2017 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:

DAIGLER ENGINEERING, P.C.
CIVIL & GEO-ENVIRONMENTAL ENGINEERING

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

March 2018

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1 INTRODUCTION

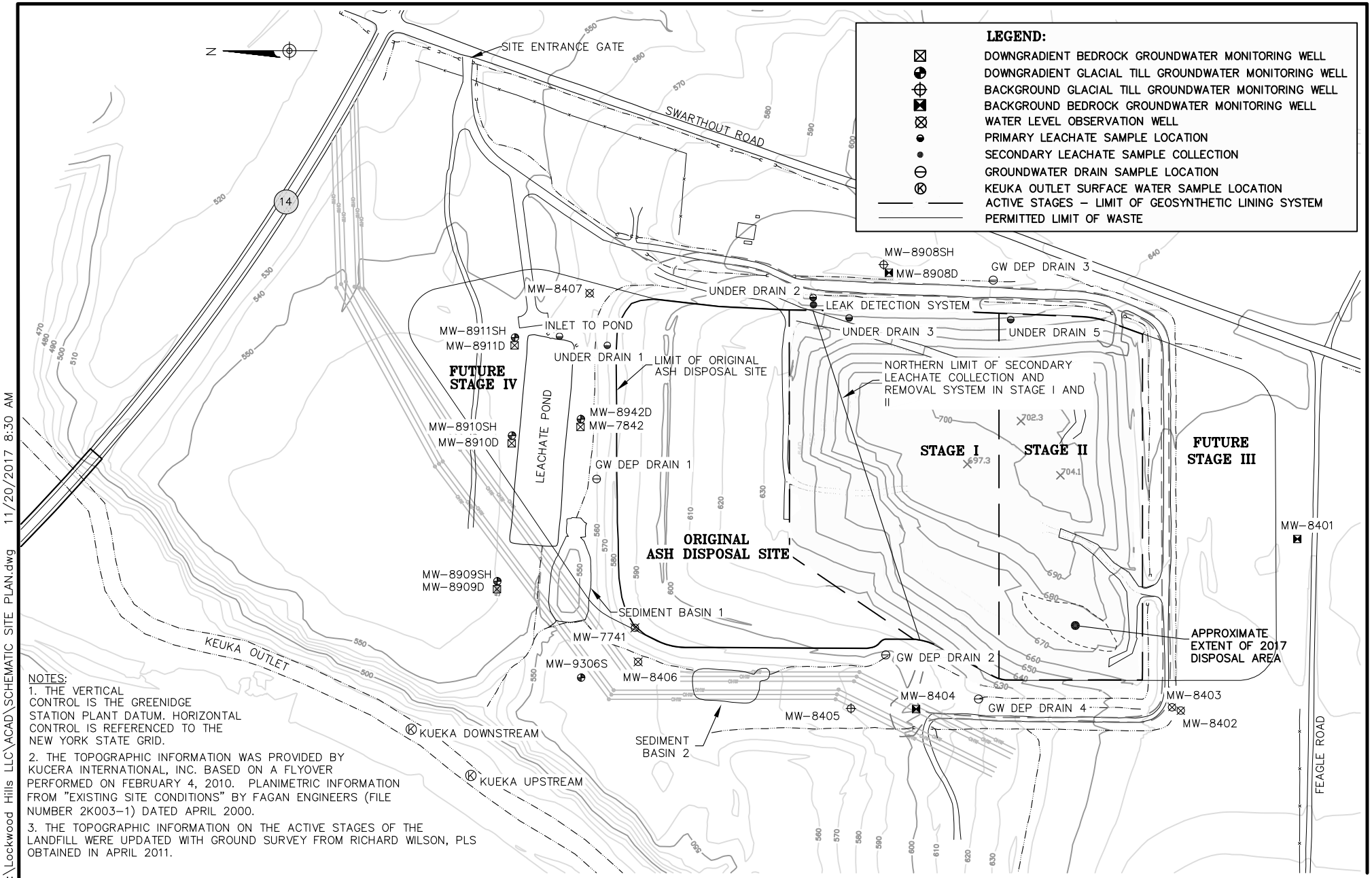
Lockwood Hills LLC (Lockwood Hills) manages the Lockwood Ash Disposal Site (Lockwood or the Landfill), a primarily coal ash monofill associated with the Greenidge Power Generating Station, an electric generating plant that used to burn coal in the Town of Torrey, Yates County, New York. Lockwood is located 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 as described in Section 2.

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

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

- The quantity and types of solid waste disposed;



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	FIGURE 1-1
SCALE: 1"=350'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE	
November 2017	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 2017 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 2017. Some erosion was noted along berms, dikes, and slopes on the monthly reports between May and December requiring corrective action. Should earthwork repairs or maintenance be required, City Hill Construction, Inc. of Penn Yan, New York (City Hill) is contacted and generally responds within a day or two to conduct the repairs. A continuous service contract is maintained with City Hill to help ensure Lockwood remains in good working order. The dust issues noted as needing corrective actions in September through December were minor and consisted of pockets of potential dust sources in the roadways as a result of exposed roadway subgrade. These areas were repaired by adding rock filler on top of the access roads. Overall, road maintenance is conducted several times per year. Based on conversation with Lockwood Hills staff in February 2018, no major issues were noted in 2017 and all minor corrective actions noted in the monthly inspection reports were addressed by City Hill within a day or two following identification during the monthly inspection. The monthly site inspection reports are provided in Attachment 2.

City Hill was contracted to conduct the remaining work described in the stormwater separation plan during 2017. This work included modifications to Sediment Basin 2 and associated drainage channels along the west side of the Landfill. Construction was completed by November 1, 2017 in conformance with an amendment to the Consent Order which was approved by the Department and dated October 13, 2016. The construction was documented with periodic construction observations by Daigler Engineering, PC (DE). Details of the construction, including a construction report and record drawings were provided to the NYSDEC in one report per cover letter dated January 23, 2017.

