.1713	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	2.118	20.0	0	0	0	0	0	0	0	0	
Thallium	0.00845	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	1.586	50.0	0	0	0	0	0	0	0	0	
Zinc	0.02868	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2433617	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-1	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5.332	200	0	0	0	0	0	0	0	0	
Antimony	0.5237	60.0	0	0	0	0	0	0	0	0	
Arsenic	ND	10.0	0	0	0	0	0	0	0	0	
Barium	0.8882	200	0	0	0	0	0	0	0	0	
Beryllium	ND	5.00	0	0	0	0	0	0	0	0	
<u>Boron</u>	7.804	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.06338	5.00	0	0	0	0	0	0	0	0	
Calcium	1.181	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Cobalt	1.06	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.7716	100	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 43

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2433617	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-1	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6068	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	5.251	5000	0	0	0	0	0	0	0	0	
Manganese	1.027	15.0	0	0	0	0	0	0	0	0	
Molybdenum	3.532	50.0	0	0	0	0	0	0	0	0	
Nickel	1.269	40.0	0	0	0	0	0	0	0	0	
Potassium	ND	5000	0	0	0	0	0	0	0	0	
Selenium	0.7681	5.00	0	0	0	0	0	0	0	0	
Silver	0.8816	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	0.6829	10.0	0	0	0	0	0	0	0	0	
Tin	0.6345	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	2.292	50.0	0	0	0	0	0	0	0	0	
Zinc	1.148	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2433629	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5.331	200	0	0	0	0	0	0	0	0	
Antimony	0.2306	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.366	10.0	0	0	0	0	0	0	0	0	
Barium	2.591	200	0	0	0	0	0	0	0	0	
Beryllium	ND	5.00	0	0	0	0	0	0	0	0	
Boron	35.6	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.00001	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	0.01907	50.0	0	0	0	0	0	0	0	0	
Copper	0.7721	25.0	0	0	0	0	0	0	0	0	
Iron	0.1592	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

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2433629	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-2	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	0.00098	5000	0	0	0	0	0	0	0	0	
Manganese	0.06125	15.0	0	0	0	0	0	0	0	0	
Molybdenum	1.998	50.0	0	0	0	0	0	0	0	0	
Nickel	0.2396	40.0	0	0	0	0	0	0	0	0	
Potassium	18.94	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	ND	5000	0	0	0	0	0	0	0	0	
Strontium	ND	20.0	0	0	0	0	0	0	0	0	
Thallium	0.04917	10.0	0	0	0	0	0	0	0	0	
Tin	0.4839	50.0	0	0	0	0	0	0	0	0	
Titanium	0.7915	50.0	0	0	0	0	0	0	0	0	
Vanadium	6.741	50.0	0	0	0	0	0	0	0	0	
Zinc	0.07838	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2433641	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2.018	200	0	0	0	0	0	0	0	0	
Antimony	0.1886	60.0	0	0	0	0	0	0	0	0	
Arsenic	0.3034	10.0	0	0	0	0	0	0	0	0	
Barium	3.986	200	0	0	0	0	0	0	0	0	
Beryllium	ND	5.00	0	0	0	0	0	0	0	0	
Boron	10.68	50.0	0	0	0	0	0	0	0	0	
Cadmium	ND	5.00	0	0	0	0	0	0	0	0	
Calcium	6.165	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	1.254	25.0	0	0	0	0	0	0	0	0	
Iron	0.05108	100	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

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2433641	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-3	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	3.695	5000	0	0	0	0	0	0	0	0	
Manganese	0.02858	15.0	0	0	0	0	0	0	0	0	
Molybdenum	0.2872	50.0	0	0	0	0	0	0	0	0	
Nickel	0.1934	40.0	0	0	0	0	0	0	0	0	
Potassium	8.762	5000	0	0	0	0	0	0	0	0	
Selenium	0.5539	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	ND	10.0	0	0	0	0	0	0	0	0	
Tin	0.3571	50.0	0	0	0	0	0	0	0	0	
Titanium	1.628	50.0	0	0	0	0	0	0	0	0	
Vanadium	ND	50.0	0	0	0	0	0	0	0	0	
Zinc	0.04881	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2433655	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

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	1.29	10.0	0	0	0	0	0	0	0	0	
Barium	2.294	200	0	0	0	0	0	0	0	0	
Beryllium	ND	5.00	0	0	0	0	0	0	0	0	
Boron	6.482	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.1726	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	0.2462	50.0	0	0	0	0	0	0	0	0	
Copper	ND	25.0	0	0	0	0	0	0	0	0	
Iron	0.205	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

ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

CCB	SeqNo: 2433655	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-4	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	3.00	0	0	0	0	0	0	0	0	
Lithium	ND	100	0	0	0	0	0	0	0	0	
Magnesium	4.861	5000	0	0	0	0	0	0	0	0	
Manganese	0.2052	15.0	0	0	0	0	0	0	0	0	
Molybdenum	2.035	50.0	0	0	0	0	0	0	0	0	
Nickel	0.3715	40.0	0	0	0	0	0	0	0	0	
Potassium	11.68	5000	0	0	0	0	0	0	0	0	
Selenium	0.6218	5.00	0	0	0	0	0	0	0	0	
Silver	0.2589	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	0.5297	50.0	0	0	0	0	0	0	0	0	
Titanium	ND	50.0	0	0	0	0	0	0	0	0	
Vanadium	5.852	50.0	0	0	0	0	0	0	0	0	
Zinc	0.3184	20.0	0	0	0	0	0	0	0	0	

CCB	SeqNo: 2433666	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCB-5	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.299	200	0	0	0	0	0	0	0	0	
Antimony	0.1678	60.0	0	0	0	0	0	0	0	0	
Arsenic	0.9104	10.0	0	0	0	0	0	0	0	0	
Barium	2.433	200	0	0	0	0	0	0	0	0	
Beryllium	ND	5.00	0	0	0	0	0	0	0	0	
Boron	5.355	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.1701	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	
Chromium	0.2383	50.0	0	0	0	0	0	0	0	0	
Cobalt	1.28	25.0	0	0	0	0	0	0	0	0	
Copper	0.2482	100	0	0	0	0	0	0	0	0	
Iron											

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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

CCV	SeqNo: 2433665	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CCV-5	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1901	3.00	2000	0	95	90	110	0	0	0	
Lithium	2007	100	2000	0	100	90	110	0	0	0	
Magnesium	2023	5000	2000	0	101	90	110	0	0	0	
Manganese	2088	15.0	2000	0	104	90	110	0	0	0	
Molybdenum	2198	50.0	2000	0	110	90	110	0	0	0	
Nickel	2158	40.0	2000	0	108	90	110	0	0	0	
Potassium	9274	5000	10000	0	92.7	90	110	0	0	0	
Selenium	2166	5.00	2000	0	108	90	110	0	0	0	
Silver	527.3	10.0	500	0	105	90	110	0	0	0	
Sodium	1842	5000	2000	0	92.1	90	110	0	0	0	
Strontium	2165	20.0	2000	0	108	90	110	0	0	0	
Thallium	1919	10.0	2000	0	95.9	90	110	0	0	0	
Tin	1929	50.0	2000	0	96.5	90	110	0	0	0	
Titanium	ND	50.0	0	0	0	90	110	0	0	0	
Vanadium	2084	50.0	2000	0	104	90	110	0	0	0	
Zinc	2192	20.0	2000	0	110	90	110	0	0	0	

CRI	SeqNo: 2432953	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: CRI-1	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	23.62	200	0	0	0	50	150	0	0	0	
Antimony	114.2	60.0	120	0	95.2	50	150	0	0	0	
Arsenic	17.35	10.0	20	0	86.8	50	150	0	0	0	
Barium	ND	200	0	0	0	50	150	0	0	0	
Boron	2.037	50.0	0	0	0	50	150	0	0	0	
Cadmium	9.969	5.00	10	0	99.7	50	150	0	0	0	
Calcium	16.69	5000	0	0	0	50	150	0	0	0	
Chromium	21.94	10.0	20	0	110	50	150	0	0	0	
Copper	48.35	25.0	50	0	96.7	50	150	0	0	0	
Iron	3.423	100	0	0	0	50	150	0	0	0	
Magnesium	ND	5000	0	0	0	50	150	0	0	0	
Manganese	28.65	15.0	30	0	95.5	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

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

CRI	SeqNo: 2432953	TestNo: E200.7	RunNo: 160682
	Samp ID: CRI-1	Units: µg/L	Analysis Date: 7/2/2018
PrepDate:		RPDLimit	
PrepRef:		RPDRefVal	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	84.05	40.0	80	0	105	50	150	0	0	0	
Potassium	ND	5000	0	0	0	50	150	0	0	0	
Selenium	11.66	5.00	10	0	117	50	150	0	0	0	
Sodium	ND	5000	0	0	0	50	150	0	0	0	
Zinc	42.14	20.0	40	0	105	50	150	0	0	0	

CRI	SeqNo: 2433000	TestNo: E200.7	RunNo: 160682
	Samp ID: CRI-2	Units: µg/L	Analysis Date: 7/2/2018
PrepDate:		RPDLimit	
PrepRef:		RPDRefVal	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	26.38	200	0	0	0	50	150	0	0	0	
Antimony	113.8	60.0	120	0	94.8	50	150	0	0	0	
Arsenic	18.21	10.0	20	0	91	50	150	0	0	0	
Barium	0.03359	200	0	0	0	50	150	0	0	0	
Boron	4.382	50.0	0	0	0	50	150	0	0	0	
Cadmium	10.1	5.00	10	0	101	50	150	0	0	0	
Calcium	20.64	5000	0	0	0	50	150	0	0	0	
Chromium	16.74	10.0	20	0	83.7	50	150	0	0	0	
Copper	47.63	25.0	50	0	95.3	50	150	0	0	0	
Iron	3.533	100	0	0	0	50	150	0	0	0	
Magnesium	ND	5000	0	0	0	50	150	0	0	0	
Manganese	29.05	15.0	30	0	96.8	50	150	0	0	0	
Nickel	86.21	40.0	80	0	108	50	150	0	0	0	
Potassium	ND	5000	0	0	0	50	150	0	0	0	
Selenium	11.81	5.00	10	0	118	50	150	0	0	0	
Sodium	ND	5000	0	0	0	50	150	0	0	0	
Zinc	42.7	20.0	40	0	107	50	150	0	0	0	

CRI	SeqNo: 2433613	TestNo: E200.7	RunNo: 160718
	Samp ID: CRI-1	Units: µg/L	Analysis Date: 7/3/2018
PrepDate:		RPDLimit	
PrepRef:		RPDRefVal	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	11.24	200	0	0	0	50	150	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: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

CRI	SeqNo: 2433613	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CRI-1	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	109.7	60.0	120	0	91.4	50	150	0	0	0	
Arsenic	19.11	10.0	20	0	95.6	50	150	0	0	0	
Barium	0.04464	200	0	0	0	50	150	0	0	0	
Boron	2.806	50.0	0	0	0	50	150	0	0	0	
Cadmium	9.78	5.00	10	0	97.8	50	150	0	0	0	
Calcium	11.94	5000	0	0	0	50	150	0	0	0	
Chromium	17.46	10.0	20	0	87.3	50	150	0	0	0	
Copper	51.74	25.0	50	0	103	50	150	0	0	0	
Iron	4.042	100	0	0	0	50	150	0	0	0	
Magnesium	20.61	5000	0	0	0	50	150	0	0	0	
Manganese	27.81	15.0	30	0	92.7	50	150	0	0	0	
Nickel	77.38	40.0	80	0	96.7	50	150	0	0	0	
Potassium	8.351	5000	0	0	0	50	150	0	0	0	
Selenium	9.844	5.00	10	0	98.4	50	150	0	0	0	
Sodium	ND	5000	0	0	0	50	150	0	0	0	
Zinc	42.54	20.0	40	0	106	50	150	0	0	0	

CRI	SeqNo: 2433660	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CRI-2	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	12.1	200	0	0	0	50	150	0	0	0	
Antimony	118.7	60.0	120	0	98.9	50	150	0	0	0	
Arsenic	20.67	10.0	20	0	103	50	150	0	0	0	
Barium	3.052	200	0	0	0	50	150	0	0	0	
Boron	1.472	50.0	0	0	0	50	150	0	0	0	
Cadmium	10.68	5.00	10	0	107	50	150	0	0	0	
Calcium	12.07	5000	0	0	0	50	150	0	0	0	
Chromium	19.45	10.0	20	0	97.3	50	150	0	0	0	
Copper	49.17	25.0	50	0	98.3	50	150	0	0	0	
Iron	3.709	100	0	0	0	50	150	0	0	0	
Magnesium	5.64	5000	0	0	0	50	150	0	0	0	
Manganese	30.42	15.0	30	0	101	50	150	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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

CRI	SeqNo: 2433660	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: CRI-2	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	87.47	40.0	80	0	109	50	150	0	0	0	
Potassium	22.08	5000	0	0	0	50	150	0	0	0	
Selenium	11.31	5.00	10	0	113	50	150	0	0	0	
Sodium	237.2	5000	0	0	0	50	150	0	0	0	
Zinc	46.94	20.0	40	0	117	50	150	0	0	0	

ICB	SeqNo: 2432952	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	24.64	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	3.676	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.02199	5.00	0	0	0	0	0	0	0	0	
Calcium	3.398	5000	0	0	0	0	0	0	0	0	
Chromium	ND	10.0	0	0	0	0	0	0	0	0	
Copper	1.121	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	0.02784	15.0	0	0	0	0	0	0	0	0	
Nickel	0.05098	40.0	0	0	0	0	0	0	0	0	
Potassium	ND	5000	0	0	0	0	0	0	0	0	
Selenium	ND	5.00	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Zinc	ND	20.0	0	0	0	0	0	0	0	0	

ICB	SeqNo: 2433612	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.796	200	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 30 of 43

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

ICB	SeqNo: 2433612	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: ICB-1	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	60.0	0	0	0	0	0	0	0	0	
Arsenic	1.555	10.0	0	0	0	0	0	0	0	0	
Barium	0.5365	200	0	0	0	0	0	0	0	0	
Boron	7.374	50.0	0	0	0	0	0	0	0	0	
Cadmium	0.1451	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	
Copper	0.5093	25.0	0	0	0	0	0	0	0	0	
Iron	0.1445	100	0	0	0	0	0	0	0	0	
Magnesium	5.445	5000	0	0	0	0	0	0	0	0	
Manganese	0.1901	15.0	0	0	0	0	0	0	0	0	
Nickel	0.1121	40.0	0	0	0	0	0	0	0	0	
Potassium	0.8525	5000	0	0	0	0	0	0	0	0	
Selenium	0.8929	5.00	0	0	0	0	0	0	0	0	
Sodium	ND	5000	0	0	0	0	0	0	0	0	
Zinc	0.2163	20.0	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2432951	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: ICV-1	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2026	200	2000	0	101	90	110	0	0	0	
Antimony	1977	60.0	2000	0	98.9	90	110	0	0	0	
Arsenic	2017	10.0	2000	0	101	90	110	0	0	0	
Barium	2025	200	2000	0	101	90	110	0	0	0	
Boron	2161	50.0	2000	0	108	90	110	0	0	0	
Cadmium	2082	5.00	2000	0	104	90	110	0	0	0	
Calcium	2056	5000	2000	0	103	90	110	0	0	0	
Chromium	1984	10.0	2000	0	99.2	90	110	0	0	0	
Copper	2064	25.0	2000	0	103	90	110	0	0	0	
Iron	2015	100	2000	0	101	90	110	0	0	0	
Magnesium	1980	5000	2000	0	99	90	110	0	0	0	
Manganese	1964	15.0	2000	0	98.2	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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: 61268

ICSA SeqNo: 2432954 PrepDate: RunNo: 160682
 Samp ID: ICSA-1 PrepRef: Analysis Date: 7/2/2018
 TestNo: E200.7 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
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	1,515	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	442000	5000	500000	0	88.4	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	118200	100	200000	0	59.1	80	120	0	0	0	S
Magnesium	520900	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	ND	5000	0	0	0	80	120	0	0	0	
Zinc	ND	20.0	0	0	0	80	120	0	0	0	

ICSA SeqNo: 2433001 PrepDate: RunNo: 160682
 Samp ID: ICSA-2 PrepRef: Analysis Date: 7/2/2018
 TestNo: E200.7 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	492700	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	2,466	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	448600	5000	500000	0	89.7	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	119900	100	200000	0	59.9	80	120	0	0	0	S
Magnesium	511900	5000	500000	0	102	80	120	0	0	0	
Manganese	ND	15.0	0	0	0	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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

ICSA	SeqNo: 2433001	PrepDate:	RunNo: 160682
	Samp ID: ICSA-2	PrepRef:	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
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: 2433614	PrepDate:	RunNo: 160718
	Samp ID: ICSA-1	PrepRef:	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	493400	200	500000	0	98.7	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	1.654	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	430100	5000	500000	0	86	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	118500	100	200000	0	59.3	80	120	0	0	0	S
Magnesium	518300	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	27.61	5000	0	0	0	80	120	0	0	0	
Zinc	ND	20.0	0	0	0	80	120	0	0	0	

ICSA	SeqNo: 2433661	PrepDate:	RunNo: 160718
	Samp ID: ICSA-2	PrepRef:	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref.Val	%REC	LowLimit	HighLimit	RPD Ref.Val	%RPD	RPDLimit	Qual
Aluminum	500300	200	500000	0	100	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
 B - Analyte detected in the associated Method Blank
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61268

ICSA	SeqNo: 2433661	PrepDate:	TestNo: E200.7	RunNo: 160718
	Samp ID: ICSA-2	PrepRef:	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	4.19	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	468300	5000	500000	0	93.7	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	130000	100	200000	0	65	80	120	0	0	0	S
Magnesium	522400	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	2.695	5000	0	0	0	80	120	0	0	0	
Selenium	ND	5.00	0	0	0	80	120	0	0	0	
Sodium	78.62	5000	0	0	0	80	120	0	0	0	
Zinc	ND	20.0	0	0	0	80	120	0	0	0	

ICSAB	SeqNo: 2432955	PrepDate:	TestNo: E200.7	RunNo: 160682
	Samp ID: ICSAB-1	PrepRef:	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	483900	200	500000	0	96.8	80	120	0	0	0	
Antimony	3.691	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	486.5	200	500	0	97.3	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	905.5	5.00	1000	0	90.6	80	120	0	0	0	
Calcium	431700	5000	500000	0	86.3	80	120	0	0	0	
Chromium	578	10.0	500	0	116	80	120	0	0	0	
Copper	535.8	25.0	500	0	107	80	120	0	0	0	
Iron	117800	100	200000	0	58.9	80	120	0	0	0	S
Magnesium	508100	5000	500000	0	102	80	120	0	0	0	
Manganese	465.2	15.0	500	0	93	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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ANALYTICAL QC SUMMARY REPORT

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

BatchID: 61268

ICSAB	SeqNo: 2432955	PrepDate:
	Samp ID: ICSAB-1	PrepRef:
	TestNo: E200.7	RunNo: 160682
	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	960.1	40.0	1000	0	96	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	878.6	20.0	1000	0	87.9	80	120	0	0	0	

ICSAB	SeqNo: 2433002	PrepDate:
	Samp ID: ICSAB-2	PrepRef:
	TestNo: E200.7	RunNo: 160682
	Units: µg/L	Analysis Date: 7/2/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	490200	200	500000	0	98	80	120	0	0	0	
Antimony	4.722	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	488.5	200	500	0	97.7	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	931.7	5.00	1000	0	93.2	80	120	0	0	0	
Calcium	445800	5000	500000	0	89.2	80	120	0	0	0	
Chromium	574.4	10.0	500	0	115	80	120	0	0	0	
Copper	546.3	25.0	500	0	109	80	120	0	0	0	
Iron	119200	100	200000	0	59.6	80	120	0	0	0	S
Magnesium	509800	5000	500000	0	102	80	120	0	0	0	
Manganese	474.1	15.0	500	0	94.8	80	120	0	0	0	
Nickel	823.2	40.0	1000	0	82.3	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	902.4	20.0	1000	0	90.2	80	120	0	0	0	

ICSAB	SeqNo: 2433615	PrepDate:
	Samp ID: ICSAB-1	PrepRef:
	TestNo: E200.7	RunNo: 160718
	Units: µg/L	Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	485700	200	500000	0	97.1	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

ANALYTICAL QC SUMMARY REPORT
BatchID: 61268

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ICSAB SeqNo: 2433615 PrepDate: TestNo: E200.7 RunNo: 160718
 Samp ID: ICSAB-1 PrepRef: Units: µg/L Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	6.61	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	492.8	200	500	0	98.6	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	898.8	5.00	1000	0	89.9	80	120	0	0	0	
Calcium	423800	5000	5000000	0	84.8	80	120	0	0	0	
Chromium	587.3	10.0	500	0	117	80	120	0	0	0	
Copper	529.7	25.0	500	0	106	80	120	0	0	0	
Iron	120000	100	200000	0	60	80	120	0	0	0	S
Magnesium	510900	5000	500000	0	102	80	120	0	0	0	
Manganese	464.7	15.0	500	0	92.9	80	120	0	0	0	
Nickel	934.6	40.0	1000	0	93.5	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	866.8	20.0	1000	0	86.7	80	120	0	0	0	

ICSAB SeqNo: 2433663 PrepDate: TestNo: E200.7 RunNo: 160718
 Samp ID: ICSAB-2 PrepRef: Units: µg/L Analysis Date: 7/3/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	492000	200	500000	0	98.4	80	120	0	0	0	
Antimony	5.652	60.0	0	0	0	80	120	0	0	0	
Arsenic	ND	10.0	0	0	0	80	120	0	0	0	
Barium	491.7	200	500	0	98.3	80	120	0	0	0	
Boron	ND	50.0	0	0	0	80	120	0	0	0	
Cadmium	972.4	5.00	1000	0	97.2	80	120	0	0	0	
Calcium	460400	5000	5000000	0	92.1	80	120	0	0	0	
Chromium	576.2	10.0	500	0	115	80	120	0	0	0	
Copper	523.5	25.0	500	0	105	80	120	0	0	0	
Iron	129500	100	200000	0	64.8	80	120	0	0	0	S
Magnesium	516700	5000	500000	0	103	80	120	0	0	0	
Manganese	497.9	15.0	500	0	99.6	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: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: 61270

cra	SeqNo: 2427619	PrepDate:	TestNo: E245.1	RunNo: 160411
	Samp ID: 0.2ppb	PrepRef:	Units: µg/L	Analysis Date: 6/25/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.3852	0.200	0.2	0	193	70	130	0	0	0	S

ICB	SeqNo: 2427617	PrepDate:	TestNo: E245.1	RunNo: 160411
	Samp ID: ICB	PrepRef:	Units: µg/L	Analysis Date: 6/25/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	-0.1047	0.200	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2427616	PrepDate:	TestNo: E245.1	RunNo: 160411
	Samp ID: ICV	PrepRef:	Units: µg/L	Analysis Date: 6/25/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.916	0.200	2	0	95.8	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 Page 42 of 43

**A.4
FIELD DUPLICATES**

Sample No. 180622008-006 Field Duplicate No. 180622008-014 Run date: 7/2/2018
 Lab Code: AES Case No. 180622008 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	442		447			5		P
Antimony	60	300	60	U	60	U				P
Arsenic	10	50	10	U	10	U				P
Barium	200	1,000	168	B	162	B		6		P
Boron	50	250	934		918		1.73			P
Cadmium	5	25	5	U	5	U				P
Calcium	5,000	25,000	90,400		85,200		5.92			P
Chromium	10	50	10	U	4.6	B		5		P
Copper	25	125	25	U	25	U				P
Iron	100	500	3,230		3,060		5.41			P
Magnesium	5,000	25,000	14,500		12,000			2500		P
Manganese	15	75	494		469		5.19			P
Mercury	0.2	1.0	0.2	U	0.2	U				CV
Nickel	40	200	6.63	B	6.05	B		0.6		P
Potassium	5,000	25,000	1,360	B	1,330	B		30		P
Selenium	5	25	5	U	5	U				P
Sodium	5,000	25,000	199,000		163,000		19.89			P
Zinc	20	100	8.89	B	8.60	B		0.3		P

**A.4
FIELD DUPLICATES**

Sample No. 180622008-021 Field Duplicate No. 180622008-023 Run Date: 7/3/2018
 Lab Code: AES Case No. 180622008 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	10	U	10	U				P
Barium	200	1,000	21.9	B	22.2	B		0.3		P
Boron	50	250	74.0	B	49.8	B		24.2		P
Cadmium	5	25	5	U	5	U				P
Calcium	5,000	25,000	37,900		38,400		1.31			P
Chromium	10	50	10	U	10	U				P
Copper	25	125	5.74	B	6.82	B		1.1		P
Iron	100	500	129		134			5		P
Magnesium	5,000	25,000	10,300		10,400			100		P
Manganese	15	75	10.9		11.3			0.4		P
Mercury	0.2	1.0	0.20	U	0.20	U				CV
Nickel	40	200	1.82	B	1.97	B		0.15		P
Potassium	5,000	25,000	2,010	B	2,010	B				P
Selenium	5	25	5	U	5	U				P
Sodium	5,000	25,000	18,400		18,600			200		P
Zinc	20	100	2.07	B	2.07	B				P

Seq. No.	9		AS Loc:	1		Date:	6/25/2018		
Sample ID:	ICB								
Analyte	Conc (Calib)	Conc (Sample)	Corr. Absorbance	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg 253.7	6/25/2018 1:21:33PM All analyte(s) passed QC.								
	-0.0996 µg/L	-0.0996 µg/L	0.0000	0.0016		0.0004		1:21:00PM	
	-0.1097 µg/L	-0.1097 µg/L	-0.0001	-0.0002		0.0003		1:21:30PM	
Mean:	-0.1047 µg/L	-0.1047 µg/L	0.0000	0.0007		0.0004			
SD:	0.00710 µg/L								
%RSD:	6.78								
6/25/2018 1:21:33PM QC value within limits for Hg 253.7 Recovery = Not calculated									

Seq. No.	10		AS Loc:	9		Date:	6/25/2018		
Sample ID:	0.2ppb								
Analyte	Conc (Calib)	Conc (Sample)	Corr. Absorbance	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg 253.7									
	0.3914 µg/L	0.3914 µg/L	0.0053	0.0230		0.0057		1:22:41PM	
	0.3790 µg/L	0.3790 µg/L	0.0051	0.0212		0.0055		1:23:11PM	
Mean:	0.3852 µg/L	0.3852 µg/L	0.0052	0.0221		0.0056			
SD:	0.00879 µg/L	0.00879 µg/L							
%RSD:	2.28								

Seq. No.	11		AS Loc:	10		Date:	6/25/2018		
Sample ID:	2.0ppb								
Analyte	Conc (Calib)	Conc (Sample)	Corr. Absorbance	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg 253.7									
	2.039 µg/L	2.039 µg/L	0.0228	0.0926		0.0232		1:24:22PM	
	1.988 µg/L	1.988 µg/L	0.0223	0.0901		0.0227		1:24:52PM	
Mean:	2.013 µg/L	2.013 µg/L	0.0225	0.0913		0.0229			
SD:	0.0355 µg/L	0.0355 µg/L							
%RSD:	1.76								

Seq. No.	12		AS Loc:	11		Date:	6/25/2018		
Sample ID:	MB-61270								
Analyte	Conc (Calib)	Conc (Sample)	Corr. Absorbance	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg 253.7									
	0.3869 µg/L	0.3869 µg/L	0.0052	0.0216		0.0056		1:26:04PM	
	0.3766 µg/L	0.3766 µg/L	0.0051	0.0208		0.0055		1:26:34PM	
Mean:	0.3818 µg/L	0.3818 µg/L	0.0052	0.0212		0.0056			
SD:	0.00727 µg/L	0.00727 µg/L							
%RSD:	1.91								

→ CRDL → Summary sheet reported
ND!
 → appears to be an error in the summary sheet

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
 BatchID: R160597

MBLK	SeqNo: 2431698	TestNo: E350.1	RunNo: 160597
	Samp ID: MBLK	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0494	0.100	0	0	0	0	0	0	0	0	J

ics	SeqNo: 2431573	TestNo: E350.1	RunNo: 160597
	Samp ID: Ics WC6-111-D	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.406	1.00	8.03	0	105	90	110	0	0	0	

ics	SeqNo: 2431595	TestNo: E350.1	RunNo: 160597
	Samp ID: Ics WC6-111-D	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.19	1.00	8.03	0	102	90	110	0	0	0	

ics	SeqNo: 2431615	TestNo: E350.1	RunNo: 160597
	Samp ID: Ics WC6-111-D	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	8.526	1.00	8.03	0	106	90	110	0	0	0	

ms	SeqNo: 2431601	TestNo: E350.1	RunNo: 160597
	Samp ID: 180619010-001	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.914	0.100	1	0.8956	102	90	110	0	0	0	

ms	SeqNo: 2431641	TestNo: E350.1	RunNo: 160597
	Samp ID: 180622008-001 (1842)	Units: mg/L	Analysis Date: 6/29/2018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	2.412	0.500	1	1.154	126	90	110	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
 B - Analyte detected in the associated Method Blank
 R - RPD outside accepted recovery limits

CLIENT: Lockwood Hills LLC
 Work Order: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R160597

msd	SeqNo: 2431642	TestNo: E350.1	RunNo: 160597		
	Samp ID: 180622008-001 (1842)	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	2.424	0.500	1	1.154	127	90	110	2.412	0.517	20	S

dup	SeqNo: 2431600	TestNo: E350.1	RunNo: 160597		
	Samp ID: 180619010-001	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.9052	0.100	0	0	0	0	0	0.8956	1.07	11.1	

ccb	SeqNo: 2431582	TestNo: E350.1	RunNo: 160597		
	Samp ID: CCB	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0478	0.100	0	0	0	0	0	0	0	0	

ccb	SeqNo: 2431594	TestNo: E350.1	RunNo: 160597		
	Samp ID: CCB	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0473	0.100	0	0	0	0	0	0	0	0	

ccb	SeqNo: 2431604	TestNo: E350.1	RunNo: 160597		
	Samp ID: CCB	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0459	0.100	0	0	0	0	0	0	0	0	

ccb	SeqNo: 2431614	TestNo: E350.1	RunNo: 160597		
	Samp ID: CCB	Units: mg/L	Analysis Date: 6/29/2018		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.0461	0.100	0	0	0	0	0	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

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R160597

cri	SeqNo: 2431574 Samp ID: cri 6-29-18	TestNo: E350.1 Units: mg/L	RunNo: 160597 Analysis Date: 6/29/2018				
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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)	0.1285	0.100	0.1	0	128	50	150	0	0	0	

icb	SeqNo: 2431572 Samp ID: ICB	TestNo: E350.1 Units: mg/L	RunNo: 160597 Analysis Date: 6/29/2018				
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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)	0.0494	0.100	0	0	0	0	0	0	0	0	

icv	SeqNo: 2431571 Samp ID: ICV	TestNo: E350.1 Units: mg/L	RunNo: 160597 Analysis Date: 6/29/2018				
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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)	0.9708	0.100	1	0	97.1	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
 Page 10 of 34

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT
BatchID: R160656

CCV	SeqNo: 2432650 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	1.043	0.100	1	0	104	90	110	0	0	0	

CCV	SeqNo: 2432652 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	1.018	0.100	1	0	102	90	110	0	0	0	

CCV	SeqNo: 2432658 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	1.058	0.100	1	0	106	90	110	0	0	0	

CCV	SeqNo: 2432660 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	1.021	0.100	1	0	102	90	110	0	0	0	

CCV	SeqNo: 2432665 Samp ID: CCV	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	0.9738	0.100	1	0	97.4	90	110	0	0	0	

cri	SeqNo: 2432589 Samp ID: cri 7-2-18	TestNo: E350.1 Units: mg/L	RunNo: 160656 Analysis Date: 7/2/2018
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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)	0.1242	0.100	0.1	0	124	50	150	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: 180622008
 Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R160766

MBLK	SeqNo: 2434462	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: MBLK		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ND	1.00	0	0	0	0	0	0	0	0	
Total Organic Carbon										

LCS	SeqNo: 2434425	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: LCS		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
29.79	1.00	30	0	99.3	85.4	112	0	0	0	
Total Organic Carbon										

LCS	SeqNo: 2434575	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: LCS		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
26.66	1.00	30	0	88.9	85.4	112	0	0	0	
Total Organic Carbon										

MS	SeqNo: 2434562	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: 180622008-010 (8911-D)		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
25.48	1.00	25	0	102	82	120	0	0	0	
Total Organic Carbon										

MS	SeqNo: 2434577	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: 180622008-020 (Inlet to Pond)		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
24.98	1.00	25	0	99.9	82	120	0	0	0	
Total Organic Carbon										

DUP	SeqNo: 2434559	RunNo: 160766	TestNo: SM 5310C	Analysis Date: 7/5/2018
	Samp ID: 180622008-007		Units: mg/L	

Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.0077	1.00	0	0	0	0	0	0	0	13.7	
Total Organic Carbon										

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 24 of 34

CLIENT: Lockwood Hills LLC
Work Order: 180622008
Project: Lockwood Ash Landfill

ANALYTICAL QC SUMMARY REPORT

BatchID: R160766

CCV	SeqNo: 2434580	TestNo: SM 5310C	RunNo: 160766	Analysis Date: 7/5/2018
	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	51.41	1.00	50	0	103	90	110	0	0	0	

CRI	SeqNo: 2434424	TestNo: SM 5310C	RunNo: 160766	Analysis Date: 7/5/2018
	Samp ID: CRI	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.035	1.00	1	0	104	50	150	0	0	0	

CRI	SeqNo: 2434574	TestNo: SM 5310C	RunNo: 160766	Analysis Date: 7/5/2018
	Samp ID: CRI	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.424	1.00	1	0	142	50	150	0	0	0	

ICB	SeqNo: 2434423	TestNo: SM 5310C	RunNo: 160766	Analysis Date: 7/5/2018
	Samp ID: ICB	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.2407	1.00	0	0	0	0	0	0	0	0	

ICV	SeqNo: 2434422	TestNo: SM 5310C	RunNo: 160766	Analysis Date: 7/5/2018
	Samp ID: ICV	Units: mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	49.26	1.00	50	0	98.5	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. 180622008-006 Field Duplicate No. 180622008-014 Run date: 7/2/2018

Lab Code: AES Case No. 180622008 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	0.6		0.6				
Alkalinity	290		270		7.1%		
Color	15		15			CPU	
Conductivity	713		671		6.1%	umhos/cm	
Chloride	4.57		3.79		18.7%		
Hardness	290		260		10.9%		
Sulfate	99.0		96.2		2.9%		
TDS	570		595		4.3%		
TOC	3.5		2.7		25.8%		J

Parameter*	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
pH	9.2					SU	
Temperature	14					Deg C	
Turbidity	>999					NTU	

*Field parameters not measured on field duplicate.

A.4 FIELD DUPLICATES

Sample No. 180622008-021 Field Duplicate No. 180622008-023 Run Date: 7/3/2018
 Lab Code: AES Case No. 180622008 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	100		96		4.1%		
Color	10		10			CPU	
Conductivity	324		331		2.1%	umhos/cm	
Chloride	36.9		37.0		0.3%		
Hardness	137		139		1.4%		
Sulfate	22.6		22.7		0.4%		
TDS	155		185		17.6%		
TOC	3.1		3.0		3.3%		

Parameter*	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
pH	7.9					SU	
Temperature	4					Deg C	
Turbidity	712					NTU	
Dissolved Oxygen	7.37						

*Field parameters not measured on the field duplicate.

Lockwood Ash Disposal Site Second Quarter 2018

Collection Date	Sample ID	Depth	Elevation	Units
6/20/2018	8908-D	6.27	605.20	feet
6/20/2018	8909-D	44.95	516.41	feet
6/20/2018	8910-D	20.47	536.26	feet
6/20/2018	8911-D	28.28	528.47	feet
6/20/2018	8942-D	15.92	542.37	feet
6/20/2018	8908-SH	5.42	605.62	feet
6/20/2018	8909-SH	10.96	549.32	feet
6/20/2018	8910-SH	14.74	541.88	feet
6/20/2018	8911-SH	18.40	528.48	feet
6/20/2018	9306-SH	5.50	559.87	feet
6/20/2018	7741	22.47	564.25	feet
6/20/2018	1842	19.86	552.05	feet
6/20/2018	8406	13.47	555.02	feet
6/20/2018	8407	Obstructed	-	feet
6/20/2018	8401	5.81	653.48	feet
6/20/2018	8402	7.05	657.06	feet
6/20/2018	8403	7.94	656.13	feet
6/20/2018	8404	6.20	593.83	feet
6/20/2018	8405	DRY	DRY	feet

THIRD QUARTER



Experience is the solution

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

November 07, 2018

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

Work Order No: 180928005

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 9/28/2018 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, appearing to read "K. Trafalski", is written over a horizontal line.

Krzysztof Trafalski
Laboratory Manager

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 180928005

Date: 07-Nov-18

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: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 9/27/2018 8:20:00 AM
Lab Sample ID: 180928005-001
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)	7.6			S.U.		9/27/2018 8:20:00 AM
Temperature (E170.1)	13			deg C		9/27/2018 8:20:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		9/27/2018 8:20:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	1210	100		µg/L	1	10/9/2018
Arsenic	8.06	5.00		µg/L	1	10/9/2018
Boron	258	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	214000	500		µg/L	10	10/9/2018
Copper	6.48	5.00		µg/L	1	10/9/2018
Iron	6510	50.0		µg/L	1	10/9/2018
Magnesium	55000	50.0		µg/L	1	10/9/2018
Manganese	1030	20.0		µg/L	1	10/9/2018
Potassium	39000	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	59900	5000		µg/L	10	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	760	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:14:40 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	5.80	2.00		mg/L	2	10/10/2018 1:23:27 AM
Sulfate	292	20.0		mg/L	10	10/11/2018 10:13:26 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	2100	100		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	1.8	0.1	S+	mg/L	1	10/12/2018 12:33:55 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 9/27/2018 8:20:00 AM
Lab Sample ID: 180928005-001
Matrix: GROUNDWATER

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

Analyst: CA

Specific Conductance	879	1		µmhos/cm	1	10/5/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: CC

TDS (Residue, Filterable)	595	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 9/26/2018 4:15:00 PM
Lab Sample ID: 180928005-002
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)	7.3			S.U.		9/26/2018 4:15:00 PM
Temperature (E170.1)	14			deg C		9/26/2018 4:15:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 4:15:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	223	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	119000	50.0		µg/L	1	10/9/2018
Copper	10.8	5.00		µg/L	1	10/9/2018
Iron	284	50.0		µg/L	1	10/9/2018
Magnesium	24100	50.0		µg/L	1	10/9/2018
Manganese	25.9	20.0		µg/L	1	10/9/2018
Potassium	1390	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/15/2018
Sodium	12100	500		µg/L	1	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	400	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:16:21 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/10/2018 1:42:32 AM
Sulfate	112	4.00		mg/L	2	10/10/2018 1:42:32 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 12:35:32 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 9/26/2018 4:15:00 PM
Lab Sample ID: 180928005-002
Matrix: GROUNDWATER

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

Specific Conductance	726	1		µmhos/cm	1	10/4/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	560	5		mg/L	1	10/1/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 9/26/2018 4:15:00 PM
Lab Sample ID: 180928005-003
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)	7.3			S.U.		9/26/2018 4:15:00 PM
Temperature (E170.1)	15			deg C		9/26/2018 4:15:00 PM
Turbidity (E180.1)	6	1.0		NTU		9/26/2018 4:15:00 PM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	6.08	5.00		µg/L	1	10/9/2018
Boron	233	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	140000	50.0		µg/L	1	10/9/2018
Copper	5.89	5.00		µg/L	1	10/9/2018
Iron	1050	50.0		µg/L	1	10/9/2018
Magnesium	63000	50.0		µg/L	1	10/9/2018
Manganese	109	20.0		µg/L	1	10/9/2018
Potassium	3090	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	29600	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	610	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:18:01 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	16.8	5.00		mg/L	5	10/10/2018 2:01:38 AM
Sulfate	317	10.0		mg/L	5	10/10/2018 2:01:38 AM

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

Alkalinity, Total (As CaCO3)	360	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.6	0.1	S+	mg/L	1	10/12/2018 12:40:24 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 9/26/2018 4:15:00 PM
Lab Sample ID: 180928005-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1140	1		µmhos/cm	1	10/4/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	940	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 9/26/2018 3:50:00 PM
Lab Sample ID: 180928005-004
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)	7.2			S.U.		9/26/2018 3:50:00 PM
Temperature (E170.1)	16			deg C		9/26/2018 3:50:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 3:50:00 PM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	5.27	5.00		µg/L	1	10/9/2018
Boron	197	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	273000	500		µg/L	10	10/9/2018
Copper	8.82	5.00		µg/L	1	10/9/2018
Iron	102	50.0		µg/L	1	10/9/2018
Magnesium	66000	50.0		µg/L	1	10/9/2018
Manganese	168	20.0		µg/L	1	10/9/2018
Potassium	3070	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	25400	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	950	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:19:43 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	17.3	5.00		mg/L	5	10/10/2018 2:20:44 AM
Sulfate	402	10.0		mg/L	5	10/10/2018 2:20:44 AM

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

Alkalinity, Total (As CaCO3)	380	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.1	0.1	S+	mg/L	1	10/12/2018 12:42:01 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 9/26/2018 3:50:00 PM
Lab Sample ID: 180928005-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1280	1		µmhos/cm	1	10/4/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1020	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 9/26/2018 11:25:00 AM
Lab Sample ID: 180928005-005
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)	9.1			S.U.		9/26/2018 11:25:00 AM
Temperature (E170.1)	14			deg C		9/26/2018 11:25:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		9/26/2018 11:25:00 AM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	1590	100		µg/L	1	10/9/2018
Arsenic	9.14	5.00		µg/L	1	10/9/2018
Boron	992	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	37700	50.0		µg/L	1	10/9/2018
Copper	5.40	5.00		µg/L	1	10/9/2018
Iron	6940	50.0		µg/L	1	10/9/2018
Magnesium	7770	50.0		µg/L	1	10/9/2018
Manganese	280	20.0		µg/L	1	10/9/2018
Potassium	1570	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	182000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	130	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:21:24 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	4.36	2.00		mg/L	2	10/10/2018 3:39:12 AM
Sulfate	91.7	4.00		mg/L	2	10/10/2018 3:39:12 AM

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

Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.6	0.1	S+	mg/L	1	10/12/2018 12:43:38 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 9/26/2018 11:25:00 AM
Lab Sample ID: 180928005-005
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	701	1		µmhos/cm	1	10/4/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	895	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 9/26/2018 11:35:00 AM
Lab Sample ID: 180928005-006
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)	7.5			S.U.		9/26/2018 11:35:00 AM
Temperature (E170.1)	14			deg C		9/26/2018 11:35:00 AM
Turbidity (E180.1)	12	1.0		NTU		9/26/2018 11:35:00 AM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	10.7	5.00		µg/L	1	10/9/2018
Boron	261	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	28000	50.0		µg/L	1	10/9/2018
Copper	8.36	5.00		µg/L	1	10/9/2018
Iron	156	50.0		µg/L	1	10/9/2018
Magnesium	18700	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	2290	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	95400	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	150	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:23:05 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/10/2018 3:58:36 AM
Sulfate	107	4.00		mg/L	2	10/10/2018 3:58:36 AM

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

Alkalinity, Total (As CaCO3)	160	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 12:45:18 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 9/26/2018 11:35:00 AM
Lab Sample ID: 180928005-006
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	491	1		µmhos/cm	1	10/4/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	305	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 9/26/2018 1:00:00 PM
Lab Sample ID: 180928005-007
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			S.U.		9/26/2018 1:00:00 PM
Temperature (E170.1)	16			deg C		9/26/2018 1:00:00 PM
Turbidity (E180.1)	103	1.0		NTU		9/26/2018 1:00:00 PM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	3050	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	76800	50.0		µg/L	1	10/9/2018
Copper	6.40	5.00		µg/L	1	10/9/2018
Iron	ND	50.0		µg/L	1	10/9/2018
Magnesium	24300	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	3530	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	102000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	290	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:24:46 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	24.0	5.00		mg/L	5	10/10/2018 4:36:46 AM
Sulfate	314	10.0	Z	mg/L	5	10/10/2018 4:36:46 AM

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

Alkalinity, Total (As CaCO3)	130	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 12:46:58 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 9/26/2018 1:00:00 PM
Lab Sample ID: 180928005-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	902	1		µmhos/cm	1	10/4/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	645	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 9/26/2018 2:00:00 PM
Lab Sample ID: 180928005-008
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)	7.8			S.U.		9/26/2018 2:00:00 PM
Temperature (E170.1)	15			deg C		9/26/2018 2:00:00 PM
Turbidity (E180.1)	21	1.0		NTU		9/26/2018 2:00:00 PM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	7.58	5.00		µg/L	1	10/9/2018
Boron	1560	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	66600	50.0		µg/L	1	10/9/2018
Copper	5.32	5.00		µg/L	1	10/9/2018
Iron	143	50.0		µg/L	1	10/9/2018
Magnesium	21900	50.0		µg/L	1	10/9/2018
Manganese	47.7	20.0		µg/L	1	10/9/2018
Potassium	3610	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	106000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	260	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:26:27 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	11.8	2.00		mg/L	2	10/10/2018 5:14:56 AM
Sulfate	243	20.0		mg/L	10	10/11/2018 10:32:31 PM

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

Alkalinity, Total (As CaCO3)	200	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 12:48:33 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 9/26/2018 2:00:00 PM
Lab Sample ID: 180928005-008
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	818	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	595	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 9/27/2018 8:00:00 AM
Lab Sample ID: 180928005-009
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.		9/27/2018 8:00:00 AM
Temperature (E170.1)	12			deg C		9/27/2018 8:00:00 AM
Turbidity (E180.1)	89	1.0		NTU		9/27/2018 8:00:00 AM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	675	100		µg/L	1	10/9/2018
Arsenic	17.1	5.00		µg/L	1	10/9/2018
Boron	318	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	59200	50.0		µg/L	1	10/9/2018
Copper	8.40	5.00		µg/L	1	10/9/2018
Iron	2370	50.0		µg/L	1	10/9/2018
Magnesium	17600	50.0		µg/L	1	10/9/2018
Manganese	158	20.0		µg/L	1	10/9/2018
Potassium	2160	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	74200	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	220	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:31:32 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	10.1	2.00		mg/L	2	10/10/2018 5:34:03 AM
Sulfate	224	20.0		mg/L	10	10/11/2018 10:51:37 PM

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

Alkalinity, Total (As CaCO3)	88	4		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.3	0.1	S+	mg/L	1	10/12/2018 12:50:05 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 9/27/2018 8:00:00 AM
Lab Sample ID: 180928005-009
Matrix: GROUNDWATER

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

Specific Conductance	629	1		µmhos/cm	1	10/5/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	350	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 9/27/2018 8:30:00 AM
Lab Sample ID: 180928005-010
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)	7.0			S.U.		9/27/2018 8:30:00 AM
Temperature (E170.1)	12			deg C		9/27/2018 8:30:00 AM
Turbidity (E180.1)	16	1.0		NTU		9/27/2018 8:30:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	5.88	5.00		µg/L	1	10/9/2018
Boron	327	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	78100	50.0		µg/L	1	10/9/2018
Copper	8.84	5.00		µg/L	1	10/9/2018
Iron	518	50.0		µg/L	1	10/9/2018
Magnesium	69700	50.0		µg/L	1	10/9/2018
Manganese	218	20.0		µg/L	1	10/9/2018
Potassium	3420	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	39700	500		µg/L	1	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	480	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:33:13 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	2.94	2.00		mg/L	2	10/10/2018 5:53:09 AM
Sulfate	235	20.0		mg/L	10	10/10/2018 6:12:15 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	190	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	0.3	0.1	S+	mg/L	1	10/12/2018 12:51:37 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 9/27/2018 8:30:00 AM
Lab Sample ID: 180928005-010
Matrix: GROUNDWATER

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

Specific Conductance	885	1		µmhos/cm	1	10/12/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	620	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 9/27/2018 7:45:00 AM
Lab Sample ID: 180928005-011
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.		9/27/2018 7:45:00 AM
Temperature (E170.1)	13			deg C		9/27/2018 7:45:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/27/2018 7:45:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	14.3	5.00		µg/L	1	10/9/2018
Boron	109	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	58900	50.0		µg/L	1	10/9/2018
Copper	6.75	5.00		µg/L	1	10/9/2018
Iron	112	50.0		µg/L	1	10/9/2018
Magnesium	63700	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	3260	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	21200	500		µg/L	1	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	410	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:34:56 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/10/2018 6:31:20 AM
Sulfate	72.8	4.00		mg/L	2	10/10/2018 6:31:20 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	320	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 12:53:09 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 9/27/2018 7:45:00 AM
Lab Sample ID: 180928005-011
Matrix: GROUNDWATER