Following construction efforts in 2016 to separate leachate from stormwater, it was discovered that lowering the ground surface elevation in the vicinity of MW-7842 resulted in a nearly fully exposed concrete seal and a significantly loose protective casing upon final site inspection. It was agreed upon by City Hill and Lockwood Hills that MW-7842 would be repaired in 2017. A drawing titled *Monitoring Well MW-7842 Repair* (February 2017) documented the repair plan which excavated a portion of the existing PVC riser and steel casing, extending both approximately

three feet above the proposed concrete pad. Repair work was conducted on June 19, 2017 in accordance with the drawing and extreme care was taken during the repair to avoid compromising the integrity of the well; however, the repair was unsuccessful. Subsequently, Lockwood Hills decided to decommission and replace this glacial till (shallow) downgradient well. A MW-7842 Decommissioning and Replacement Plan was submitted to the Department and was approved on December 22, 2017. The proposed work was completed in early 2018.

Leachate flow monitoring, which began July 1, 2016, continued throughout 2017 based on the *Leachate Flow Monitoring Plan* (January 2016) prepared by DE. The initial four months of the data collection period coincided with historical drought conditions. The measured leachate flowrates were quite low as compared to the average leachate flowrate of 9.35 gallon per minute obtained from quarterly measurements taken between 2003 and 2014. This prompted Lockwood Hills to request an extension of the leachate flow data collection period aimed at capturing a more typical cyclic seasonal pattern of leachate generation. A second amendment to the Consent Order was issued by the Department on July 10, 2017 that extended the data collection timeframe until November 30, 2017 which included a submission deadline for a Leachate Flow Monitoring and Analysis report 45 days after the completion of data collection (i.e., January 12, 2018).

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 2017 calendar year, the excavation of Sediment Basin 2 and re-construction of the stormwater channels associated with the stormwater separation plan construction produced a mixture of soil and ash which was disposed in the Landfill. As a result, approximately 70 cubic yards, or 91 tons of material were disposed in the southwest corner of Stage II of the Landfill in October 2017. Cover soil was stripped from the disposal area in Stage II, and stockpiled onsite prior to the mixture of soil and ash 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 counts and a historic waste density. No waste materials were accepted from offsite during 2017.

2.3 ASH DENSITY, CAPACITY, AND SITE LIFE

No field testing of ash density was completed during calendar year 2017. 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 2017. As of December 31, 2017, the remaining airspace is approximately 421,867 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 assumed to be 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, 2017 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.

A spike in the daily average leachate flowrate on October 21st and 22nd of 2016 appears to be in direct response to a significant rainfall event of 4.55 inches reported at the nearest official National Oceanic and Atmospheric Administration (NOAA) weather station (NOAA 5.1, approximately 7.2 miles northwest of the site near the Village of Penn Yan) over these two days. Following this initial spike, a more gradual increase in daily average leachate flowrates continued largely without exception through May 2017. Since late-May 2017, the daily average flowrates have decreased and remained largely constant.

The average daily leachate flow rate for 2017 was 12.0 gallons per minute ($\pm$ 3.0 std. dev.; n = 365 days) with a daily maximum and daily minimum of 120.3 and 5.9 gallons per minute, respectively. A total of 6.3 million gallons of leachate was discharged to the Leachate Pond during 2017.

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.

A total of approximately 6.3 million gallons of primary and secondary leachate were treated in the pond between January and December 2017. Four discharge events were authorized during 2017, beginning on March 6th, May 10th, July 26th, and November 8th. Documentation of the Pond Discharge events are including with their respective months in Attachment 2. The March and May events both lasted 12 days, releasing approximately 2.1 million gallons at an average rate of 175,000 gallons per day and 1.45 million gallons at a rate of 120,800 gallons per day, respectively. The July and November events lasted 14 days. The July event released at an average rate of 139,000 gallons per day resulting in a discharge of 1.95 million gallons. The November event totaled approximately 1.67 million gallons and released at an average rate of 119,000 gallons per day.

The primary leachate values in Section 3 of the NYSDEC Annual Report Form (Attachment 1) were calculated from the total leachate per month as measured 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) which are performed on a monthly basis in conjunction with the monthly inspections. These manual measurements are typically recorded on the monthly site inspection reports (see Attachment 2)[1].

JAMKO Technical Solutions, Inc. of Lyons, New York, was hired to perform the annual primary leachate pipe jetting which was completed without incident in late 2017. The proof of payment to JAMKO can be found in Attachment 2 with the Monthly Site Inspection Form for December.

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 15.9, 6.0, 3.6, and 3.6 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 2017. The monthly and quarterly flow measurements were all well below the 20 gpad allowed by the regulations. The monthly and quarterly instantaneous flow measurements and water quality analysis for the LDS is discussed in more detail in Section 4.4. The monthly flow measurements were used to calculate monthly secondary leachate volumes for the year as reported in Section 4 of the NYSDEC Annual Report Form (Attachment 1). The resulting volume of secondary leachate for 2017 is approximately 28,401 gallons.

[1] Manual LDS flow measurements for April and May were reportedly 1200 mL in 180 sec and 1000 mL in 180 sec, respectively. These measurements were inadvertently not reported on their respective monthly site inspection form.

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 original ash disposal site 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 landfill was placed in protective layup in general accordance with the Layup Plan prepared by Daigler Engineering, PC (DE) and submitted to the NYSDEC in May 2011. As detailed in the 2012 Closure/Post-Closure Memo submitted to Dale Irwin (of GMMM, LLC at that time) on March 4, 2013, the volume of soil cover required for site closure was adjusted downward by approximately 25% for areas already at final grade which received the minimum six inches of soil cover under the Layup Plan.