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

Analyst: CA

Specific Conductance	675	1		µmhos/cm	1	10/12/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: CC

TDS (Residue, Filterable)	325	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 9/26/2018 11:25:00 AM
Lab Sample ID: 180928005-012
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)	9.1			S.U.		9/26/2018 11:25:00 AM
Temperature (E170.1)	14			deg C		9/26/2018 11:25:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		9/26/2018 11:25:00 AM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	1960	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	1080	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	40600	50.0		µg/L	1	10/9/2018
Copper	5.99	5.00		µg/L	1	10/9/2018
Iron	8420	50.0		µg/L	1	10/9/2018
Magnesium	8550	50.0		µg/L	1	10/9/2018
Manganese	316	20.0		µg/L	1	10/9/2018
Potassium	1670	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	220000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	140	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:36:39 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	4.27	2.00		mg/L	2	10/11/2018 11:10:42 PM
Sulfate	86.5	4.00		mg/L	2	10/11/2018 11:10:42 PM

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

Alkalinity, Total (As CaCO3)	310	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	0.6	0.1	S+	mg/L	1	10/12/2018 12:54:41 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 9/26/2018 11:25:00 AM
Lab Sample ID: 180928005-012
Matrix: GROUNDWATER

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

Specific Conductance	713	1		µmhos/cm	1	10/5/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	880	5		mg/L	1	10/1/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 9/26/2018 5:10:00 PM
Lab Sample ID: 180928005-013
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)	7.7			S.U.		9/26/2018 5:10:00 PM
Temperature (E170.1)	14			deg C		9/26/2018 5:10:00 PM
Turbidity (E180.1)	13	1.0		NTU		9/26/2018 5:10:00 PM

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

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	900	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	82900	50.0		µg/L	1	10/9/2018
Copper	6.46	5.00		µg/L	1	10/9/2018
Iron	255	50.0		µg/L	1	10/9/2018
Magnesium	22900	50.0		µg/L	1	10/9/2018
Manganese	70.3	20.0		µg/L	1	10/9/2018
Potassium	2660	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	84400	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	300	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:38:22 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	31.3	2.00		mg/L	2	10/10/2018 7:50:01 AM
Sulfate	59.9	4.00		mg/L	2	10/10/2018 7:50:01 AM

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

Alkalinity, Total (As CaCO3)	340	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Nitrogen, Ammonia (As N)	1.0	0.1		mg/L	1	10/12/2018 5:26:05 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 9/26/2018 5:10:00 PM
Lab Sample ID: 180928005-013
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	786	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	515	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 9/26/2018 9:37:00 AM
Lab Sample ID: 180928005-014
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)	7.80	0.10		mg/L		9/26/2018 9:37:00 AM
Flow, GPD	28.5			gal/day		9/26/2018 9:37:00 AM
pH (E150.1)	7.4			S.U.		9/26/2018 9:37:00 AM
Temperature (E170.1)	17			deg C		9/26/2018 9:37:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 9:37:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	9.79	5.00		µg/L	1	10/9/2018
Boron	10800	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	457000	500		µg/L	10	10/9/2018
Copper	6.54	5.00		µg/L	1	10/9/2018
Iron	312	50.0		µg/L	1	10/9/2018
Magnesium	167000	500		µg/L	10	10/9/2018
Manganese	265	20.0		µg/L	1	10/9/2018
Potassium	25600	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	143000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	1800	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:40:04 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	95.0	20.0		mg/L	20	10/10/2018 8:09:18 AM
Sulfate	1410	40.0		mg/L	20	10/10/2018 8:09:18 AM

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

Alkalinity, Total (As CaCO3)	460	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 9/26/2018 9:37:00 AM
Lab Sample ID: 180928005-014
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)	0.5	0.1	N+	mg/L	1	10/12/2018 5:27:46 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2750	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2520	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 9/26/2018 12:00:00 PM
Lab Sample ID: 180928005-015
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)	5.88	0.10		mg/L		9/26/2018 12:00:00 PM
Flow, GPD	4942			gal/day		9/26/2018 12:00:00 PM
pH (E150.1)	7.6			S.U.		9/26/2018 12:00:00 PM
Temperature (E170.1)	13			deg C		9/26/2018 12:00:00 PM
Turbidity (E180.1)	248	1.0		NTU		9/26/2018 12:00:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	21.7	5.00		µg/L	1	10/9/2018
Boron	4540	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	342000	500		µg/L	10	10/9/2018
Copper	6.37	5.00		µg/L	1	10/9/2018
Iron	1910	50.0		µg/L	1	10/9/2018
Magnesium	76100	50.0		µg/L	1	10/9/2018
Manganese	788	20.0		µg/L	1	10/9/2018
Potassium	15800	50.0		µg/L	1	10/9/2018
Selenium	19.5	5.00		µg/L	1	10/9/2018
Sodium	43700	500		µg/L	1	10/9/2018

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 9/28/2018)

Mercury	ND	0.5		ng/L	1	10/1/2018
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1200	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:45:09 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	26.8	10.0		mg/L	10	10/12/2018 12:48:44 AM
Sulfate	448	20.0		mg/L	10	10/12/2018 12:48:44 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 9/26/2018 12:00:00 PM
Lab Sample ID: 180928005-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	650	10		mg/L CaCO3	1	10/1/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.2	0.1		mg/L	1	10/12/2018 5:32:40 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1640	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1280	5		mg/L	1	10/1/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 9/26/2018 10:20:00 AM
Lab Sample ID: 180928005-016
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		9/26/2018 10:20:00 AM
Flow, GPD	4106			gal/day		9/26/2018 10:20:00 AM
pH (E150.1)	7.5			S.U.		9/26/2018 10:20:00 AM
Temperature (E170.1)	14			deg C		9/26/2018 10:20:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 10:20:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	13.2	5.00		µg/L	1	10/9/2018
Boron	51300	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	514000	500		µg/L	10	10/9/2018
Copper	7.12	5.00		µg/L	1	10/9/2018
Iron	2740	50.0		µg/L	1	10/9/2018
Magnesium	84200	50.0		µg/L	1	10/9/2018
Manganese	1320	20.0		µg/L	1	10/9/2018
Potassium	107000	500		µg/L	10	10/9/2018
Selenium	16.7	5.00		µg/L	1	10/9/2018
Sodium	250000	5000		µg/L	10	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1600	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:46:51 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	335	20.0		mg/L	20	10/12/2018 1:08:01 AM
Sulfate	1650	40.0		mg/L	20	10/12/2018 1:08:01 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	310	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 9/26/2018 10:20:00 AM
Lab Sample ID: 180928005-016
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)	2.2	0.5		mg/L	5	10/12/2018 6:17:43 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	3710	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3550	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 9/26/2018 9:20:00 AM
Lab Sample ID: 180928005-017
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)	4.60	0.10		mg/L		9/26/2018 9:20:00 AM
Flow, GPD	295			gal/day		9/26/2018 9:20:00 AM
pH (E150.1)	6.8			S.U.		9/26/2018 9:20:00 AM
Temperature (E170.1)	16			deg C		9/26/2018 9:20:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 9:20:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	38400	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	581000	500		µg/L	10	10/9/2018
Copper	6.59	5.00		µg/L	1	10/9/2018
Iron	208	50.0		µg/L	1	10/9/2018
Magnesium	116000	500		µg/L	10	10/9/2018
Manganese	361	20.0		µg/L	1	10/9/2018
Potassium	131000	500		µg/L	10	10/9/2018
Selenium	19.1	5.00		µg/L	1	10/9/2018
Sodium	357000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	1900	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:53:38 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	554	50.0		mg/L	50	10/12/2018 1:46:13 AM
Sulfate	1750	100		mg/L	50	10/12/2018 1:46:13 AM

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

Alkalinity, Total (As CaCO3)	390	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 9/26/2018 9:20:00 AM
Lab Sample ID: 180928005-017
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)	0.4	0.1		mg/L	1	10/12/2018 5:35:55 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	4580	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	4050	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 21" Inlet To Pond
Collection Date: 9/26/2018 12:23:00 PM
Lab Sample ID: 180928005-018
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)	7.53	0.10		mg/L		9/26/2018 12:23:00 PM
Flow, GPD	15,206			gal/day		9/26/2018 12:23:00 PM
pH (E150.1)	7.7			S.U.		9/26/2018 12:23:00 PM
Temperature (E170.1)	14			deg C		9/26/2018 12:23:00 PM
Turbidity (E180.1)	22	1.0		NTU		9/26/2018 12:23:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	16.7	5.00		µg/L	1	10/9/2018
Boron	27600	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	438000	500		µg/L	10	10/9/2018
Copper	7.29	5.00		µg/L	1	10/9/2018
Iron	1760	50.0		µg/L	1	10/9/2018
Magnesium	81900	50.0		µg/L	1	10/9/2018
Manganese	717	20.0		µg/L	1	10/9/2018
Potassium	54700	500		µg/L	10	10/9/2018
Selenium	16.4	5.00		µg/L	1	10/9/2018
Sodium	292000	5000		µg/L	10	10/9/2018

LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 9/28/2018)

Mercury	ND	0.5		ng/L	1	10/1/2018
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HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1400	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:55:19 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	176	20.0		mg/L	20	10/12/2018 2:24:24 AM
Sulfate	1270	40.0		mg/L	20	10/12/2018 2:24:24 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 21" Inlet To Pond
Collection Date: 9/26/2018 12:23:00 PM
Lab Sample ID: 180928005-018
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	470	10		mg/L CaCO3	1	10/1/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.5	0.1		mg/L	1	10/12/2018 5:37:33 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	3100	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2730	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 9/26/2018 3:23:00 PM
Lab Sample ID: 180928005-019
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)	5.88	0.10		mg/L		9/26/2018 3:23:00 PM
pH (E150.1)	8.4			S.U.		9/26/2018 3:23:00 PM
Temperature (E170.1)	21			deg C		9/26/2018 3:23:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 3:23:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	65.1	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	42700	50.0		µg/L	1	10/9/2018
Copper	6.11	5.00		µg/L	1	10/9/2018
Iron	95.2	50.0		µg/L	1	10/9/2018
Magnesium	12600	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	3130	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	26900	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	160	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:57:01 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	39.1	2.00		mg/L	2	10/12/2018 2:43:31 AM
Sulfate	22.9	4.00		mg/L	2	10/12/2018 2:43:31 AM

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

Alkalinity, Total (As CaCO3)	108	4		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 5:42:27 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 9/26/2018 3:23:00 PM
Lab Sample ID: 180928005-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	352	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	185	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 9/26/2018 3:44:00 PM
Lab Sample ID: 180928005-020
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)	5.76	0.10		mg/L		9/26/2018 3:44:00 PM
pH (E150.1)	8.4			S.U.		9/26/2018 3:44:00 PM
Temperature (E170.1)	21			deg C		9/26/2018 3:44:00 PM
Turbidity (E180.1)	8	1.0		NTU		9/26/2018 3:44:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	62.3	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	40200	50.0		µg/L	1	10/9/2018
Copper	7.60	5.00		µg/L	1	10/9/2018
Iron	70.2	50.0		µg/L	1	10/9/2018
Magnesium	11900	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	2860	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	25400	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	150	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 2:58:43 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	39.6	2.00		mg/L	2	10/12/2018 3:02:36 AM
Sulfate	23.2	4.00		mg/L	2	10/12/2018 3:02:36 AM

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

Alkalinity, Total (As CaCO3)	110	10		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 5:44:05 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 9/26/2018 3:44:00 PM
Lab Sample ID: 180928005-020
Matrix: SURFACE WATER

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

Analyst: CA

Specific Conductance	361	1		µmhos/cm	1	10/5/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: CC

TDS (Residue, Filterable)	160	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 9/26/2018 3:25:00 PM
Lab Sample ID: 180928005-021
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)	5.84	0.10		mg/L		9/26/2018 3:25:00 PM
pH (E150.1)	8.4			S.U.		9/26/2018 3:25:00 PM
Temperature (E170.1)	21			deg C		9/26/2018 3:25:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 3:25:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	5.61	5.00		µg/L	1	10/9/2018
Boron	50.3	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	42600	50.0		µg/L	1	10/9/2018
Copper	7.83	5.00		µg/L	1	10/9/2018
Iron	88.0	50.0		µg/L	1	10/9/2018
Magnesium	12600	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	3140	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	26800	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	160	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 3:00:25 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	39.1	2.00		mg/L	2	10/12/2018 4:21:44 AM
Sulfate	22.8	4.00		mg/L	2	10/12/2018 4:21:44 AM

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

Alkalinity, Total (As CaCO3)	104	4		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 5:45:45 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 9/26/2018 3:25:00 PM
Lab Sample ID: 180928005-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	353	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	205	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 9/26/2018 2:23:00 PM
Lab Sample ID: 180928005-022
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)	6.41	0.10		mg/L		9/26/2018 2:23:00 PM
pH (E150.1)	7.0			S.U.		9/26/2018 2:23:00 PM
Temperature (E170.1)	17			deg C		9/26/2018 2:23:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 2:23:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	25100	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	231000	500		µg/L	10	10/9/2018
Copper	6.60	5.00		µg/L	1	10/9/2018
Iron	189	50.0		µg/L	1	10/9/2018
Magnesium	80000	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	53600	500		µg/L	10	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	219000	5000		µg/L	10	10/9/2018

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

Total Hardness (As CaCO3)	910	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 3:02:07 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	176	20.0		mg/L	20	10/12/2018 4:41:11 AM
Sulfate	1020	40.0		mg/L	20	10/12/2018 4:41:11 AM

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

Alkalinity, Total (As CaCO3)	96	4		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 5:47:25 PM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 9/26/2018 2:23:00 PM
Lab Sample ID: 180928005-022
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2420	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2000	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 9/27/2018 7:30:00 AM
Lab Sample ID: 180928005-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	ND	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	64.3	50.0		µg/L	1	10/9/2018
Copper	5.85	5.00		µg/L	1	10/9/2018
Iron	ND	50.0		µg/L	1	10/9/2018
Magnesium	ND	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	ND	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	ND	500		µg/L	1	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 3:03:50 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	10/12/2018 5:00:16 AM
Sulfate	ND	4.00		mg/L	2	10/12/2018 5:00:16 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	10	1		mg/L CaCO3	1	10/1/2018
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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	10/12/2018 5:49:00 PM
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CONDUCTANCE AT 25C - SM 2510B-2011

Analyst: **CA**

Specific Conductance	1	1		µmhos/cm	1	10/12/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 9/27/2018 7:30:00 AM
Lab Sample ID: 180928005-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: **CC**

TDS (Residue, Filterable)	70	5		mg/L	1	10/2/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LLHg Field Blank
Collection Date: 9/27/2018 7:15:00 AM
Lab Sample ID: 180928005-024
Matrix: FIELD BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E

Analyst: **WB**

(Prep: 1631E - 9/28/2018)

Mercury	ND	0.5		ng/L	1	10/1/2018
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 9/26/2018 11:49:00 AM
Lab Sample ID: 180928005-025
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)	4.94	0.10		mg/L		9/26/2018 11:49:00 AM
Flow, GPD	456			gal/day		9/26/2018 11:49:00 AM
pH (E150.1)	7.3			S.U.		9/26/2018 11:49:00 AM
Temperature (E170.1)	16			deg C		9/26/2018 11:49:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 11:49:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	3930	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	327000	500		µg/L	10	10/9/2018
Copper	9.28	5.00		µg/L	1	10/9/2018
Iron	ND	50.0		µg/L	1	10/9/2018
Magnesium	119000	500		µg/L	10	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	7860	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	50300	5000		µg/L	10	10/9/2018

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1300	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 3:56:30 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	75.0	10.0		mg/L	10	10/12/2018 5:19:22 AM
Sulfate	800	20.0		mg/L	10	10/12/2018 5:19:22 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	400	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 9/26/2018 11:49:00 AM
Lab Sample ID: 180928005-025
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	10/12/2018 5:50:32 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2090	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1730	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 9/26/2018 9:05:00 AM
Lab Sample ID: 180928005-026
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)	5.04	0.10		mg/L		9/26/2018 9:05:00 AM
Flow, GPD	418			gal/day		9/26/2018 9:05:00 AM
pH (E150.1)	6.9			S.U.		9/26/2018 9:05:00 AM
Temperature (E170.1)	18			deg C		9/26/2018 9:05:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		9/26/2018 9:05:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 10/1/2018)

Aluminum	ND	100		µg/L	1	10/9/2018
Arsenic	ND	5.00		µg/L	1	10/9/2018
Boron	325	50.0		µg/L	1	10/9/2018
Cadmium	ND	5.00		µg/L	1	10/9/2018
Calcium	216000	500		µg/L	10	10/9/2018
Copper	10.6	5.00		µg/L	1	10/9/2018
Iron	ND	50.0		µg/L	1	10/9/2018
Magnesium	42100	50.0		µg/L	1	10/9/2018
Manganese	ND	20.0		µg/L	1	10/9/2018
Potassium	4210	50.0		µg/L	1	10/9/2018
Selenium	ND	5.00		µg/L	1	10/9/2018
Sodium	17300	500		µg/L	1	10/9/2018

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

Total Hardness (As CaCO3)	710	5		mg/L CaCO3	1	10/9/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 10/1/2018)

Mercury	ND	0.0002		mg/L	1	10/1/2018 3:58:12 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	5.25	5.00		mg/L	5	10/12/2018 5:38:28 AM
Sulfate	267	10.0		mg/L	5	10/12/2018 5:38:28 AM

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

Alkalinity, Total (As CaCO3)	370	10		mg/L CaCO3	1	10/1/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: 180928005
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 9/26/2018 9:05:00 AM
Lab Sample ID: 180928005-026
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	10/12/2018 5:52:04 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1060	1		µmhos/cm	1	10/5/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	765	5		mg/L	1	10/2/2018

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 2
Collection Date: 9/26/2018 8:04:00 AM
Lab Sample ID: 180928005-027
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

9/26/2018 8:04:00 AM

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 9/26/2018 8:08:00 AM
Lab Sample ID: 180928005-028
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

9/26/2018 8:08:00 AM

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 5
Collection Date: 9/26/2018 9:14:00 AM
Lab Sample ID: 180928005-029
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	Dry			NA		9/26/2018 9:14:00 AM
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Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-SH
Collection Date: 9/26/2018 1:00:00 PM
Lab Sample ID: 180928005-030
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

9/26/2018 1:00:00 PM

Adirondack Environmental Services, Inc

Date: 07-Nov-18

CLIENT: Lockwood Hills LLC
Work Order: **180928005**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8405
Collection Date: 9/26/2018 4:27:00 PM
Lab Sample ID: 180928005-031
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		9/26/2018 4:27:00 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#:

180928005

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>K. Ambrose / R. Bursley</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	9/27/18	0820	A P	GW		G	4	Lockwood Ash LF Quarterly
002	8404	9/26/18	1615	A P	GW		G	4	Field pH, Temp, Turbidity
003	8908-D	9/26/18	1615	A P	GW		G	4	
004	8908-SH	9/26/18	1550	A P	GW		G	4	
005	8909-D	9/26/18	1125	A P	GW		G	4	
006	8909-SH	9/26/18	1135	A P	GW		G	4	
007	8910-D	9/26/18	1300	A P	GW		G	4	
008	8911-D	9/26/18	1400	A P	GW		G	4	
009	8911-SH	9/27/18	0800	A P	GW		G	4	
010	8942-D	9/27/18	0830	A P	GW		G	4	
011	9306-SH	9/27/18	0745	A	GW		G	4	
012	GW Dup 8909-D	9/26/18	1125		GW		G	4	
Shipment Arrived Via: FedEx UPS Client <u>AES</u> Other: _____				Special Instructions/Remarks: Page 1 of 3					
Turnaround Time Requested: 1 Day 3 Day <u>Normal</u> 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		Properly Preserved <u>(Y)</u> N			Received Within Holding Times <u>(Y)</u> N				
Notes: <u>[Signature]</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#:

180928005

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: K. Aruba / R. Barley			
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			
	8401	9/26/18	1710	A	GW		G	4	Lockwood Ash LF Quarterly
				P					Field pH, Temp, Turbidity
013	Leak Detection Syst.	9/26/18	0937	A	GW		G	4	+ Field Flow Reading, DO
014				P					
015	Under Drain 1	9/26/18	1200	A	GW		G	5	+ Field Flow Reading, DO
016				P					
017	Under Drain 2	9/26/18	1020	A	GW		G	4	+ Field Flow Reading, DO
018				P					
019	Under Drain 3	9/26/18	0920	A	GW		G	4	+ Field Flow Reading, DO
020				P					
021	Inlet to Pond	9/26/18	1223	A	GW		G	5	+ Field Flow Reading, DO
022				P					
023	Keuka Upstream	9/26/18	1523	A	GW		G	4	Lockwood Quarterly +DO
024				P					
025	Keuka Downstream	9/26/18	1544	A	SF		G	4	Lockwood Quarterly +DO
026				P					
027	Surface Water Dup	9/26/18	1525	A	SF		G	4	Lockwood Quarterly +DO
028				P					
029	Pond Grab	9/26/18	1423	A	SF		G	4	Lockwood Quarterly +DO
030				P					
031	Field Blank	9/27/18	0730	A	GW		G	4	Lockwood Quarterly +DO
032				P					
033	LLHg Field Blank	9/27/18	0715	A	GW		G	1	EPA 1631
034				P					

Shipment Arrived Via: FedEx UPS Client AES Other: _____

Turnaround Time Requested:
 1 Day 3 Day Normal
 2 -Day 5 Day

Special Instructions/Remarks:
 Page 2 of 3

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>	9/26/18	9:30 AM

Sample Temperature:
 Ambient Chilled
 Chilling Process begun

Properly Preserved
 Y N

Received Within Holding Times
 Y N

Notes: _____



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

180928005

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>K. Ambrose / R. Brainer</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		
025 024	8401 GW Dep Drain 1	9/26/18	1149		GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026 025	GW Dep Drain 3	9/26/18	0905	A	GW		4	+ Field Flow Reading, DO
027 026	GW Dep Drain 2	9/26/18	0804	A	GW		0	Observation Only
028 027	GW Dep Drain 4	9/26/18	0808	A	GW		0	Observation Only
029 028	Under Drain 5	9/26/18	0914	A	GW		0	Observation Only
030 029	8910-SH	9/26/18	1300	A	GW		0	Observation Only
031 030	8405	9/26/18	1627	A	GW		0	Observation Only
	GW Dep Drain 1	9/26/18	1649	P				
				A				
				P				
				A				
				P				
				A				
				P				
				A				
				P				

Shipment Arrived Via:
 FedEx UPS Client AES Other: _____

Turnaround Time Requested:
 1 Day 3 Day Normal
 2 -Day 5 Day

Special Instructions/Remarks:
 Page 3 of 3

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
		9/28/18	9:30 AM

Sample Temperature: Ambient <u>Chilled</u> 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>49</u>	Notes: _____	Notes: _____



Experience is the solution

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

- (a) Neither **Adirondack Environmental Services, Inc.**, nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.**'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.
- (d) In no event shall **Adirondack Environmental Services, Inc.**, its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Lockwood Ash Disposal Site Third Quarter 2018

Collection Date	Sample ID	Depth	Elevation	Units
9/26/2018	8908-D	6.78	606.19	feet
9/26/2018	8909-D	46.35	515.55	feet
9/26/2018	8910-D	21.18	537.16	feet
9/26/2018	8911-D	27.78	529.13	feet
9/26/2018	8942-D	15.89	543.06	feet
9/26/2018	8908-SH	5.88	606.89	feet
9/26/2018	8909-SH	9.98	551.65	feet
9/26/2018	8910-SH	15.28	543.27	feet
9/26/2018	8911-SH	18.94	537.98	feet
9/26/2018	9306-SH	7.65	558.57	feet
9/26/2018	7741	24.17	563.88	feet
9/26/2018	1842	6.24	552.96	feet
9/26/2018	8406	13.47	555.02	feet
9/26/2018	8407	Obstructed	-	feet
9/26/2018	8401	6.35	653.94	feet
9/26/2018	8402	7.09	657.00	feet
9/26/2018	8403	8.02	656.05	feet
9/26/2018	8404	7.00	595.73	feet
9/26/2018	8405	DRY	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

January 02, 2019

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

Work Order No: 181214006

TEL: (315) 536-2359

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 12/14/2018 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, appearing to read "K. Trafalski", written over a horizontal line.

Krzysztof Trafalski
Laboratory Manager

ELAP#: 10709

CLIENT: Lockwood Hills LLC
Project: Lockwood Ash Landfill
Lab Order: 181214006

Date: 02-Jan-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: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 1842
Collection Date: 12/13/2018 8:25:00 AM
Lab Sample ID: 181214006-001
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)	8.2			S.U.		12/13/2018 8:25:00 AM
Temperature (E170.1)	9			deg C		12/13/2018 8:25:00 AM
Turbidity (E180.1)	> 999	1.0		NTU		12/13/2018 8:25:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	1160	100		µg/L	1	12/19/2018 3:49:25 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 3:49:25 PM
Boron	282	50.0		µg/L	1	12/19/2018 3:49:25 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 3:49:25 PM
Calcium	103000	500		µg/L	10	12/19/2018 3:54:41 PM
Copper	6.55	5.00		µg/L	1	12/19/2018 3:49:25 PM
Iron	3570	50.0		µg/L	1	12/19/2018 3:49:25 PM
Magnesium	52800	50.0		µg/L	1	12/19/2018 3:49:25 PM
Manganese	386	20.0		µg/L	1	12/19/2018 3:49:25 PM
Potassium	31200	50.0		µg/L	1	12/19/2018 3:49:25 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 3:49:25 PM
Sodium	42300	500		µg/L	1	12/19/2018 3:49:25 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	465	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:32:09 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	4.30	2.00		mg/L	2	12/28/2018 3:21:23 PM
Sulfate	211	5.00		mg/L	5	12/27/2018 4:59:00 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DA A**

Alkalinity, Total (As CaCO3)	3300	100		mg/L CaCO3	1	12/20/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Nitrogen, Ammonia (As N)	1.0	0.1		mg/L	1	12/21/2018 12:31:50 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	1842
Work Order:	181214006	Collection Date:	12/13/2018 8:25:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	181214006-001
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	773	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	520	5		mg/L	1	12/20/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 12/12/2018 3:37:00 PM
Lab Sample ID: 181214006-002
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)	6.8			S.U.		12/12/2018 3:37:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 3:37:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 3:37:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	103	100		µg/L	1	12/19/2018 4:15:44 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 4:15:44 PM
Boron	194	50.0		µg/L	1	12/19/2018 4:15:44 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 4:15:44 PM
Calcium	140000	500		µg/L	10	12/19/2018 4:36:42 PM
Copper	8.08	5.00		µg/L	1	12/19/2018 4:15:44 PM
Iron	213	50.0		µg/L	1	12/19/2018 4:15:44 PM
Magnesium	24300	50.0		µg/L	1	12/19/2018 4:15:44 PM
Manganese	31.5	20.0		µg/L	1	12/19/2018 4:15:44 PM
Potassium	1290	50.0		µg/L	1	12/19/2018 4:15:44 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 4:15:44 PM
Sodium	9360	500		µg/L	1	12/19/2018 4:15:44 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	448	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:33:53 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	2.11	2.00		mg/L	2	12/27/2018 5:36:12 PM
Sulfate	90.0	2.00		mg/L	2	12/27/2018 5:36:12 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	350	10		mg/L CaCO3	1	12/20/2018
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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	12/21/2018 12:35:05 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8404
Collection Date: 12/12/2018 3:37:00 PM
Lab Sample ID: 181214006-002
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	687	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	550	5		mg/L	1	12/18/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 12/12/2018 2:45:00 PM
Lab Sample ID: 181214006-003
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)	7.3			S.U.		12/12/2018 2:45:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 2:45:00 PM
Turbidity (E180.1)	17	1.0		NTU		12/12/2018 2:45:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 4:41:47 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 4:41:47 PM
Boron	245	50.0		µg/L	1	12/19/2018 4:41:47 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 4:41:47 PM
Calcium	184000	500		µg/L	10	12/19/2018 4:47:00 PM
Copper	ND	5.00		µg/L	1	12/19/2018 4:41:47 PM
Iron	913	50.0		µg/L	1	12/19/2018 4:41:47 PM
Magnesium	62200	50.0		µg/L	1	12/19/2018 4:41:47 PM
Manganese	119	20.0		µg/L	1	12/19/2018 4:41:47 PM
Potassium	2880	50.0		µg/L	1	12/19/2018 4:41:47 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 4:41:47 PM
Sodium	22900	500		µg/L	1	12/19/2018 4:41:47 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	716	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:39:00 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	12/27/2018 6:13:22 PM
Sulfate	265	5.00		mg/L	5	12/27/2018 6:13:22 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	410	10		mg/L CaCO3	1	12/20/2018
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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	12/21/2018 12:38:20 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-D
Collection Date: 12/12/2018 2:45:00 PM
Lab Sample ID: 181214006-003
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1090	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	855	5		mg/L	1	12/18/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 12/12/2018 2:30:00 PM
Lab Sample ID: 181214006-004
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)	7.2			S.U.		12/12/2018 2:30:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 2:30:00 PM
Turbidity (E180.1)	7	1.0		NTU		12/12/2018 2:30:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 4:52:07 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 4:52:07 PM
Boron	172	50.0		µg/L	1	12/19/2018 4:52:07 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 4:52:07 PM
Calcium	180000	500		µg/L	10	12/19/2018 4:57:20 PM
Copper	7.36	5.00		µg/L	1	12/19/2018 4:52:07 PM
Iron	74.2	50.0		µg/L	1	12/19/2018 4:52:07 PM
Magnesium	58900	50.0		µg/L	1	12/19/2018 4:52:07 PM
Manganese	46.2	20.0		µg/L	1	12/19/2018 4:52:07 PM
Potassium	2540	50.0		µg/L	1	12/19/2018 4:52:07 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 4:52:07 PM
Sodium	19600	500		µg/L	1	12/19/2018 4:52:07 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	691	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:40:41 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	14.0	5.00		mg/L	5	12/27/2018 6:31:58 PM
Sulfate	279	5.00		mg/L	5	12/27/2018 6:31:58 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	430	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 12:43:13 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8908-SH
Collection Date: 12/12/2018 2:30:00 PM
Lab Sample ID: 181214006-004
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1100	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	905	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-D
Collection Date: 12/12/2018 12:15:00 PM
Lab Sample ID: 181214006-005
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)	9.2			S.U.		12/12/2018 12:15:00 PM
Temperature (E170.1)	11			deg C		12/12/2018 12:15:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		12/12/2018 12:15:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	624	100		µg/L	1	12/19/2018 5:02:27 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 5:02:27 PM
Boron	834	50.0		µg/L	1	12/19/2018 5:02:27 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 5:02:27 PM
Calcium	74500	50.0		µg/L	1	12/19/2018 5:02:27 PM
Calcium	117000	500		µg/L	10	12/19/2018 5:07:40 PM
Copper	ND	5.00		µg/L	1	12/19/2018 5:02:27 PM
Iron	3180	50.0		µg/L	1	12/19/2018 5:02:27 PM
Magnesium	9400	50.0		µg/L	1	12/19/2018 5:02:27 PM
Manganese	601	20.0		µg/L	1	12/19/2018 5:02:27 PM
Potassium	1420	50.0		µg/L	1	12/19/2018 5:02:27 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 5:02:27 PM
Sodium	151000	5000		µg/L	10	12/19/2018 5:07:40 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	225	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:42:23 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	12/27/2018 7:46:59 PM
Sulfate	92.8	2.00		mg/L	2	12/27/2018 7:46:59 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	350	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 12:44:50 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8909-D
Work Order:	181214006	Collection Date:	12/12/2018 12:15:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	181214006-005
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	634	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1060	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8909-SH
Collection Date: 12/12/2018 12:00:00 PM
Lab Sample ID: 181214006-006
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)	7.9			S.U.		12/12/2018 12:00:00 PM
Temperature (E170.1)	11			deg C		12/12/2018 12:00:00 PM
Turbidity (E180.1)	8	1.0		NTU		12/12/2018 12:00:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 5:12:41 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 5:12:41 PM
Boron	258	50.0		µg/L	1	12/19/2018 5:12:41 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 5:12:41 PM
Calcium	27000	50.0		µg/L	1	12/19/2018 5:12:41 PM
Copper	ND	5.00		µg/L	1	12/19/2018 5:12:41 PM
Iron	85.0	50.0		µg/L	1	12/19/2018 5:12:41 PM
Magnesium	17300	50.0		µg/L	1	12/19/2018 5:12:41 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 5:12:41 PM
Potassium	1980	50.0		µg/L	1	12/19/2018 5:12:41 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 5:12:41 PM
Sodium	59500	5000		µg/L	10	12/19/2018 5:17:55 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	138	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:47:27 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/27/2018 8:05:41 PM
Sulfate	115	2.00		mg/L	2	12/27/2018 8:05:41 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	170	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 12:46:27 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT:	Lockwood Hills LLC	Client Sample ID:	8909-SH
Work Order:	181214006	Collection Date:	12/12/2018 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	Lab Sample ID:	181214006-006
PO#:		Matrix:	GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	478	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	375	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 12/12/2018 12:50:00 PM
Lab Sample ID: 181214006-007
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)	7.4			S.U.		12/12/2018 12:50:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 12:50:00 PM
Turbidity (E180.1)	11	1.0		NTU		12/12/2018 12:50:00 PM

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

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 5:22:57 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 5:22:57 PM
Boron	3340	50.0		µg/L	1	12/19/2018 5:22:57 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 5:22:57 PM
Calcium	77800	50.0		µg/L	1	12/19/2018 5:22:57 PM
Copper	ND	5.00		µg/L	1	12/19/2018 5:22:57 PM
Iron	ND	50.0		µg/L	1	12/19/2018 5:22:57 PM
Magnesium	27000	50.0		µg/L	1	12/19/2018 5:22:57 PM
Manganese	41.8	20.0		µg/L	1	12/19/2018 5:22:57 PM
Potassium	3210	50.0		µg/L	1	12/19/2018 5:22:57 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 5:22:57 PM
Sodium	85000	5000		µg/L	10	12/19/2018 5:43:58 PM

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

Total Hardness (As CaCO3)	305	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:49:08 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	28.3	5.00		mg/L	5	12/27/2018 8:24:17 PM
Sulfate	319	5.00		mg/L	5	12/27/2018 8:24:17 PM

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

Alkalinity, Total (As CaCO3)	170	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 12:48:08 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-D
Collection Date: 12/12/2018 12:50:00 PM
Lab Sample ID: 181214006-007
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	968	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	860	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 12/12/2018 1:30:00 PM
Lab Sample ID: 181214006-008
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.		12/12/2018 1:30:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 1:30:00 PM
Turbidity (E180.1)	12	1.0		NTU		12/12/2018 1:30:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 5:49:07 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 5:49:07 PM
Boron	1330	50.0		µg/L	1	12/19/2018 5:49:07 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 5:49:07 PM
Calcium	53600	50.0		µg/L	1	12/19/2018 5:49:07 PM
Copper	ND	5.00		µg/L	1	12/19/2018 5:49:07 PM
Iron	ND	50.0		µg/L	1	12/19/2018 5:49:07 PM
Magnesium	19200	50.0		µg/L	1	12/19/2018 5:49:07 PM
Manganese	33.2	20.0		µg/L	1	12/19/2018 5:49:07 PM
Potassium	2990	50.0		µg/L	1	12/19/2018 5:49:07 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 5:49:07 PM
Sodium	80500	5000		µg/L	10	12/19/2018 5:54:19 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	213	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:50:49 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	11.8	5.00		mg/L	5	12/27/2018 8:42:52 PM
Sulfate	252	5.00		mg/L	5	12/27/2018 8:42:52 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	200	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 1:09:46 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-D
Collection Date: 12/12/2018 1:30:00 PM
Lab Sample ID: 181214006-008
Matrix: GROUNDWATER

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

Specific Conductance	785	1		µmhos/cm	1	12/17/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	640	5		mg/L	1	12/19/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 12/13/2018 7:45:00 AM
Lab Sample ID: 181214006-009
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)	8.3			S.U.		12/13/2018 7:45:00 AM
Temperature (E170.1)	10			deg C		12/13/2018 7:45:00 AM
Turbidity (E180.1)	246	1.0		NTU		12/13/2018 7:45:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	107	100		µg/L	1	12/19/2018 5:59:28 PM
Arsenic	9.70	5.00		µg/L	1	12/19/2018 5:59:28 PM
Boron	304	50.0		µg/L	1	12/19/2018 5:59:28 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 5:59:28 PM
Calcium	42600	50.0		µg/L	1	12/19/2018 5:59:28 PM
Copper	ND	5.00		µg/L	1	12/19/2018 5:59:28 PM
Iron	374	50.0		µg/L	1	12/19/2018 5:59:28 PM
Magnesium	14400	50.0		µg/L	1	12/19/2018 5:59:28 PM
Manganese	67.1	20.0		µg/L	1	12/19/2018 5:59:28 PM
Potassium	1760	50.0		µg/L	1	12/19/2018 5:59:28 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 5:59:28 PM
Sodium	61300	5000		µg/L	10	12/19/2018 6:04:38 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	165	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:52:31 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	9.71	2.00		mg/L	2	12/27/2018 9:20:01 PM
Sulfate	229	10.0		mg/L	10	12/27/2018 9:38:37 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	100	4		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 1:11:23 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8911-SH
Collection Date: 12/13/2018 7:45:00 AM
Lab Sample ID: 181214006-009
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	609	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	400	5		mg/L	1	12/20/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 12/13/2018 8:40:00 AM
Lab Sample ID: 181214006-010
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)	7.8			S.U.		12/13/2018 8:40:00 AM
Temperature (E170.1)	11			deg C		12/13/2018 8:40:00 AM
Turbidity (E180.1)	17	1.0		NTU		12/13/2018 8:40:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 6:09:42 PM
Arsenic	6.24	5.00		µg/L	1	12/19/2018 6:09:42 PM
Boron	304	50.0		µg/L	1	12/19/2018 6:09:42 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 6:09:42 PM
Calcium	66000	50.0		µg/L	1	12/19/2018 6:09:42 PM
Copper	ND	5.00		µg/L	1	12/19/2018 6:09:42 PM
Iron	479	50.0		µg/L	1	12/19/2018 6:09:42 PM
Magnesium	63400	50.0		µg/L	1	12/19/2018 6:09:42 PM
Manganese	216	20.0		µg/L	1	12/19/2018 6:09:42 PM
Potassium	2720	50.0		µg/L	1	12/19/2018 6:09:42 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 6:09:42 PM
Sodium	29200	500		µg/L	1	12/19/2018 6:09:42 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	426	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:54:14 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	3.11	2.00		mg/L	2	12/27/2018 9:57:13 PM
Sulfate	242	10.0		mg/L	10	12/27/2018 10:15:49 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	320	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 1:13:00 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8942-D
Collection Date: 12/13/2018 8:40:00 AM
Lab Sample ID: 181214006-010
Matrix: GROUNDWATER

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

Specific Conductance	847	1		µmhos/cm	1	12/28/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	465	5		mg/L	1	12/20/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 12/13/2018 7:30:00 AM
Lab Sample ID: 181214006-011
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)	7.8			S.U.		12/13/2018 7:30:00 AM
Temperature (E170.1)	10			deg C		12/13/2018 7:30:00 AM
Turbidity (E180.1)	22	1.0		NTU		12/13/2018 7:30:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 6:20:04 PM
Arsenic	8.92	5.00		µg/L	1	12/19/2018 6:20:04 PM
Boron	101	50.0		µg/L	1	12/19/2018 6:20:04 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 6:20:04 PM
Calcium	49000	50.0		µg/L	1	12/19/2018 6:20:04 PM
Copper	ND	5.00		µg/L	1	12/19/2018 6:20:04 PM
Iron	87.8	50.0		µg/L	1	12/19/2018 6:20:04 PM
Magnesium	57300	50.0		µg/L	1	12/19/2018 6:20:04 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 6:20:04 PM
Potassium	2790	50.0		µg/L	1	12/19/2018 6:20:04 PM
Selenium	5.35	5.00		µg/L	1	12/19/2018 6:20:04 PM
Sodium	15100	500		µg/L	1	12/19/2018 6:20:04 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	358	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:55:56 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/28/2018 4:31:52 AM
Sulfate	63.5	2.00	N	mg/L	2	12/28/2018 4:31:52 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	360	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 1:14:37 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 9306-SH
Collection Date: 12/13/2018 7:30:00 AM
Lab Sample ID: 181214006-011
Matrix: GROUNDWATER

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

Specific Conductance	641	1		µmhos/cm	1	12/28/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	290	5		mg/L	1	12/20/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 12/12/2018 12:15:00 PM
Lab Sample ID: 181214006-012
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)	9.2			S.U.		12/12/2018 12:15:00 PM
Temperature (E170.1)	11			deg C		12/12/2018 12:15:00 PM
Turbidity (E180.1)	> 999	1.0		NTU		12/12/2018 12:15:00 PM

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

(Prep: SW3010A - 12/17/2018)

Aluminum	634	100		µg/L	1	12/19/2018 6:30:28 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 6:30:28 PM
Boron	812	50.0		µg/L	1	12/19/2018 6:30:28 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 6:30:28 PM
Calcium	75300	50.0		µg/L	1	12/19/2018 6:30:28 PM
Copper	ND	5.00		µg/L	1	12/19/2018 6:30:28 PM
Iron	3310	50.0		µg/L	1	12/19/2018 6:30:28 PM
Magnesium	9680	50.0		µg/L	1	12/19/2018 6:30:28 PM
Manganese	600	20.0		µg/L	1	12/19/2018 6:30:28 PM
Potassium	1380	50.0		µg/L	1	12/19/2018 6:30:28 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 6:30:28 PM
Sodium	142000	5000		µg/L	10	12/19/2018 6:51:29 PM

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

Total Hardness (As CaCO3)	228	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:57:39 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	3.50	2.00		mg/L	2	12/28/2018 5:09:03 AM
Sulfate	79.4	2.00		mg/L	2	12/28/2018 5:09:03 AM

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

Alkalinity, Total (As CaCO3)	340	10		mg/L CaCO3	1	12/21/2018
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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	12/21/2018 1:16:14 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW DUP 8909-D
Collection Date: 12/12/2018 12:15:00 PM
Lab Sample ID: 181214006-012
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	683	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	935	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 12/12/2018 1:12:00 PM
Lab Sample ID: 181214006-013
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)	5.66	0.10		mg/L		12/12/2018 1:12:00 PM
Flow, GPD	531.36			gal/day		12/12/2018 1:12:00 PM
pH (E150.1)	7.1			S.U.		12/12/2018 1:12:00 PM
Temperature (E170.1)	9			deg C		12/12/2018 1:12:00 PM
Turbidity (E180.1)	4	1.0		NTU		12/12/2018 1:12:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 6:56:32 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 6:56:32 PM
Boron	2610	50.0		µg/L	1	12/19/2018 6:56:32 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 6:56:32 PM
Calcium	353000	500		µg/L	10	12/19/2018 7:01:46 PM
Copper	ND	5.00		µg/L	1	12/19/2018 6:56:32 PM
Iron	ND	50.0		µg/L	1	12/19/2018 6:56:32 PM
Magnesium	92700	50.0		µg/L	1	12/19/2018 6:56:32 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 6:56:32 PM
Potassium	5700	50.0		µg/L	1	12/19/2018 6:56:32 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 6:56:32 PM
Sodium	28900	500		µg/L	1	12/19/2018 6:56:32 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1263	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 3:59:20 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	57.5	2.00		mg/L	2	12/28/2018 5:27:40 AM
Sulfate	651	20.0		mg/L	20	12/28/2018 5:46:16 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	410	10		mg/L CaCO3	1	12/21/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 1
Collection Date: 12/12/2018 1:12:00 PM
Lab Sample ID: 181214006-013
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	12/21/2018 1:17:51 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1750	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1620	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 12/12/2018 11:55:00 AM
Lab Sample ID: 181214006-014
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)	6.83	0.10		mg/L		12/12/2018 11:55:00 AM
Flow, GPD	41.76			gal/day		12/12/2018 11:55:00 AM
pH (E150.1)	7.7			S.U.		12/12/2018 11:55:00 AM
Temperature (E170.1)	9			deg C		12/12/2018 11:55:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 11:55:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 7:06:55 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 7:06:55 PM
Boron	1010	50.0		µg/L	1	12/19/2018 7:06:55 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 7:06:55 PM
Calcium	355000	500		µg/L	10	12/19/2018 7:12:13 PM
Copper	ND	5.00		µg/L	1	12/19/2018 7:06:55 PM
Iron	ND	50.0		µg/L	1	12/19/2018 7:06:55 PM
Magnesium	137000	500		µg/L	10	12/19/2018 7:12:13 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 7:06:55 PM
Potassium	4310	50.0		µg/L	1	12/19/2018 7:06:55 PM
Selenium	6.26	5.00		µg/L	1	12/19/2018 7:06:55 PM
Sodium	64200	5000		µg/L	10	12/19/2018 7:12:13 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1440	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:01:02 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	38.4	2.00		mg/L	2	12/28/2018 7:22:30 AM
Sulfate	1000	20.0		mg/L	20	12/28/2018 7:41:16 AM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	400	10		mg/L CaCO3	1	12/21/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Leak Detection Syst.
Collection Date: 12/12/2018 11:55:00 AM
Lab Sample ID: 181214006-014
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	12/21/2018 1:22:43 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2080	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2210	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 12/12/2018 12:53:00 PM
Lab Sample ID: 181214006-015
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)	6.76	0.10		mg/L		12/12/2018 12:53:00 PM
Flow, GPD	7608.96			gal/day		12/12/2018 12:53:00 PM
pH (E150.1)	7.9			S.U.		12/12/2018 12:53:00 PM
Temperature (E170.1)	10			deg C		12/12/2018 12:53:00 PM
Turbidity (E180.1)	175	1.0		NTU		12/12/2018 12:53:00 PM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 7:17:23 PM
Arsenic	38.1	5.00		µg/L	1	12/19/2018 7:17:23 PM
Boron	3640	50.0		µg/L	1	12/19/2018 7:17:23 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 7:17:23 PM
Calcium	308000	500		µg/L	10	12/19/2018 7:22:37 PM
Copper	ND	5.00		µg/L	1	12/19/2018 7:17:23 PM
Iron	4060	50.0		µg/L	1	12/19/2018 7:17:23 PM
Magnesium	67300	50.0		µg/L	1	12/19/2018 7:17:23 PM
Manganese	689	20.0		µg/L	1	12/19/2018 7:17:23 PM
Potassium	13300	50.0		µg/L	1	12/19/2018 7:17:23 PM
Selenium	37.4	5.00		µg/L	1	12/19/2018 7:17:23 PM
Sodium	29300	500		µg/L	1	12/19/2018 7:17:23 PM

LOW LEVEL MERCURY - EPA 1631E Analyst: **WB**
 (Prep: 1631E - 12/17/2018)

Mercury	ND	0.5		ng/L	1	12/18/2018
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HARDNESS - EPA 200.7 REV 4.4 Analyst: **SM**

Total Hardness (As CaCO3)	1045	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:02:44 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	17.8	2.00		mg/L	2	12/28/2018 3:39:58 PM
Sulfate	417	20.0		mg/L	20	12/28/2018 3:58:34 PM