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), adjusted by 3% for inflation to convert 2017 dollars to 2018 dollars. 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. Based on the above, the total final cover closure cost was estimated as $2,844,307 in 2018 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 $2,093,443 in 2018 dollars. The initial costs for each post-closure item in 2018 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	$71,838
Leachate Management	$27,791
Repair and Maintenance	$9,963
Monthly Inspections	$7,125
TOTAL	$116,717

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 $45,000. Data validation and quarterly environmental reporting are currently provided by DE for approximately $26,838. The total annual cost for environmental monitoring is therefore $71,838 in 2018. 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.

Currently there is no cost associated with leachate management as it is treated passively via an onsite sedimentation basin. This practice will change in the future based on the Consent Order (Case No. R8-20140710-47) Lockwood Hills agreed to execute with the New York State Department of Environmental Conservation (NYSDEC), effective February 18, 2015 and amended in February 2016 and July 2017. The Consent Order will require, in part, the segregation of stormwater from leachate and the treatment and disposal of the leachate onsite or at an appropriate offsite facility. The annual leachate management cost is a placeholder cost at $27,791. This cost will eventually be replaced with a more realistic estimate based on the approved leachate management practice.

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 2018 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.

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 $4,937,750 in 2018 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 will be forwarded under separate cover to the NYSDEC upon receipt. At the time of this report, the letter of credit had not been finalized. The available credit will be sufficient to cover 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 2017, 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 first quarter in 2017. This baseline event was third-party validated as required by the Lockwood EMP, Section 3.3.8. Routine sampling was performed during the second, 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 first quarter's event is including 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 27th and 28th, 2017. 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. Both 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. MW-7842, a shallow, glacial till well and MW-8407, a water level observation well, were also reported as dry during the fourth quarter. These wells will be discussed further in Section 4.5.

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 results for ammonia in MW-8911SH and Under Drain 3 and selenium in GW Dep Drain 3 were flagged by the laboratory for a matrix spike percent recovery being outside the acceptable range. The affected ammonia data should be estimated as bias high. 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 original ash disposal site (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 original ash disposal site (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. Time-series plots for all monitored parameters in the leachate are presented in Attachment 5.

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 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 2017 is that of pH in Under Drain 3 in the second quarter. However, occasional values of pH below the lower limit of the standard are not unusual at this location.

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 2017 as discussed below. An exception to this is the Inlet to Pond sampling location which experienced 12 intra-location maxima or minima throughout the year. This is not unexpected as the data points for Inlet to Pond are only inclusive of those collected both before and after the modification of leachate discharge pipes in 2016, which combined the OADS leachate with that from Stages I and II. Prior to the modification leachate from the OADS entered the Leachate Pond separately and the 24" Inlet to Pond location included only leachate from Stages I and II.

The leachate quality was consistent with previously recorded data with no notable upward or downward trending in concentrations for the majority of parameter-location combinations. One sample was obtained from Under Drain 5 during the first quarter of 2017. This is the first sample

available for this location in nearly a decade (i.e., since the first quarter of 2012). Alkalinity, boron, iron, manganese, sodium, and sulfate were considerably lower in Under Drain 5 compared to historic levels, while calcium, chloride, and hardness were elevated. The concentration of selenium was also lower compared to historic data, yet considerably elevated compared to other leachate locations. As reported last year, selenium concentrations in the primary leachate appear to have leveled off near the standard following a slow but steady decline during previous years. This observation continues to be true.

Table 4-2

LOCKWOOD ASH DISPOSAL SITE
LEACHATE QUALITY SUMMARY
2017 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(3/29-30/2017)

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	26	255	150	10	10	10
Total Dissolved Solids, TDS	500 mg/L	1,820	1,250	2,850	3,790	2,480	3,600
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	1,190	3,800	24,100	8,850	12,500	12,400
Cadmium, Cd	5 ug/L						
Chloride, Cl_2	250,000 ug/L			264,000	832,000	276,000	825,000
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		3,740	4,460	4,950	2,160	
Magnesium, Mg	(35,000 ug/L)	109,000	75,700	70,600	87,500	74,800	81,600
Manganese, Mn	300 ug/L		766	782	504	411	
Fe + Mn	500 ug/L		4,506	5,242	5,454	2,571	
Mercury, Hg	0.7 ug/L						
Nickel*,Ni	100 ug/L						
Selenium, Se	10 ug/L		20	30	22	38	72
Sodium, Na	20,000 ug/L	44,800	48,000	211,000	187,000	180,000	226,000
Sulfate, SO_4	250,000 ug/L	1,080,000	468,000	1,470,000	1,480,000	1,120,000	1,380,000
Zinc*, Zn	(5,000 ug/L)						

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

Table 4-3

LOCKWOOD ASH DISPOSAL SITE
LEACHATE QUALITY SUMMARY
2017 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(6/28-29/2017)

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				6.0		
Turbidity	< 5 NTU	20	75	50		22	
Total Dissolved Solids, TDS	500 mg/L	2,570	1,480	3,320	4,480	2,470	
Ammonia, NH_3	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		44			39	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	1,150	3,960	38,600	18,100	17,400	
Cadmium, Cd	5 ug/L						
Chloride, Cl_2	250,000 ug/L			314,000	996,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		7,400	5,380	706	6,690	
Magnesium, Mg	(35,000 ug/L)	159,000	64,100	72,200	85,200	71,200	
Manganese, Mn	300 ug/L		674	920	321	560	
Fe + Mn	500 ug/L		8,074	6,300	1,027	7,250	
Mercury, Hg	0.7 ug/L						
Nickel*,Ni	100 ug/L						
Selenium, Se	10 ug/L		16	36	20	37	
Sodium, Na	20,000 ug/L	93,900	29,900	145,000	177,000	118,000	
Sulfate, SO_4	250,000 ug/L	1,510,000	556,000	1,750,000	1,720,000	1,260,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only, routine sampled collected this quarter.
** Insufficient flow

Table 4-4

LOCKWOOD ASH DISPOSAL SITE
LEACHATE QUALITY SUMMARY
2017 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(9/20-21/2017)

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		6.5				
Turbidity	< 5 NTU	65	200	25	25	75	
Total Dissolved Solids, TDS	500 mg/L	2,620	1,490	3,410	4,290	2,660	
Ammonia, NH_3	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L		56			31	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	2,720	3,930	41,200	25,500	20,400	
Cadmium, Cd	5 ug/L						
Chloride, Cl_2	250,000 ug/L			307,000	745,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L		6,640	2,430		3,540	
Magnesium, Mg	(35,000 ug/L)	216,000	80,500	93,900	115,000	88,300	
Manganese, Mn	300 ug/L		815	1,140	317	668	
Fe + Mn	500 ug/L		7,455	3,570		4,208	
Mercury, Hg	0.7 ug/L						
Nickel*,Ni	100 ug/L						
Selenium, Se	10 ug/L			14	12	22	
Sodium, Na	20,000 ug/L	125,000	40,200	227,000	337,000	173,000	
Sulfate, SO_4	250,000 ug/L	1,440,000	521,000	1,760,000	1,720,000	1,280,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only, routine sample collected this quarter.
** Dry

Table 4-5

LOCKWOOD ASH DISPOSAL SITE
LEACHATE QUALITY SUMMARY
2017 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(12/27-28/2017)

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	57		28	35	24	
Total Dissolved Solids, TDS	500 mg/L	3,100	1,320	3,360	4,090	2,530	
Ammonia, NH_3	2,000 ug/L						
Antimony*, Sb	3 ug/L						
Arsenic, As	25 ug/L	26				21	
Barium*, Ba	1,000 ug/L						
Boron, B	1,000 ug/L	26,600	3,860	39,500	19,300	20,400	
Cadmium, Cd	5 ug/L						
Chloride, Cl_2	250,000 ug/L	271,000		341,000	853,000		
Chromium*, Cr	50 ug/L						
Copper, Cu	200 ug/L						
Iron, Fe	300 ug/L	17,200		5,860	1,530	2,420	
Magnesium, Mg	(35,000 ug/L)	129,000	78,600	92,000	110,000	89,000	
Manganese, Mn	300 ug/L	716	726	984	542	553	
Fe + Mn	500 ug/L	17,916	987	6,844	2,072	2,973	
Mercury, Hg	0.7 ug/L						
Nickel*,Ni	100 ug/L						
Selenium, Se	10 ug/L					23	
Sodium, Na	20,000 ug/L	198,000	43,800	219,000	262,000	249,000	
Sulfate, SO_4	250,000 ug/L	1,560,000	442,000	1,640,000	1,610,000	1,240,000	
Zinc*, Zn	(5,000 ug/L)						

* Baseline only, routine sampled collected this quarter.
**Dry

Three parameters were measured at notable maximum concentrations during 2017 in Under Drain 3, namely in chloride (inter-location), potassium (intra-location), and conductivity (intra-location) in the second, third, and fourth quarters, respectively. These maxima appear to be associated with increasing trends at Under Drain 3 as described herein. The previously reported stagnation of an increasing trend in chloride is no longer supported, with all four quarters of 2017 being the highest on record at Under Drain 3. In fact, the annual average for 2017 is approximately 1.5 times greater than the mean for the previous three years, and even greater for years prior. Under Drain 2 also appears to have an increasing trend with respect to chloride. Concentrations greater than the Part 703 GA standard of 250 mg/L were observed in Under Drain 2 for the first time during the first quarter of 2017. Concentrations remained elevated above the standard during all four quarters with an intra-location maximum occurring in the fourth quarter. Conversely, Inlet to Pond concentrations were less than the standard for the latter three quarters of the year. Addition of the flow from Under Drain 1, which has remained consistently low in chloride concentration, has promoted a leveling off of the previously reported increasing trend in chloride in Inlet to Pond.

The increasing trends in potassium and conductivity in Under Drain 3 have been relatively steady for the available data set. Under Drain 2 and Inlet to Pond also display trending with respect to potassium and conductivity similar to that described for chloride; that is, an increasing trend at Under Drain 2 and a leveling off of the previously reported upward trend at Inlet to Pond. The fourth quarter result for conductivity in Under Drain 2 is the second highest on record with the intrawell maximum recorded in 2008 appearing to be an outlier.

Concentrations of manganese in Under Drain 3 still appear to be on a downward trend; however, all four quarters were just greater than the standard following last year's three consecutive quarters less than the standard. One other intra-location minima occurred in 2017 that does not appear to be part of an overall trend, that is, pH in the third quarter in Under Drain 1.

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 2017 continued to be characterized by elevated levels of TDS, magnesium, sodium, and sulfate throughout the year, as well as, turbidity and boron which were detected above the Part 703 GA standard every quarter this year. Isolated elevated levels of arsenic, chloride, iron, and manganese in the fourth quarter were also detected, similar to that of the primary leachate. The fourth quarter exceedances of arsenic and chloride standards are 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. Magnesium concentrations were measured at an inter-location leachate maximum in the third quarter's LDS sample.

Nine intra-location maximum concentrations were measured in the LDS samples during 2017. Although the quantity is not unusual, all but two of the intra-location maxima occurred in the fourth quarter. These fourth quarter maxima included ammonia (tied), arsenic, boron, chloride, conductivity, iron, and potassium. Hardness and one of its ions, magnesium, were intra-location maxima at LDS in the third quarter.

Based on analytical data available for the 2015 annual report, upward trending between the beginning of 2011 and the beginning of 2015 associated with leachate indicators TDS, boron, sodium, and sulfate, had reportedly ended. While the LDS results from the first three quarters of 2017 were consistent with this 2015 conclusion, the elevated concentrations in the fourth quarter of 2017 in boron (intra-location maximum), TDS (third highest), and sodium (second highest) are not. These four parameters will continue to be monitored and trending evaluated to determine if the 2015 conclusions regarding trending remain valid for the LDS.

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.