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

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 1
Collection Date: 12/12/2018 12:53:00 PM
Lab Sample ID: 181214006-015
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	650	10		mg/L CaCO3	1	12/21/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	0.1	0.1		mg/L	1	12/21/2018 1:24:20 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	1580	1		µmhos/cm	1	12/17/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	1380	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 12/12/2018 12:30:00 PM
Lab Sample ID: 181214006-016
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)	5.77	0.10		mg/L		12/12/2018 12:30:00 PM
Flow, GPD	3879.36			gal/day		12/12/2018 12:30:00 PM
pH (E150.1)	7.3			S.U.		12/12/2018 12:30:00 PM
Temperature (E170.1)	11			deg C		12/12/2018 12:30:00 PM
Turbidity (E180.1)	45	1.0		NTU		12/12/2018 12:30:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 7:27:48 PM
Arsenic	5.89	5.00		µg/L	1	12/19/2018 7:27:48 PM
Boron	33100	50.0		µg/L	1	12/19/2018 7:27:48 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 7:27:48 PM
Calcium	516000	500		µg/L	10	12/19/2018 7:33:09 PM
Copper	ND	5.00		µg/L	1	12/19/2018 7:27:48 PM
Iron	1630	50.0		µg/L	1	12/19/2018 7:27:48 PM
Magnesium	67600	50.0		µg/L	1	12/19/2018 7:27:48 PM
Manganese	895	20.0		µg/L	1	12/19/2018 7:27:48 PM
Potassium	108000	500		µg/L	10	12/19/2018 7:33:09 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 7:27:48 PM
Sodium	159000	5000		µg/L	10	12/19/2018 7:33:09 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	1567	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:07:48 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	359	50.0		mg/L	50	12/28/2018 4:17:10 PM
Sulfate	1470	50.0		mg/L	50	12/28/2018 4:17:10 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	300	10		mg/L CaCO3	1	12/21/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 2
Collection Date: 12/12/2018 12:30:00 PM
Lab Sample ID: 181214006-016
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	12/21/2018 1:25:56 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	3530	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3320	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 12/12/2018 11:40:00 AM
Lab Sample ID: 181214006-017
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)	4.45	0.10		mg/L		12/12/2018 11:40:00 AM
Flow, GPD	418.0			gal/day		12/12/2018 11:40:00 AM
pH (E150.1)	6.3			S.U.		12/12/2018 11:40:00 AM
Temperature (E170.1)	12			deg C		12/12/2018 11:40:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 11:40:00 AM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 7:38:24 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 7:38:24 PM
Boron	15800	50.0		µg/L	1	12/19/2018 7:38:24 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 7:38:24 PM
Calcium	714000	500		µg/L	10	12/19/2018 7:59:24 PM
Copper	ND	5.00		µg/L	1	12/19/2018 7:38:24 PM
Iron	181	50.0		µg/L	1	12/19/2018 7:38:24 PM
Magnesium	75100	50.0		µg/L	1	12/19/2018 7:38:24 PM
Manganese	446	20.0		µg/L	1	12/19/2018 7:38:24 PM
Potassium	126000	500		µg/L	10	12/19/2018 7:59:24 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 7:38:24 PM
Sodium	160000	5000		µg/L	10	12/19/2018 7:59:24 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	2091	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:09:30 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	659	50.0		mg/L	50	12/28/2018 5:12:56 PM
Sulfate	1580	50.0		mg/L	50	12/28/2018 5:12:56 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	290	10		mg/L CaCO3	1	12/21/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0

Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 3
Collection Date: 12/12/2018 11:40:00 AM
Lab Sample ID: 181214006-017
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)	0.5	0.1		mg/L	1	12/21/2018 1:27:37 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	4400	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	3960	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

BAMA 2/25/19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: ~~21~~ Inlet To Pond
Collection Date: 12/12/2018 2:10:00 PM
Lab Sample ID: 181214006-018
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)	6.72	0.10		mg/L		12/12/2018 2:10:00 PM
pH (E150.1)	7.5			S.U.		12/12/2018 2:10:00 PM
Temperature (E170.1)	9			deg C		12/12/2018 2:10:00 PM
Turbidity (E180.1)	210	1.0		NTU		12/12/2018 2:10:00 PM
FLOW	15218			gal/day		12/12/2018 2:10 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 12/17/2018)						
Aluminum	ND	100		µg/L	1	12/19/2018 8:04:38 PM
Arsenic	16.8	5.00		µg/L	1	12/19/2018 8:04:38 PM
Boron	16700	50.0		µg/L	1	12/19/2018 8:04:38 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 8:04:38 PM
Calcium	442000	500		µg/L	10	12/19/2018 8:10:00 PM
Copper	ND	5.00		µg/L	1	12/19/2018 8:04:38 PM
Iron	2090	50.0		µg/L	1	12/19/2018 8:04:38 PM
Magnesium	67500	50.0		µg/L	1	12/19/2018 8:04:38 PM
Manganese	520	20.0		µg/L	1	12/19/2018 8:04:38 PM
Potassium	75600	500		µg/L	10	12/19/2018 8:10:00 PM
Selenium	42.0	5.00		µg/L	1	12/19/2018 8:04:38 PM
Sodium	136000	5000		µg/L	10	12/19/2018 8:10:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: WB
(Prep: 1631E - 12/17/2018)						
Mercury	ND	0.5		ng/L	1	12/18/2018
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	1382	5		mg/L CaCO3	1	12/19/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 12/17/2018)						
Mercury	ND	0.0002		mg/L	1	12/17/2018 4:11:11 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	217	20.0		mg/L	20	12/28/2018 6:27:59 PM
Sulfate	1100	20.0		mg/L	20	12/28/2018 6:27:59 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	450	10		mg/L CaCO3	1	12/21/2018

*Per Adk field form
BAMA 2/25/19*

Adirondack Environmental Services, Inc

Date: 02-Jan-19

BAUA
2/25/19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: ~~24~~ Inlet To Pond
Collection Date: 12/12/2018 2:10:00 PM
Lab Sample ID: 181214006-018
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	12/26/2018 5:10:00 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	2800	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	2550	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 12/12/2018 2:36:00 PM
Lab Sample ID: 181214006-019
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)	7.23	0.10		mg/L		12/12/2018 2:36:00 PM
pH (E150.1)	7.6			S.U.		12/12/2018 2:36:00 PM
Temperature (E170.1)	4			deg C		12/12/2018 2:36:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 2:36:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 8:15:16 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 8:15:16 PM
Boron	ND	50.0		µg/L	1	12/19/2018 8:15:16 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 8:15:16 PM
Calcium	34100	50.0		µg/L	1	12/19/2018 8:15:16 PM
Copper	ND	5.00		µg/L	1	12/19/2018 8:15:16 PM
Iron	94.5	50.0		µg/L	1	12/19/2018 8:15:16 PM
Magnesium	11000	50.0		µg/L	1	12/19/2018 8:15:16 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 8:15:16 PM
Potassium	2280	50.0		µg/L	1	12/19/2018 8:15:16 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 8:15:16 PM
Sodium	15100	500		µg/L	1	12/19/2018 8:15:16 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	130	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:12:54 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	33.1	2.00		mg/L	2	12/28/2018 6:46:41 PM
Sulfate	21.8	2.00		mg/L	2	12/28/2018 6:46:41 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	112	4		mg/L CaCO3	1	12/21/2018
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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	12/26/2018 5:14:57 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Upstream
Collection Date: 12/12/2018 2:36:00 PM
Lab Sample ID: 181214006-019
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	328	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	250	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 12/12/2018 3:05:00 PM
Lab Sample ID: 181214006-020
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)	7.69	0.10		mg/L		12/12/2018 3:05:00 PM
pH (E150.1)	7.6			S.U.		12/12/2018 3:05:00 PM
Temperature (E170.1)	4			deg C		12/12/2018 3:05:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 3:05:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 8:25:33 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 8:25:33 PM
Boron	ND	50.0		µg/L	1	12/19/2018 8:25:33 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 8:25:33 PM
Calcium	34700	50.0		µg/L	1	12/19/2018 8:25:33 PM
Copper	ND	5.00		µg/L	1	12/19/2018 8:25:33 PM
Iron	132	50.0		µg/L	1	12/19/2018 8:25:33 PM
Magnesium	11100	50.0		µg/L	1	12/19/2018 8:25:33 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 8:25:33 PM
Potassium	2330	50.0		µg/L	1	12/19/2018 8:25:33 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 8:25:33 PM
Sodium	15200	500		µg/L	1	12/19/2018 8:25:33 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	132	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:14:37 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	33.4	2.00		mg/L	2	12/28/2018 7:05:17 PM
Sulfate	22.5	2.00		mg/L	2	12/28/2018 7:05:17 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	108	4		mg/L CaCO3	1	12/21/2018
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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	12/26/2018 5:16:35 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Keuka Downstream
Collection Date: 12/12/2018 3:05:00 PM
Lab Sample ID: 181214006-020
Matrix: SURFACE WATER

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

Specific Conductance	330	1		µmhos/cm	1	12/28/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011 Analyst: **CC**

TDS (Residue, Filterable)	360	5		mg/L	1	12/19/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 12/12/2018 3:05:00 PM
Lab Sample ID: 181214006-021
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)	7.69	0.10		mg/L		12/12/2018 3:05:00 PM
pH (E150.1)	7.6			S.U.		12/12/2018 3:05:00 PM
Temperature (E170.1)	4			deg C		12/12/2018 3:05:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 3:05:00 PM
ICP METALS - EPA 200.7						Analyst: SM
(Prep: SW3010A - 12/17/2018)						
Aluminum	106	100		µg/L	1	12/19/2018 8:35:51 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 8:35:51 PM
Boron	ND	50.0		µg/L	1	12/19/2018 8:35:51 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 8:35:51 PM
Calcium	35600	50.0		µg/L	1	12/19/2018 8:35:51 PM
Copper	ND	5.00		µg/L	1	12/19/2018 8:35:51 PM
Iron	240	50.0		µg/L	1	12/19/2018 8:35:51 PM
Magnesium	11400	50.0		µg/L	1	12/19/2018 8:35:51 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 8:35:51 PM
Potassium	2340	50.0		µg/L	1	12/19/2018 8:35:51 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 8:35:51 PM
Sodium	15300	500		µg/L	1	12/19/2018 8:35:51 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: SM
Total Hardness (As CaCO3)	136	5		mg/L CaCO3	1	12/19/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 12/17/2018)						
Mercury	ND	0.0002		mg/L	1	12/17/2018 4:16:18 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: CS
Chloride	33.4	2.00		mg/L	2	12/28/2018 7:23:53 PM
Sulfate	22.5	2.00		mg/L	2	12/28/2018 7:23:53 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	110	10		mg/L CaCO3	1	12/21/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: PL
Nitrogen, Ammonia (As N)	ND	0.1		mg/L	1	12/26/2018 5:18:12 PM

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Surface Water DUP
Collection Date: 12/12/2018 3:05:00 PM
Lab Sample ID: 181214006-021
Matrix: SURFACE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	323	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	215	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 12/12/2018 1:30:00 PM
Lab Sample ID: 181214006-022
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)	9.52	0.10		mg/L		12/12/2018 1:30:00 PM
pH (E150.1)	7.4			S.U.		12/12/2018 1:30:00 PM
Temperature (E170.1)	1			deg C		12/12/2018 1:30:00 PM
Turbidity (E180.1)	6	1.0		NTU		12/12/2018 1:30:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 8:46:04 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 8:46:04 PM
Boron	15000	50.0		µg/L	1	12/19/2018 8:46:04 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 8:46:04 PM
Calcium	286000	500		µg/L	10	12/19/2018 9:07:23 PM
Copper	ND	5.00		µg/L	1	12/19/2018 8:46:04 PM
Iron	92.5	50.0		µg/L	1	12/19/2018 8:46:04 PM
Magnesium	57400	50.0		µg/L	1	12/19/2018 8:46:04 PM
Manganese	23.5	20.0		µg/L	1	12/19/2018 8:46:04 PM
Potassium	58400	500		µg/L	10	12/19/2018 9:07:23 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 8:46:04 PM
Sodium	117000	5000		µg/L	10	12/19/2018 9:07:23 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	950	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:18:01 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	154	20.0		mg/L	20	12/28/2018 7:42:28 PM
Sulfate	901	20.0		mg/L	20	12/28/2018 7:42:28 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	220	10		mg/L CaCO3	1	12/21/2018
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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	12/26/2018 5:19:50 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Pond Grab
Collection Date: 12/12/2018 1:30:00 PM
Lab Sample ID: 181214006-022
Matrix: SURFACE WATER

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

Analyst: CA

Specific Conductance	2090	1		µmhos/cm	1	12/28/2018
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TOTAL DISSOLVED SOLIDS - SM 2540C-2011

Analyst: CC

TDS (Residue, Filterable)	1820	5		mg/L	1	12/19/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 12/12/2018 12:42:00 PM
Lab Sample ID: 181214006-023
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)	6.45	0.10		mg/L		12/12/2018 12:42:00 PM
pH (E150.1)	8.4			S.U.		12/12/2018 12:42:00 PM
Temperature (E170.1)	13			deg C		12/12/2018 12:42:00 PM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 12:42:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 9:12:39 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 9:12:39 PM
Boron	ND	50.0		µg/L	1	12/19/2018 9:12:39 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 9:12:39 PM
Calcium	ND	50.0		µg/L	1	12/19/2018 9:12:39 PM
Copper	ND	5.00		µg/L	1	12/19/2018 9:12:39 PM
Iron	ND	50.0		µg/L	1	12/19/2018 9:12:39 PM
Magnesium	ND	50.0		µg/L	1	12/19/2018 9:12:39 PM
Manganese	ND	20.0		µg/L	1	12/19/2018 9:12:39 PM
Potassium	ND	50.0		µg/L	1	12/19/2018 9:12:39 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 9:12:39 PM
Sodium	ND	500		µg/L	1	12/19/2018 9:12:39 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	ND	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:19:43 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	ND	2.00		mg/L	2	12/28/2018 8:38:14 PM
Sulfate	ND	2.00		mg/L	2	12/28/2018 8:38:14 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	2	1		mg/L CaCO3	1	12/21/2018
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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	12/26/2018 5:21:28 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Field Blank
Collection Date: 12/12/2018 12:42:00 PM
Lab Sample ID: 181214006-023
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	6	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	35	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: LLHg Field Blank
Collection Date: 12/12/2018 12:45:00 PM
Lab Sample ID: 181214006-024
Matrix: FIELD BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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LOW LEVEL MERCURY - EPA 1631E Analyst: **WB**

(Prep: 1631E - 12/17/2018)

Mercury	ND	0.5		ng/L	1	12/18/2018
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 12/12/2018 3:10:00 PM
Lab Sample ID: 181214006-025
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)	7.6			S.U.		12/12/2018 3:10:00 PM
Temperature (E170.1)	9			deg C		12/12/2018 3:10:00 PM
Turbidity (E180.1)	4	1.0		NTU		12/12/2018 3:10:00 PM

ICP METALS - EPA 200.7

Analyst: **SM**

(Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 9:22:35 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 9:22:35 PM
Boron	781	50.0		µg/L	1	12/19/2018 9:22:35 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 9:22:35 PM
Calcium	67900	50.0		µg/L	1	12/19/2018 9:22:35 PM
Copper	ND	5.00		µg/L	1	12/19/2018 9:22:35 PM
Iron	217	50.0		µg/L	1	12/19/2018 9:22:35 PM
Magnesium	20600	50.0		µg/L	1	12/19/2018 9:22:35 PM
Manganese	65.3	20.0		µg/L	1	12/19/2018 9:22:35 PM
Potassium	2080	50.0		µg/L	1	12/19/2018 9:22:35 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 9:22:35 PM
Sodium	63900	5000		µg/L	10	12/19/2018 9:27:47 PM

HARDNESS - EPA 200.7 REV 4.4

Analyst: **SM**

Total Hardness (As CaCO3)	254	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0

Analyst: **AVB**

(Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:21:26 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Analyst: **CS**

Chloride	26.4	2.00		mg/L	2	12/28/2018 8:56:50 PM
Sulfate	59.4	2.00		mg/L	2	12/28/2018 8:56:50 PM

ALKALINITY TO PH 4.5 -SM 2320B-2011

Analyst: **DAA**

Alkalinity, Total (As CaCO3)	380	10		mg/L CaCO3	1	12/21/2018
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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	12/26/2018 5:23:06 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8401
Collection Date: 12/12/2018 3:10:00 PM
Lab Sample ID: 181214006-025
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	739	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	530	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 12/12/2018 9:25:00 AM
Lab Sample ID: 181214006-026
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)	7.81	0.10		mg/L		12/12/2018 9:25:00 AM
Flow, GPD	989.3			gal/day		12/12/2018 9:25:00 AM
pH (E150.1)	7.3			S.U.		12/12/2018 9:25:00 AM
Temperature (E170.1)	6			deg C		12/12/2018 9:25:00 AM
Turbidity (E180.1)	< 1	1.0		NTU		12/12/2018 9:25:00 AM

ICP METALS - EPA 200.7 Analyst: **SM**
 (Prep: SW3010A - 12/17/2018)

Aluminum	ND	100		µg/L	1	12/19/2018 9:32:57 PM
Arsenic	ND	5.00		µg/L	1	12/19/2018 9:32:57 PM
Boron	134	50.0		µg/L	1	12/19/2018 9:32:57 PM
Cadmium	ND	5.00		µg/L	1	12/19/2018 9:32:57 PM
Calcium	140000	500		µg/L	10	12/19/2018 9:38:11 PM
Copper	ND	5.00		µg/L	1	12/19/2018 9:32:57 PM
Iron	ND	50.0		µg/L	1	12/19/2018 9:32:57 PM
Magnesium	31400	50.0		µg/L	1	12/19/2018 9:32:57 PM
Manganese	25.6	20.0		µg/L	1	12/19/2018 9:32:57 PM
Potassium	2580	50.0		µg/L	1	12/19/2018 9:32:57 PM
Selenium	ND	5.00		µg/L	1	12/19/2018 9:32:57 PM
Sodium	7600	500		µg/L	1	12/19/2018 9:32:57 PM

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

Total Hardness (As CaCO3)	479	5		mg/L CaCO3	1	12/19/2018
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MERCURY - EPA 245.1 REV 3.0 Analyst: **AVB**
 (Prep: E245.1 - 12/17/2018)

Mercury	ND	0.0002		mg/L	1	12/17/2018 4:29:55 PM
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ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1 Analyst: **CS**

Chloride	3.87	2.00		mg/L	2	12/28/2018 10:31:24 PM
Sulfate	198	10.0		mg/L	10	12/28/2018 10:50:08 PM

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

Alkalinity, Total (As CaCO3)	320	10		mg/L CaCO3	1	12/21/2018
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AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0 Analyst: **PL**

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 3
Collection Date: 12/12/2018 9:25:00 AM
Lab Sample ID: 181214006-026
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	12/26/2018 5:28:00 PM
CONDUCTANCE AT 25C - SM 2510B-2011						Analyst: CA
Specific Conductance	795	1		µmhos/cm	1	12/28/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-2011						Analyst: CC
TDS (Residue, Filterable)	610	5		mg/L	1	12/19/2018

Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 2
Collection Date: 12/12/2018 9:02:00 AM
Lab Sample ID: 181214006-027
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		12/12/2018 9:02:00 AM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: GW Dep Drain 4
Collection Date: 12/12/2018 9:04:00 AM
Lab Sample ID: 181214006-028
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		12/12/2018 9:04:00 AM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: Under Drain 5
Collection Date: 12/12/2018 4:20:00 PM
Lab Sample ID: 181214006-029
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	Dry			NA		12/12/2018 4:20:00 PM
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Adirondack Environmental Services, Inc

Date: 02-Jan-19

CLIENT: Lockwood Hills LLC
Work Order: 181214006
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: 8910-SH
Collection Date: 12/13/2018 11:00:00 AM
Lab Sample ID: 181214006-030
Matrix: GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: FLD
Observation	Poor Recovery			NA		12/13/2018 11:00:00 AM



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 181214006

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 Baisky / K. Ambra				
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 ✓	12/13/18	0825	A P	GW		G	4	Lockwood Ash LF Quarterly	
002	8404 ✓	12/2/18	1537	A P	GW		G	4	Field pH, Temp, Turbidity	
003	8908-D ✓	12/12/18	1445	A P	GW		G	4	↓	
004	8908-SH ✓	12/12/18	1430	A P	GW		G	4		
005	8909-D ✓	12/12/18	1215	A P	GW		G	4		
006	8909-SH ✓	12/12/18	1200	A P	GW		G	4		
007	8910-D ✓	12/12/18	1250	A P	GW		G	4		
008	8911-D ✓	12/12/18	1330	A P	GW		G	4		
009	8911-SH ✓	12/13/18	0745	A P	GW		G	4		
010	8942-D ✓	12/13/18	0840	A P	GW		G	4		
011	9306-SH ✓	12/13/18	0730	A P	GW		G	4		
012	GW Dup 89090 ✓	12/12/18	1215	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 <u>Chilled</u> Chilling Process begun Notes: <u>4°C</u>		Properly Preserved <u>Y</u> N				Received Within Holding Times <u>Y</u> N				
Notes: _____		Notes: _____				Notes: _____				



181214006



314 North Pearl Street
 Albany, New York 12207
 518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

181214006

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: Ryan Binsley / K Ambra				
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			
013	GW Dep Drain 1 x	12/12/18	1312	A P	GW		G	4	Lockwood Q Field pH, Temp, Turb, Field Flow Reading, DO
014	Leak Detection Syst. x	12/12/18	1155	A P	GW		G	4	"
015	Under Drain 1 x	12/12/18	1253	A P	GW		G	5	"
016	Under Drain 2 x	12/12/18	1236 (10) 0942	A P	GW		G	4	"
017	Under Drain 3 x	12/12/18	1140	A P	GW		G	4	"
018	21" Inlet to Pond x	12/12/18	1410	A P	GW		G	5	"
019	Keuka Upstream x	12/12/18	1436	A P	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream x	12/12/18	1505	A P	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup x	12/12/18	1505	A P	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab x	12/12/18	1330	A P	SF		G	4 ⁽¹²⁾	Lockwood Quarterly +DO +TDS
023	Field Blank x	12/12/18	1242	A P	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank x	12/12/18	1245	A P	GW		G	1	EPA 1631

Shipment Arrived Via: FedEx UPS Client (AES) Other: _____

Special Instructions/Remarks: Page 2 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
	<i>[Signature]</i>	12/14/18	7:25 AM

Sample Temperature Ambient <input checked="" type="checkbox"/> Chilled Chilling Process begun Notes: <u>4°C</u>	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: _____
--	--	---



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 Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#:

181214006

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 Baileys / K. 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		
025 013	8401 *	12/12/18	1510	A P	GW		4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026 014	GW Dep Drain 3 ✓	12/12/18	0925	A P	GW		4	+ Field Flow Reading, DO
027 015	GW Dep Drain 2 ✓	12/12/18	0902	A P	GW		0	Observation Only
028 016	GW Dep Drain 4 ✓	12/12/18	0904	A P	GW		0	Observation Only
029 017	Under Drain 5 ✓	12/12/18	1620	A P	GW		0	Observation Only
030 018	8910-SH	12/12/18	1100	A P	GW		0	Observation Only
031 019	8405	12/12/18	1640	A P	GW		0	Observation Only
				P				
				A				
				P				
				A				
				P				
				A				
				P				
				A				
				P				

025 J.M.
12/14/18

Shipment Arrived Via:
 FedEx UPS Client AES Other: _____

Special Instructions/Remarks:
 Page 3 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

12/14/18 7:25 AM

Sample Temperature Ambient Chilled Chilling Process begun Notes: 4°C	Properly Preserved Y N	Received Within Holding Times Y N
--	----------------------------------	---



Experience is the solution

314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

- (a) Neither **Adirondack Environmental Services, Inc.**, nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.**'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.
- (d) In no event shall **Adirondack Environmental Services, Inc.**, its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Lockwood Ash Disposal Site Fourth Quarter 2018

Collection Date	Sample ID	Depth	Elevation	Units
12/12/2018	8908-D	6.65	606.32	feet
12/12/2018	8909-D	45.35	516.55	feet
12/12/2018	8910-D	20.53	537.81	feet
12/12/2018	8911-D	27.99	528.92	feet
12/12/2018	8942-D	15.21	543.74	feet
12/12/2018	8908-SH	8.05	604.72	feet
12/12/2018	8909-SH	7.88	553.75	feet
12/12/2018	8910-SH	5.68	552.87	feet
12/12/2018	8911-SH	25.88	531.04	feet
12/12/2018	9306-SH	4.39	561.83	feet
12/12/2018	7741	22.25	565.80	feet
12/12/2018	1842	6.04	657.01	feet
12/12/2018	8406	13.47	556.08	feet
12/12/2018	8407	Obstructed	-	feet
12/12/2018	8401	4.95	655.34	feet
12/12/2018	8402	7.08	657.01	feet
12/12/2018	8403	7.95	656.12	feet
12/12/2018	8404	6.25	596.48	feet
12/12/2018	8405	DRY	DRY	feet

ATTACHMENT 5

Time-Series Plots

Baseline Parameters in the Leachate and Monitoring Wells

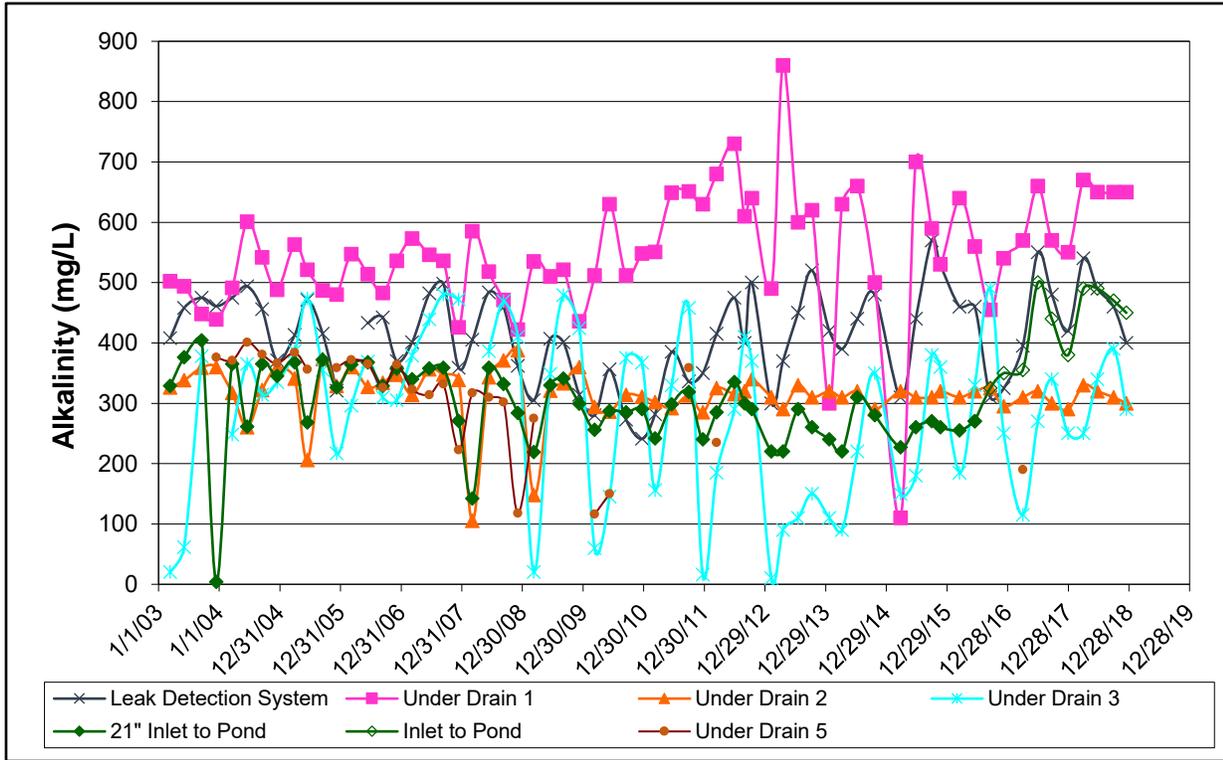
Updated Through 4th Quarter 2018

Table of Contents:

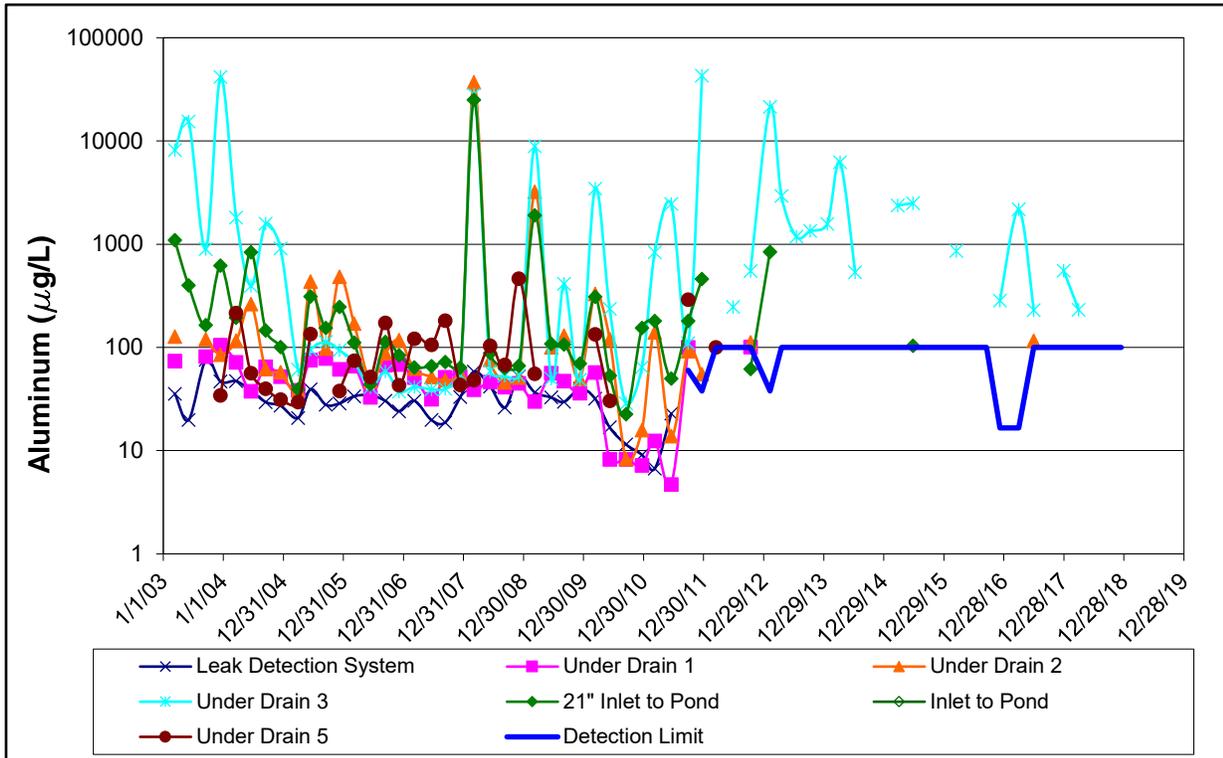
Leachate Time-Series Plots (alphabetical order)	A2-2 thru A2-16
Monitoring Well Time-Series Plots (alphabetical order)	A2-17 thru A2-45
Static Groundwater Level Time-Series Plots.....	A2-46 thru A2-47

LEACHATE TIME-SERIES PLOTS

ALKALINITY

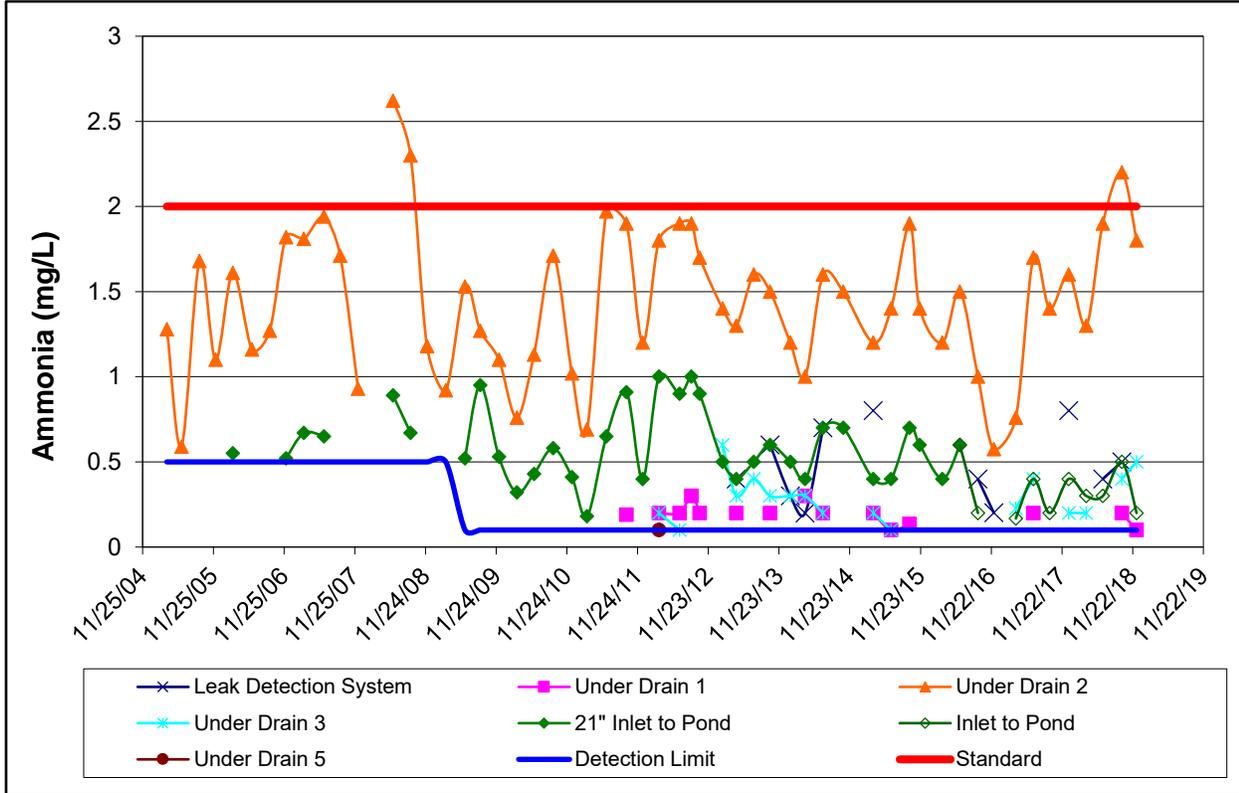


ALUMINUM

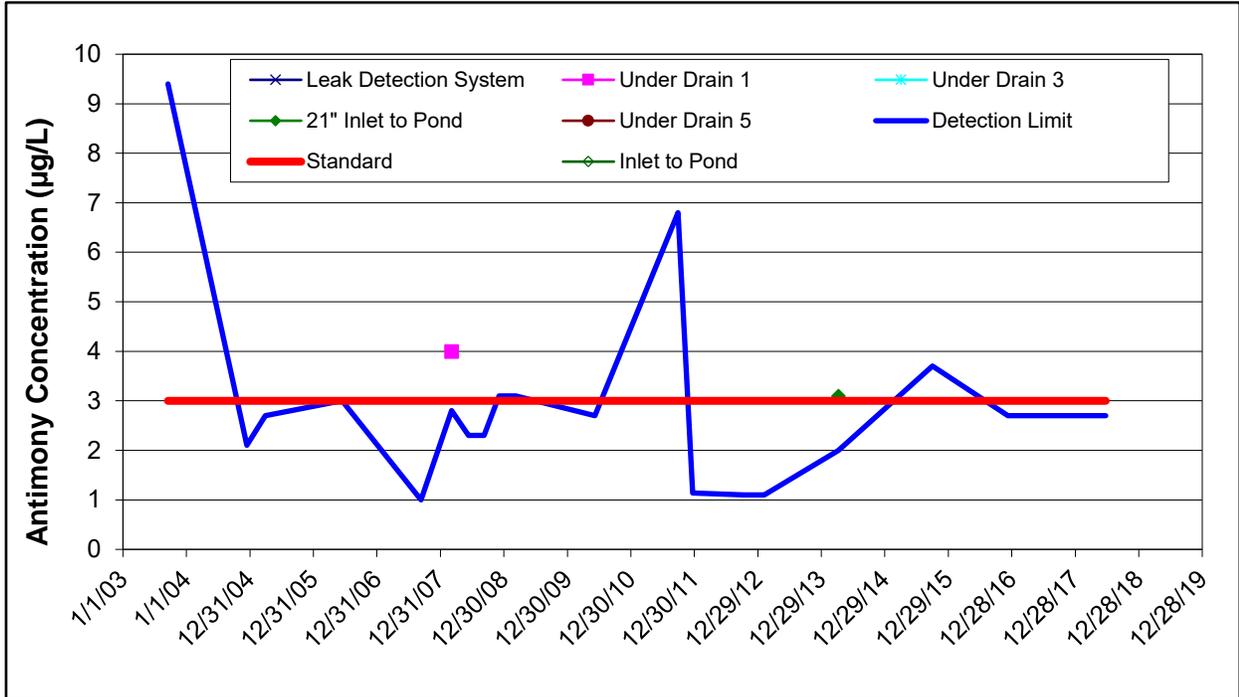


LEACHATE TIME-SERIES PLOTS, CONT.

AMMONIA (Note: Only data above detection has been included in this plot)

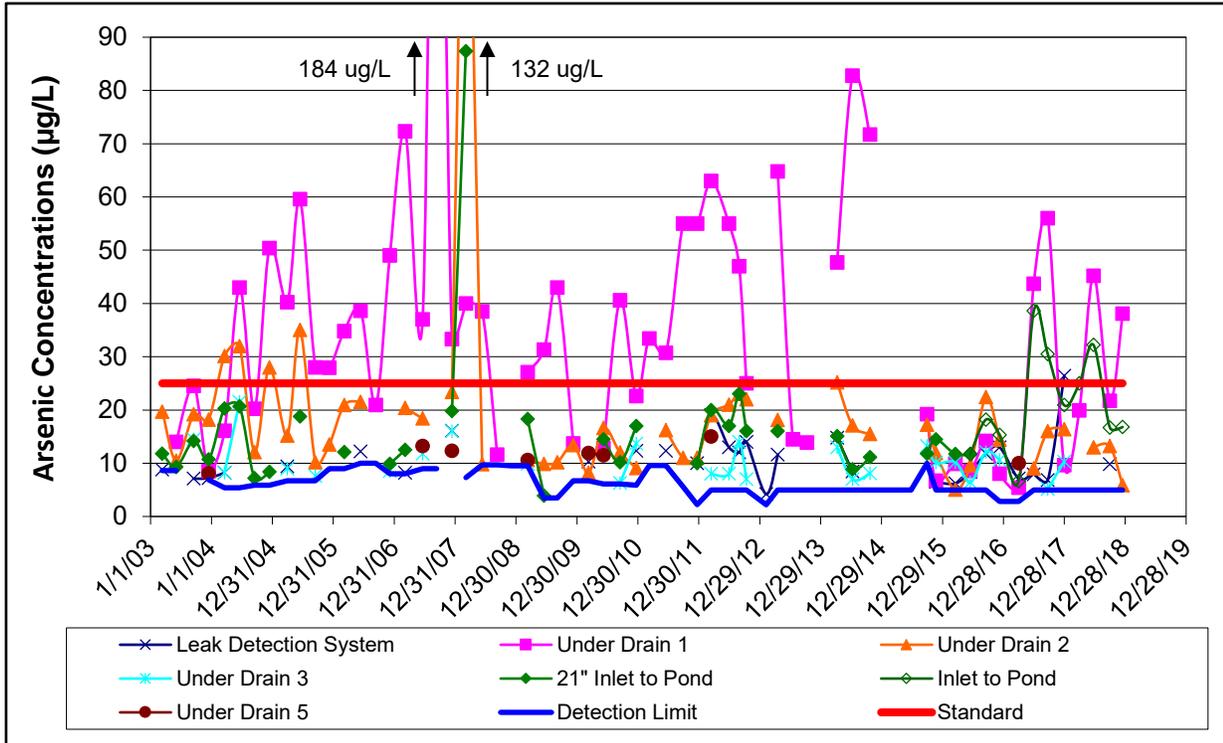


ANTIMONY (Note: Only data above detection has been included in this plot)

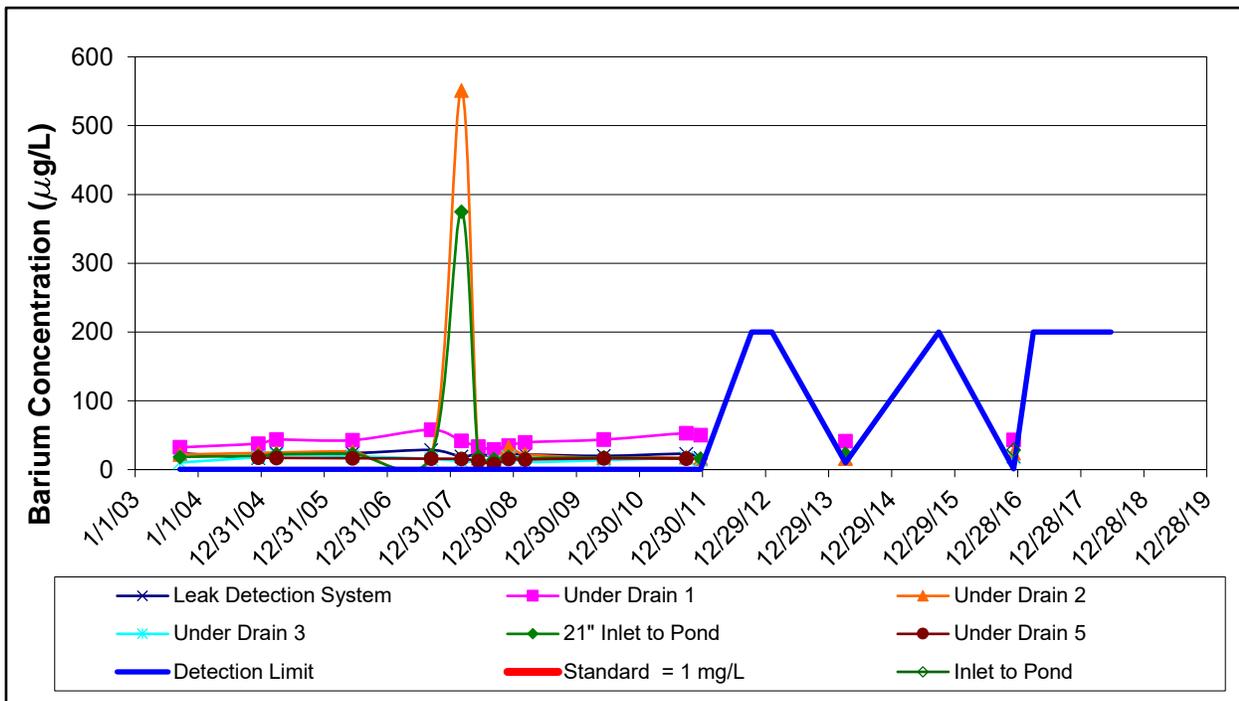


LEACHATE TIME-SERIES PLOTS, CONT.

ARSENIC (Note: Only data above detection has been included in this plot)

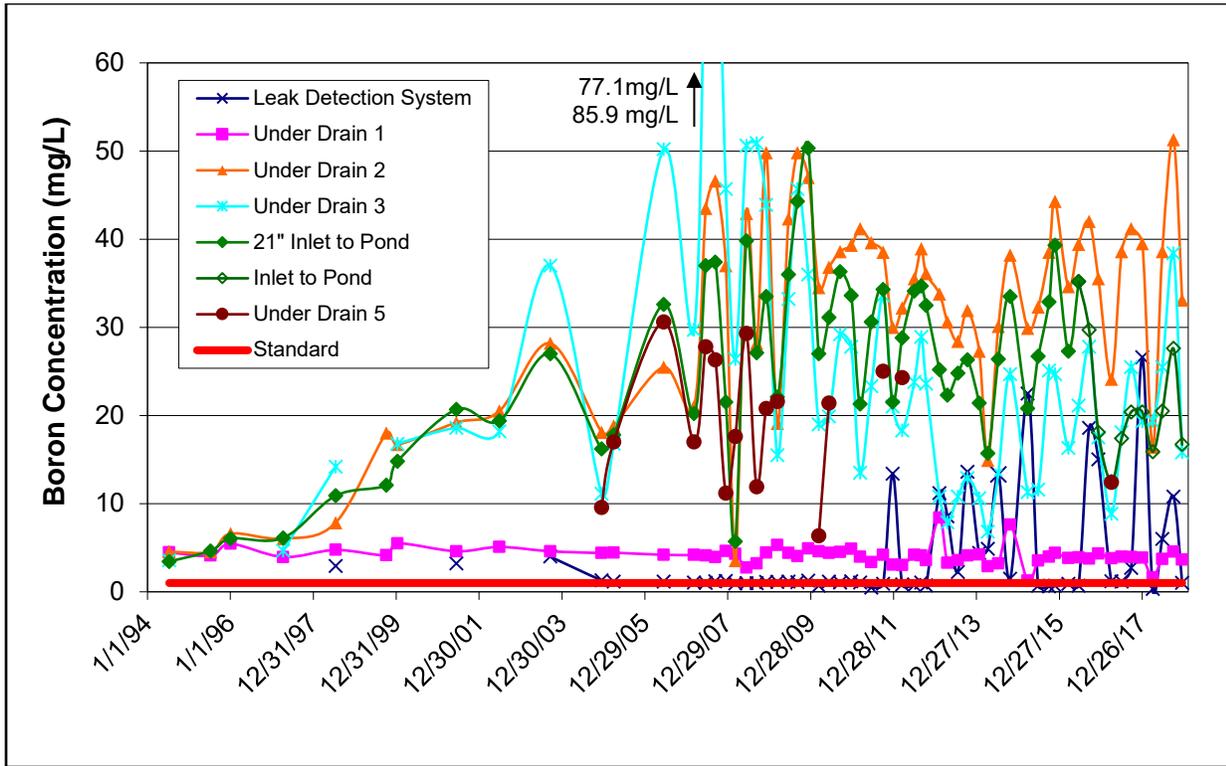


BARIUM

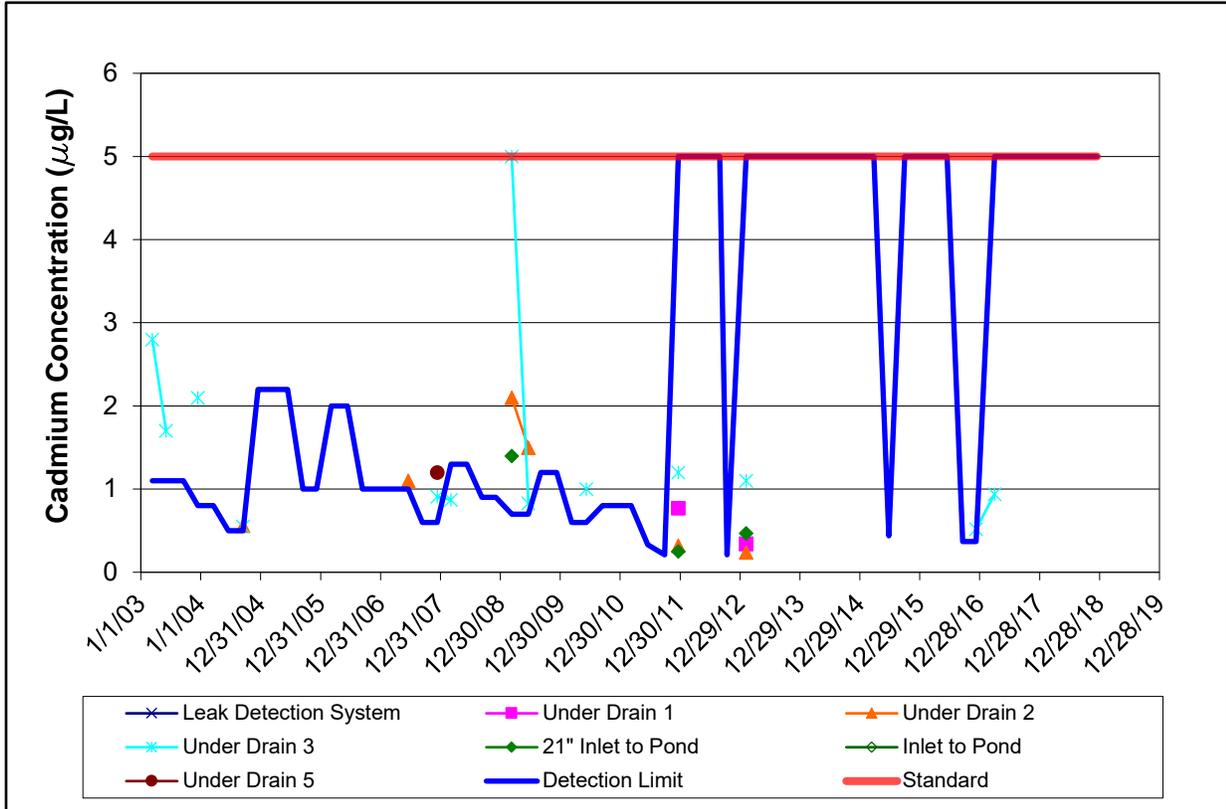


LEACHATE TIME-SERIES PLOTS, CONT.

BORON

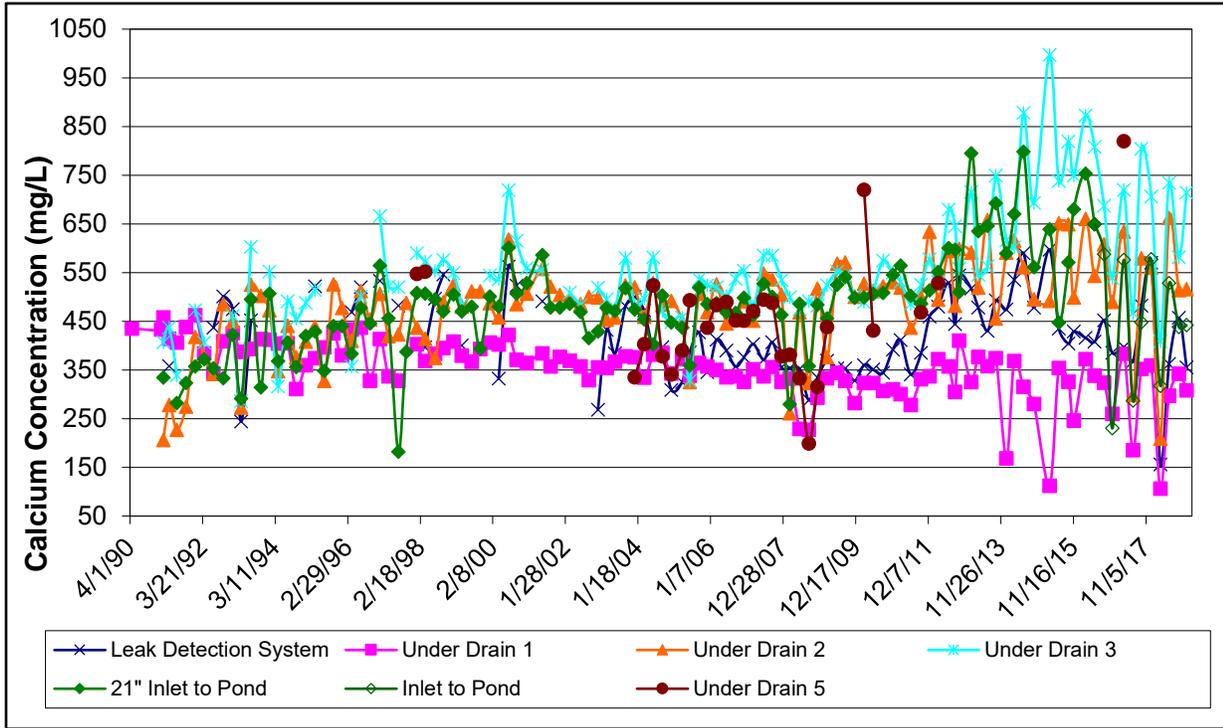


CADMIUM (Note: Only data above detection has been included in this plot)

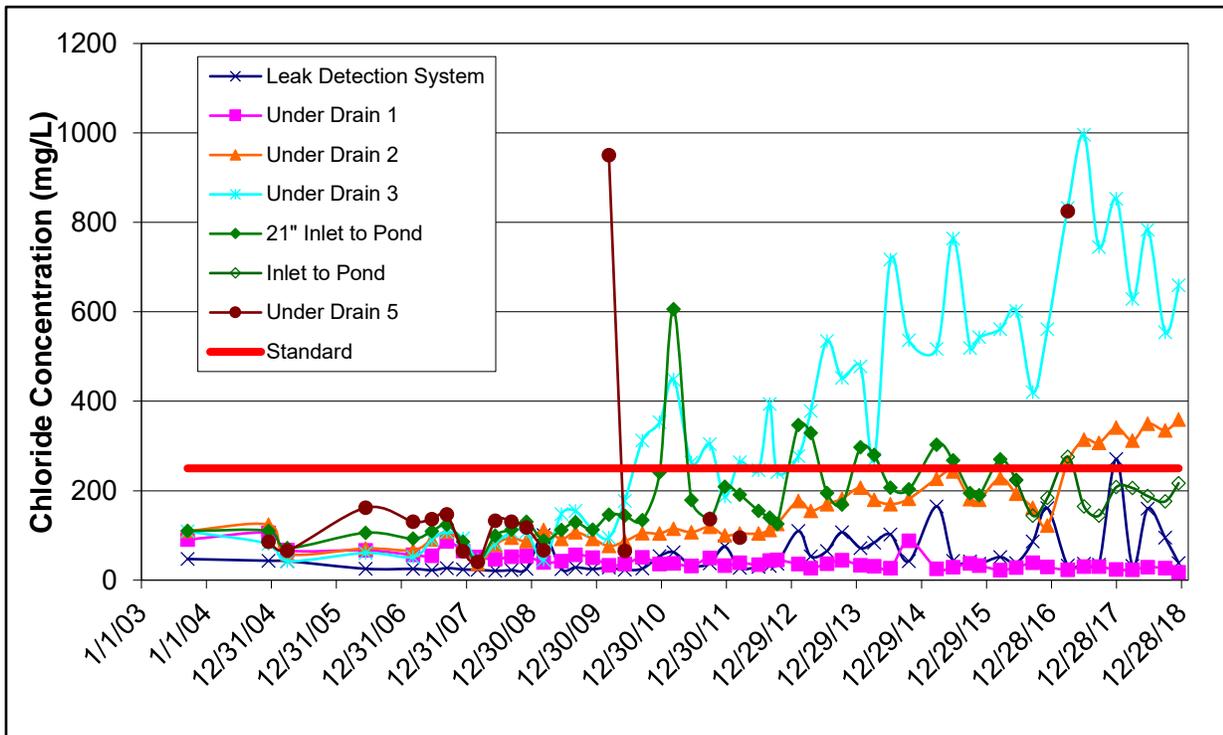


LEACHATE TIME-SERIES PLOTS, CONT.

CALCIUM

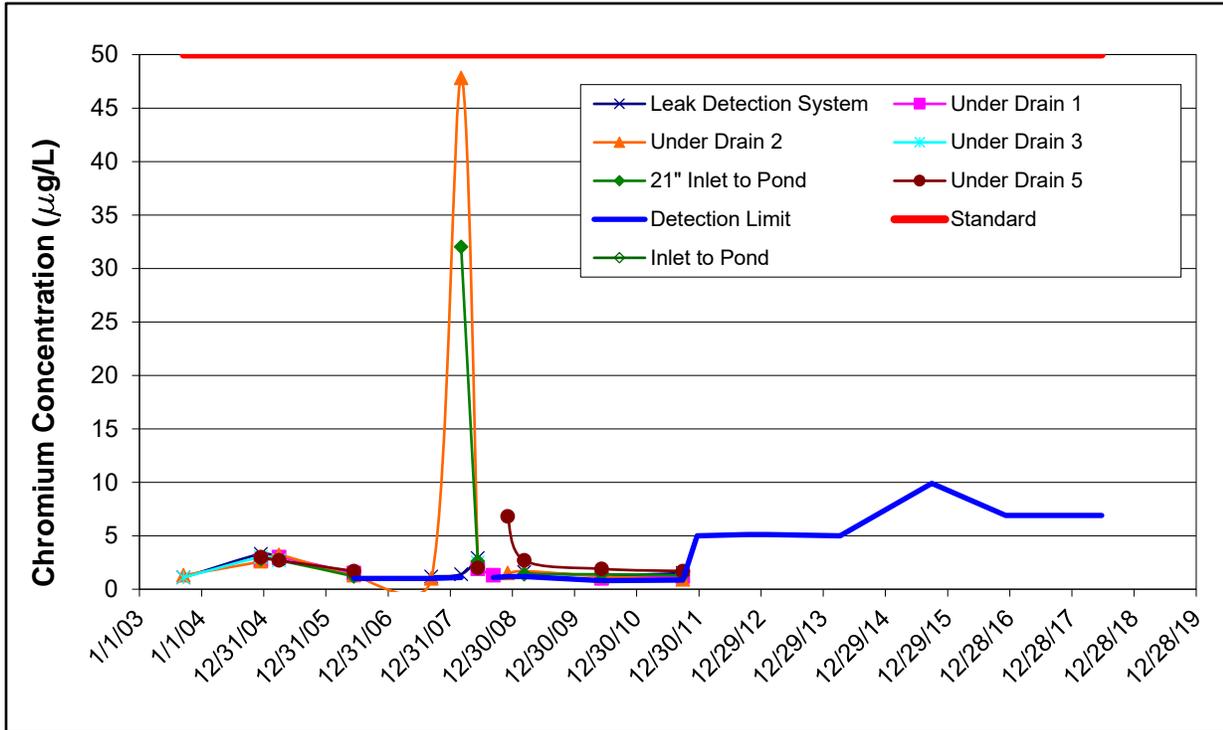


CHLORIDE

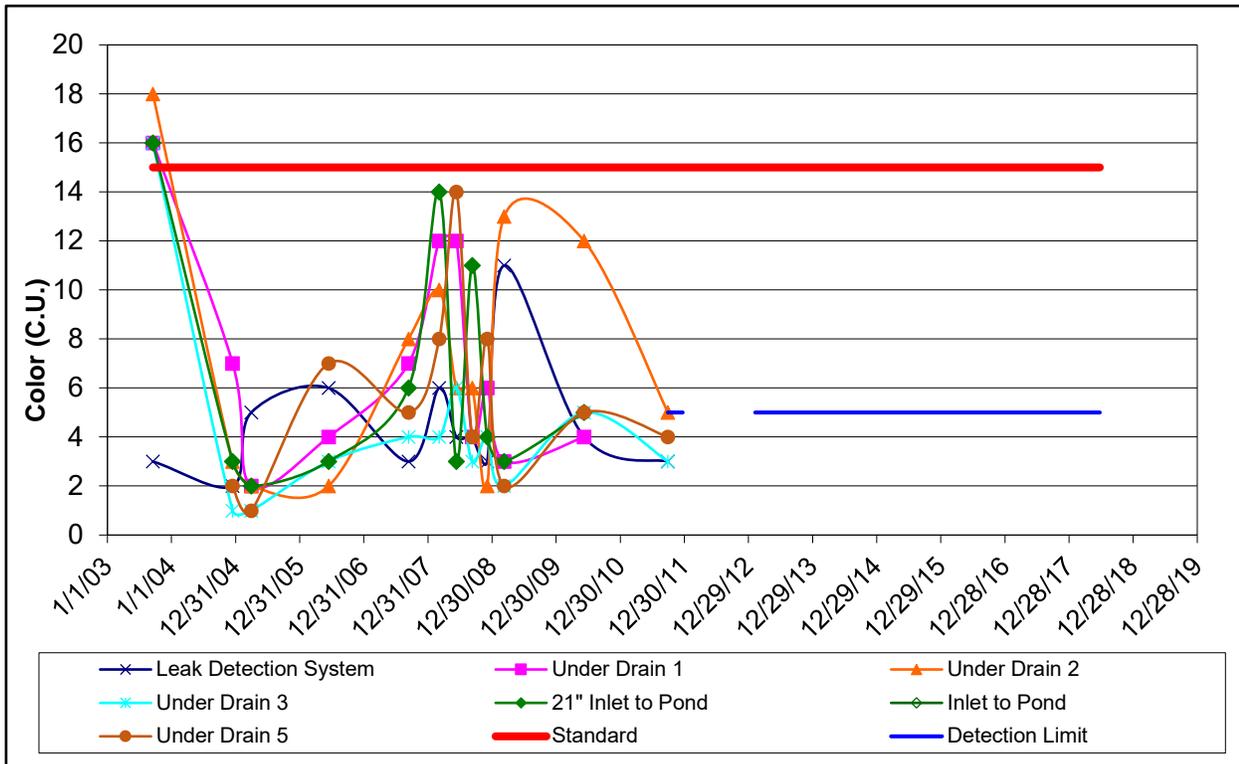


LEACHATE TIME-SERIES PLOTS, CONT.

CHROMIUM (Note: Only data above detection has been included in this plot)

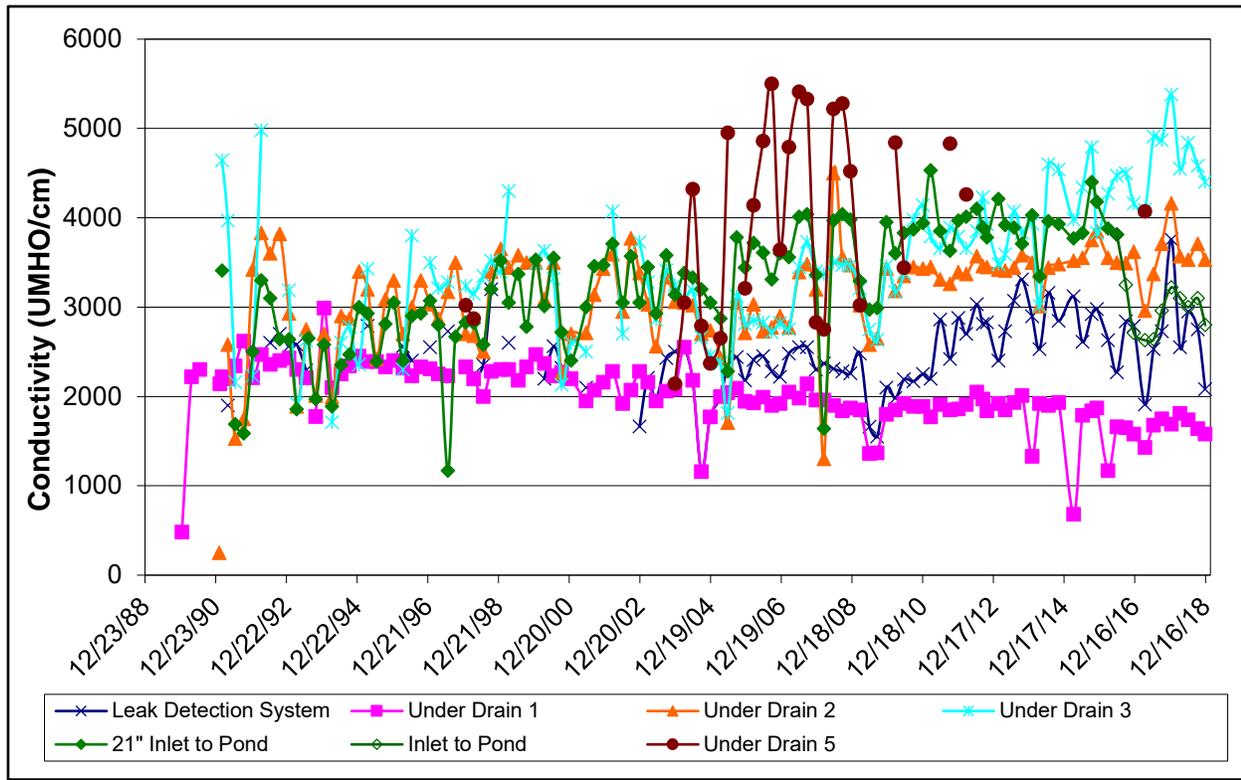


COLOR

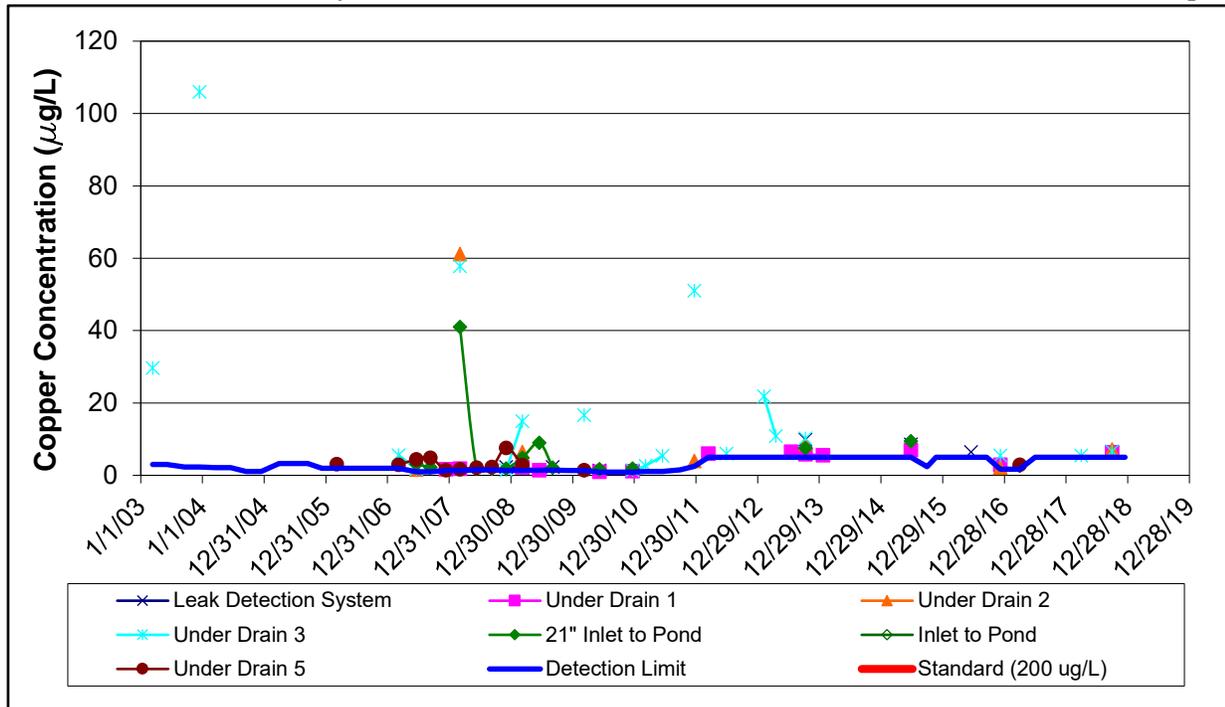


LEACHATE TIME-SERIES PLOTS, CONT.

CONDUCTIVITY

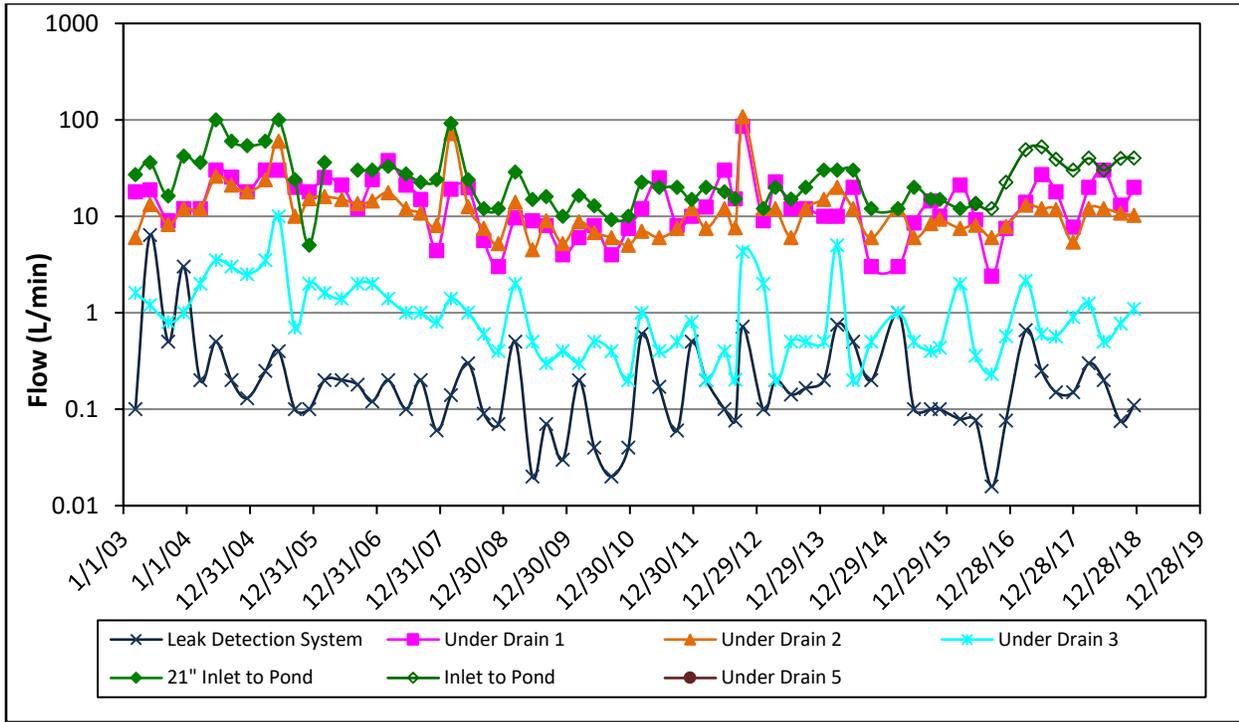


COPPER (Note: Only data above detection has been included in this plot)

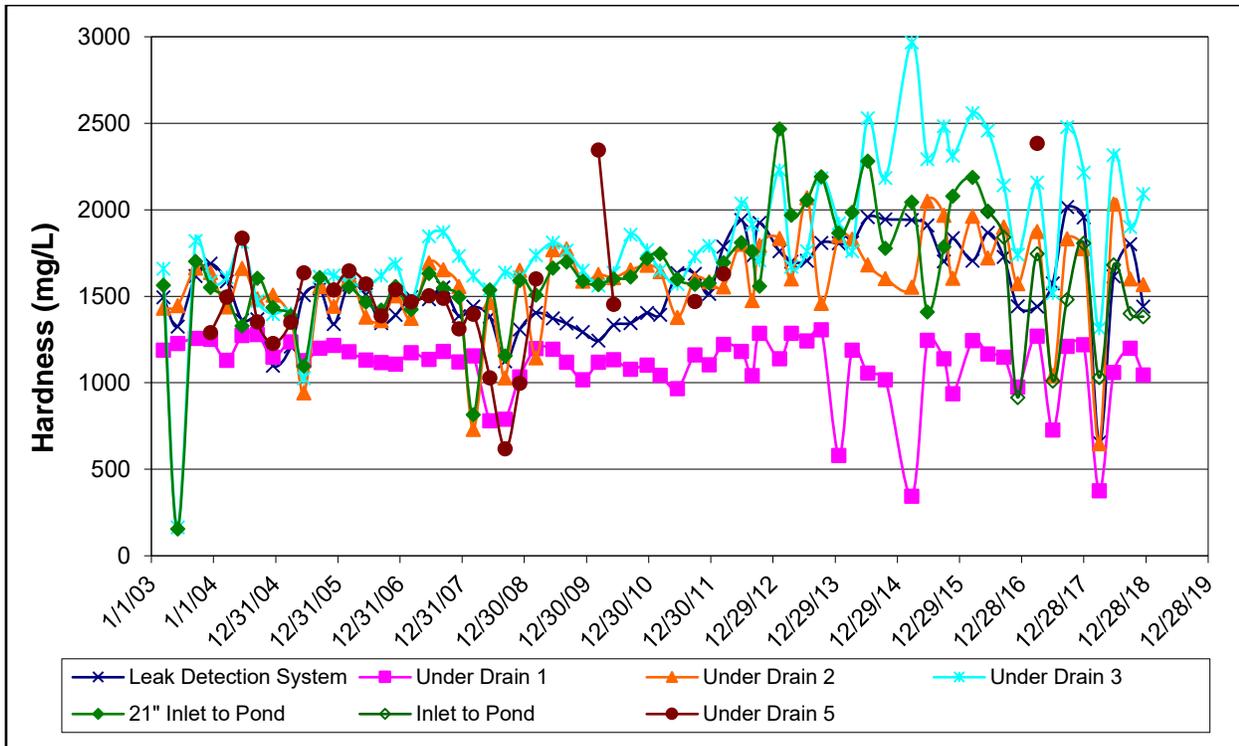


LEACHATE TIME-SERIES PLOTS, CONT.

FLOW

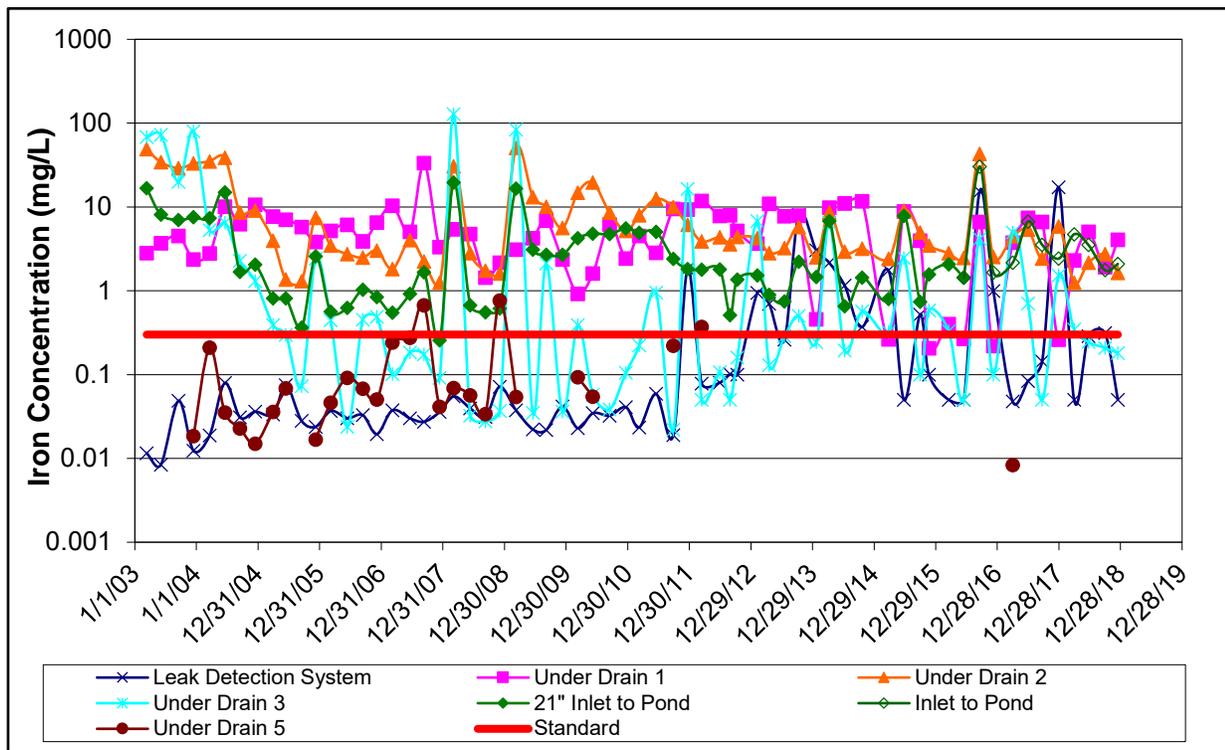


HARDNESS

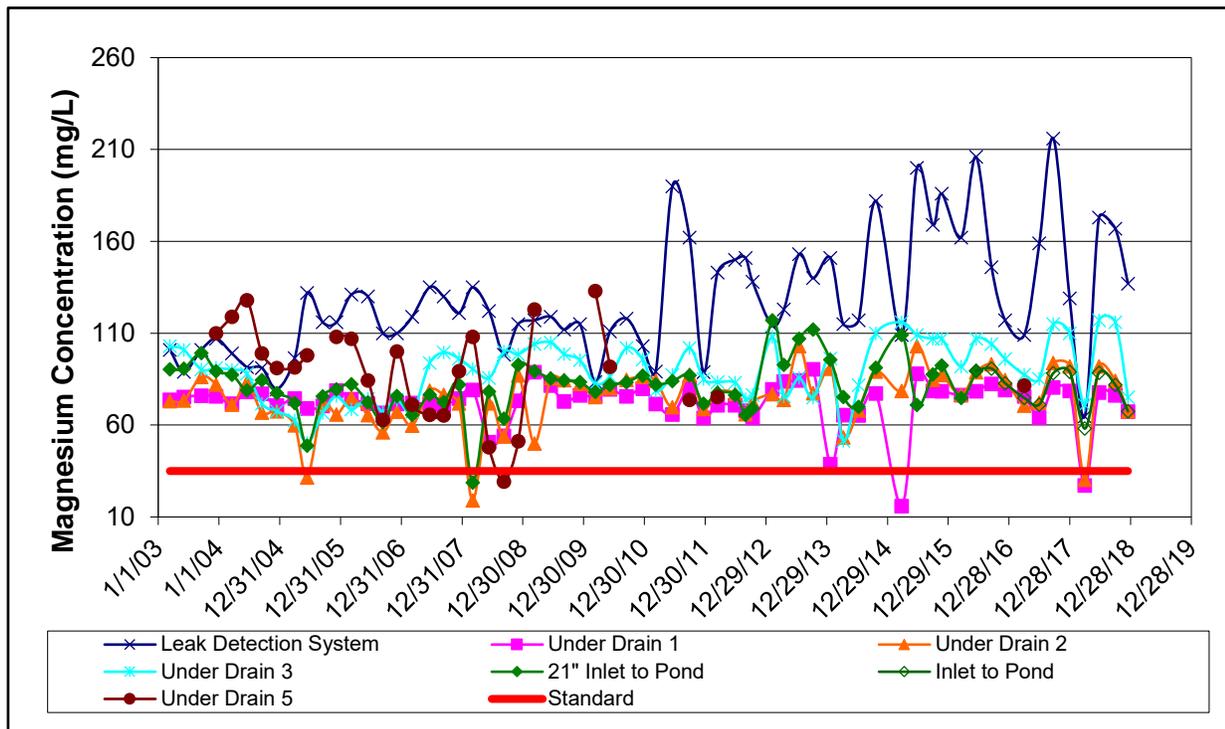


LEACHATE TIME-SERIES PLOTS, CONT.

IRON

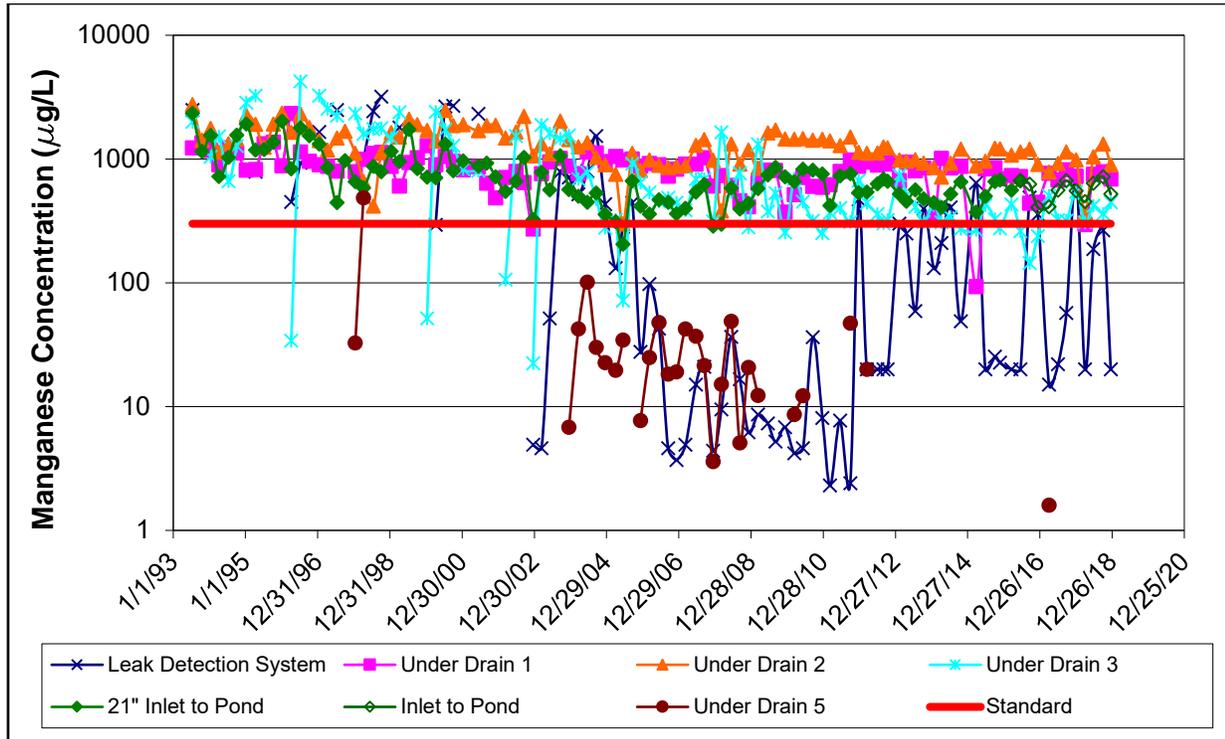


MAGNESIUM

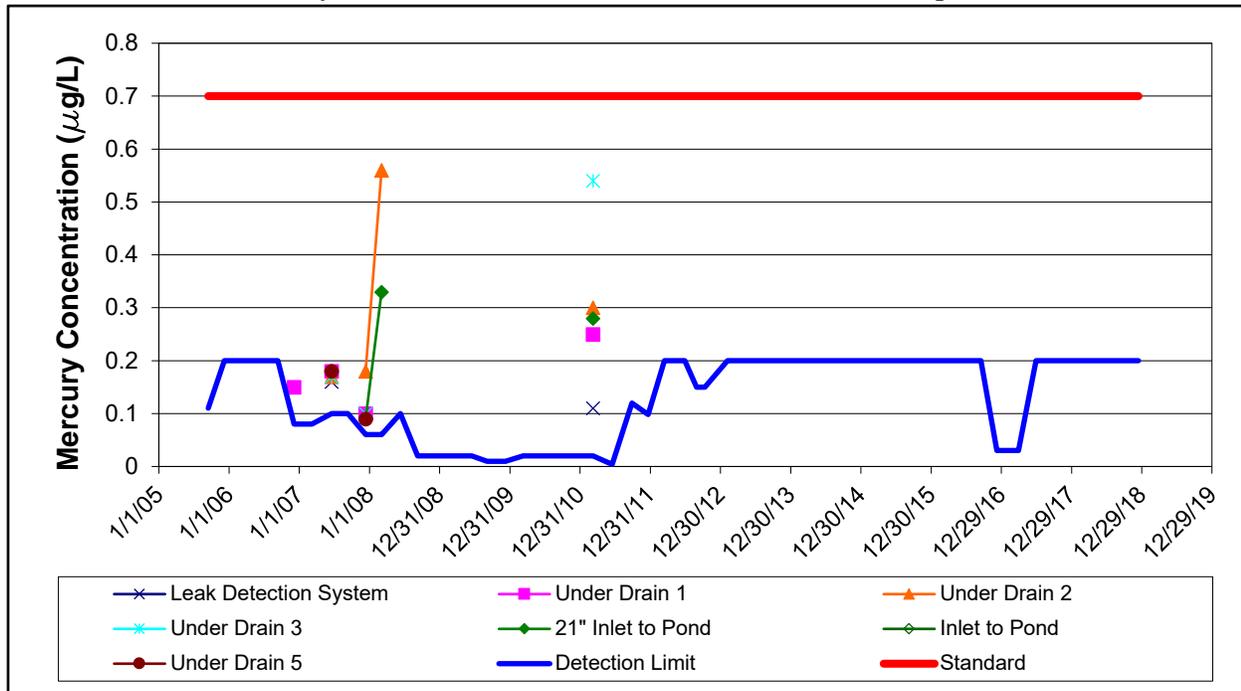


LEACHATE TIME-SERIES PLOTS, CONT.

MANGANESE

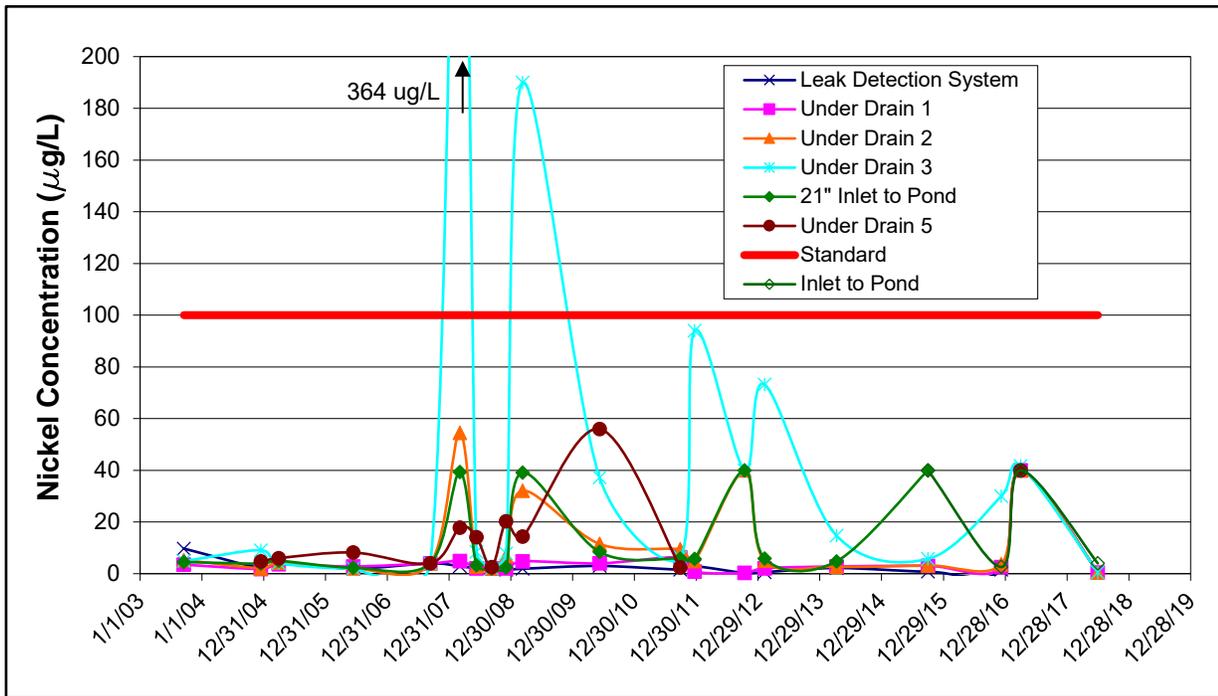


MERCURY (Note: Only data above detection has been included in this plot)

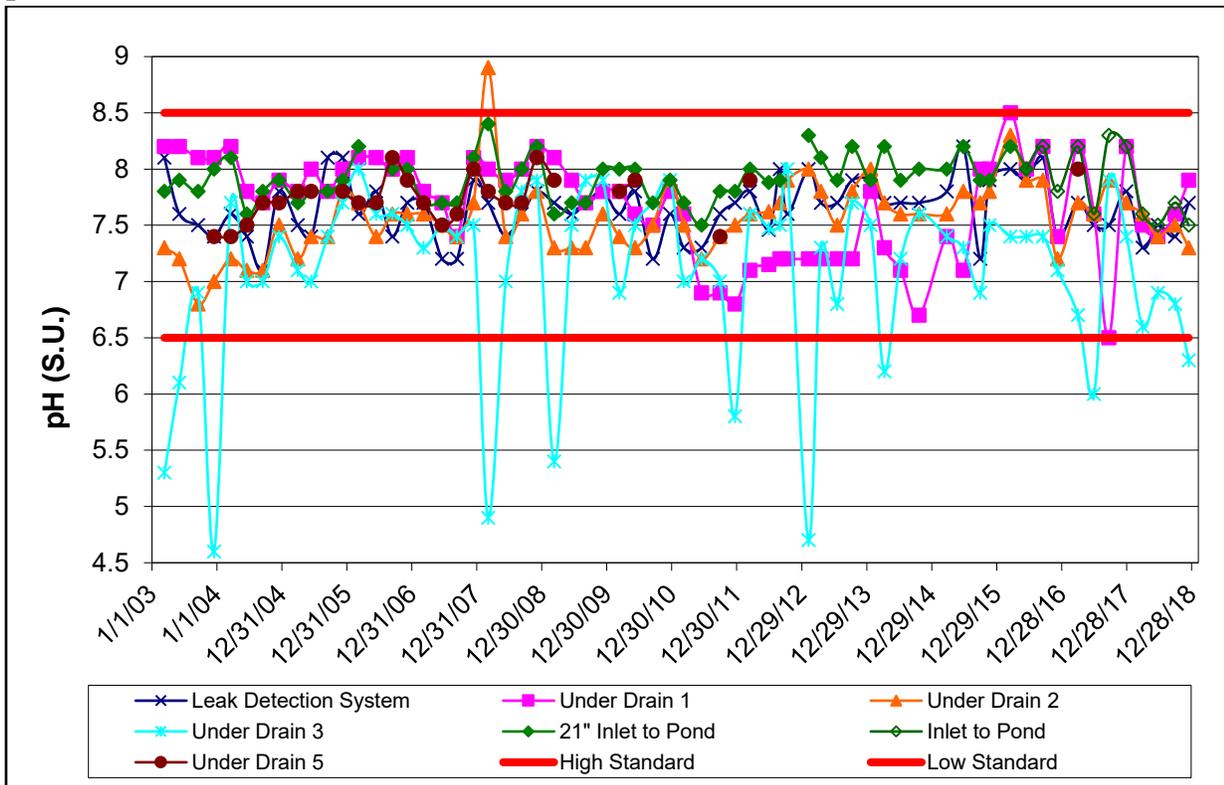


LEACHATE TIME-SERIES PLOTS, CONT.

NICKEL

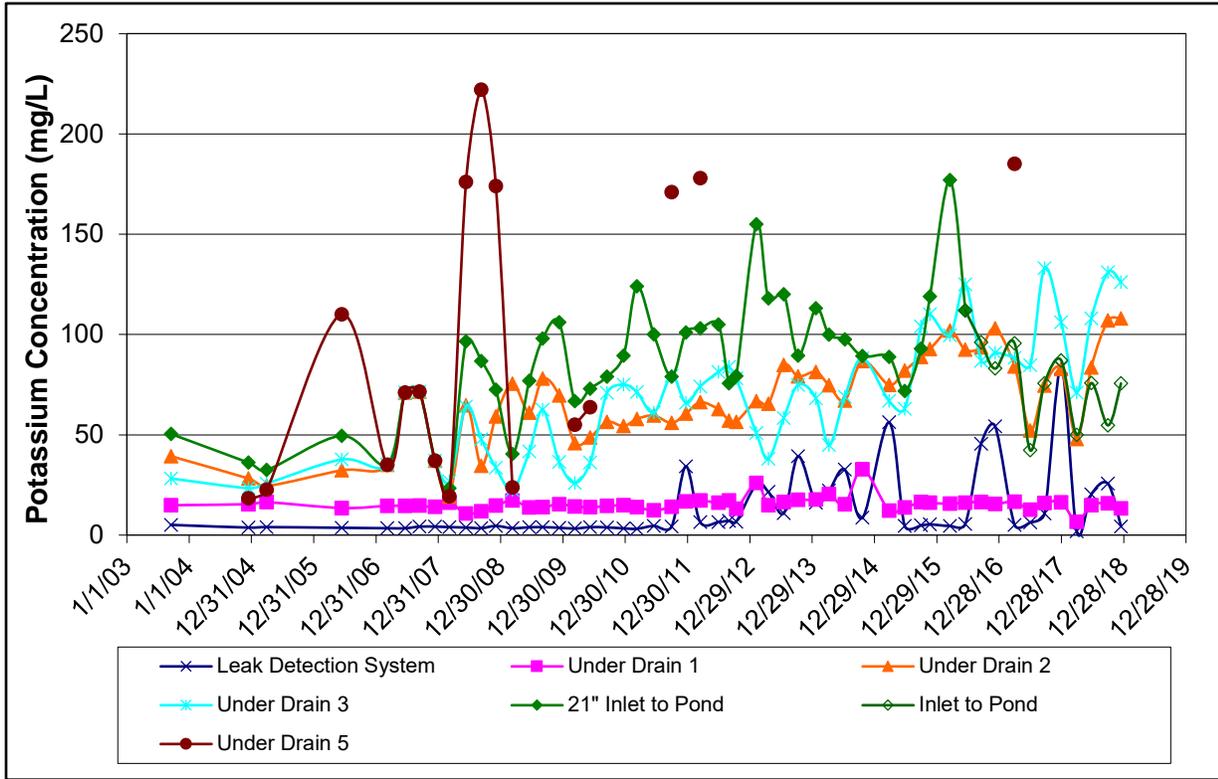


pH

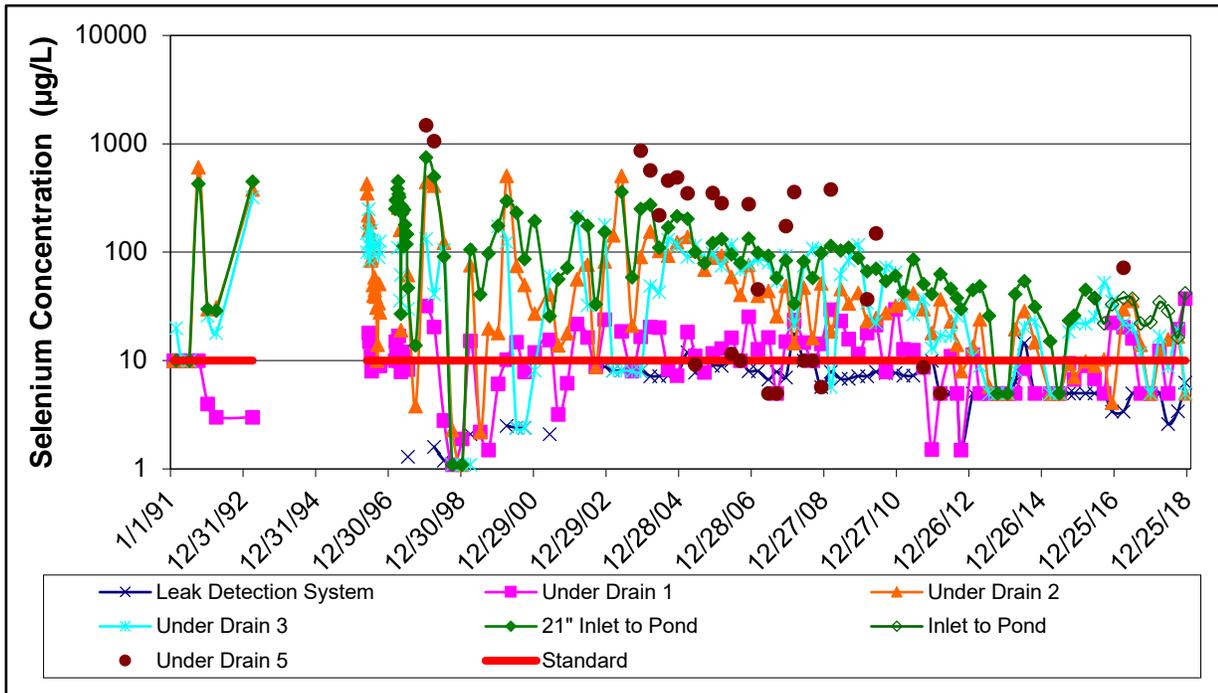


LEACHATE TIME-SERIES PLOTS, CONT.