MW-7842, a shallow, glacial till well was reported as dry during the third and fourth quarters. MW-7842 was first blocked during both the first and second quarter sampling events, however, samples were successfully collected for these quarters using a peristaltic pump. Unusual water quality concentrations generally not associated with any trending were reported for these two sampling events. The results appeared to support possible intrusion from surface water. Following the unsuccessful repair effort, Lockwood Hills decommissioned MW-7842 with NYSDEC's approval and installed a new well MW-1842 immediately adjacent. Details on this effort will be provided under a separate cover.

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 $CaCO_3$). 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 2017 calendar year include:

- pH in MW-8909D – This parameter is historically elevated in MW-8909D, as it was for all but the third quarter this year. The pH at this well averages around 9.0 S.U.;

- pH in MW-8911SH – Levels at this well are generally elevated compared to the other shallow and deep wells on site, averaging around 8.1 S.U (± 0.22 S.U. standard deviation). The pH observed during the fourth quarter was just greater than the upper limit of the Part 703 GA standard at 8.6 S.U. This is the first time this well has experienced an exceedance of this standard;

- Manganese in MW-8942D – It is not unusual for this well to sporadically exceed the standard for manganese. The third 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.

Table 4-6

LOCKWOOD ASH DISPOSAL SITE GROUNDWATER QUALITY SUMMARY
2017 FIRST QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(3/29-30/2017)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT														
		Background Wells					Downgradient Wells								GW Dep Drain 1	GW Dep Drain 3
		8401D	8404D	8405S**	8908D	8908S	7842S	8909D	8909S	8910D	8910S*	8911D	8911S	8942D	9306S	
Color*	< 15 C.U.															
pH	6.5 < pH < 8.5							9.3								
Turbidity	< 5 NTU		10			13	61	> 999						23	25	300	10
Total Dissolved Solids, TDS	500 mg/L				820	730	575	505		690		615		645		1,280	545
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									2,830		1,590				2,190	
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	362			994		1,060	3,540					363	522		382	
Magnesium, Mg	(35,000 ug/L)				65,600	57,400	51,900							65,700	58,400	84,200	
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L				1,096		1,153	3,630						630			
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	89,000			33,700	32,100		226,000	72,300	105,000		131,000	94,500	41,200	21,600	43,700	
Sulfate, SO_4	250,000 ug/L				330,000	254,000				363,000		305,000		280,000		654,000	
Zinc*, Zn	(5,000 ug/L)																

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

**Dry

+Poor Recovery

Table 4-7

LOCKWOOD ASH DISPOSAL SITE GROUNDWATER QUALITY SUMMARY
2017 SECOND QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(6/28-29/2017)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT														
		Background Wells					Downgradient Wells								GW Dep Drain 1	GW Dep Drain 3
		8401D	8404D	8405S**	8908D	8908S	7842S++	8909D	8909S	8910D	8910S*	8911D	8911S	8942D	9306S	
Color*	< 15 C.U.															
pH	6.5 < pH < 8.5							8.5								
Turbidity	< 5 NTU		8		203			565		7		140	7	10	9		
Total Dissolved Solids, TDS	500 mg/L				805	805	510			635		620		610		1,850	1,170
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									3,160		1,940				3,440	
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				711			3,460				1,370		316			
Magnesium, Mg	(35,000 ug/L)				296,000	56,400								60,100	53,800	98,900	54,900
Manganese, Mn	300 ug/L											382					
Fe + Mn	500 ug/L				788			3,524				1,752		560			
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	56,100			27,100	23,500		177,000	51,500	88,300		104,000	63,700	30,900		34,400	
Sulfate, SO_4	250,000 ug/L				285,000	341,000				368,000		318,000	271,000	285,000		967,000	383,000
Zinc*, Zn	(5,000 ug/L)																

* Baseline only, routine sampled collected this quarter.

** Insufficient flow

+ Poor Recovery

++ Sample collected on July 7, 2017 using a peristaltic pump

Table 4-8

LOCKWOOD ASH DISPOSAL SITE GROUNDWATER QUALITY SUMMARY
2017 THIRD QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(9/20-21/2017)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT															
		Background Wells					Downgradient Wells									GW Dep Drain 1	GW Dep Drain 3
		8401D	8404D	8405S**	8908D	8908S	7842S++	8909D	8909S	8910D	8910S+	8911D	8911S	8942D	9306S		
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5																
Turbidity	< 5 NTU	8	75		62			189				27			500		20
Total Dissolved Solids, TDS	500 mg/L	520	535		885	955				745		610		670		1,770	1,080
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									3,280		1,920				3,150	
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		348		1,540			962				326		523	463		
Magnesium, Mg	(35,000 ug/L)				67,100	64,200								66,800	59,700	115,000	
Manganese, Mn	300 ug/L													426			
Fe + Mn	500 ug/L				1,727			998						949			
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	70,100			33,700	29,000		172,000	55,200	99,900		130,000	71,400	40,000	20,800	35,700	25,900
Sulfate, $S0_4$	250,000 ug/L				311,000	317,000				366,000		304,000	252,000	261,000		896,000	420,000
Zinc*, Zn	(5,000 ug/L)																

* Baseline only, routine sample collected this quarter.

** Dry

+ Poor Recovery

++ Obstructed

Table 4-9

LOCKWOOD ASH DISPOSAL SITEGROUNDWATER QUALITY SUMMARY
2017 FOURTH QUARTER EXCEEDANCES OF 6 NYCRR PART 703 GA STANDARDS
(12/27-28/2017)

Parameter	6 NYCRR Part 703 GA Standard (TOGS 1.1.1 GA Guidance Value)	MONITORING POINT															
		Background Wells					Downgradient Wells									GW Dep Drain 1	GW Dep Drain 3
		8401D	8404D	8405S**	8908D	8908S	7842S++	8909D	8909S	8910D	8910S+	8911D	8911S	8942D	9306S		
Color*	< 15 C.U.																
pH	6.5 < pH < 8.5							9.0					8.6				
Turbidity	< 5 NTU		68			47		>999				28			57		
Total Dissolved Solids, TDS	500 mg/L	505			825	740		535		675		560		555		1,380	
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									2,840		1,410				2,640	
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				1,010			2,200				467		735	813		
Magnesium, Mg	(35,000 ug/L)				67,000	64,800								66,300	62,000	104,000	42,800
Manganese, Mn	300 ug/L																
Fe + Mn	500 ug/L				1,131			2,314				559		917	893		
Mercury, Hg	0.7 ug/L																
Nickel*, Ni	100 ug/L																
Selenium, Se	10 ug/L																
Sodium, Na	20,000 ug/L	90,400			33,300	28,900		180,000	68,600	109,000		95,200	60,400	39,700	20,400	42,000	
Sulfate, $S0_4$	250,000 ug/L				260,000					343,000						709,000	284,000
Zinc*, Zn	(5,000 ug/L)																

* Baseline only, routine sampled collected this quarter.

**Dry

+Poor Recovery

++ Obstructed

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 2017. The trends are discussed below.

Groundwater quality during 2017 was mostly typical with the exception of several wells which exhibited unusual concentrations generally not associated with any trending. Downgradient well MW-7842, which was discussed in Section 4.5.1, was atypical during the first and second quarters when samples were able to be collected. Numerous intrawell minima and maxima for nine different parameters were reported. It was surmised that this well's surface seal was compromised from damage sustained during nearby stormwater construction efforts in 2016 and that the unusual concentrations obtained in the first half of 2017 may have been the result of surface water intrusion. Consequentially, MW-7842 was decommissioned and a new, homologous well was installed in an adjacent location in early 2018.

MW-8908D also exhibited several intrawell minima concentrations during the second quarter 2017; namely, hardness and its constituent's calcium and magnesium, as well as, potassium. Notably, however, the turbidity at MW-8908D was nearly three times the previous intrawell maximum. All five parameters appear to have returned to normal during the latter half of the year. Through the third quarter of 2016 a possible upward trend in manganese was noted at MW-8908SH during 2016; however, concentrations since then have been low. A plot of the annual averages at this well with respect to manganese depicts the lowest annual average on record in 2017 reinforced by a first quarter 2017 intrawell minimum.

Several parameters at MW-8908SH (i.e., calcium, chloride, conductivity, hardness, iron, magnesium, manganese, sulfate, and TDS) and sulfate in MW-8908D have declined or leveled off since late 2015. Perhaps the most striking decrease is the fourth quarter result for sulfate, which was less than the Part 703 GA standard. This has not occurred since around 1994. Prior to 2015, slow and steady increasing trends were generally observed. By the latter portion of 2017, increasing trends with respect to these parameters are no longer evident.

Sulfate concentrations have been steadily increasing at wells MW-8911SH and MW-7842SH (prior to the well being damaged). A second quarter intrawell maximum was observed at MW-8911SH, which is only the fourth time this well has been greater than the Part 703 GA standard. Notably, the concentrations at MW-8911SH are nearing the Part 703 GA standard with two of this year's samples detected greater than the standard.

Four intrawell maxima and one minimum were observed in 2017 with respect to pH. The first quarter maxima at MW-8401 surpassed the former maximum from the previous quarter. Intrawell maxima at MW-8911SH (fourth quarter), MW-7842 (first quarter), and MW-8942D (third quarter) are not atypical sitewide and do not coincide with any trending. Similarly, the intrawell minimum pH observed in the third quarter of 2017 at MW-8909D was not unusual sitewide.

Background, bedrock well MW-8401 had several intrawell minima during 2017 in calcium and manganese in the second quarter and in iron during the fourth quarter. Both iron and manganese support a long-standing decreasing trend with respect to these parameters. Calcium has been relatively constant with one of the smallest standard deviations across all wells of ± 8.8 and a mean of 79 mg/L. Average annual chloride levels in well MW-8401 were again lower than the previous year, and nearly half the average annual peak which occurred in 2015. The decreases in concentration over the last two years no longer supports the increasing trend observed between 2006 and 2015.

In nearly all glacial till and bedrock wells across the site, conductivity levels were on the rise with small increase each quarter between the first and fourth quarters of the year, with the first quarter being relatively low compared to historic data. Fourth quarter results generally coincide with typical levels observed at their respective wells. While strikingly consistent, there is no cause for concern regarding the conductivity across the site.

Boron concentrations in MW-8910D were lower this year compared to recent history with an average concentration of 3,028 mg/L near 2011 levels. Conversely, boron was an intrawell maximum during the second quarter at MW-8911D, and the third quarter concentration was a close second supporting a slow, but consistently increasing, trend at this bedrock well. Further, concentrations greater than the standard have been observed since the beginning of 2011. Boron

does not appear to be impacting the shallow glacial till wells onsite. In fact, the average concentration at MW-8911D's shallow counterpart, MW-8911SH, was more than four times less than the average concentration at MW-8911D.

A few other instances of intrawell maxima and minima were recorded during the 2017 calendar year. A summary of these more isolated incidences are as follows:

- Alkalinity in MW-8911D – An intrawell minimum in alkalinity (170 mg/L) in the first quarter was atypical for the well as the concentration was more than one standard deviation from the mean.
- Alkalinity at MW-8909SH – An intrawell maximum in alkalinity in the second quarter could support a very shallow increasing trend since around 2012.
- Ammonia in MW-8911D – An intrawell maximum concentration of ammonia was reported for this downgradient bedrock well in the second quarter. There is no evidence of trending and the concentrations are still well under the Part 703 GA standard.
- Chloride in MW-8911SH – An intrawell maximum concentration of chloride during the second quarter supports a slow but steady increasing trend at this well.
- Manganese in MW-8908D – An intrawell maximum during the third quarter was observed with no apparent trending at this time. Further, the fourth quarter concentration returned to within one standard deviation of the mean for the entire data set.
- Sodium in MW-8911SH – Sodium in MW-8911SH was an intrawell maximum in the first quarter for the second consecutive year. Sodium concentrations in this well have become extremely variable since around 2012. There is no evidence of trending.
- Turbidity in MW-8908D – An intrawell maximum level of turbidity was reported for this bedrock well during the second quarter. No trending is apparent at this time.