POTASSIUM

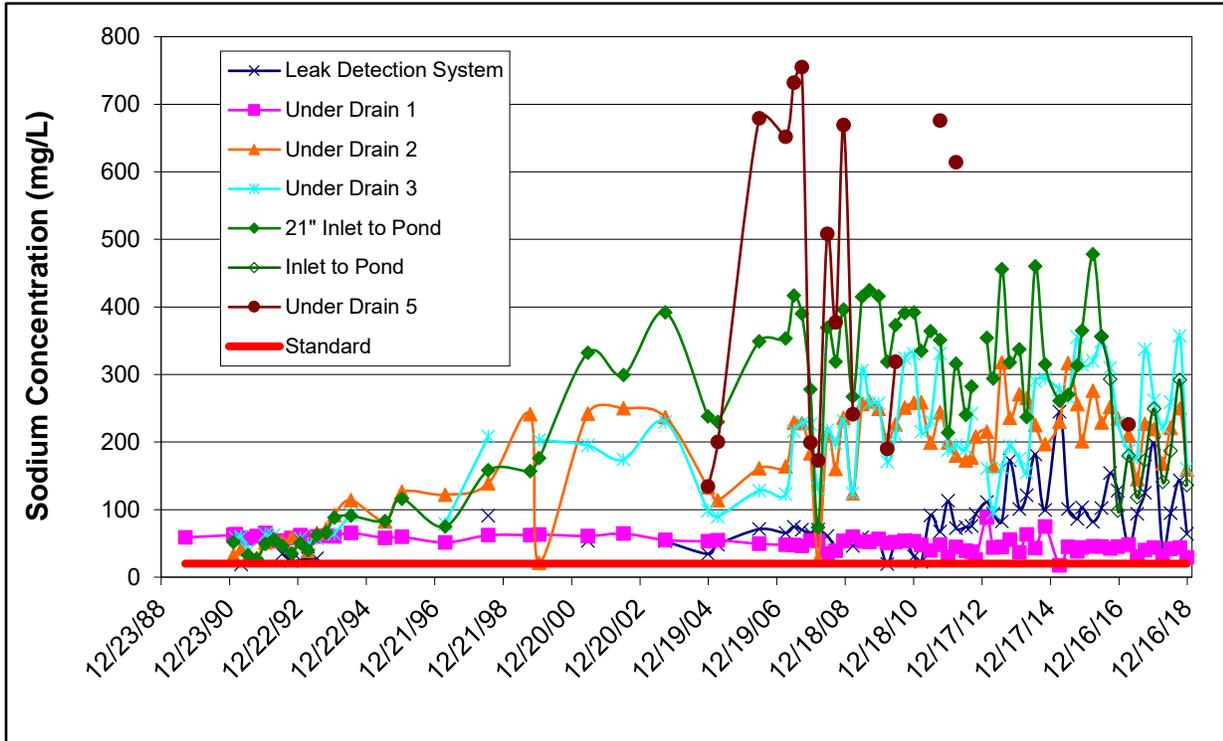


SELENIUM

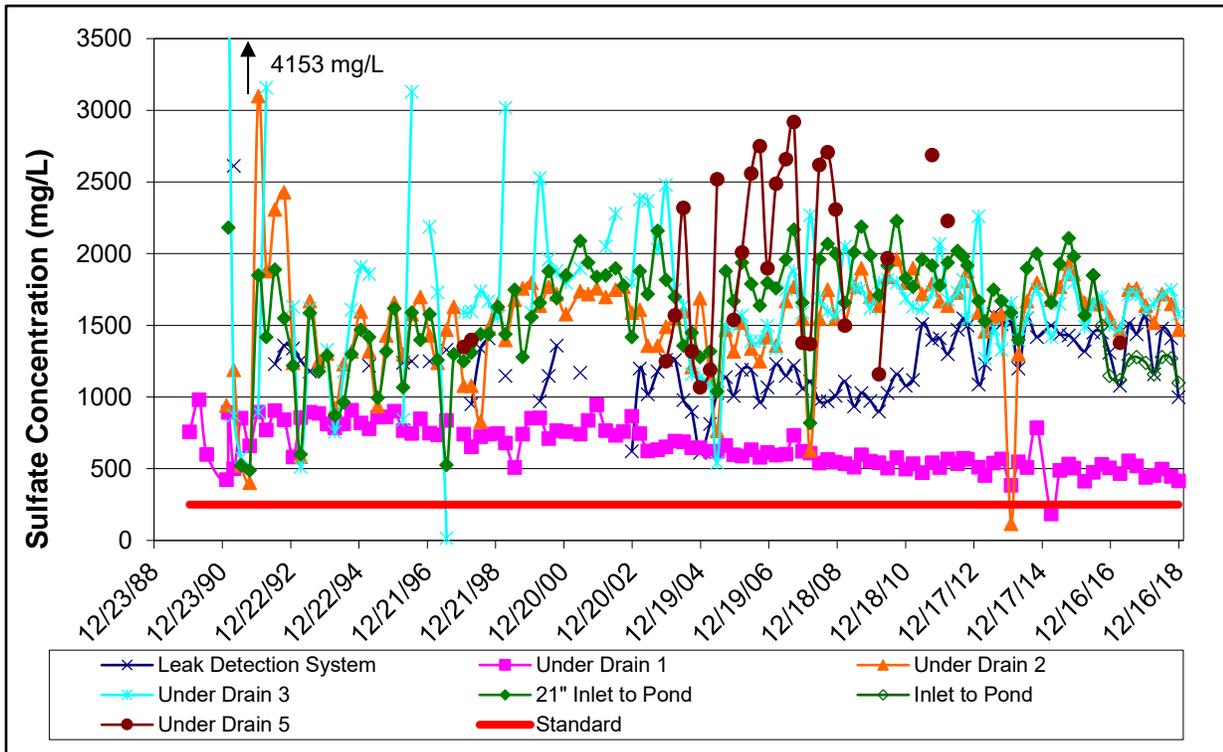


LEACHATE TIME-SERIES PLOTS, CONT.

SODIUM

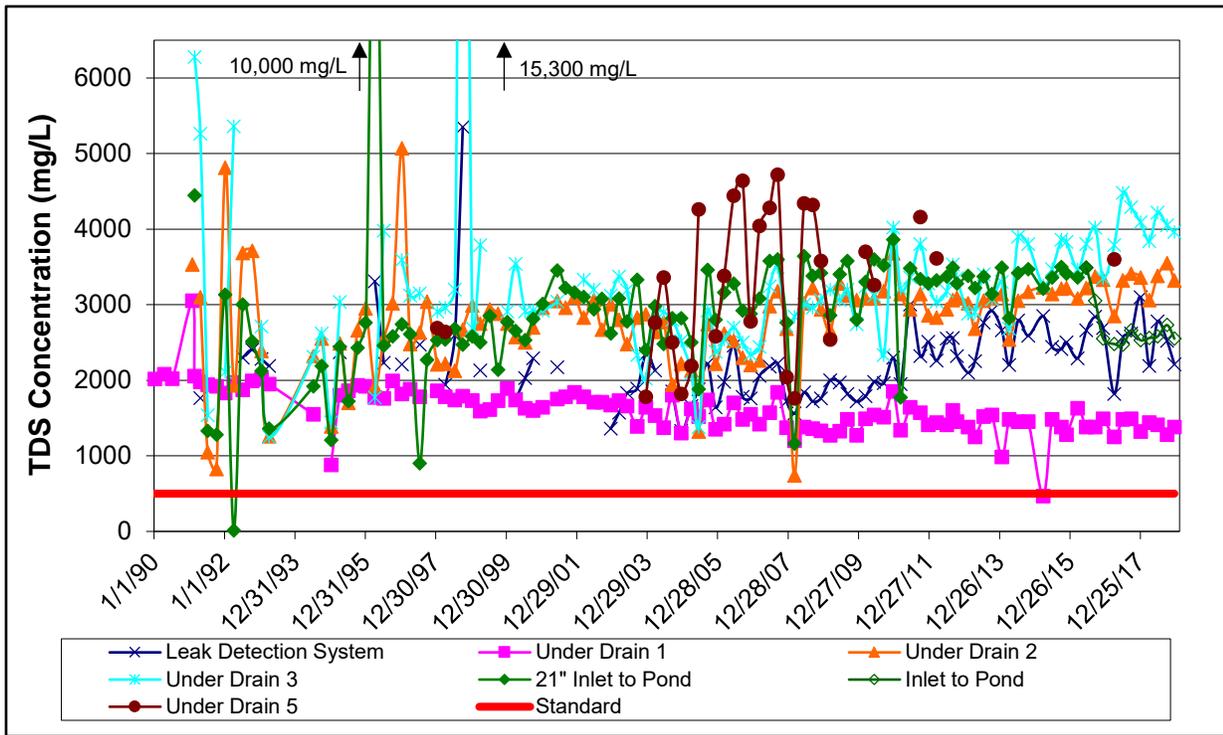


SULFATE

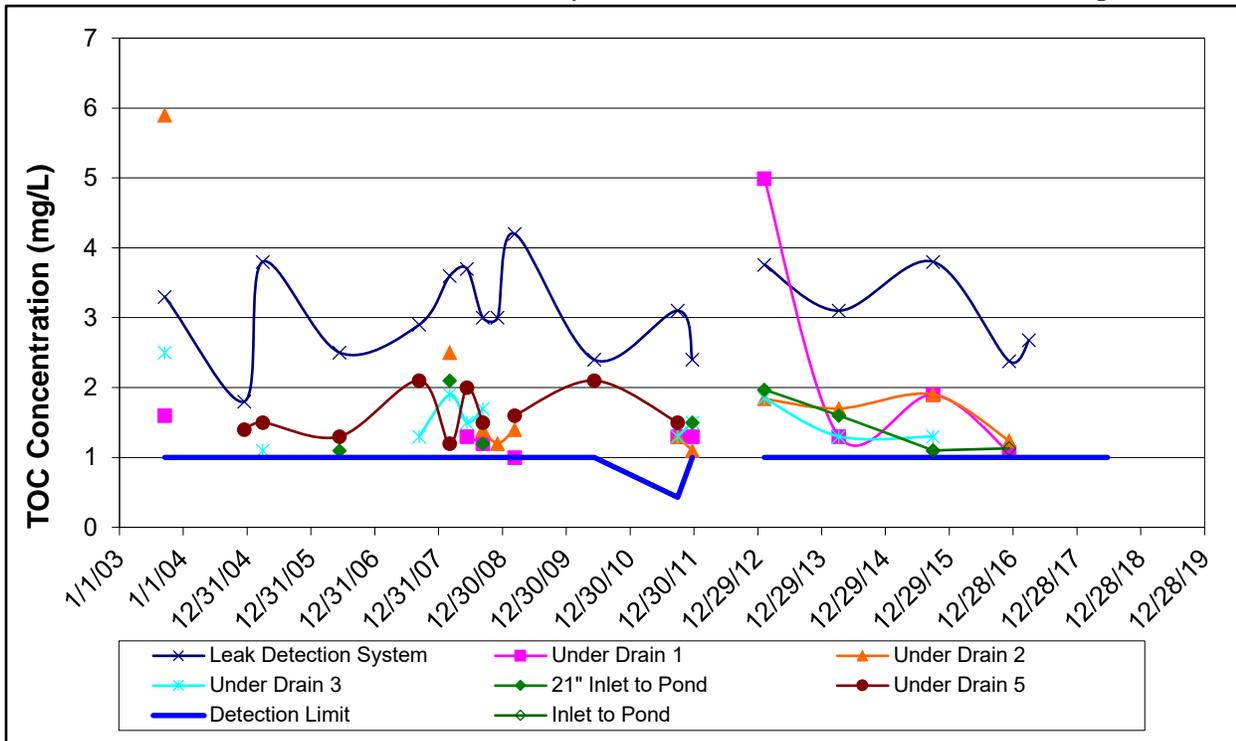


LEACHATE TIME-SERIES PLOTS, CONT.

TOTAL DISSOLVED SOLIDS

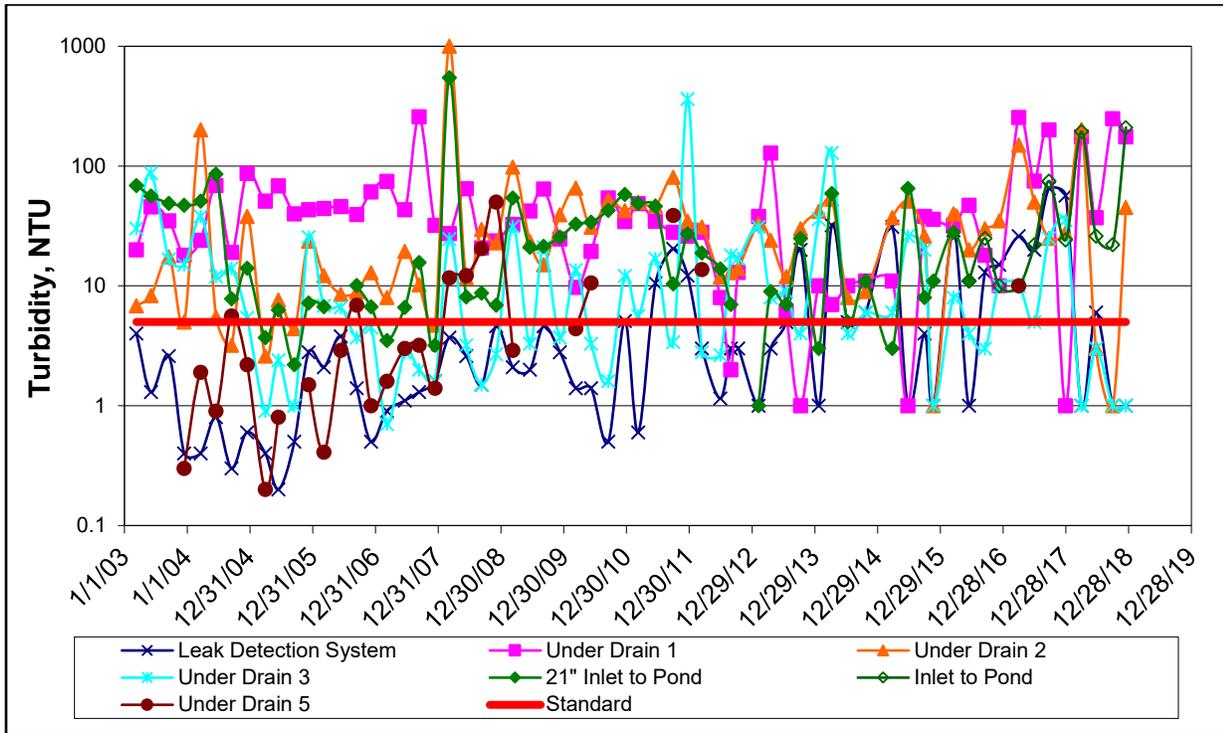


TOTAL ORGANIC CARBON (Note: Only data above detection is included in this plot)

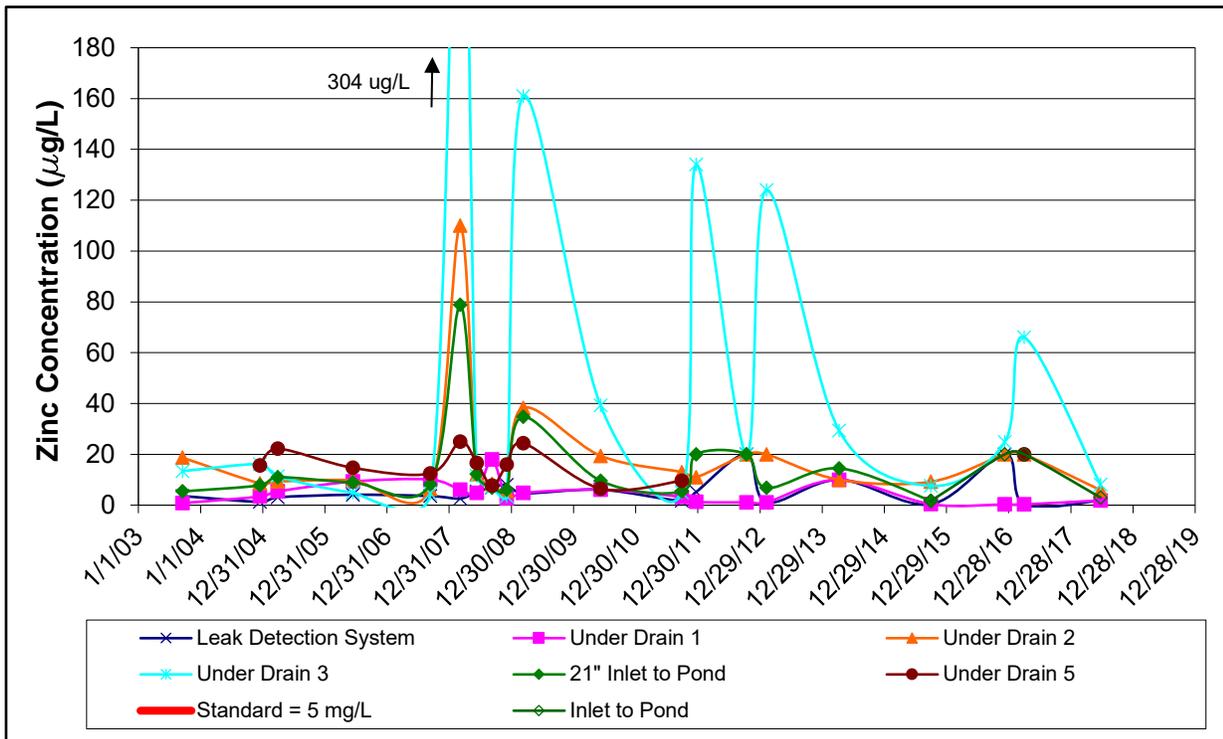


LEACHATE TIME-SERIES PLOTS, CONT.

TURBIDITY



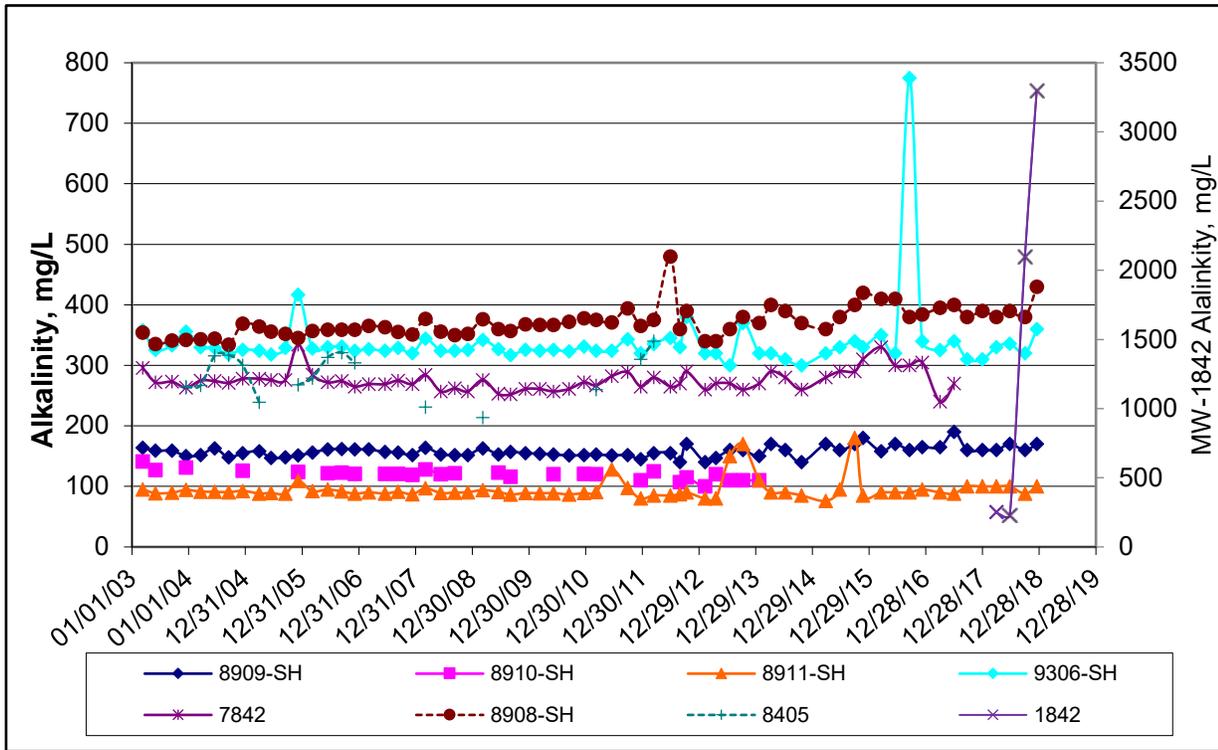
ZINC



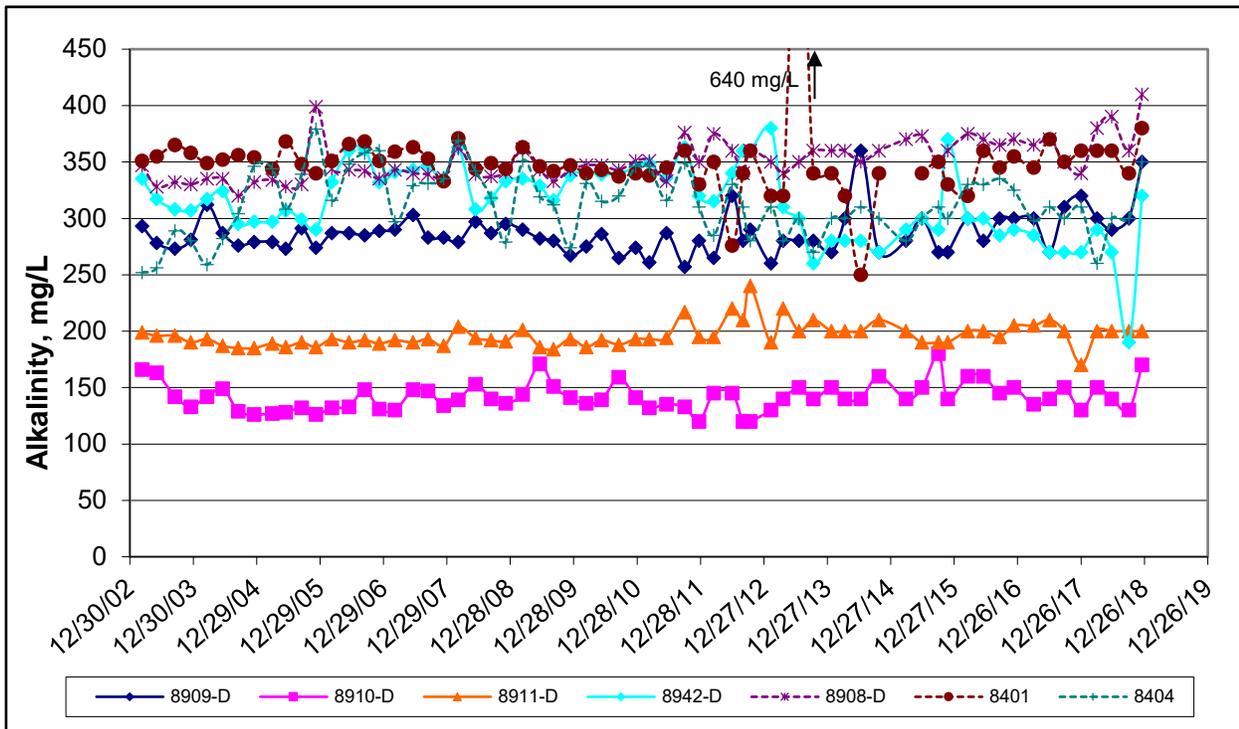
MONITORING WELL TIME-SERIES PLOTS

ALKALINITY

GLACIAL TILL

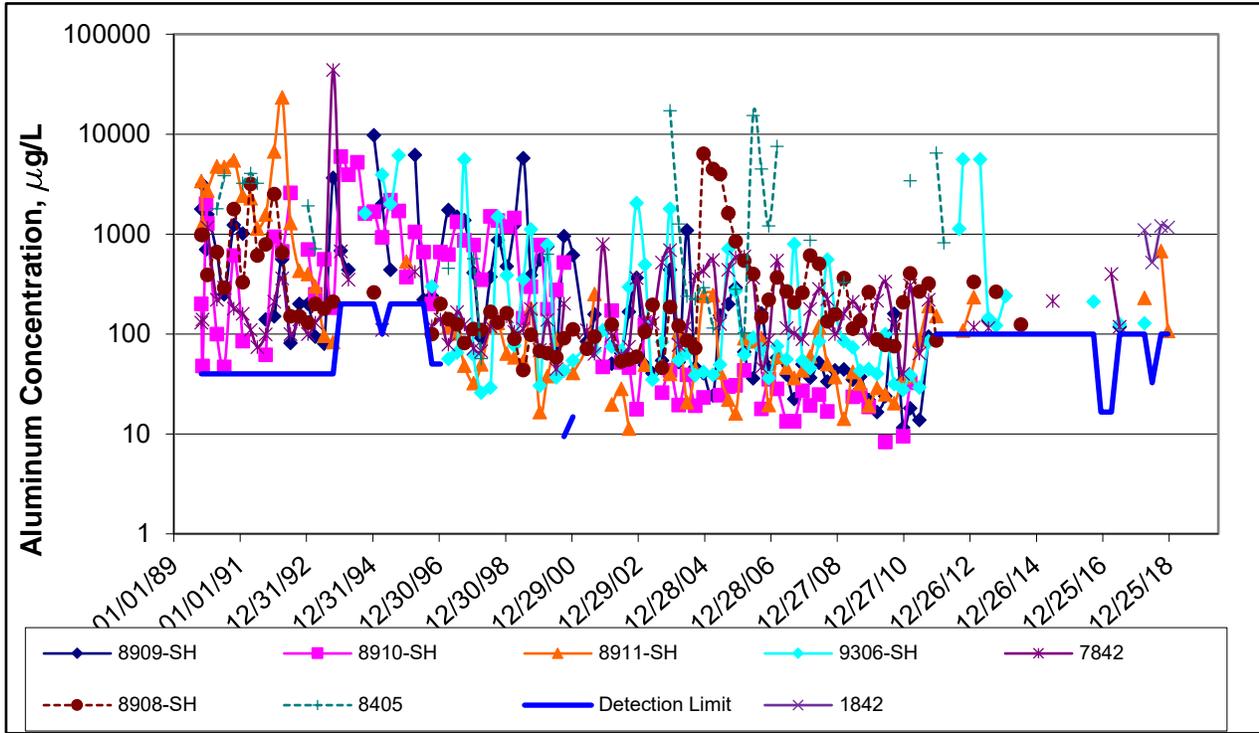


BEDROCK

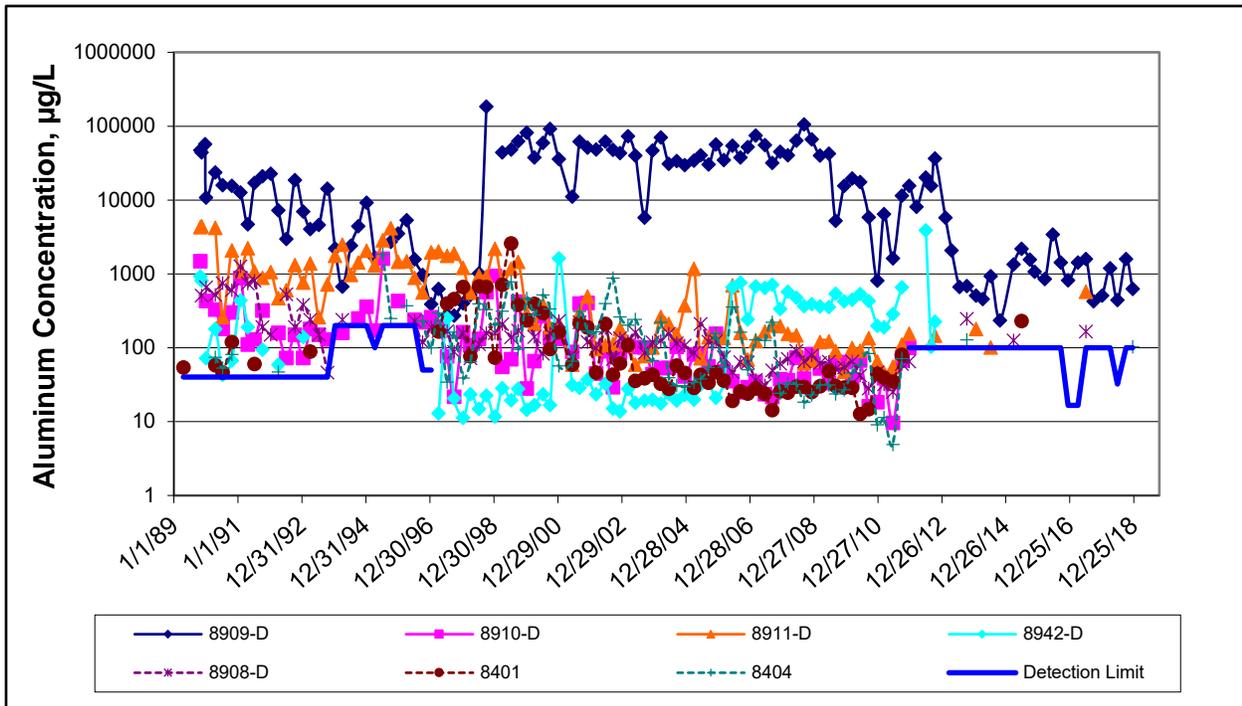


MONITORING WELL TIME-SERIES PLOTS, CONT.
ALUMINUM

GLACIAL TILL



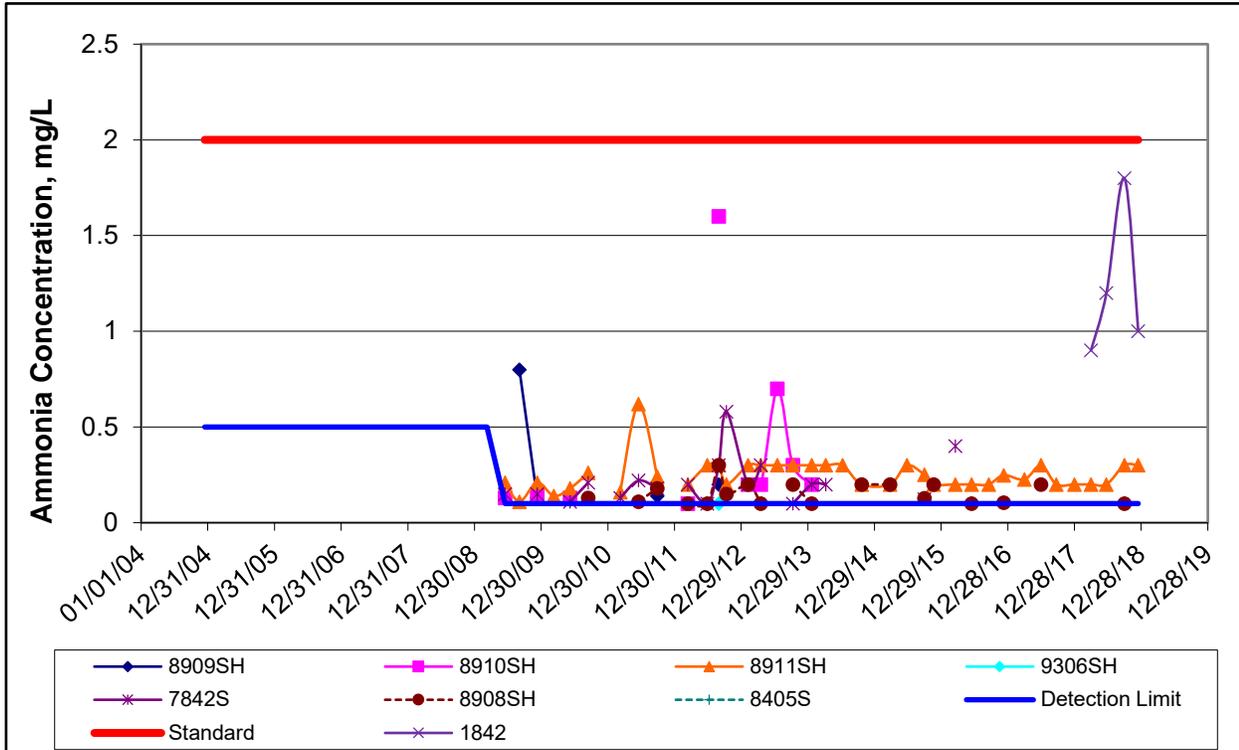
BEDROCK



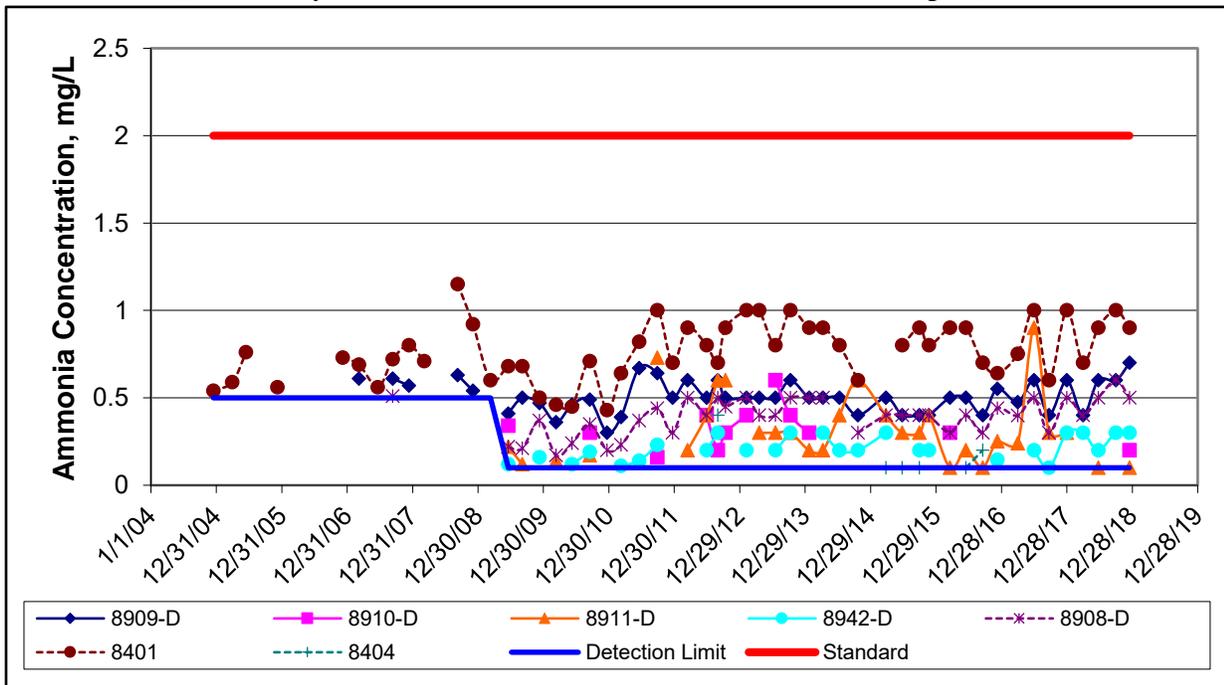
MONITORING WELL TIME-SERIES PLOTS, CONT.

AMMONIA

GLACIAL TILL (Note: Only data above detection has been included in this plot)

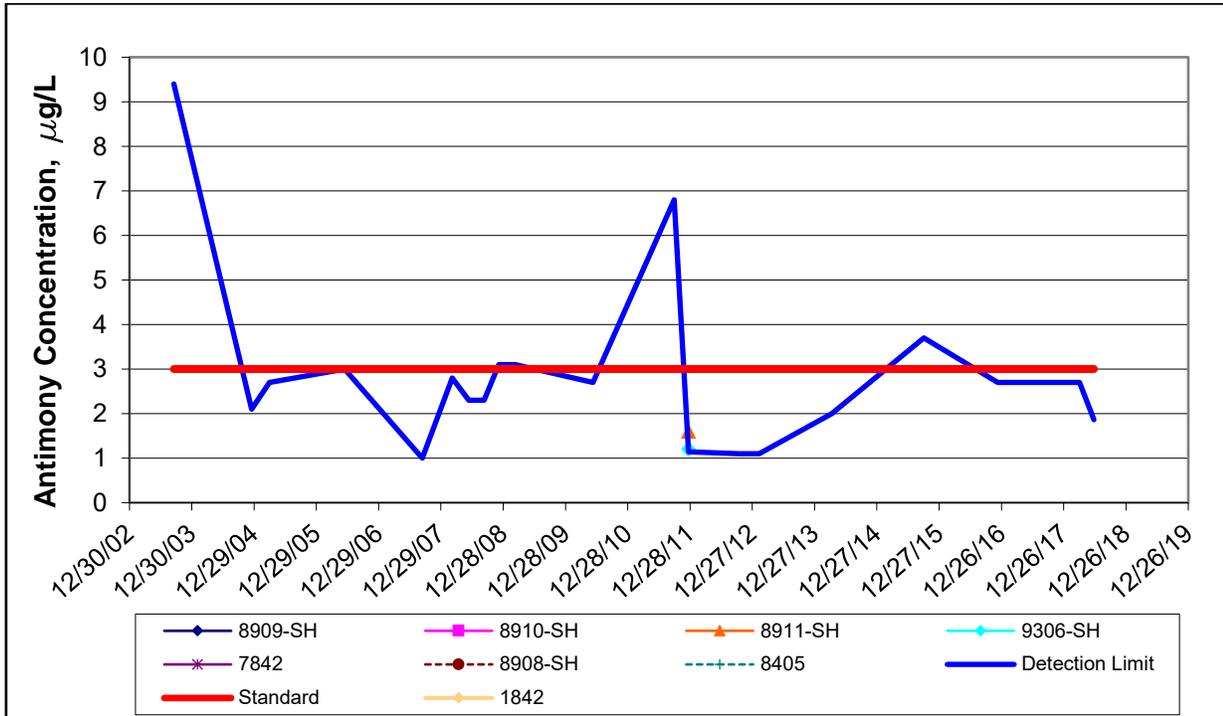


BEDROCK (Note: Only data above detection has been included in this plot)

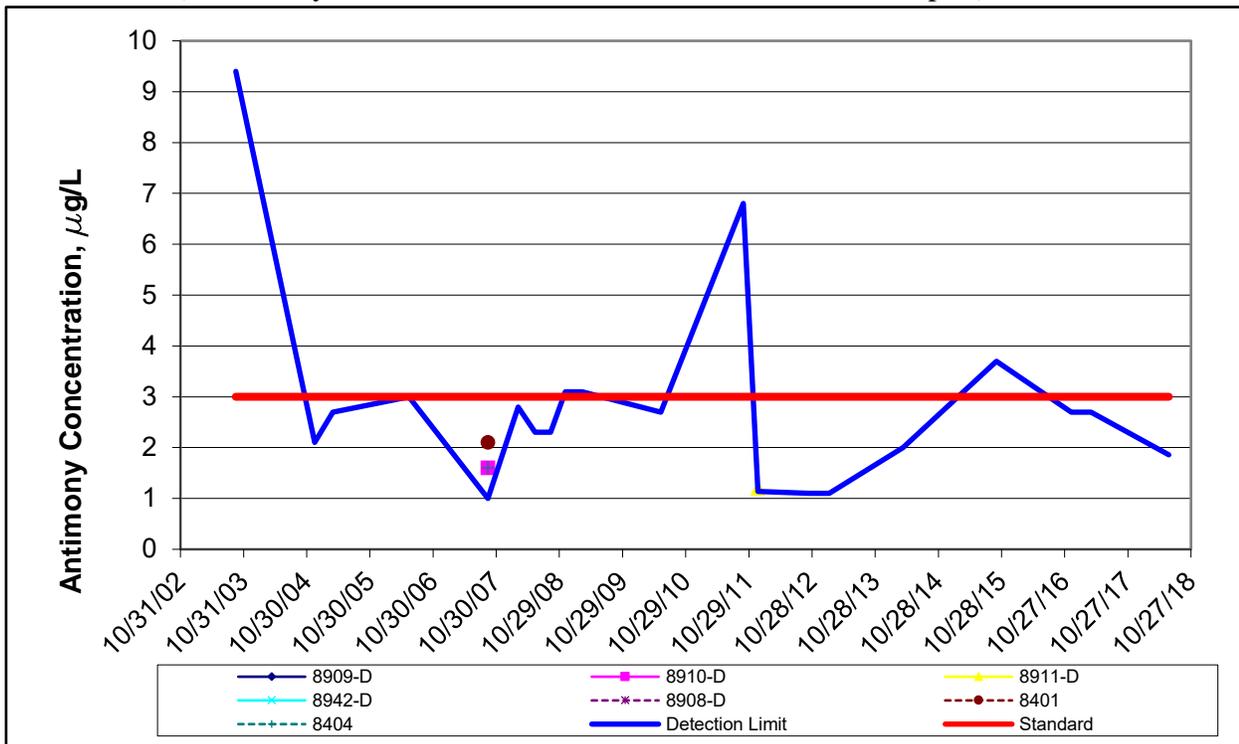


MONITORING WELL TIME-SERIES PLOTS, CONT.
ANTIMONY

GLACIAL TILL (Note: Only data above detection has been included in this plot)



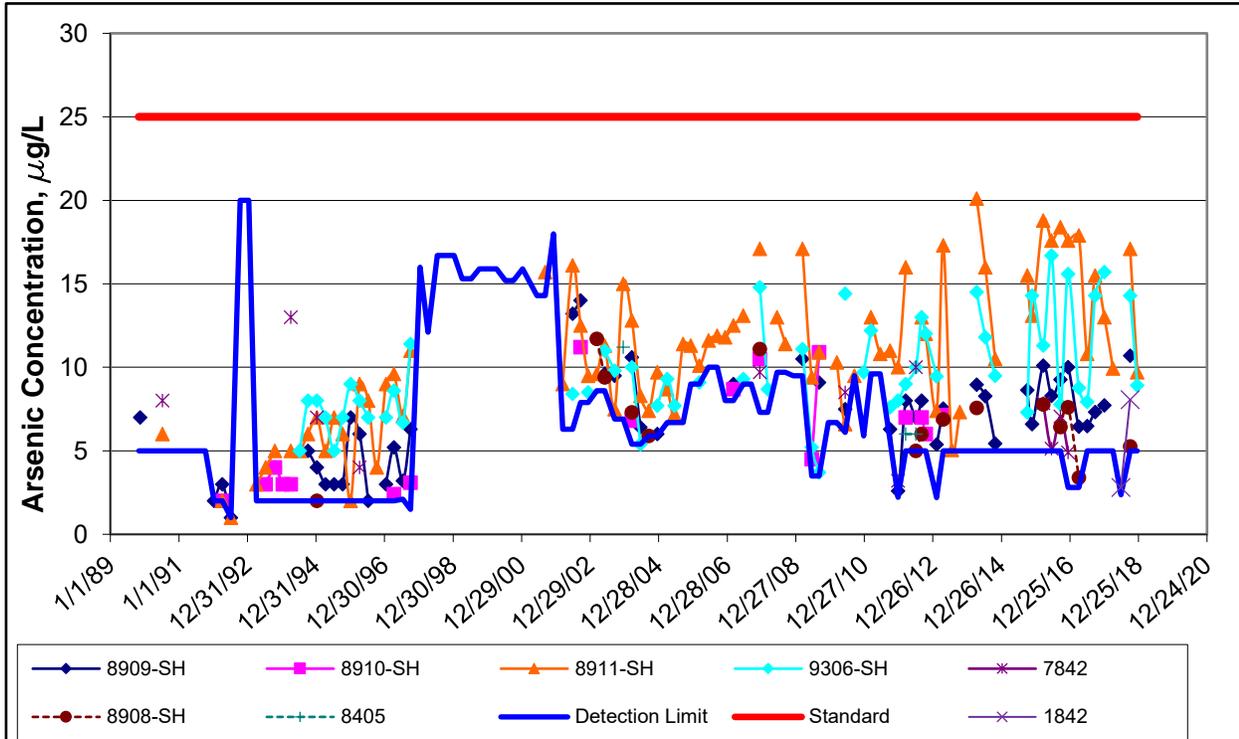
BEDROCK (Note: Only data above detection has been included in this plot)



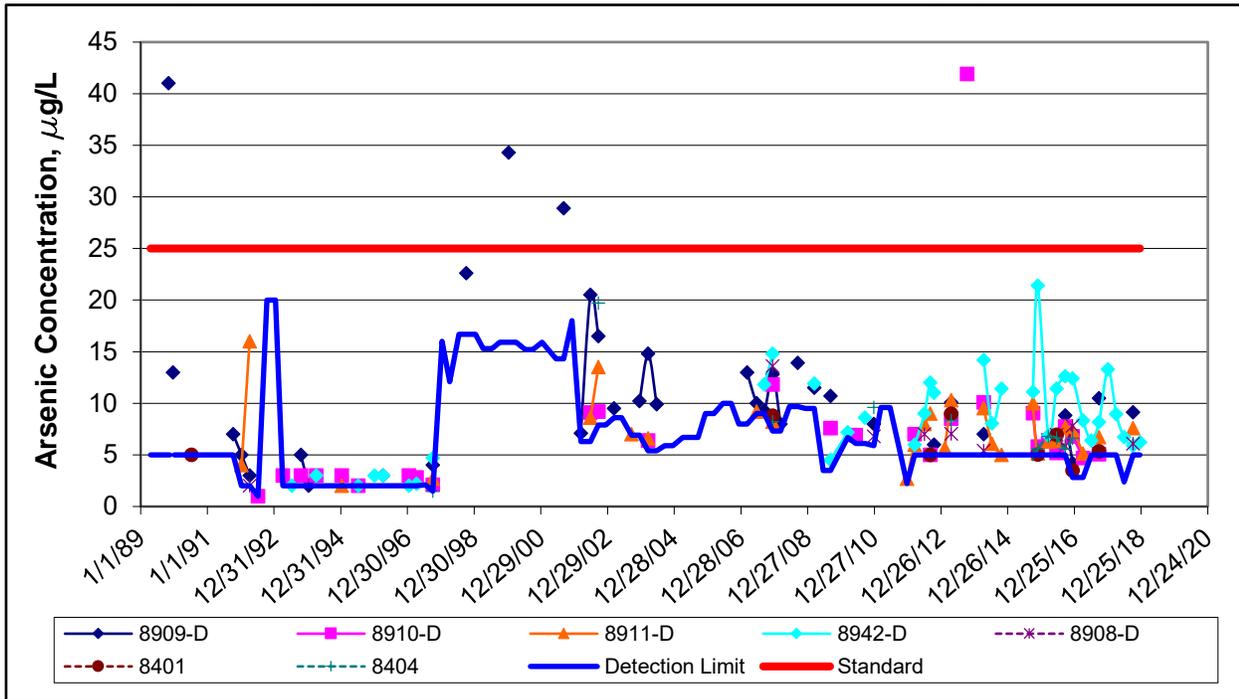
MONITORING WELL TIME-SERIES PLOTS, CONT.

ARSENIC

GLACIAL TILL (Note: Only data above detection has been included in this plot)



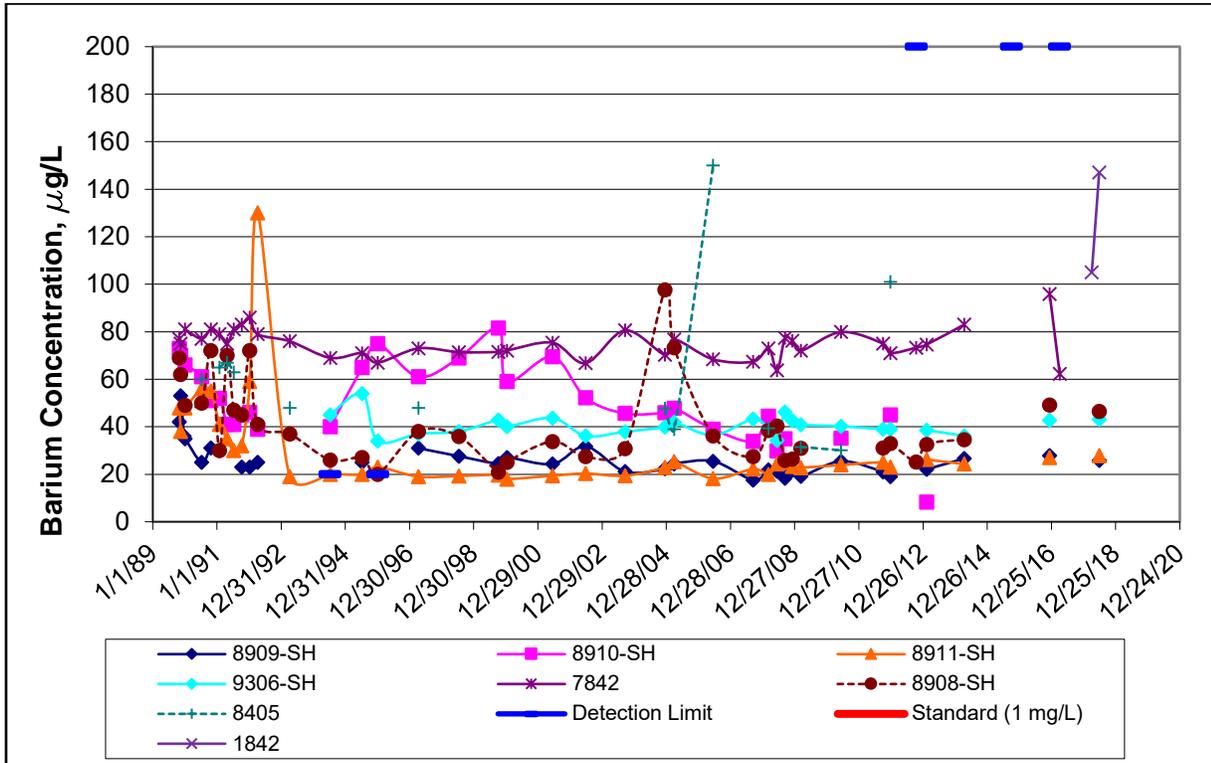
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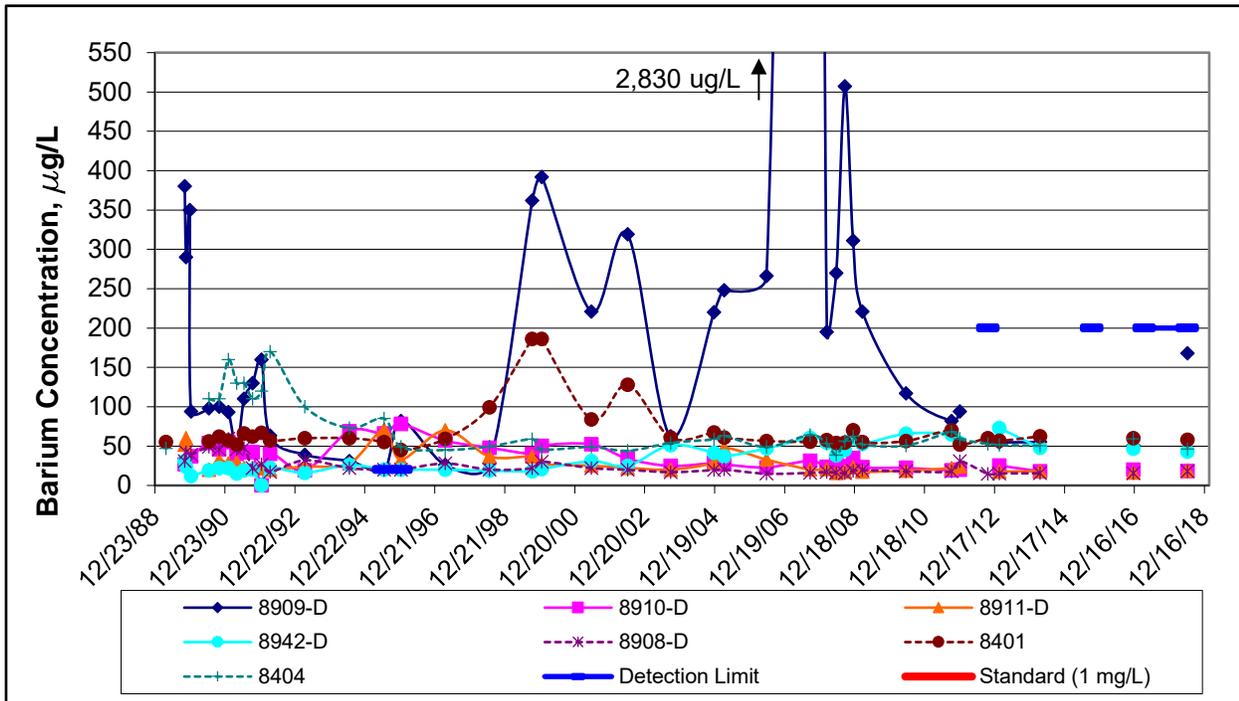
MONITORING WELL TIME-SERIES PLOTS, CONT.

BARIUM

GLACIAL TILL



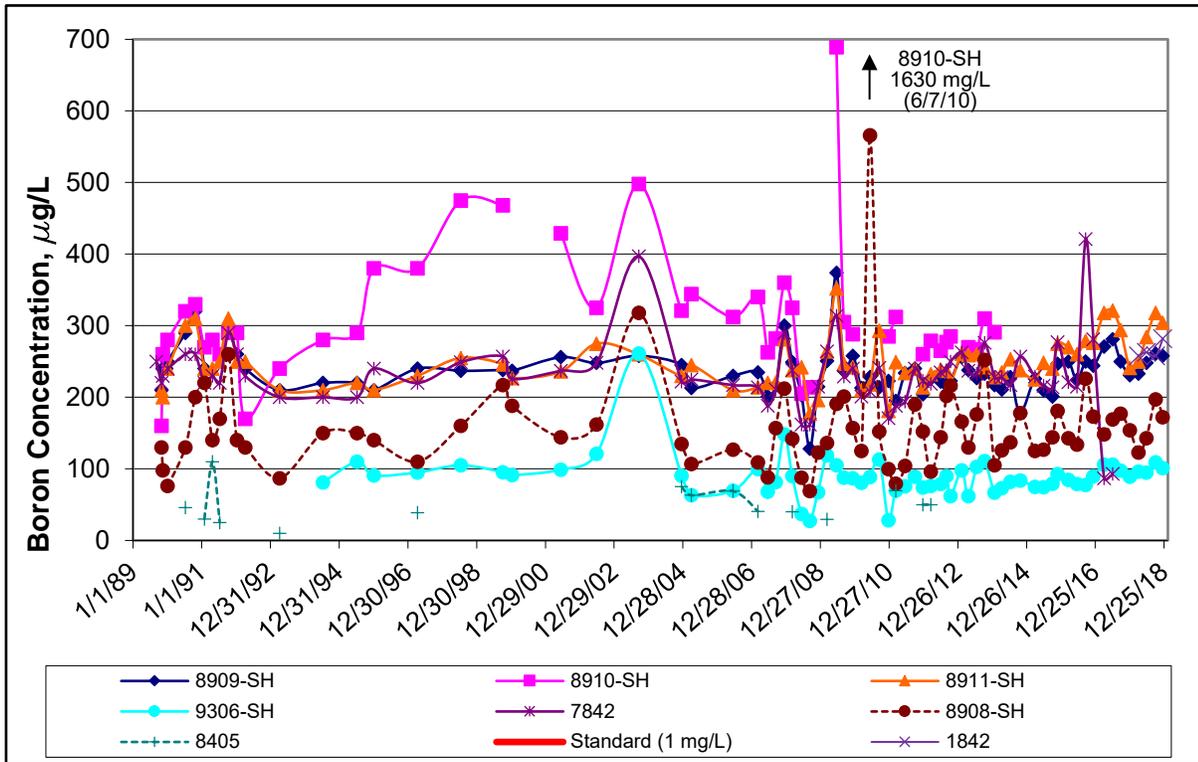
BEDROCK



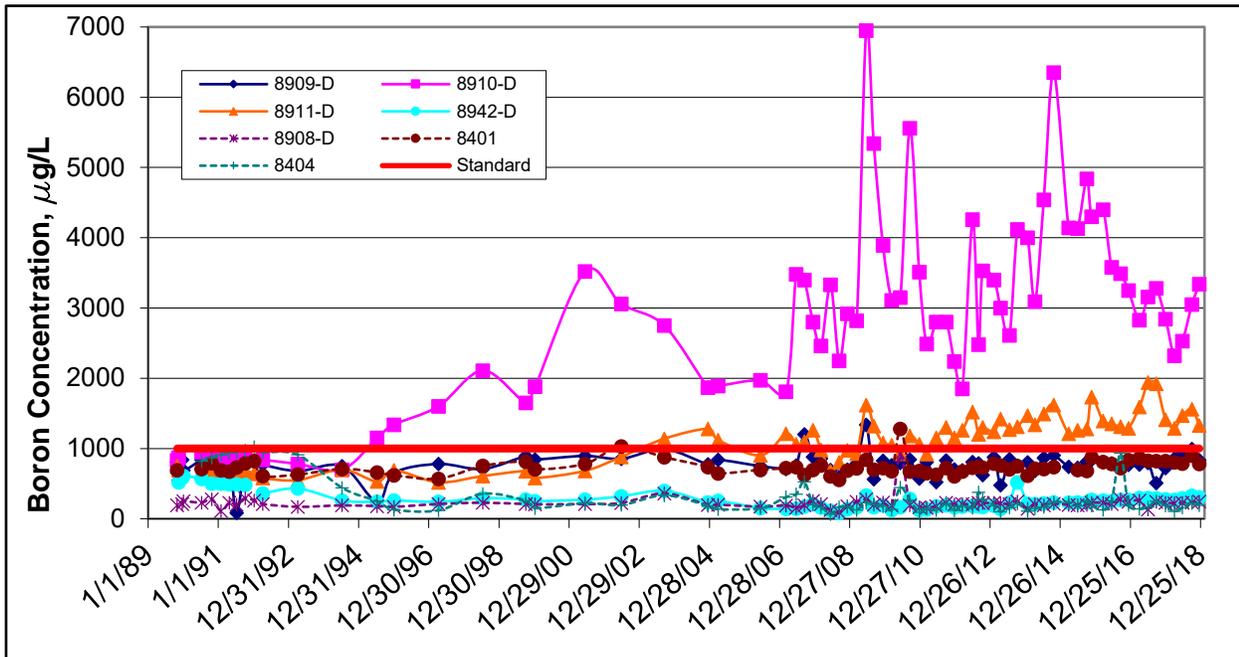
MONITORING WELL TIME-SERIES PLOTS, CONT.

BORON

GLACIAL TILL



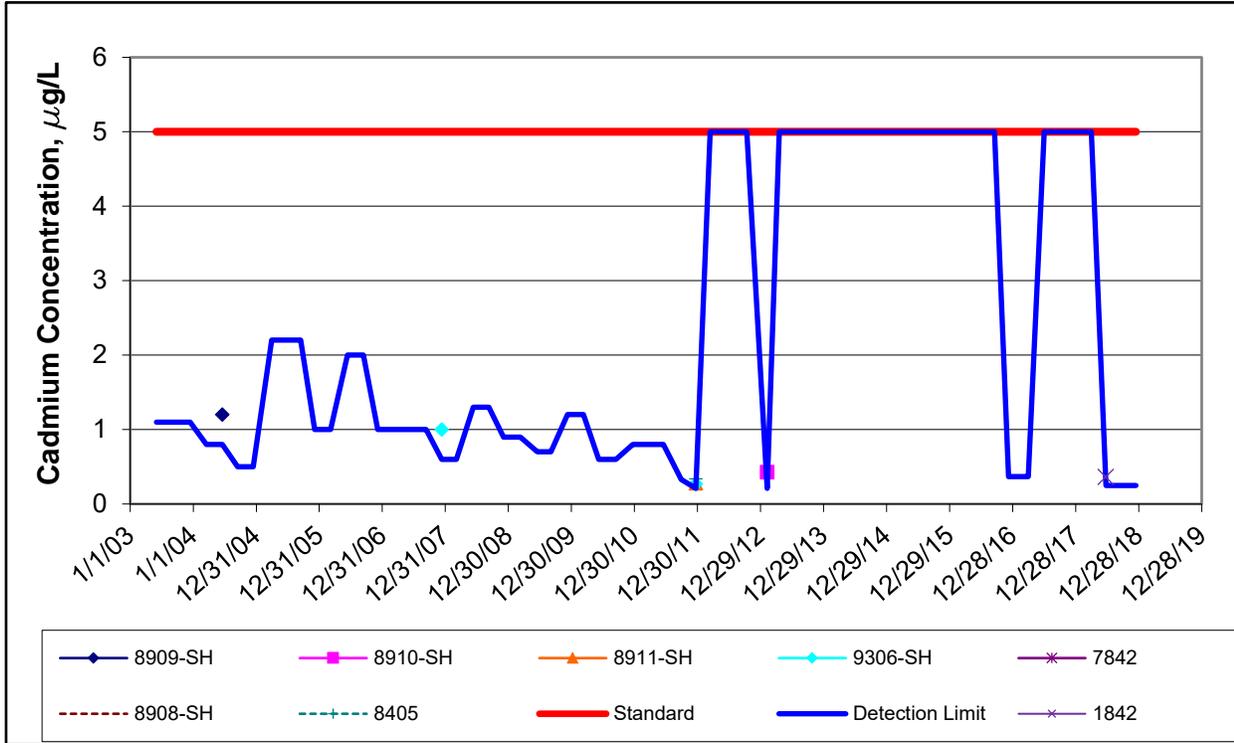
BEDROCK



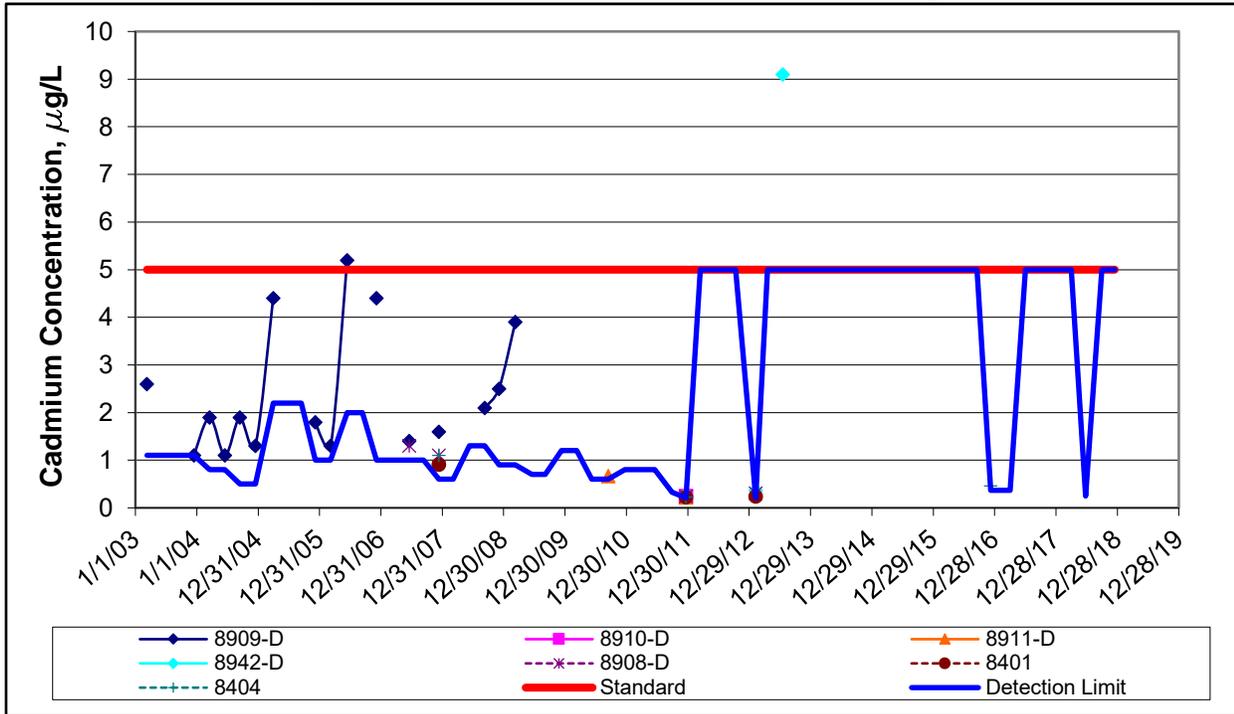
MONITORING WELL TIME-SERIES PLOTS, CONT.

CADMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



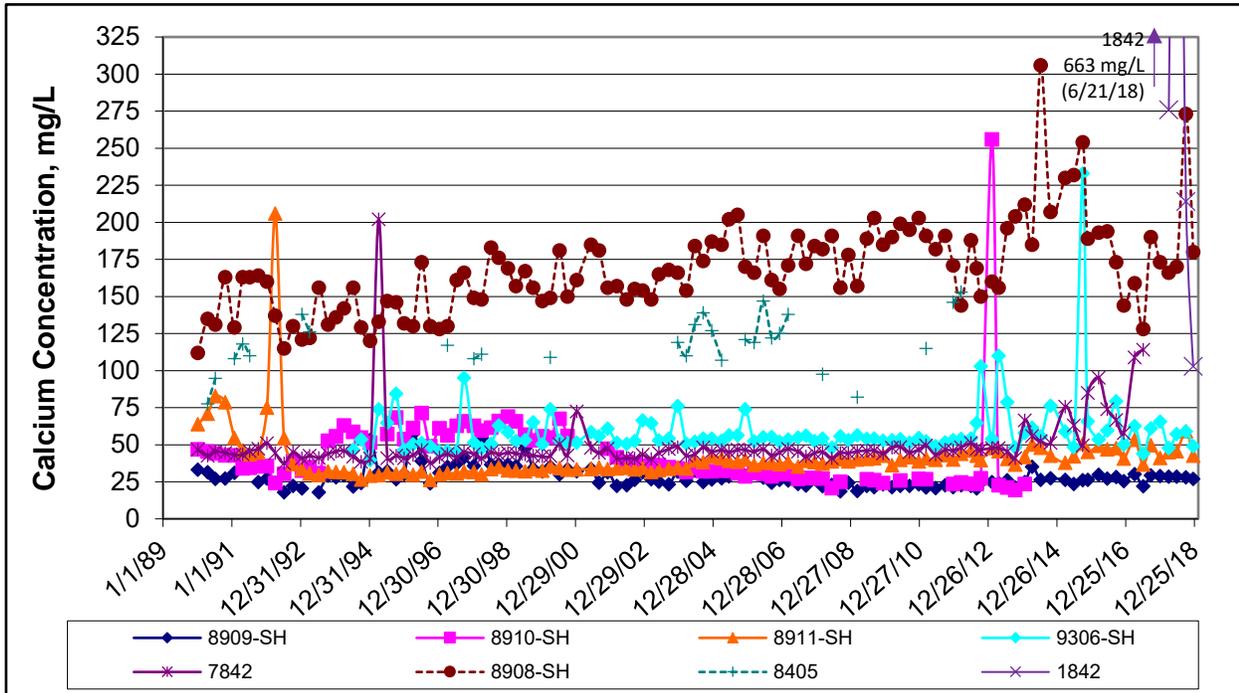
BEDROCK (Note: Only data above detection has been included in this plot)



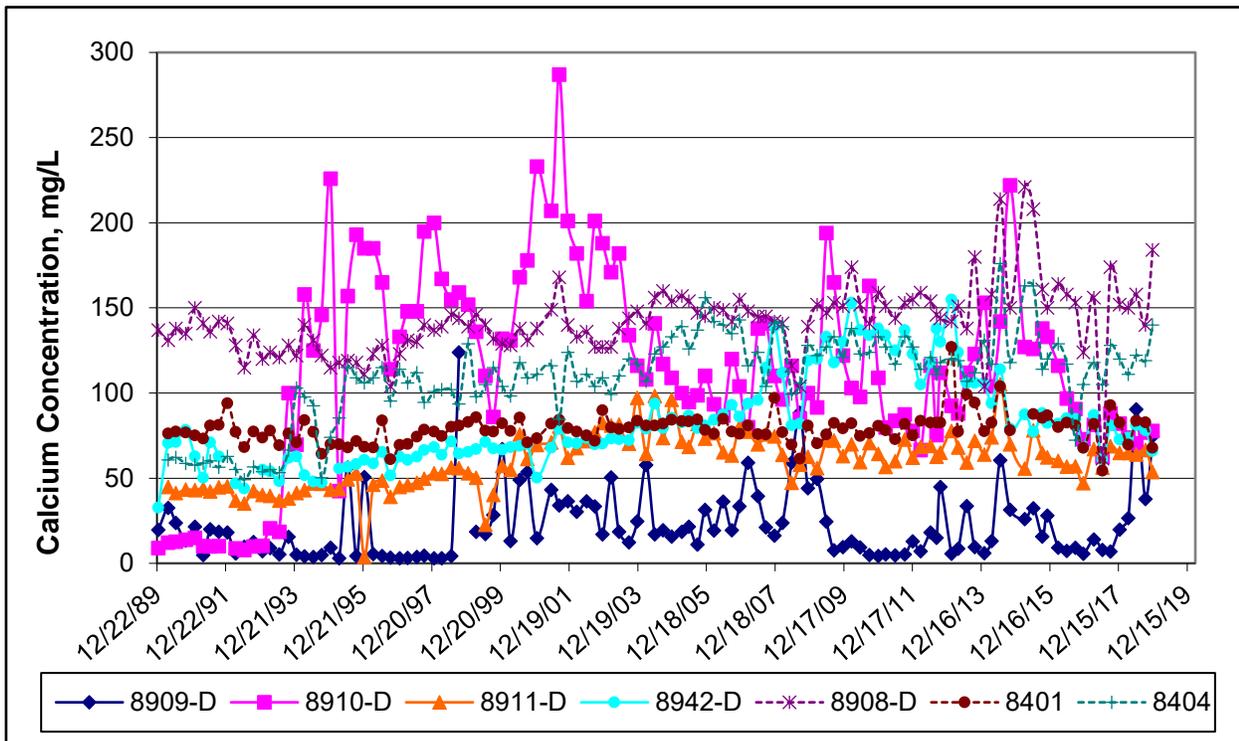
MONITORING WELL TIME-SERIES PLOTS, CONT.

CALCIUM

GLACIAL TILL

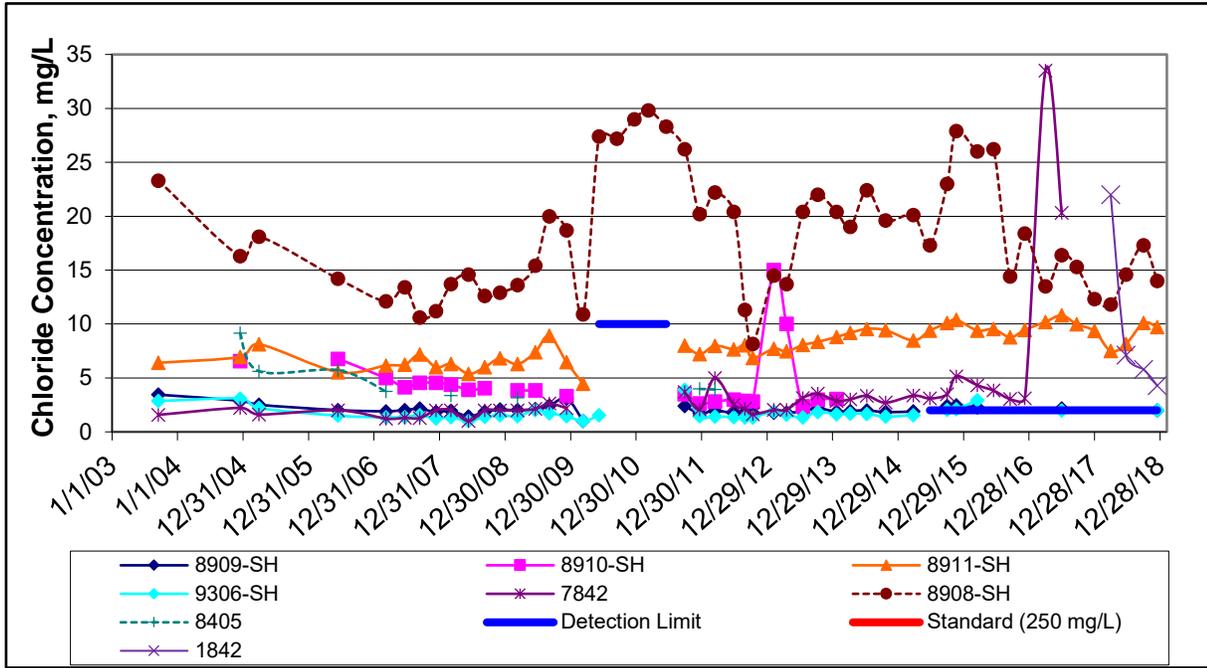


BEDROCK

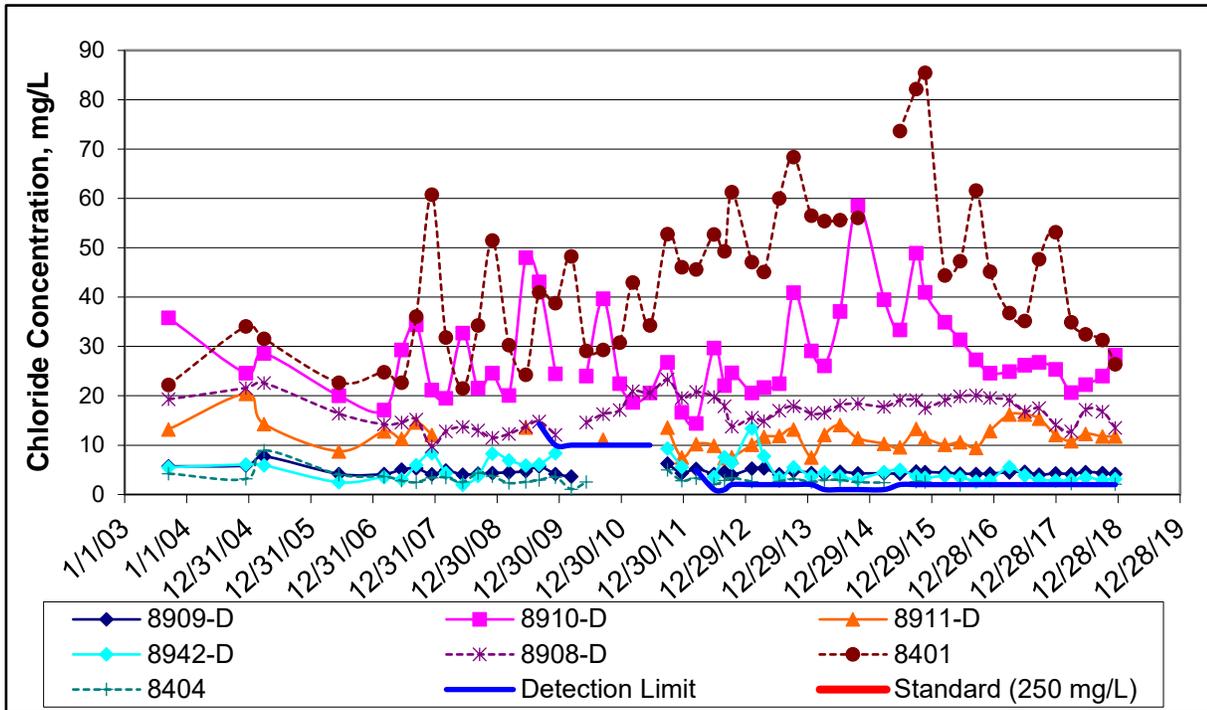


MONITORING WELL TIME-SERIES PLOTS, CONT.
CHLORIDE

GLACIAL TILL

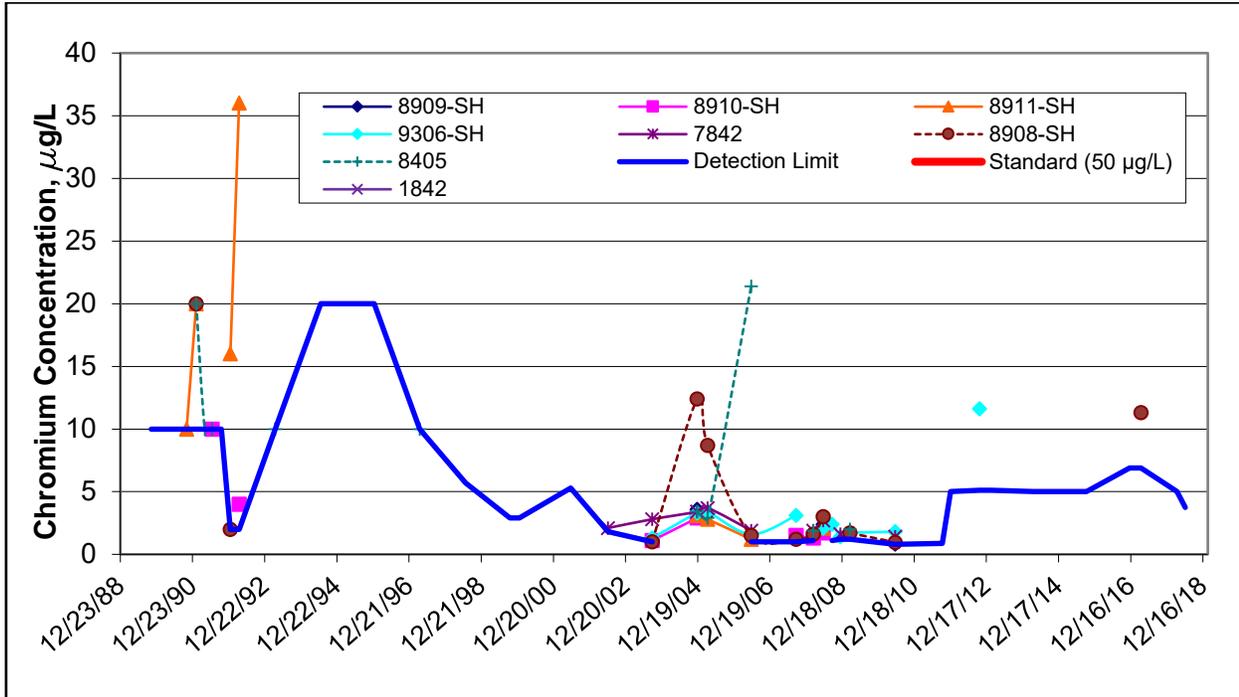


BEDROCK

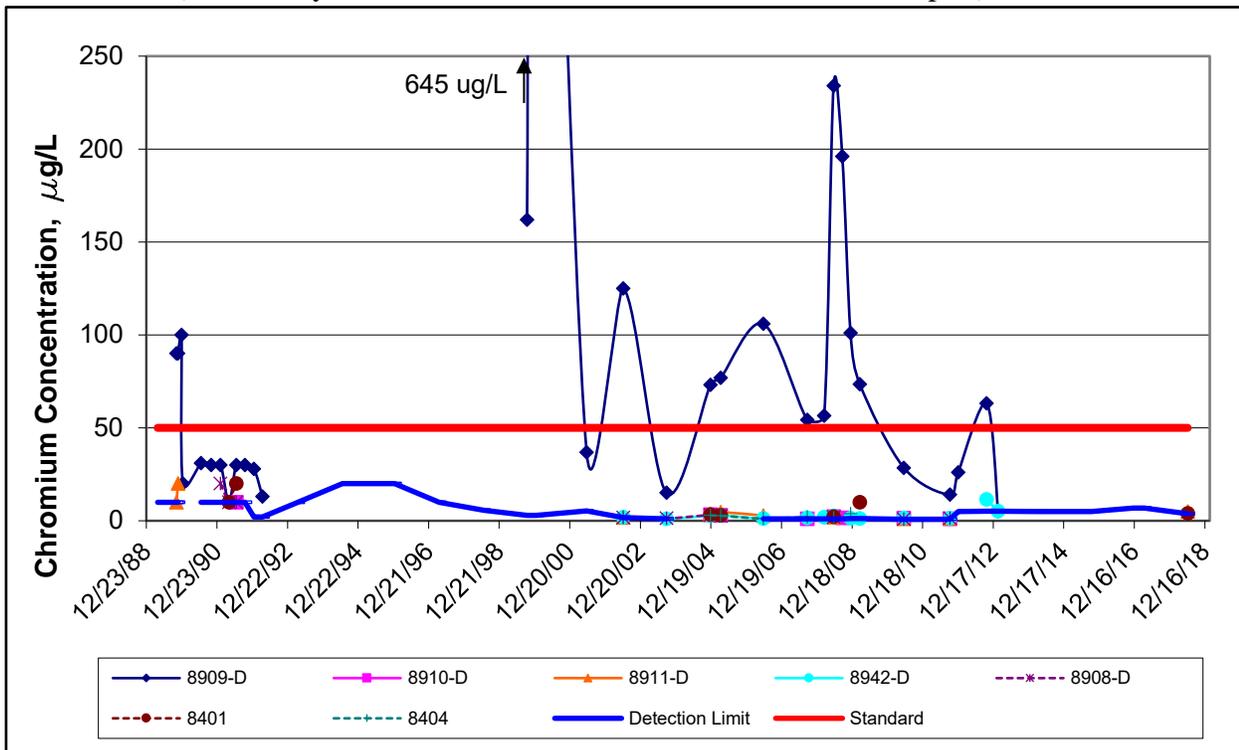


MONITORING WELL TIME-SERIES PLOTS, CONT.
CHROMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)

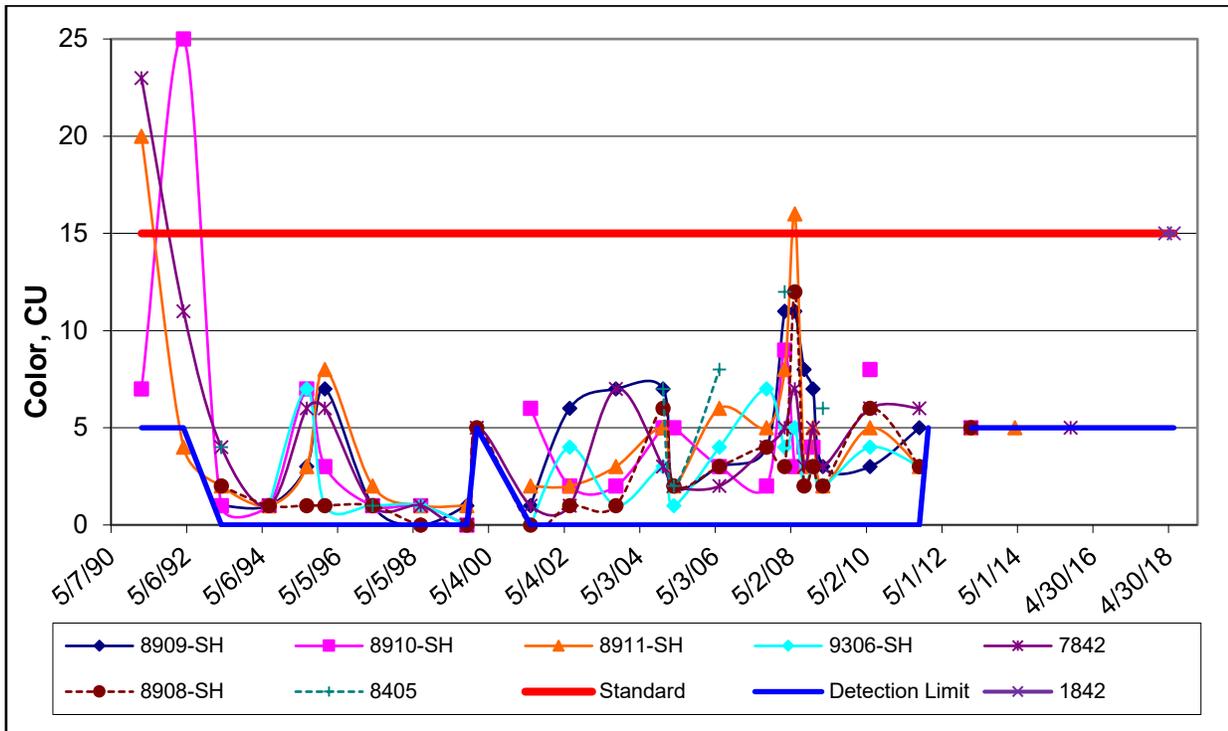


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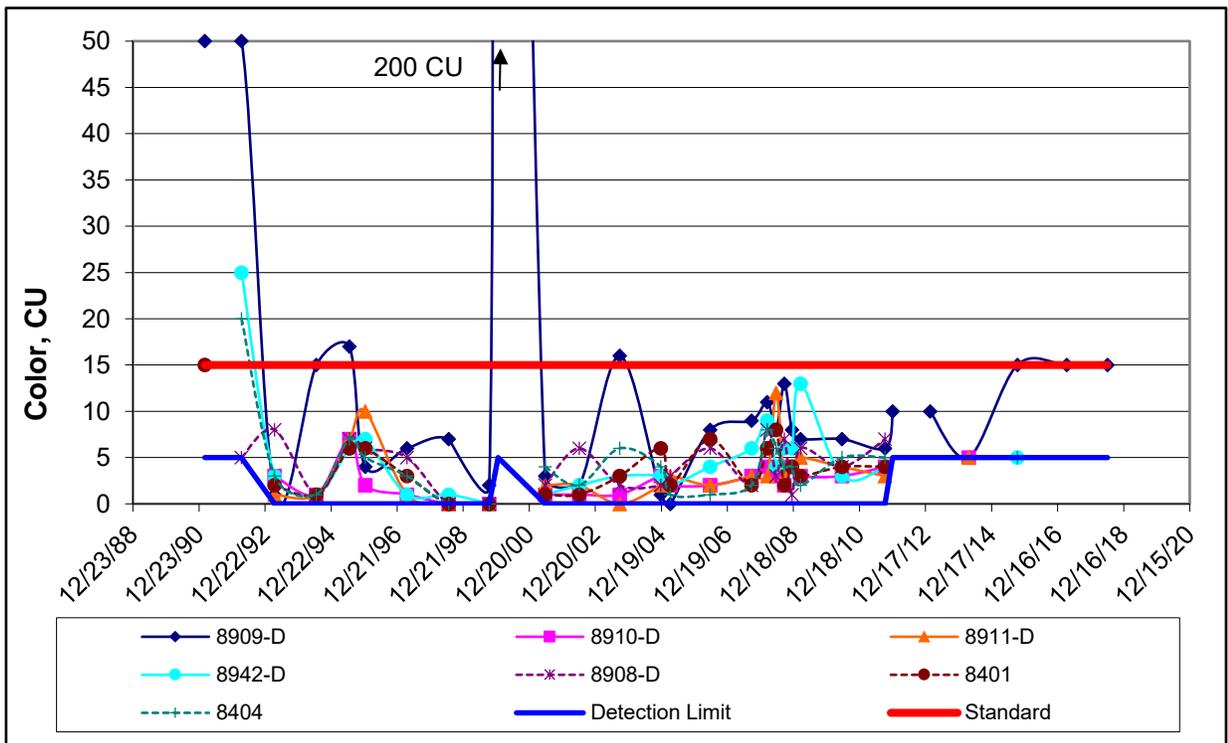


MONITORING WELL TIME-SERIES PLOTS, CONT.
COLOR

GLACIAL TILL

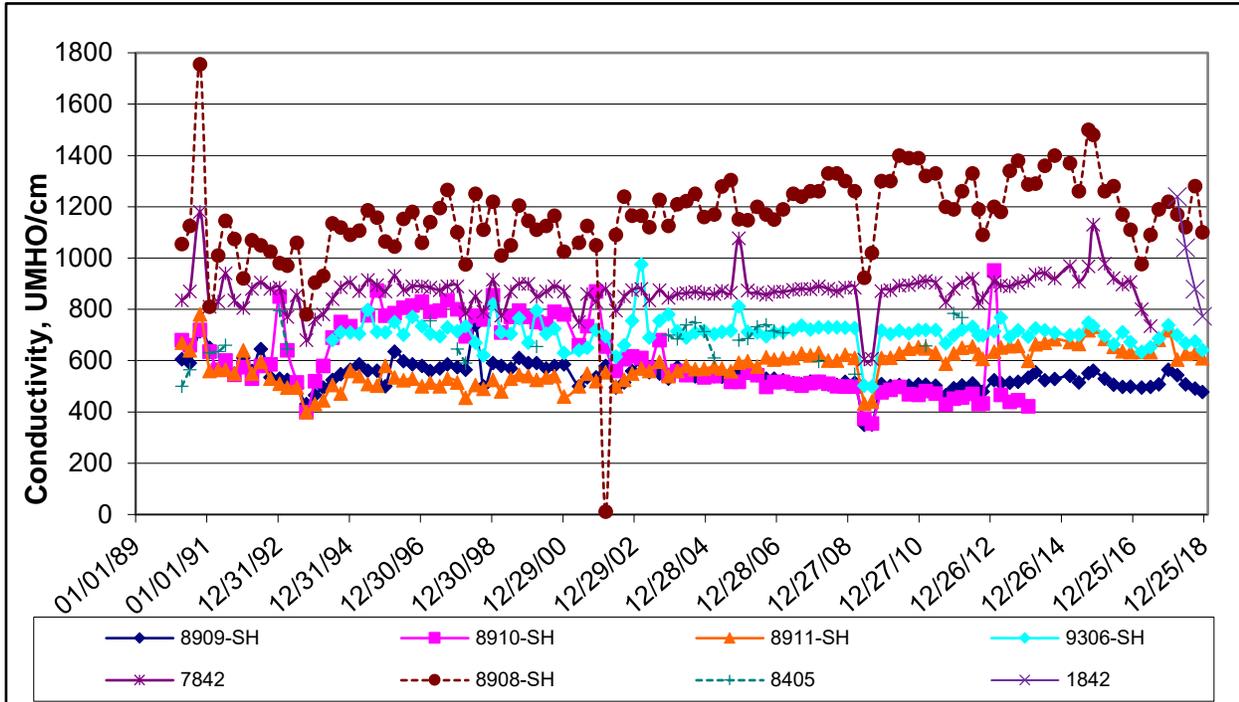


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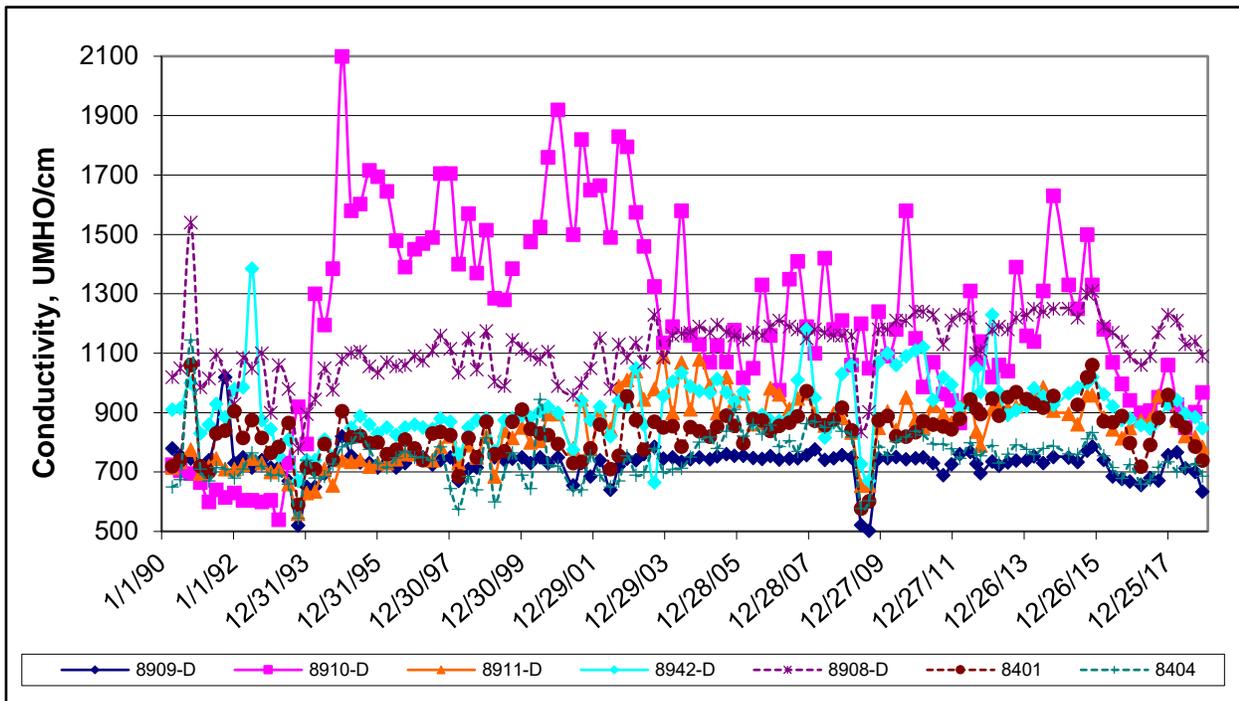


MONITORING WELL TIME-SERIES PLOTS, CONT.
CONDUCTIVITY

GLACIAL TILL

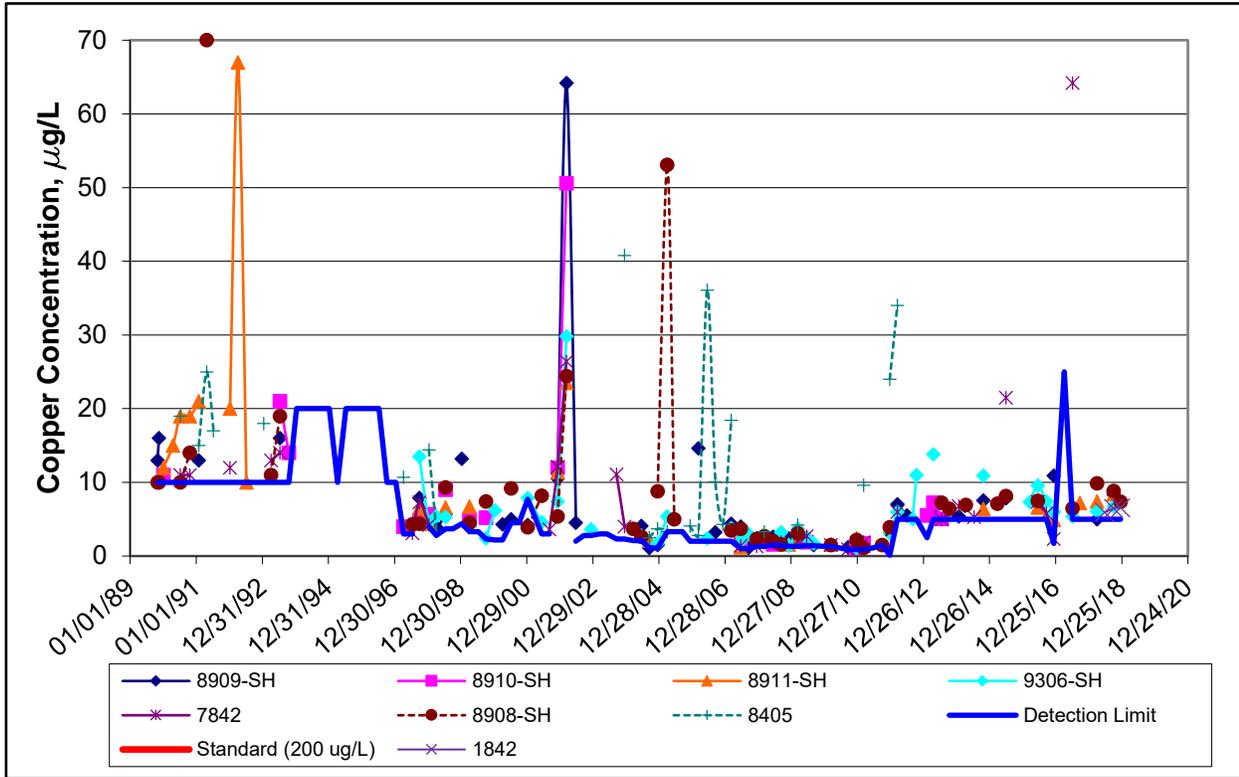


BEDROCK

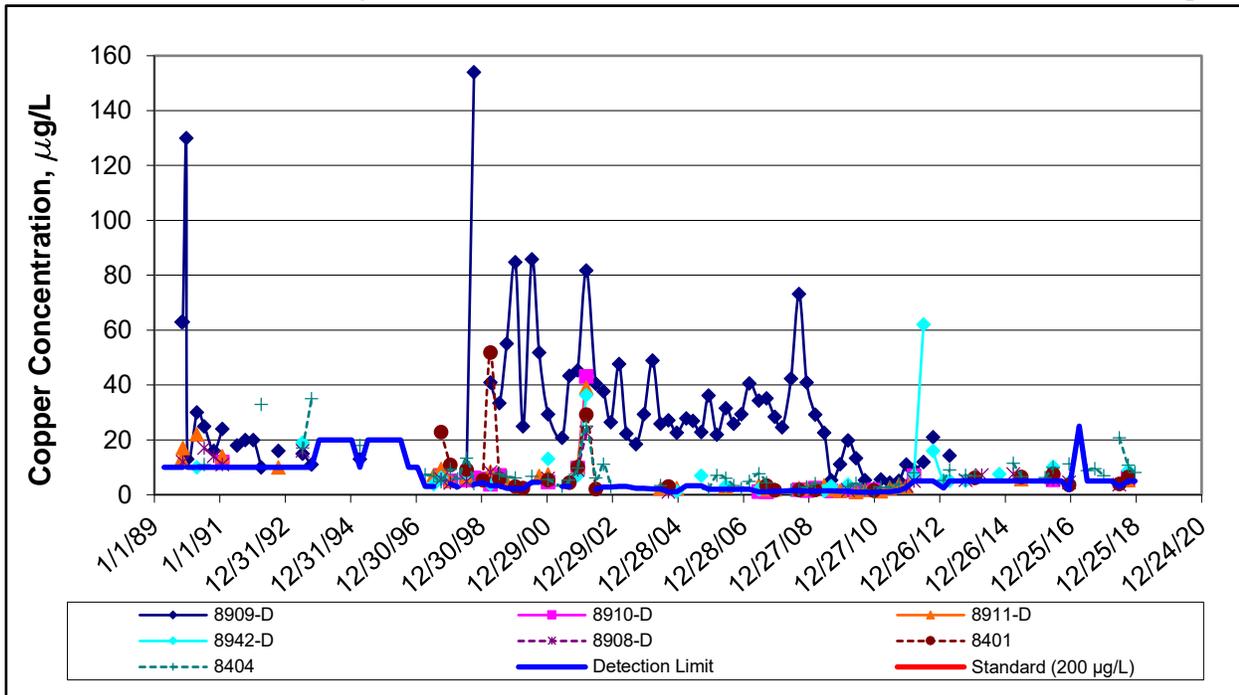


MONITORING WELL TIME-SERIES PLOTS, CONT.
COPPER

GLACIAL TILL (Note: Only data above detection has been included in this plot)