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 2017. 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 arsenic during the first quarter, aluminum and dissolved oxygen in the second quarter, and alkalinity in the third quarter. A significant decrease between up and downstream samples occurred during the fourth quarter in copper at 25.4%. Other notable differences (greater than 10%) between upstream and downstream samples during the 2017 sampling events include increases in alkalinity, iron, and dissolved oxygen in the first, second, and fourth quarters, respectively. Notable decreases between the upstream and downstream samples include dissolved oxygen in the third quarter and iron in the fourth quarter.

The Leachate Pond was not actively discharging during any of the quarterly surface water samples in 2017. However, 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. An intrawell minimum water level was reported during the first quarter; however, the well was reported as dry during the rest of 2017. MW-8407 has never been reported as dry prior to the fourth quarter of 2016. During construction activity in 2016 related to the stormwater separation project, MW-8407 was raised to accommodate changes in the surrounding ground surface elevation and the Geomon sampler installed in MW-8407 was removed. Since then water level readings have been atypical. Downhole camera video in March 2017 revealed that a section of the ¾-inch PVC Geomon riser pipe had broken off and was left in MW-8407 approximately 15 feet below the top of the riser. Therefore, it is believed that the first quarter's intrawell minimum water level is erroneous and likely due to interference from the abandoned Geomon riser pipe. After several attempts, retrieval of the ¾-inch PVC pipe from the well were

unsuccessful. Given that the well was only used for water level observations and sufficient bedrock groundwater level coverage across the site remains without MW-8407, Lockwood Hills requests that this be permanently removed from the sampling program.

The groundwater heads during 2017 were generally within one standard deviation of the mean for the entire data set. 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 2017 were generally typical for the site, with one exception in the fourth quarter. The vertical gradient at the MW-8911 couplet was unusually low resulting from the second lowest groundwater level recorded in the shallow, glacial till well of this couplet. This vertical gradient is expected to rebound during 2018, as there is no apparent trend.

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2017 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

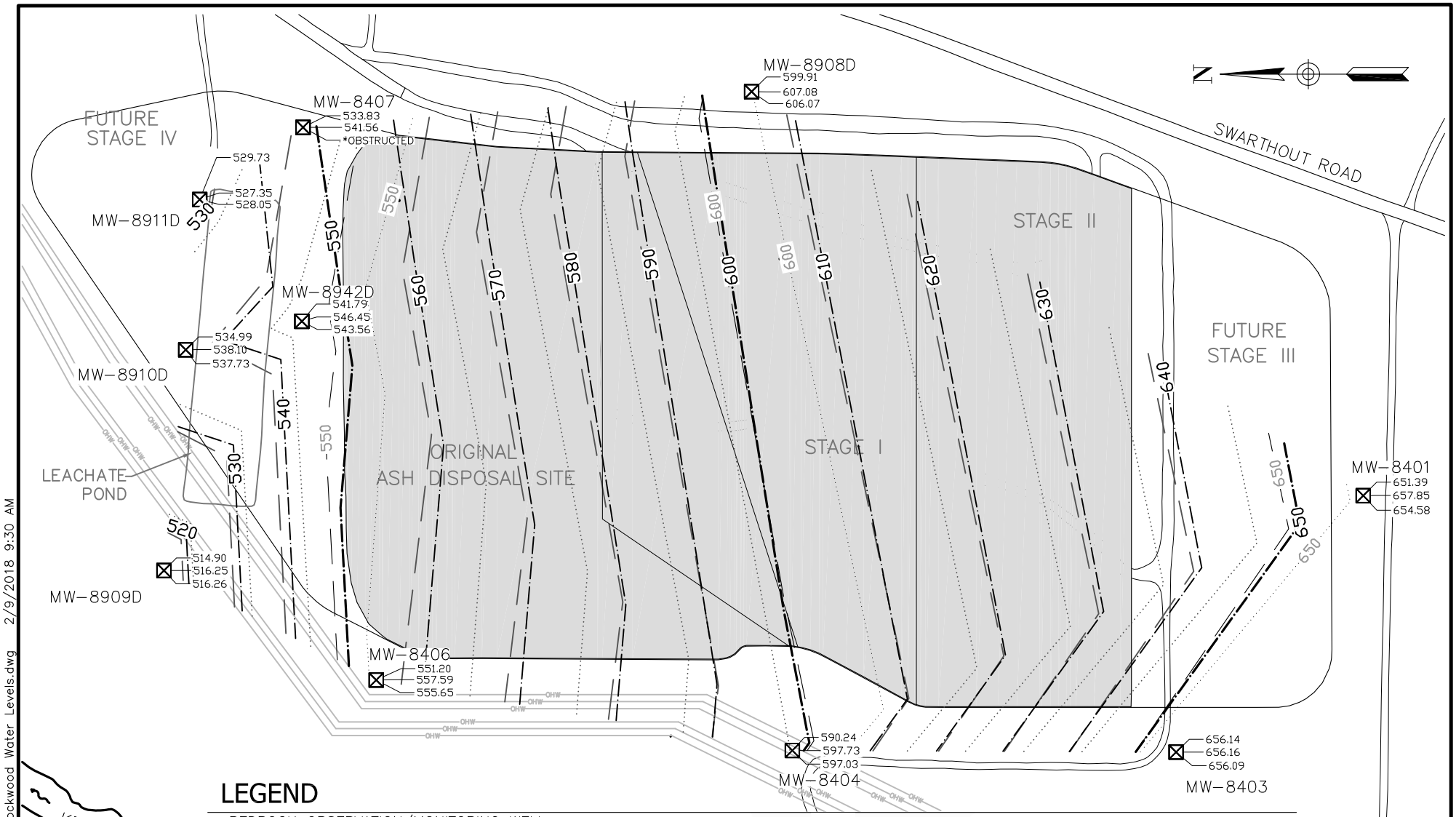
		First Quarter (3/30/2016)				Second Quarter (6/29/2017)			
Parameter	**Units**	**Kueka Upstream**	**Kueka Downstream**	**Difference**	**% Increase**	**Kueka Upstream**	**Kueka Downstream**	**Difference**	**% Increase**
Alkalinity	mg/l	95	105	10	10.5%	120	130	10	8.3%
Aluminum	ug/l	<16.6	<16.6			111	140	29	26.1%
Ammonia	mg/l	<0.1	<0.1			<0.1	<0.1		
Antimony	ug/l	<2.7	<2.7			BO	BO		
Arsenic	ug/l	3.4	4.4	1.0	29.4%	<5.0	<5.0		
Barium	ug/l	<200	<200			BO	BO		
Boron	ug/l	<50	<50			66.3	64.8	-1.5	-2.3%
Cadmium	ug/l	<0.37	<0.37			<5.0	<5.0		
Calcium	ug/l	40,000	39,400	-600	-1.5%	31,100	30,400	-700	-2.3%
Chloride	mg/l	38.9	38.9			46.3	46.0	-0.3	-0.6%
Chromium	ug/l	<6.9	<6.9			BO	BO		
Color	C.U.	5	5			BO	BO		
Conductivity	µmhos/cm	337	336	-1	-0.3%	371	370	-1	-0.3%
Copper	ug/l	4.0	3.9	-0.1	-2.5%	<5.0	<5.0		
DO	mg/l	7.37	7.88	0.5	6.9%	4.25	8.18	3.93	92.5%
Hardness	mg/l	146	144	-2	-1.4%	128	127	-1	-0.8%
Iron	ug/l	200	216	16	8.0%	72.0	79.4	7.4	10.3%
Magnesium	ug/l	11,300	11,200	-100	-0.9%	12,300	12,400	100	0.8%
Manganese	ug/l	21	22.4	1.4	6.7%	<20.0	<20.0		
Mercury	ug/l	<0.03.	<0.03			<0.2	<0.2		
Nickel	ug/l	<40	<40			BO	BO		
pH	SU	7.9	7.5	-0.4	-5.1%	8.5	8.1	-0.4	-4.7%
Potassium	ug/l	<5,000	<5,000			2,980	3,140	160	5.4%
Selenium	ug/l	<3.4	<3.4			<5.0	<5.0		
Sodium	ug/l	19,500	19,300	-200	-1.0%	16,900	17,700	800	4.7%
Sulfate	mg/l	23.4	23.5	0.1	0.4%	27.0	27.0		
TDS	mg/l	175	165	-10	-5.7%	225	220	-5	-2.2%
TOC	mg/l	2.31	2.41	0.1	4.3%	BO	BO		
Turbidity	NTU	712	686	-26	-3.7%	<1.0	<1.0		
Zinc	ug/l	<20	<20			BO	BO		