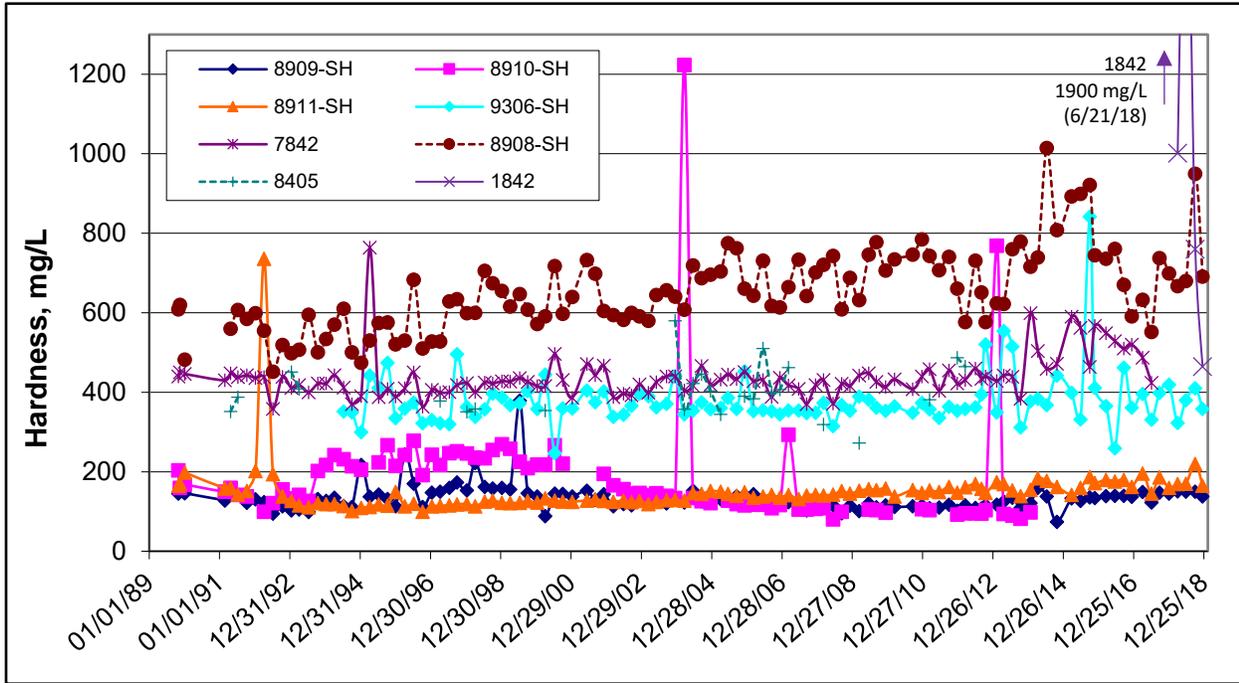


BEDROCK (Note: Only data above detection has been included in this plot)

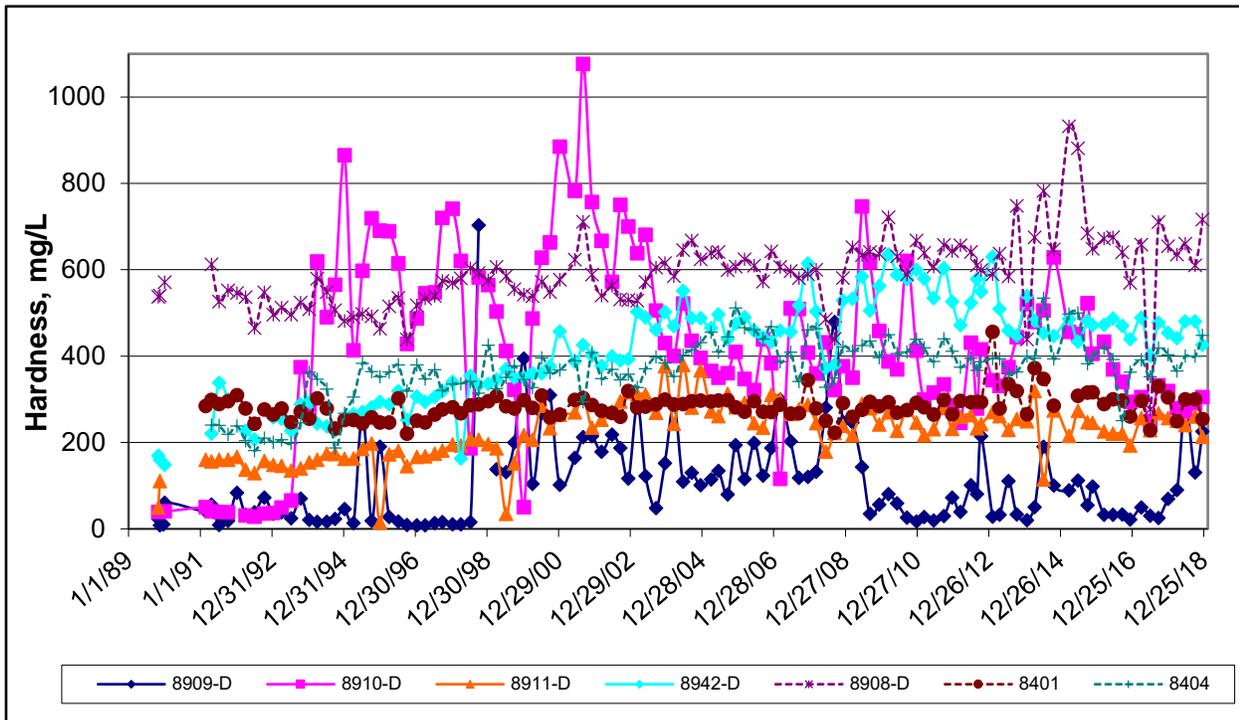


MONITORING WELL TIME-SERIES PLOTS, CONT.
HARDNESS

GLACIAL TILL



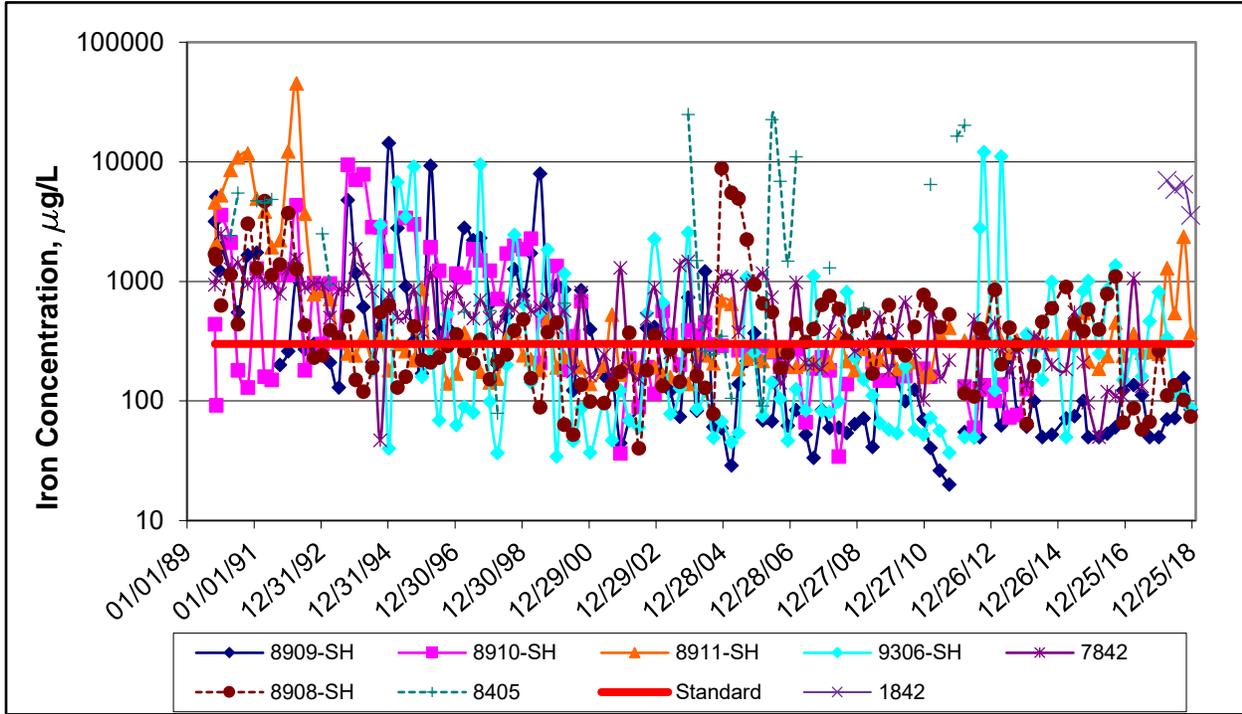
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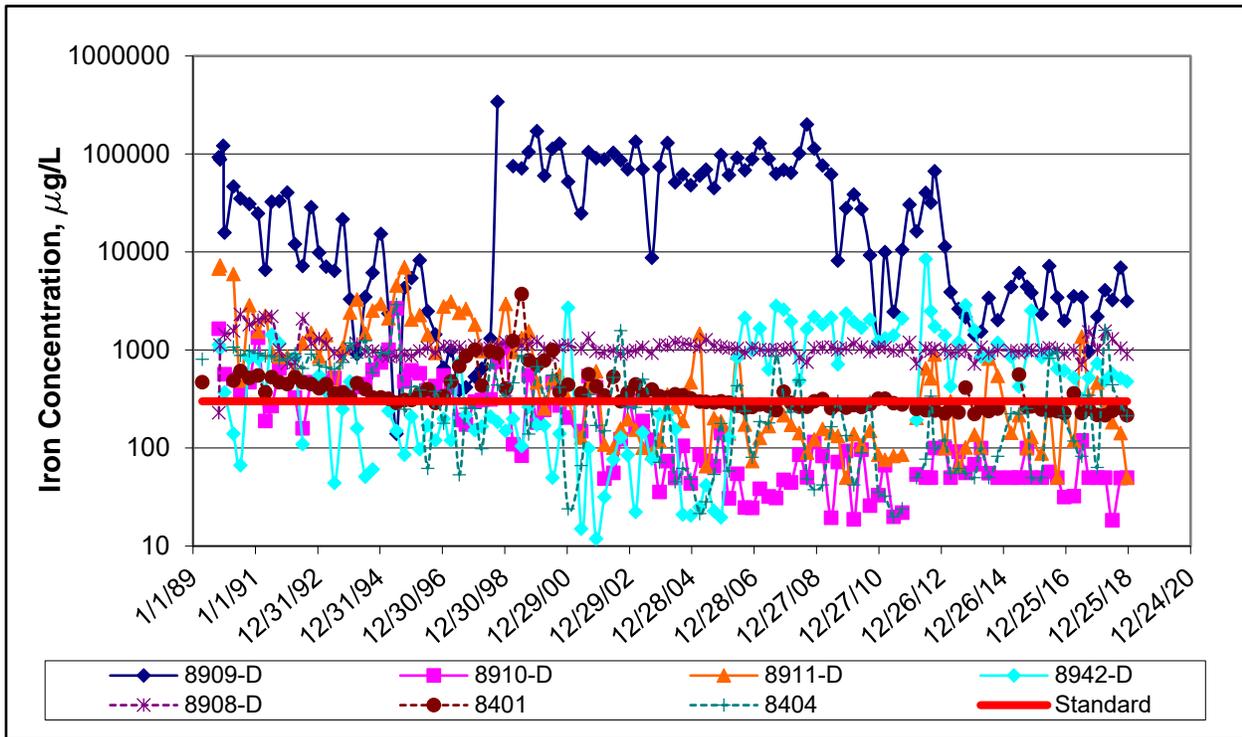
MONITORING WELL TIME-SERIES PLOTS, CONT.

IRON

GLACIAL TILL

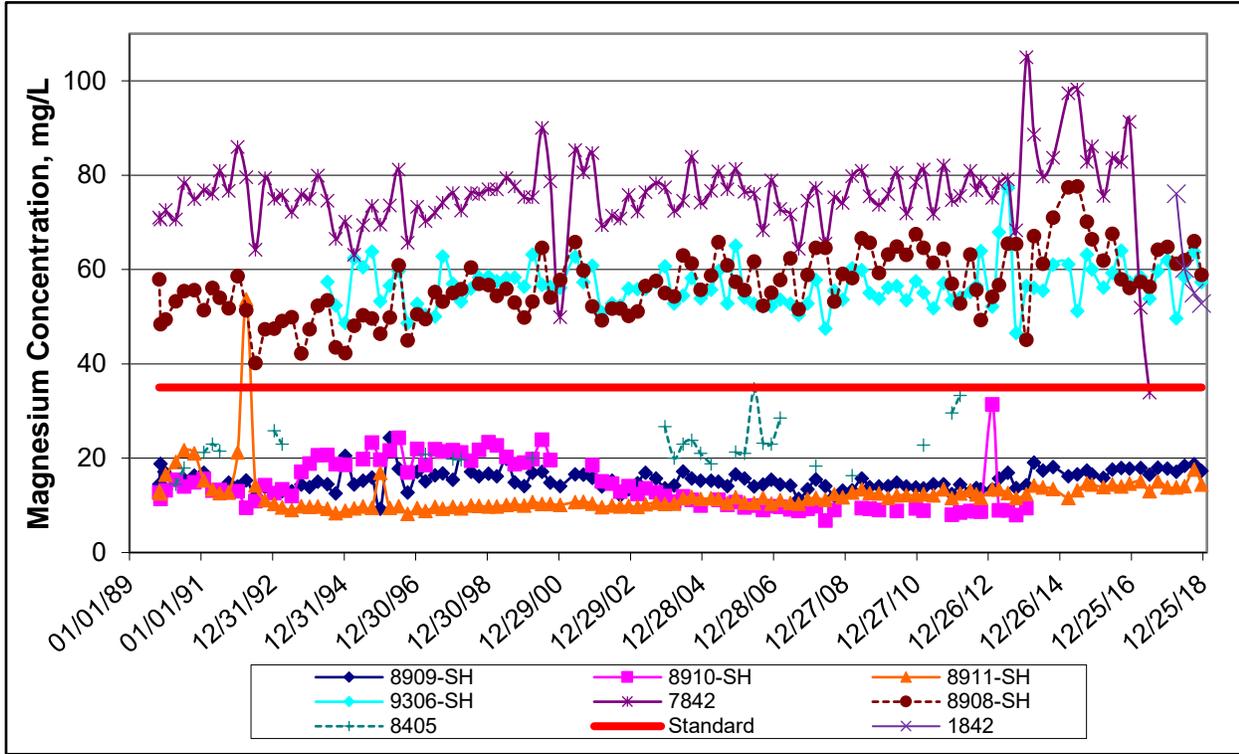


BEDROCK

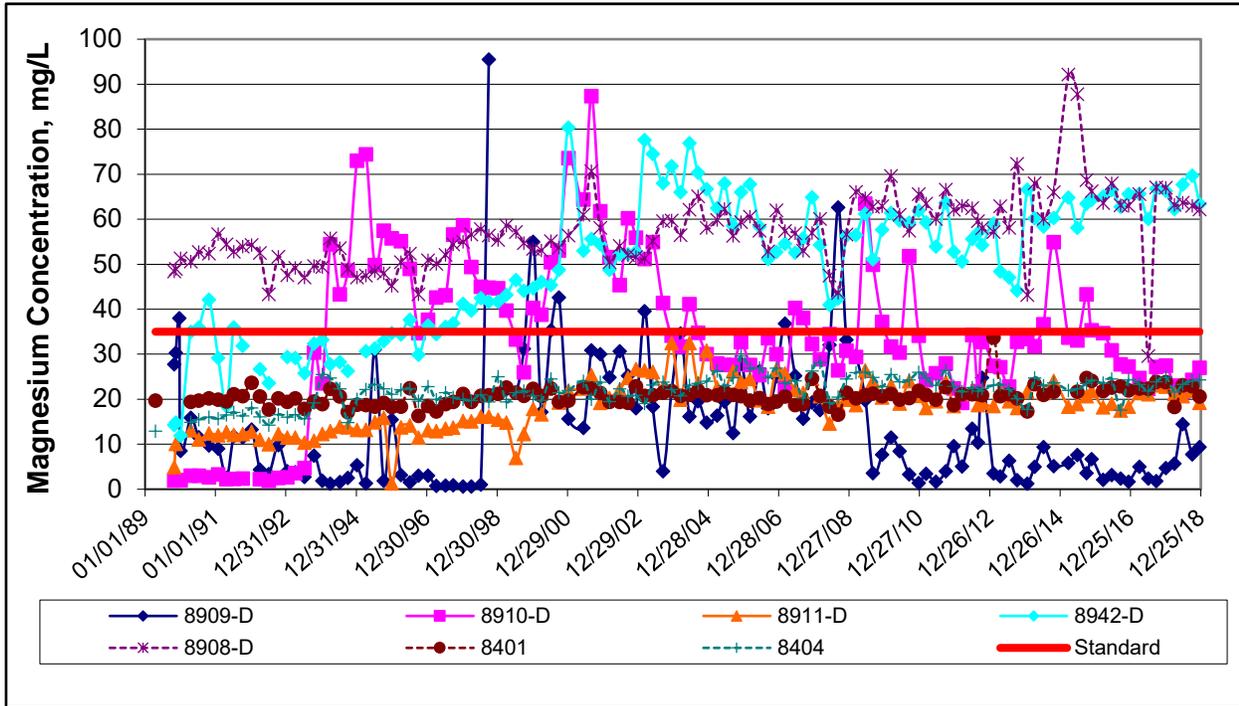


MONITORING WELL TIME-SERIES PLOTS, CONT.
MAGNESIUM

GLACIAL TILL

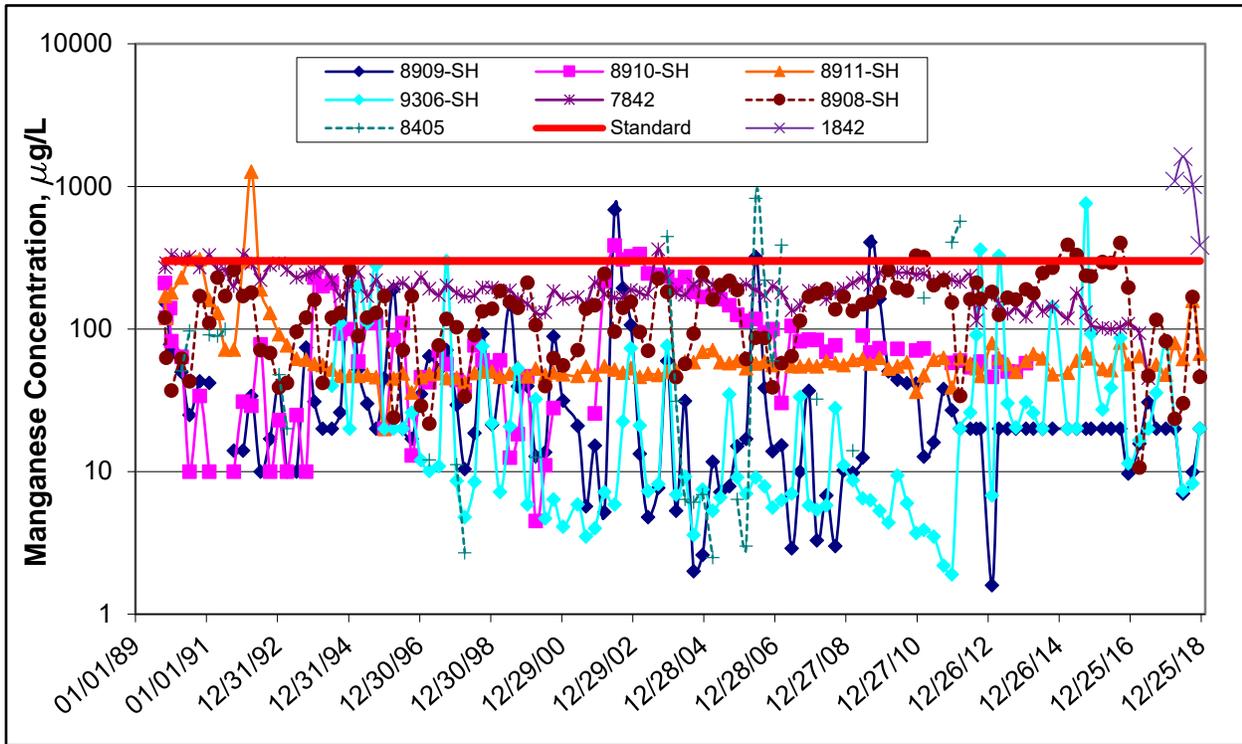


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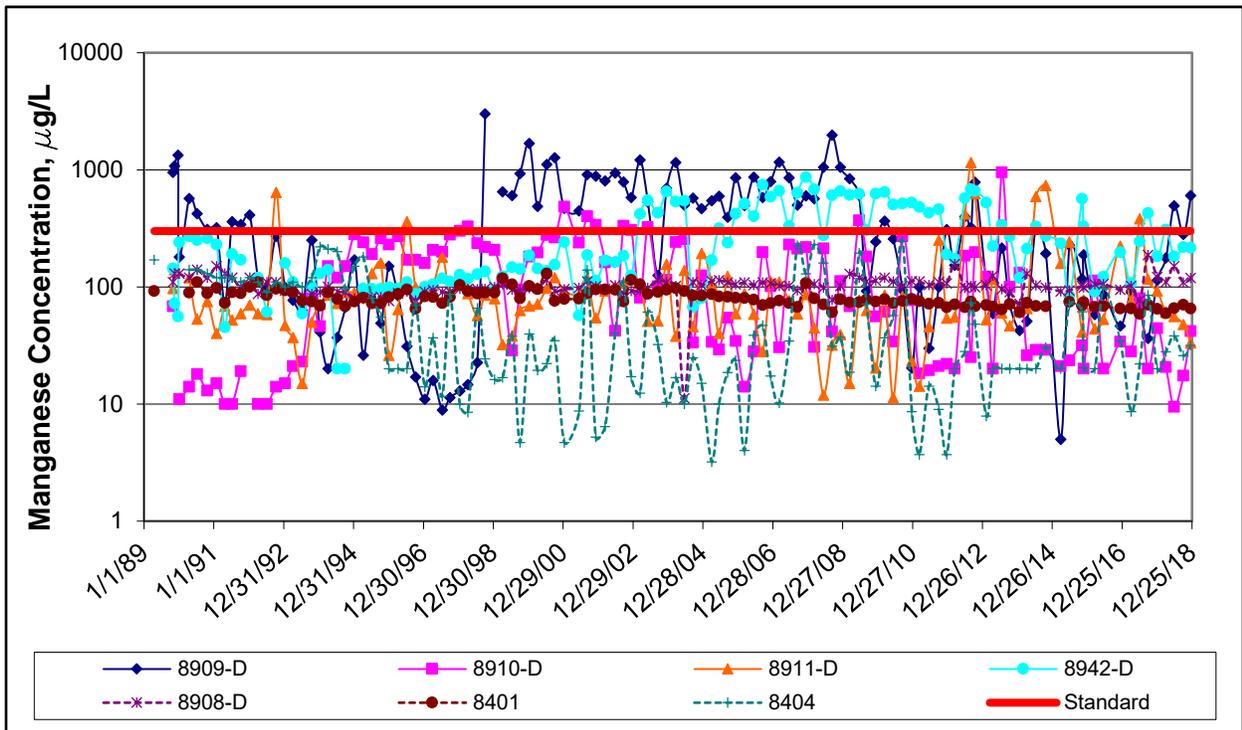


MONITORING WELL TIME-SERIES PLOTS, CONT.
MANGANESE

GLACIAL TILL

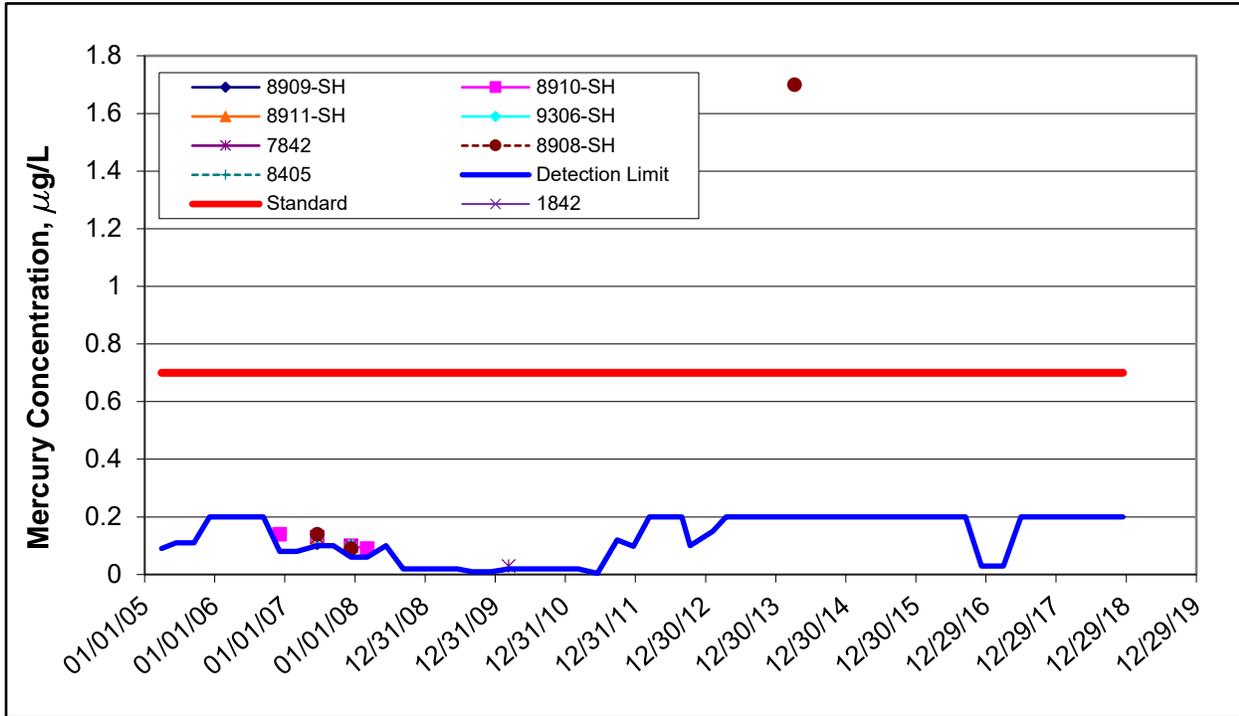


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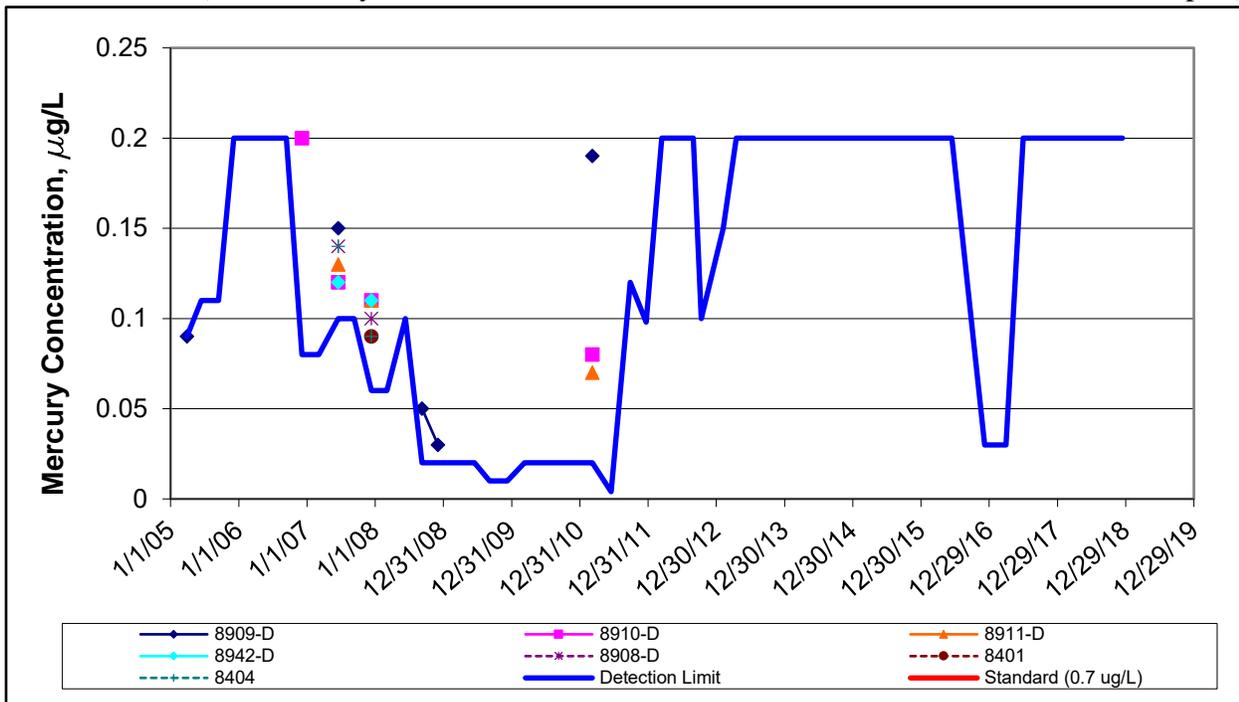


MONITORING WELL TIME-SERIES PLOTS, CONT.
MERCURY

GLACIAL TILL (Note: Only data above detection has been included in this plot)



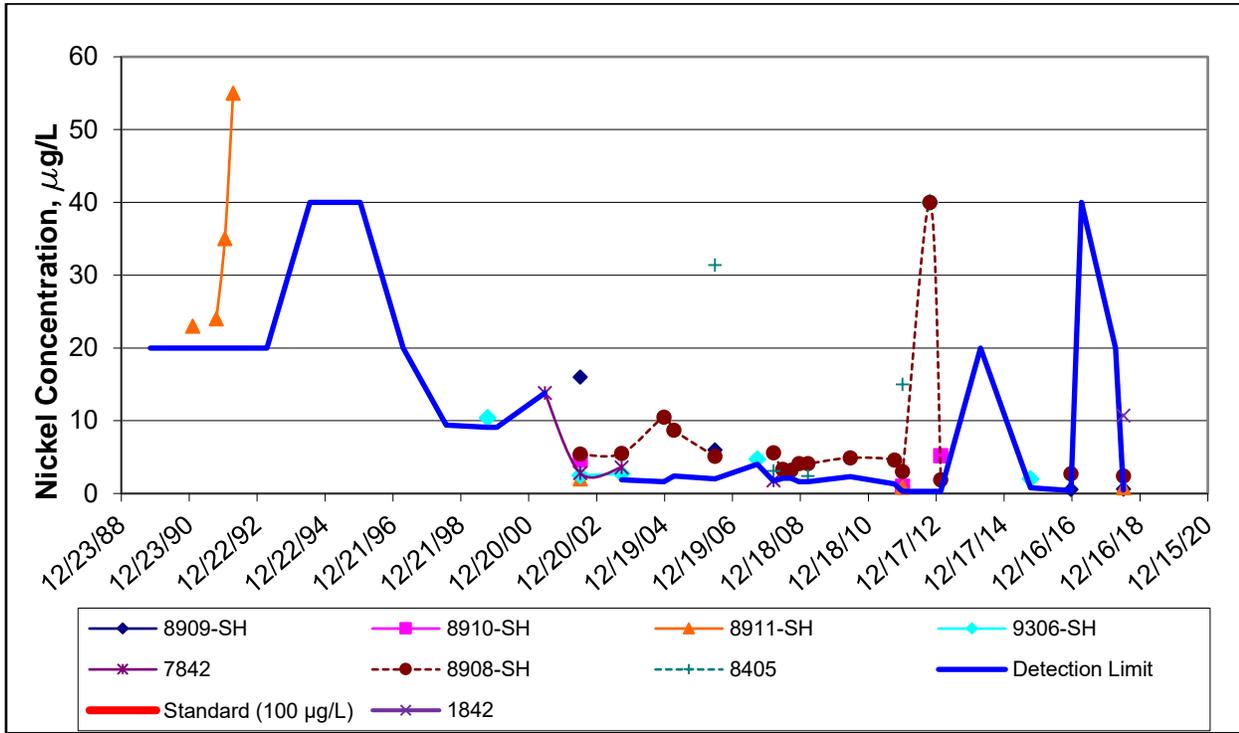
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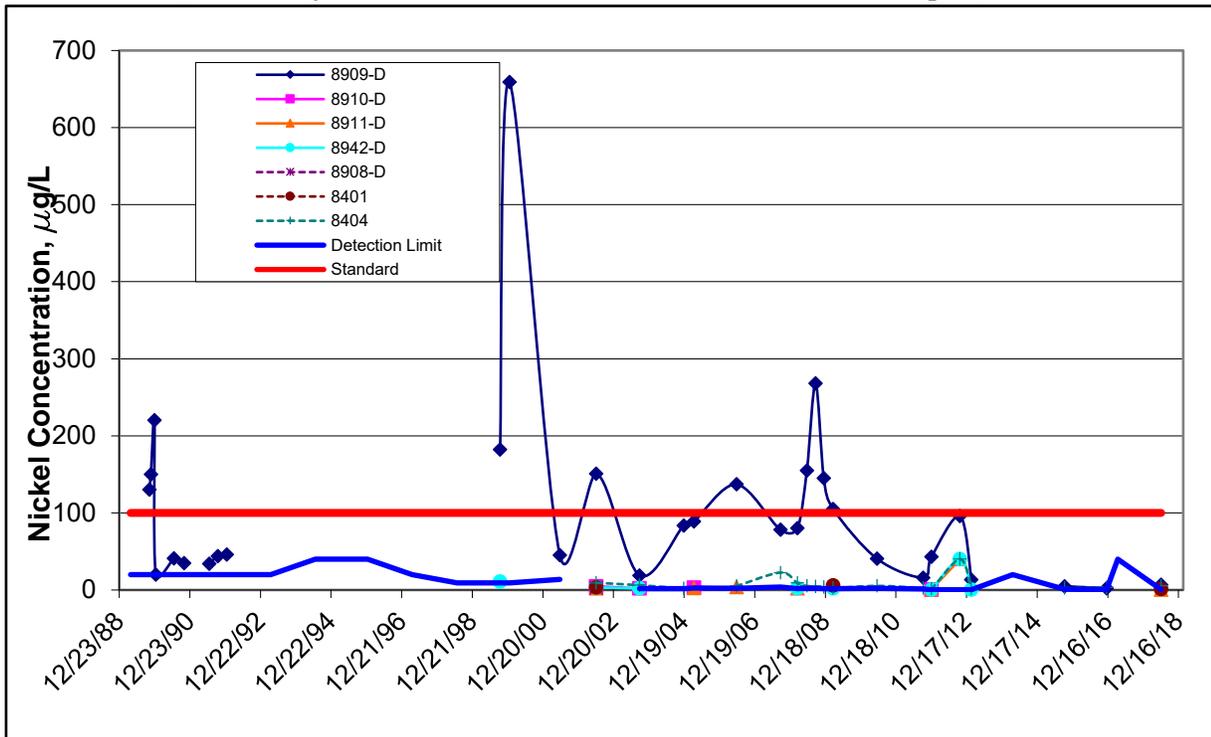
MONITORING WELL TIME-SERIES PLOTS, CONT.

NICKEL

GLACIAL TILL (Note: Only data above detection has been included in this plot)



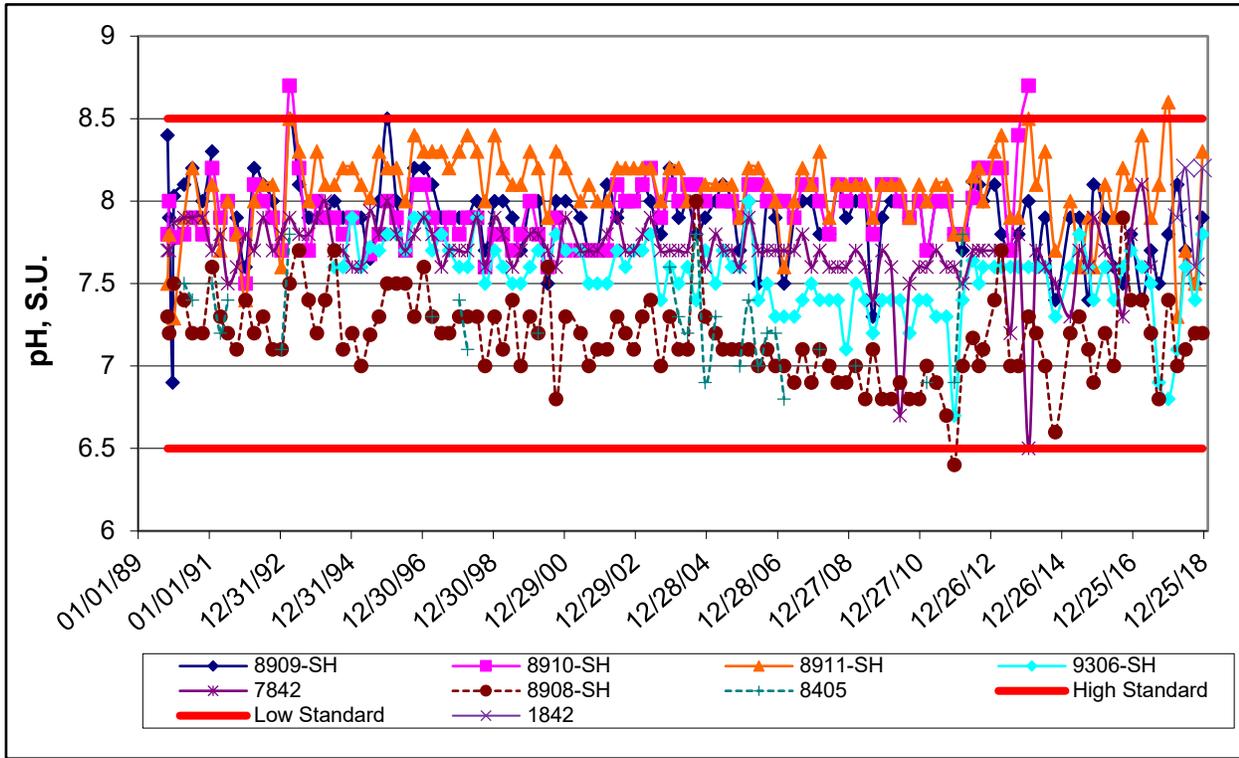
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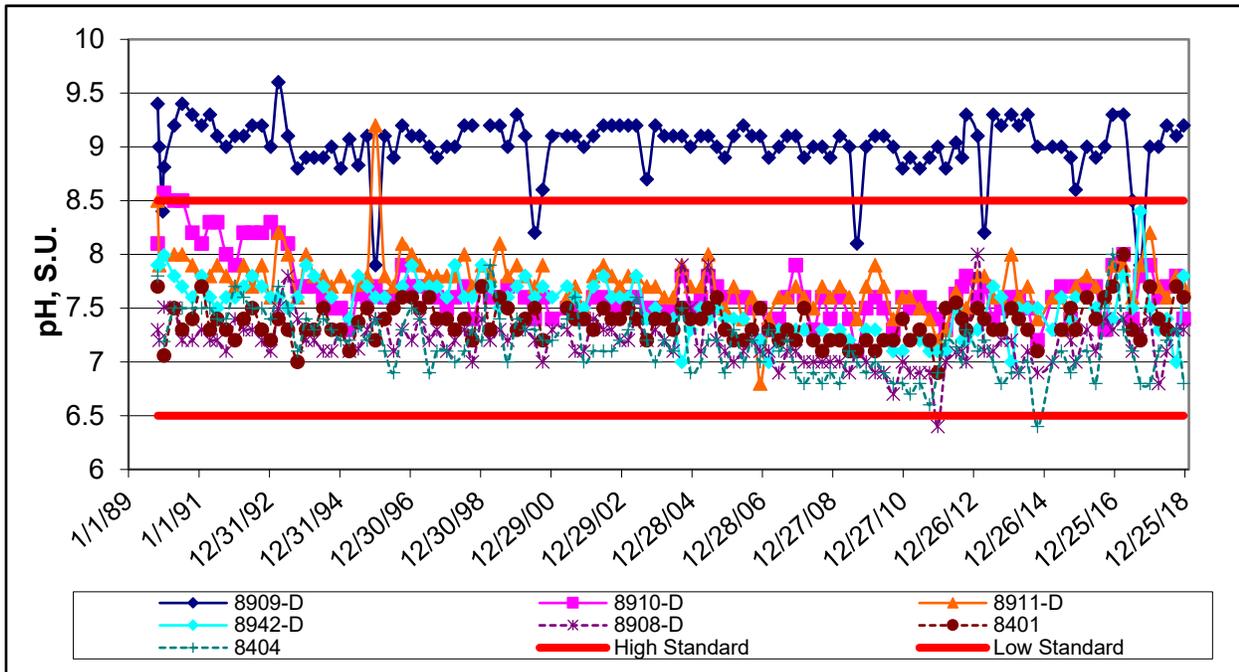
MONITORING WELL TIME-SERIES PLOTS, CONT.

pH

GLACIAL TILL

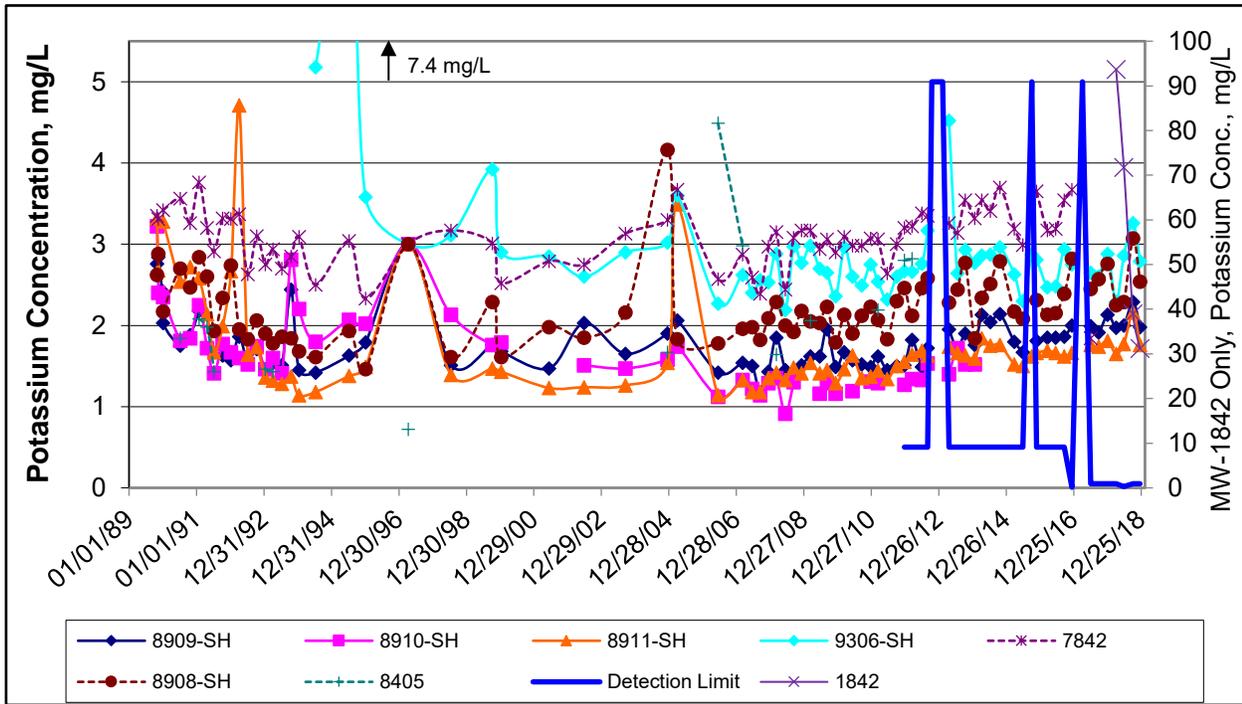


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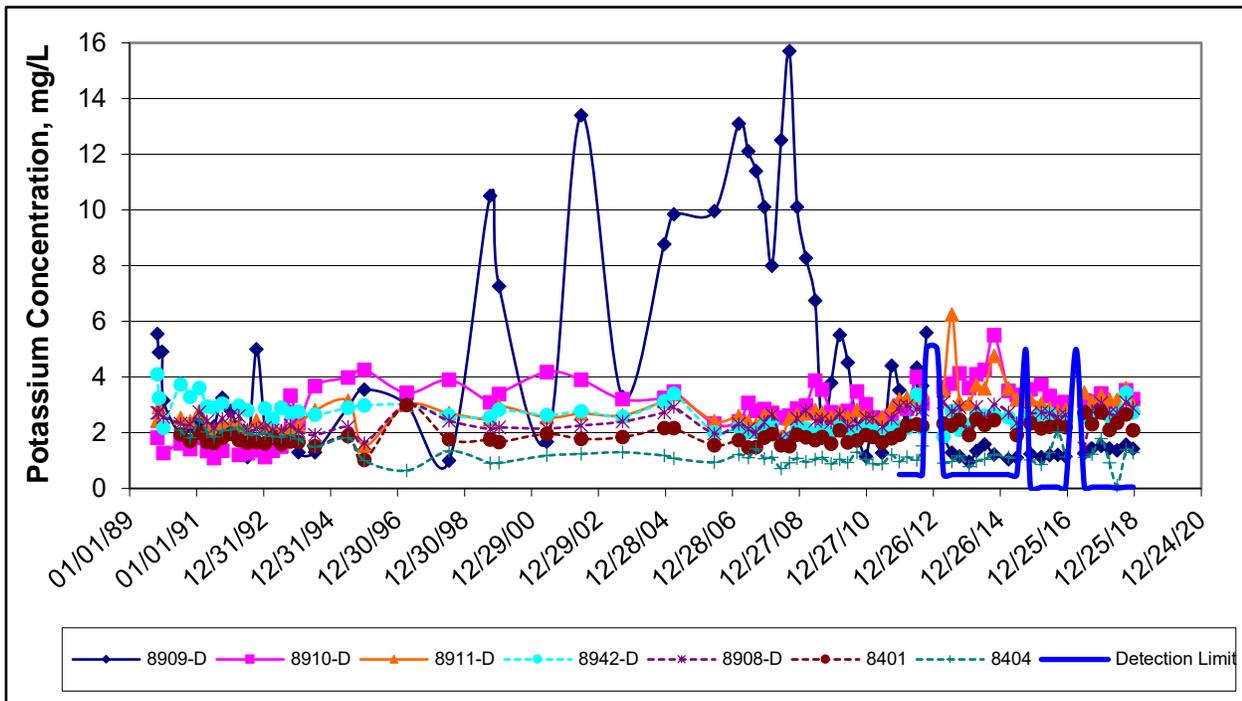


MONITORING WELL TIME-SERIES PLOTS, CONT.
POTASSIUM

GLACIAL TILL

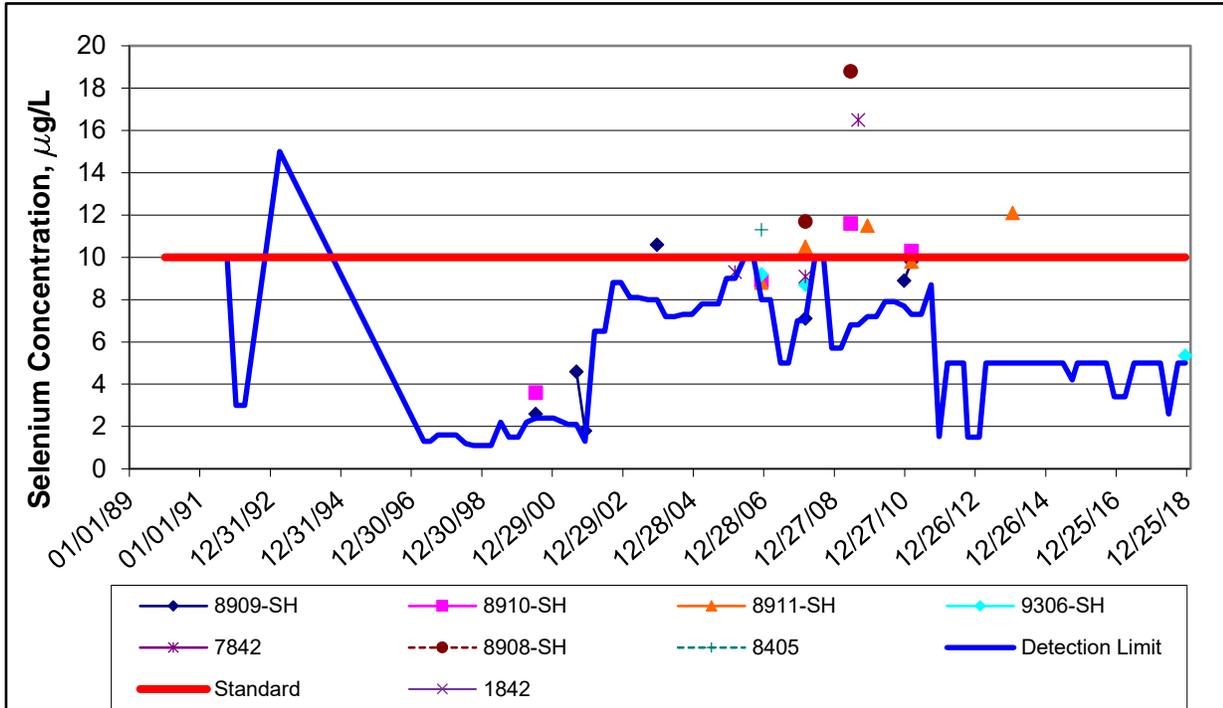


BEDROCK

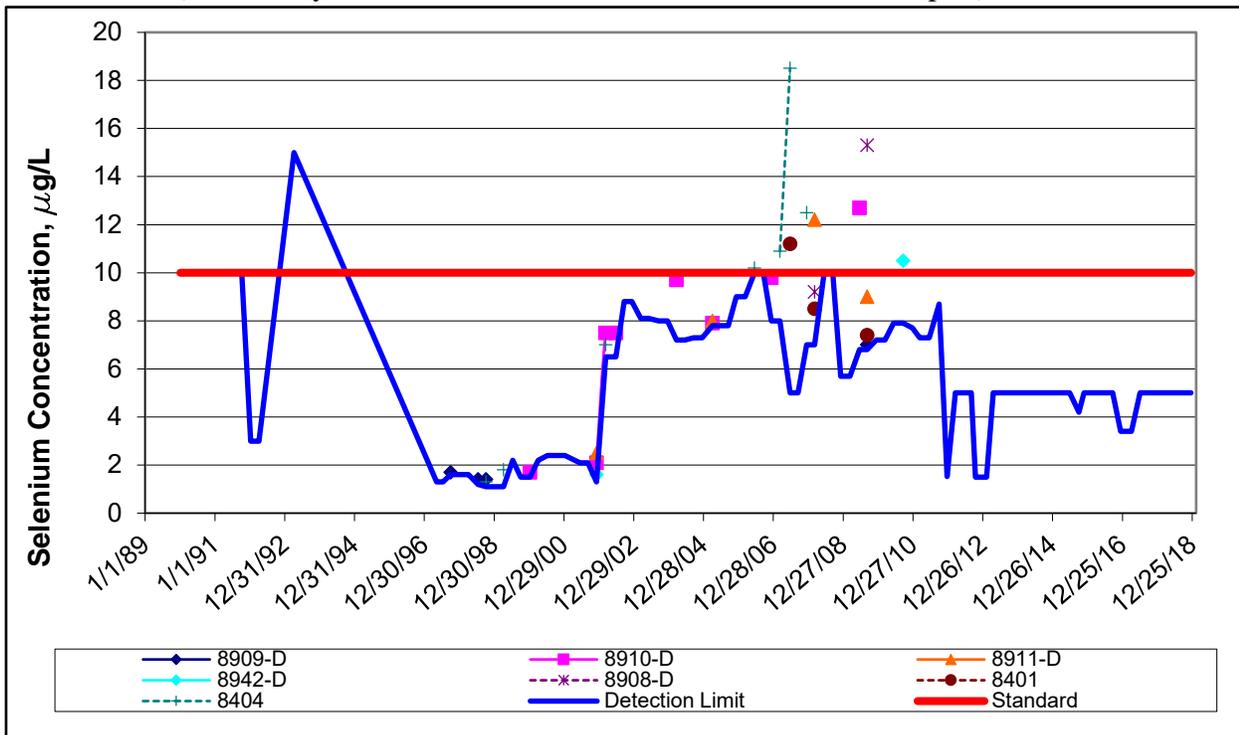


MONITORING WELL TIME-SERIES PLOTS, CONT.
SELENIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



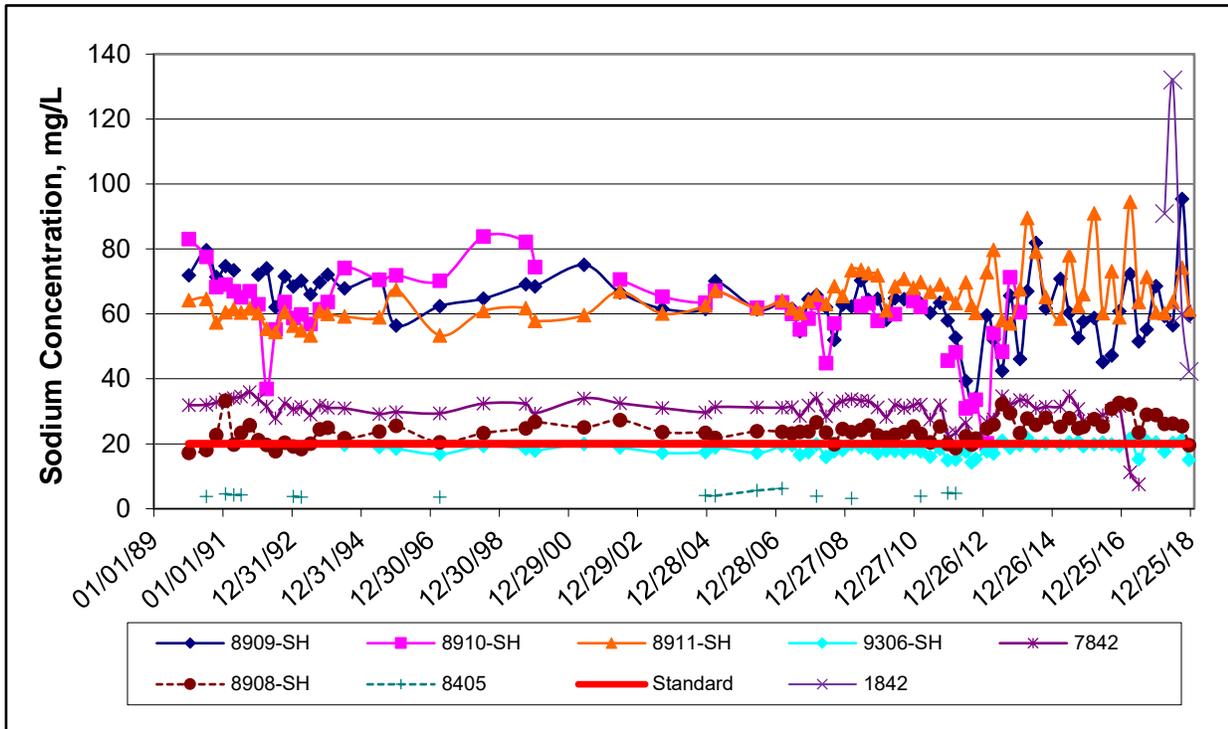
BEDROCK (Note: Only data above detection has been included in this plot)



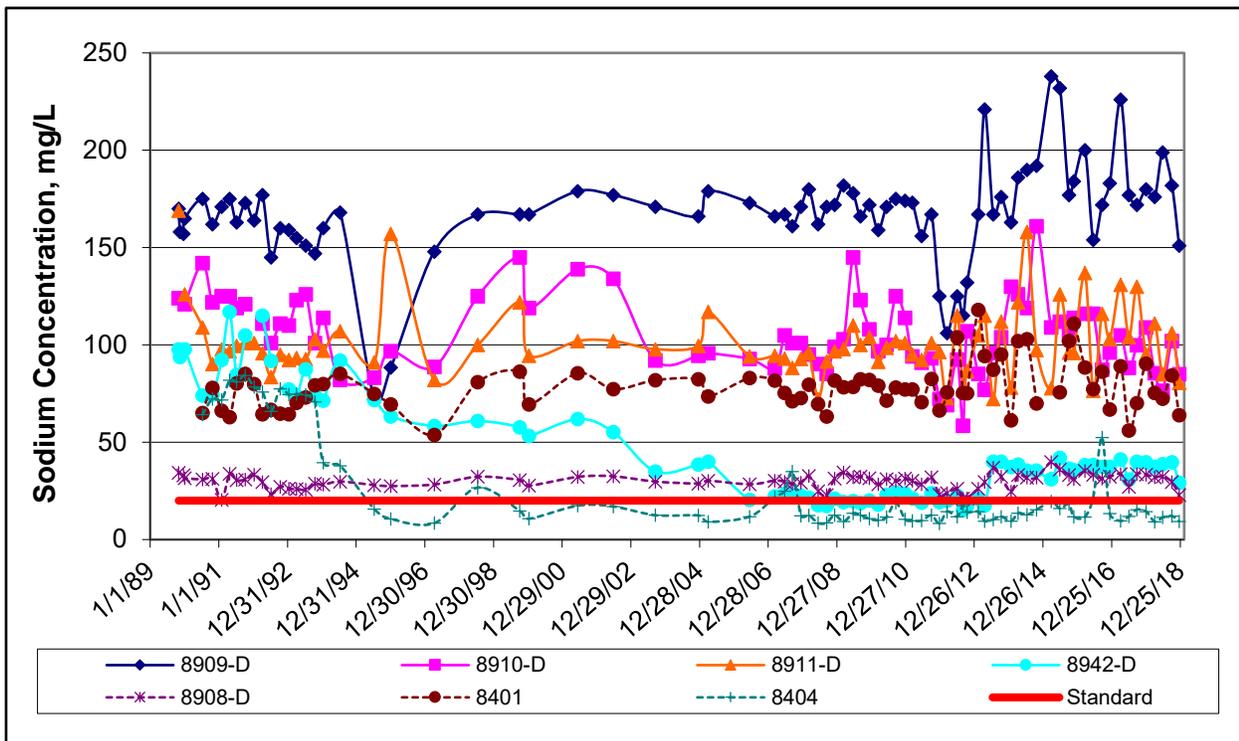
MONITORING WELL TIME-SERIES PLOTS, CONT.

SODIUM

GLACIAL TILL



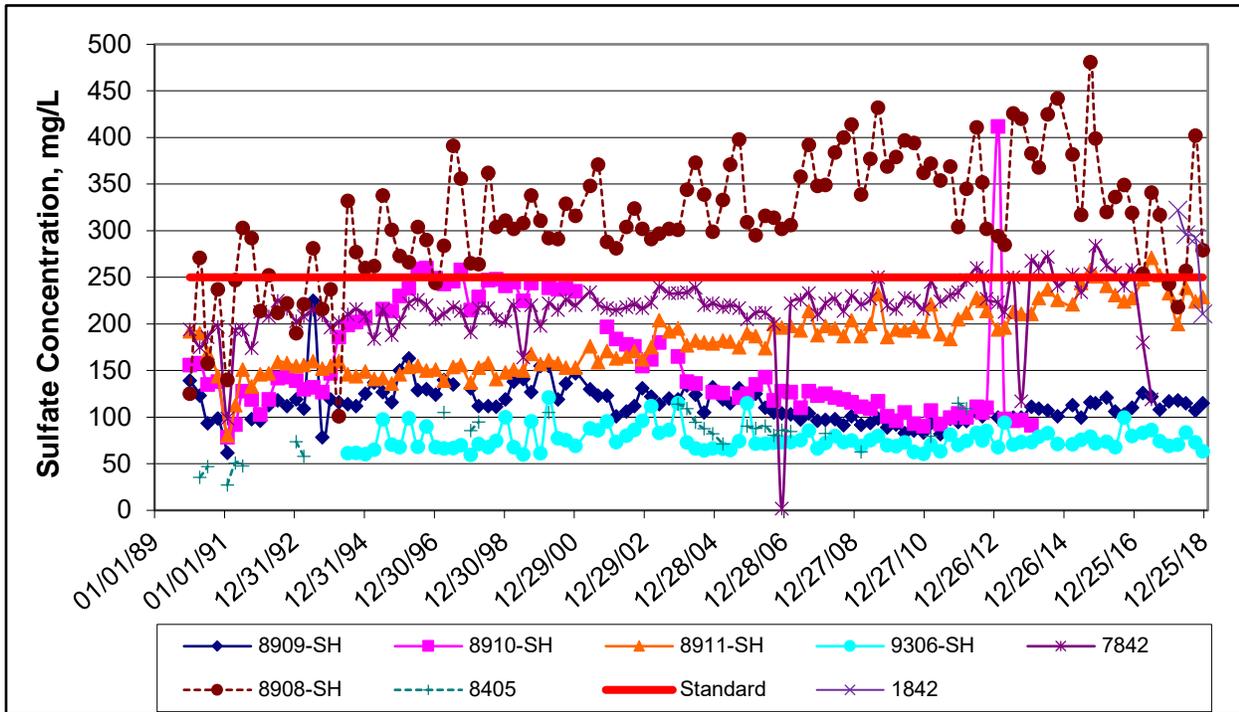
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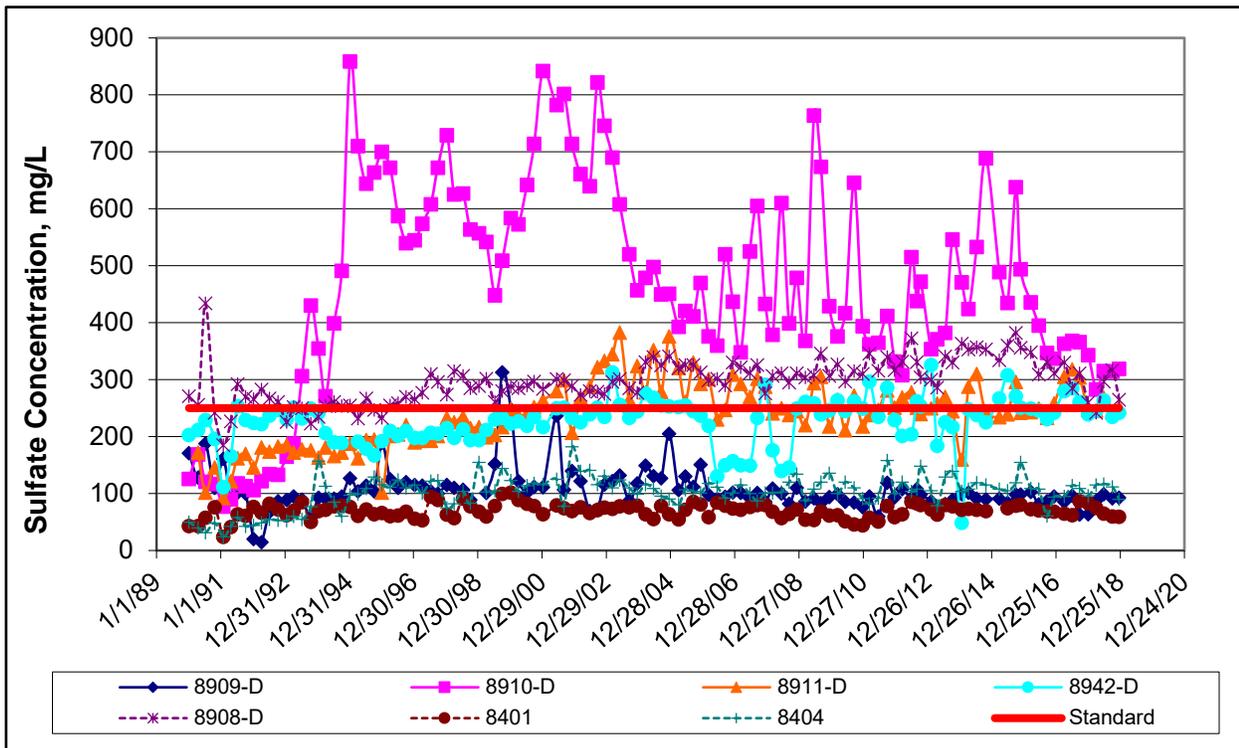
MONITORING WELL TIME-SERIES PLOTS, CONT.

SULFATE

GLACIAL TILL

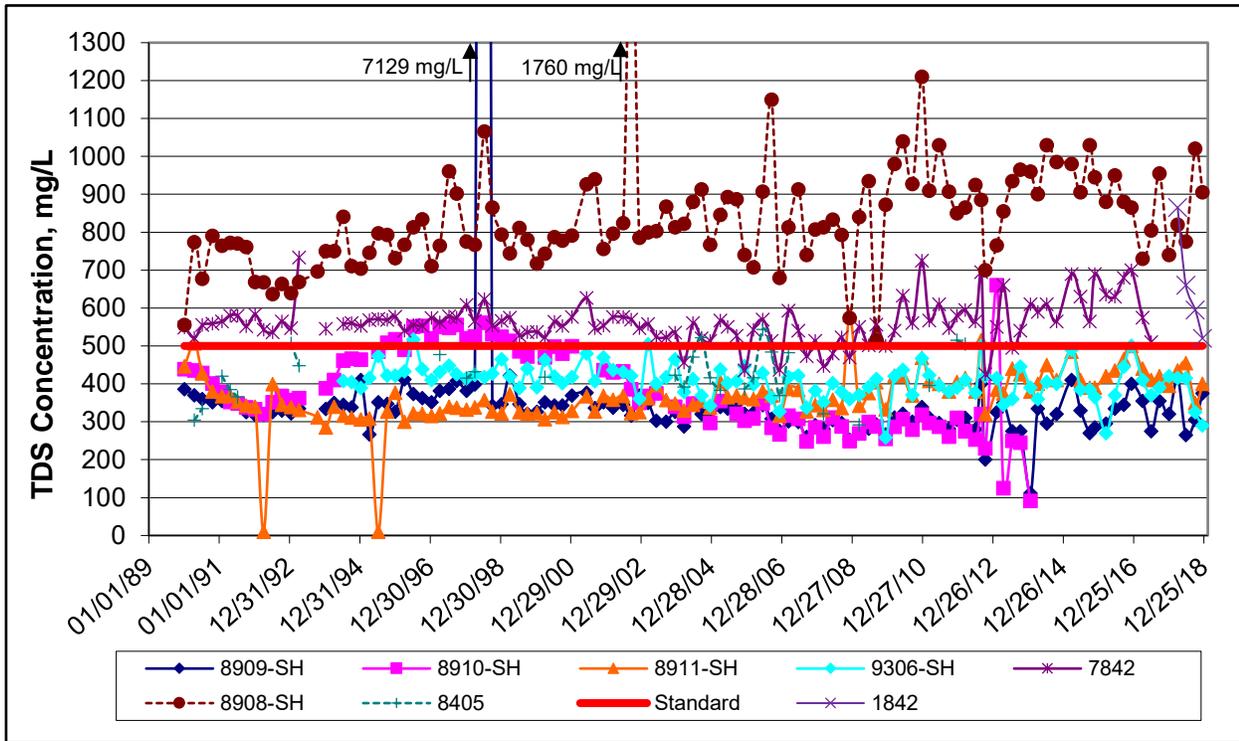


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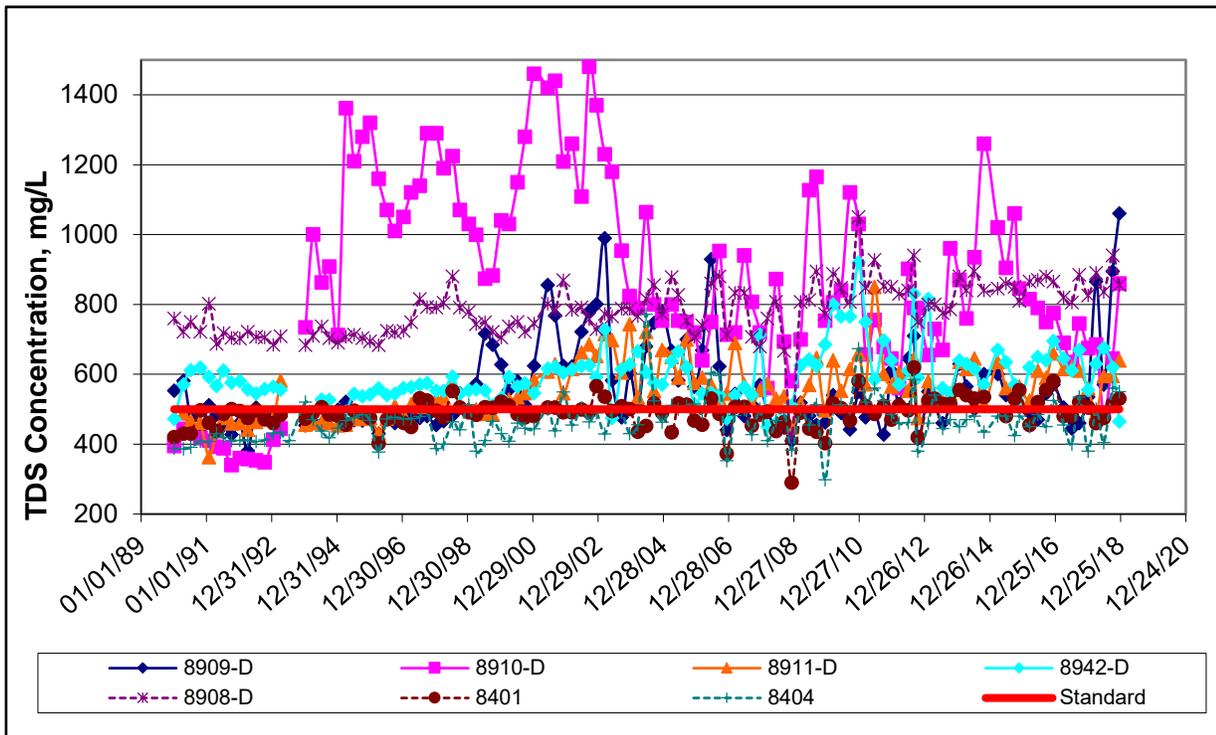


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL DISSOLVED SOLIDS

GLACIAL TILL

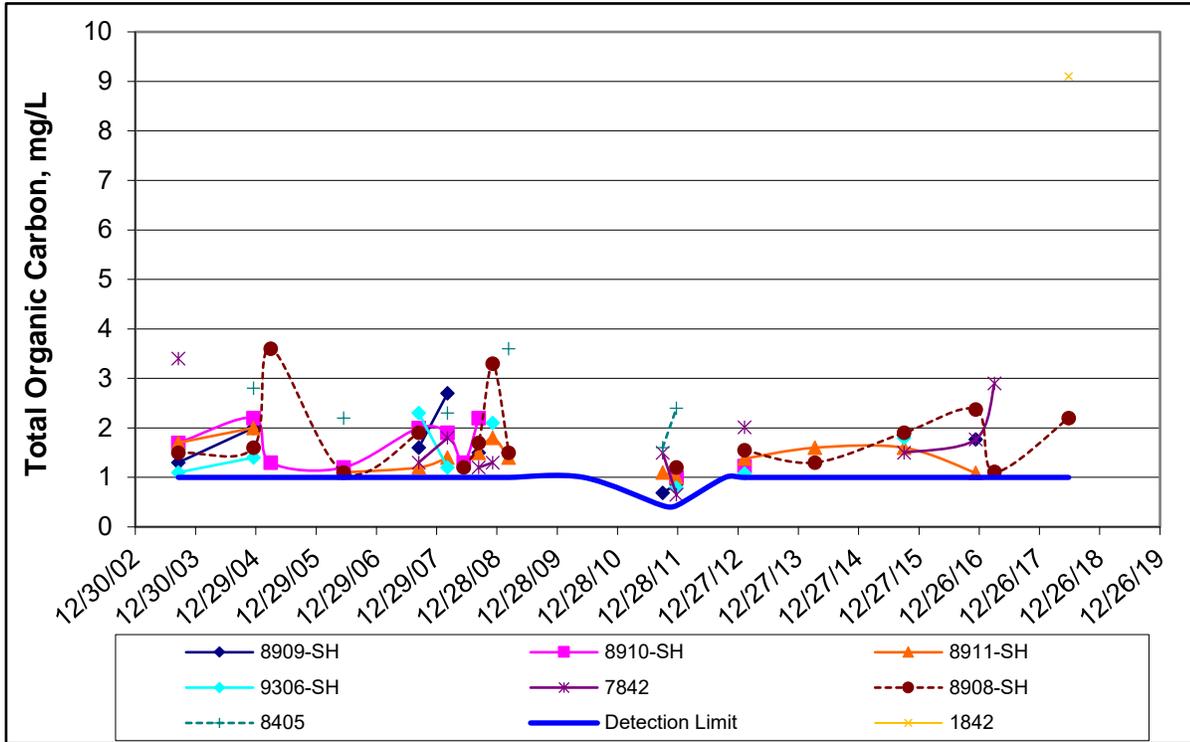


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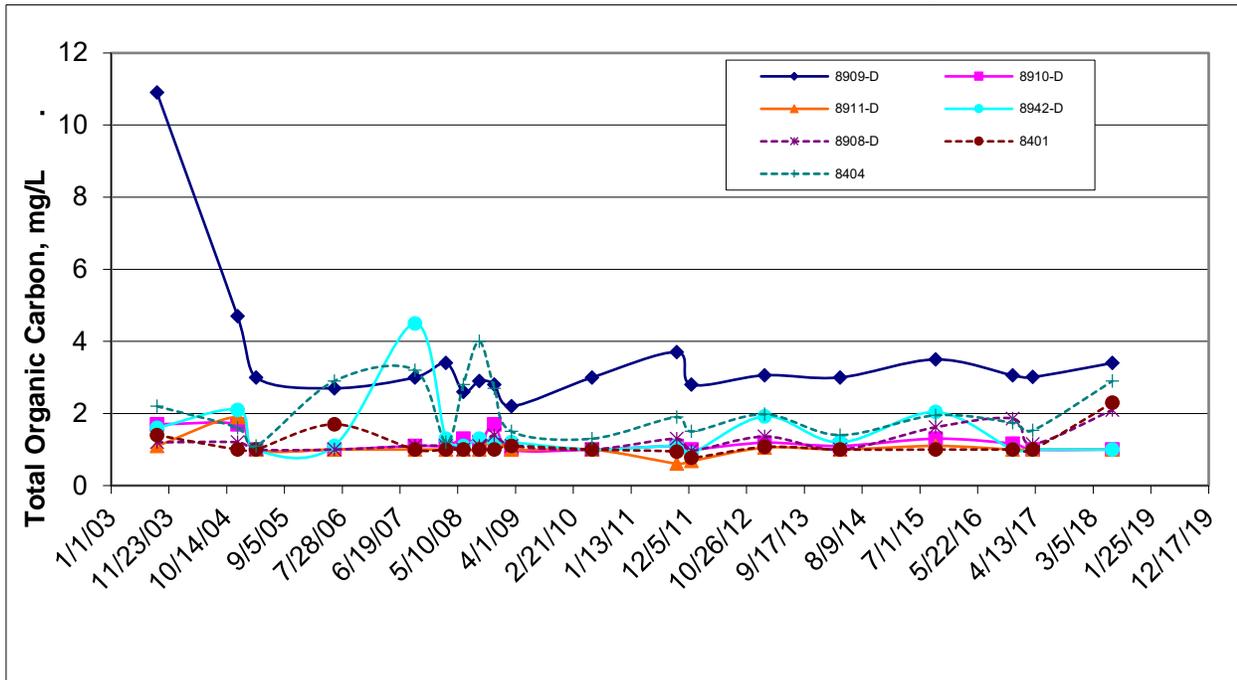


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL ORGANIC CARBON

GLACIAL TILL (Note: Only data above detection has been included in this plot)

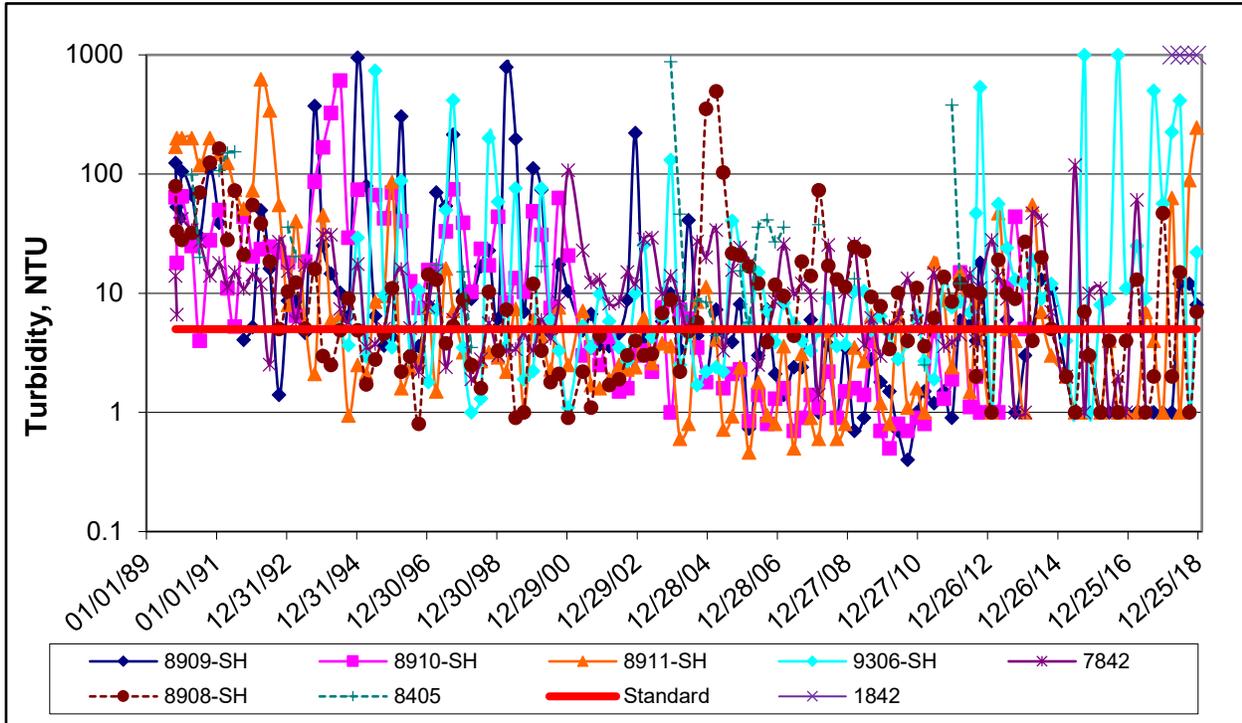


BEDROCK (Note: Only data above detection has been included in this plot)

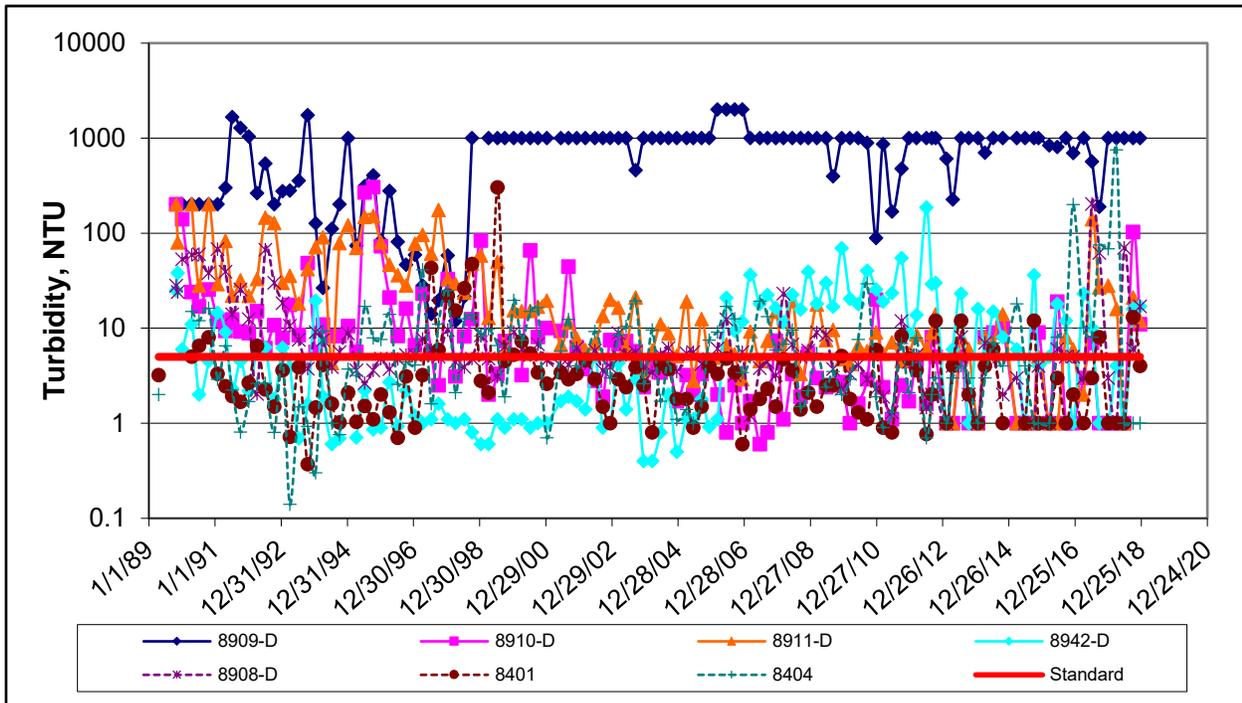


MONITORING WELL TIME-SERIES PLOTS, CONT.
TURBIDITY

GLACIAL TILL



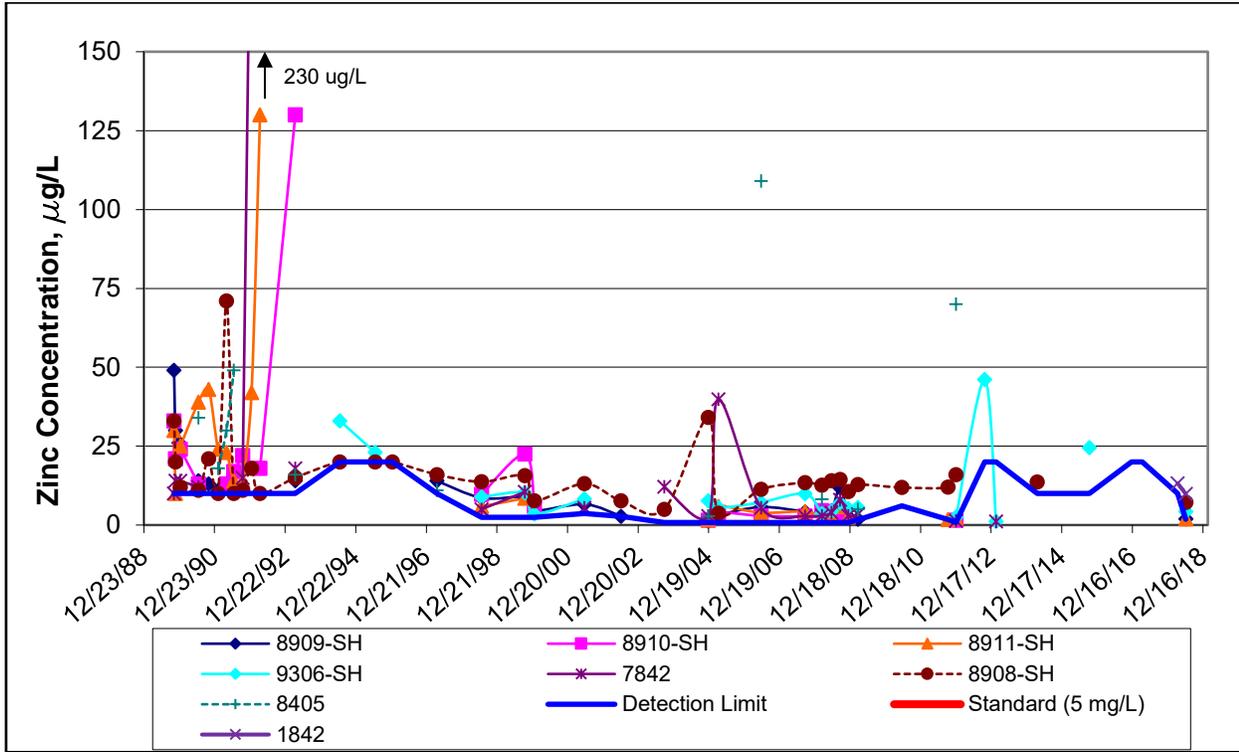
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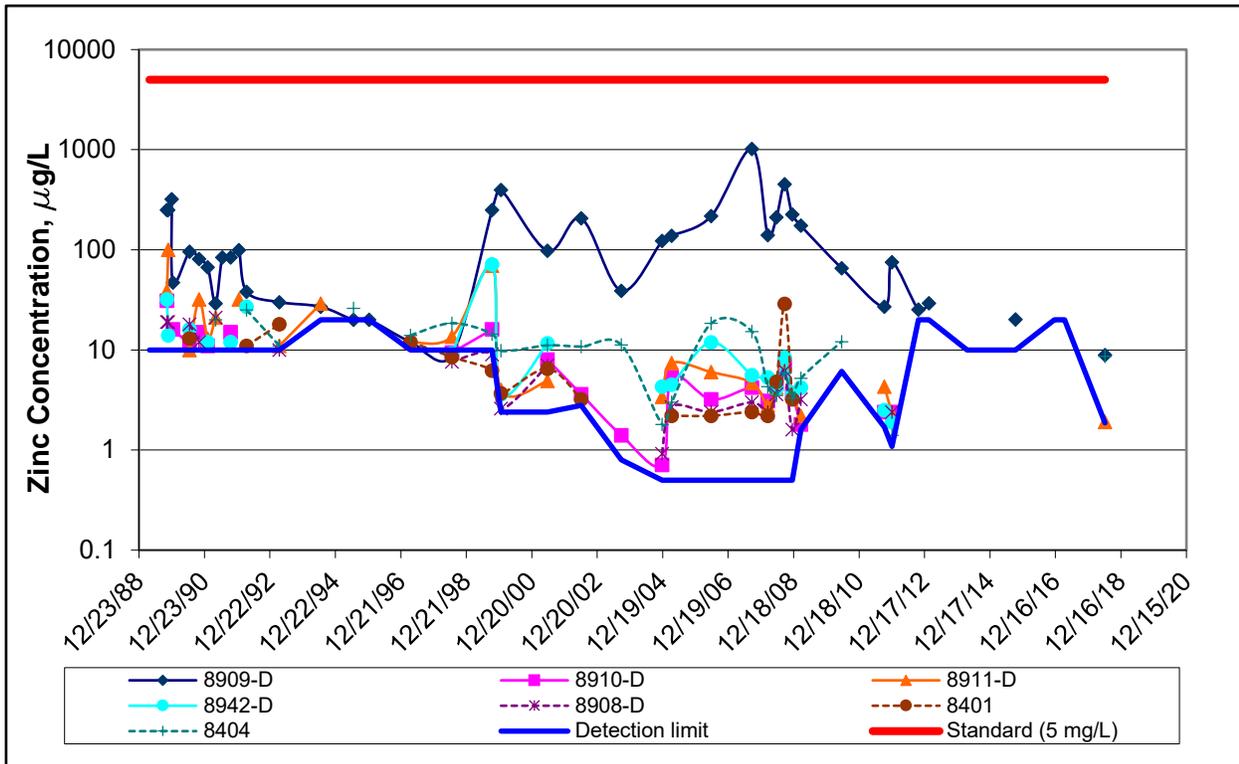
MONITORING WELL TIME-SERIES PLOTS, CONT.

ZINC

GLACIAL TILL



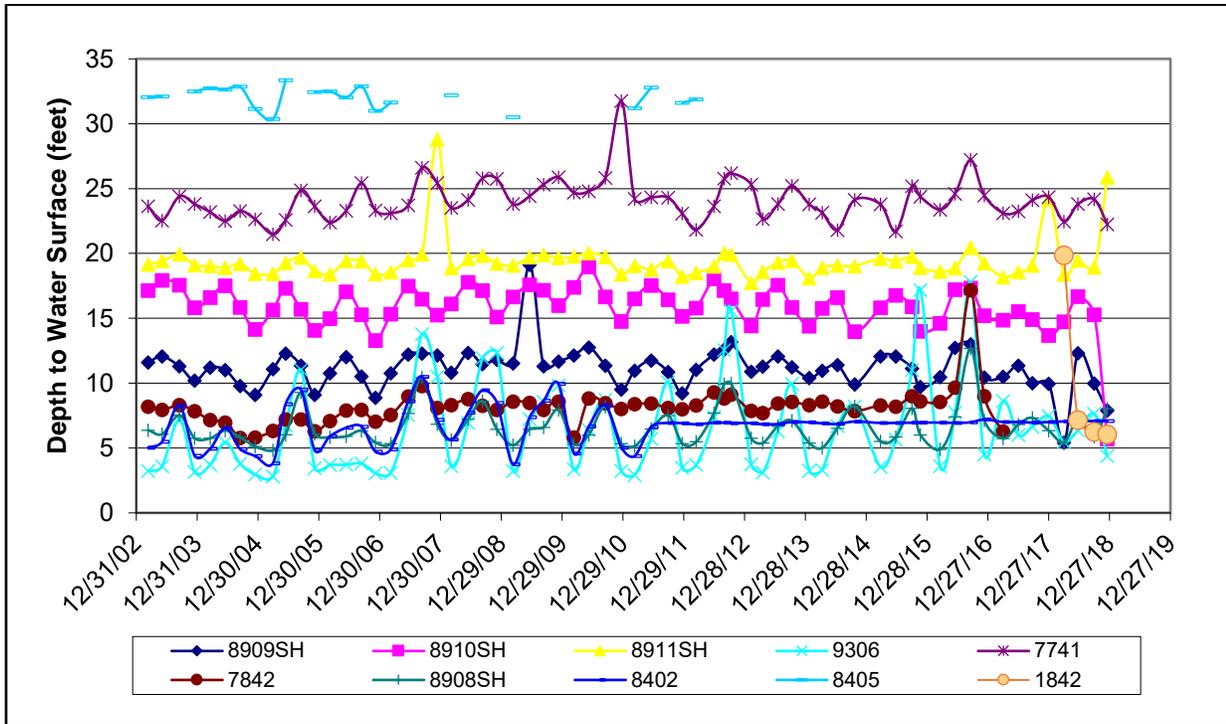
BEDROCK



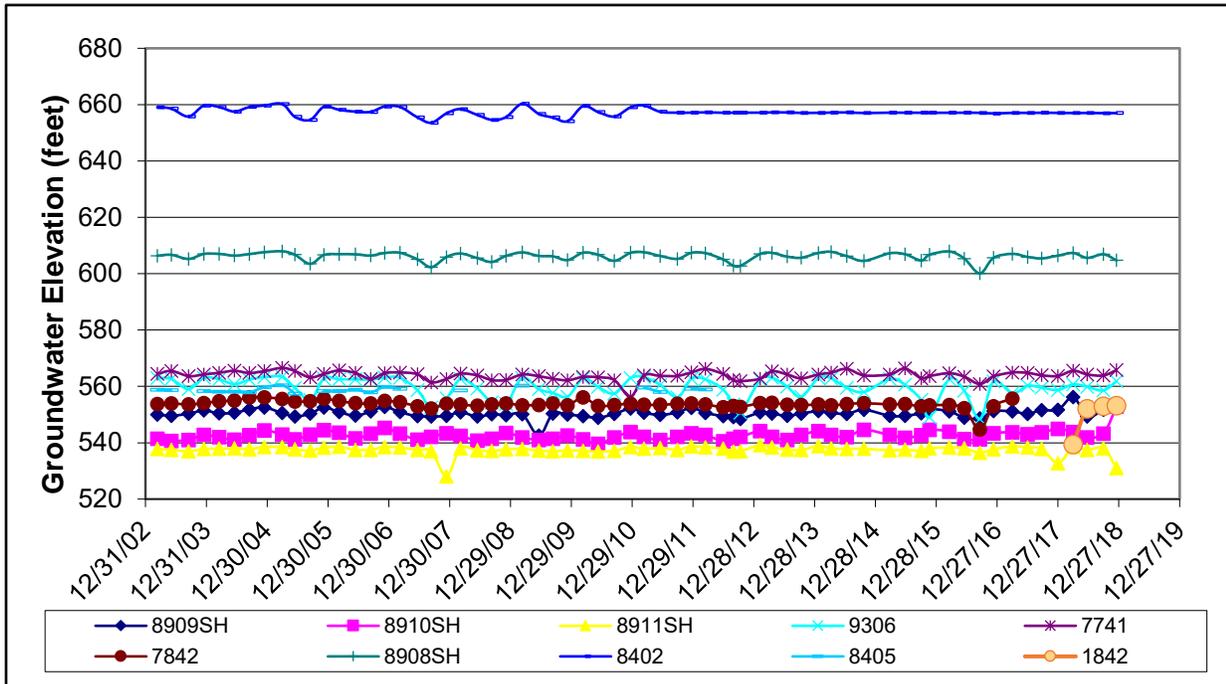
STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS

GLACIAL TILL

DEPTH TO WATER SURFACE

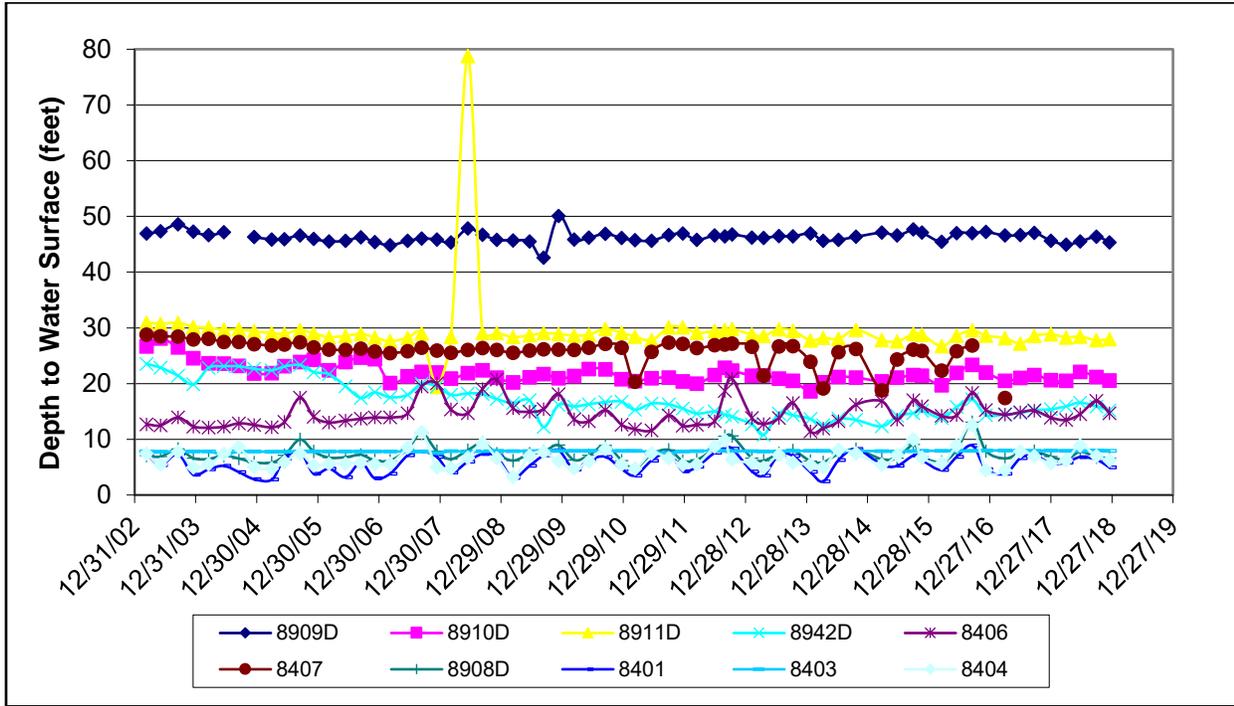


GROUNDWATER ELEVATION



STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS BEDROCK

DEPTH TO WATER SURFACE



GROUNDWATER ELEVATION