BO = Baseline Events Only

Table 4-10
LOCKWOOD ASH DISPOSAL SITE
2017 SURFACE WATER EVALUATION FOR THE KEUKA OUTLET

		Third Quarter (9/21/2017)				Fourth Quarter (12/27/2017)			
Parameter	**Units**	**Kueka Upstream**	**Kueka Downstream**	**Difference**	**% Increase**	**Kueka Upstream**	**Kueka Downstream**	**Difference**	**% Increase**
Alkalinity	mg/l	120	150	30	25.0%	190	190		
Aluminum	ug/l	< 100	< 100			< 100	< 100		
Ammonia	mg/l	< 0.1	< 0.1			< 0.1	< 0.1		
Antimony	ug/l	BO	BO			BO	BO		
Arsenic	ug/l	5.13	< 5.0	-0.13	-2.5%	< 5.0	< 5.0		
Barium	ug/l	BO	BO			BO	BO		
Boron	ug/l	< 50.0	< 50.0			< 50.0	< 50.0		
Cadmium	ug/l	< 5.0	< 5.0			< 5.0	< 5.0		
Calcium	ug/l	42,900	43,700	800	1.9%	73,300	75,000	1,700	2.3%
Chloride	mg/l	44.5	44.7	0.2	0.4%	79.8	81.7	1.9	2.4%
Chromium	ug/l	BO	BO			BO	BO		
Color	C.U.	BO	BO			BO	BO		
Conductivity	µmhos/cm	395	403	8	2.0%	745	752	7	0.9%
Copper	ug/l	< 5.0	< 5.0			7.16	5.34	-2	-25.4%
DO	mg/l	4.44	3.85	-0.59	-13.3%	9.8	11.8	2.00	20.4%
Hardness	mg/l	156	159	3	1.9%	267	274	7	2.6%
Iron	ug/l	69.7	64.3	-5.4	-7.7%	77.5	66.8	-10.7	-13.8%
Magnesium	ug/l	11,800	12,000	200	1.7%	20,500	21,000	500	2.4%
Manganese	ug/l	< 20.0	< 20.0			< 20.0	< 20.0		
Mercury	ug/l	< 0.2	< 0.2			< 0.2	< 0.2		
Nickel	ug/l	BO	BO			BO	BO		
pH	SU	7.0	6.5	-0.5	-7.1%	8.3	8.9	0.6	7.2%
Potassium	ug/l	2,790	2,830	40	1.4%	4,260	4,140	-120	-2.8%
Selenium	ug/l	< 5.0	< 5.0			< 5.0	< 5.0		
Sodium	ug/l	26,300	27,300	1,000	3.8%	38,900	40,600	1,700	4.4%
Sulfate	mg/l	26.1	26.0	-0.1	-0.4%	42.9	44.1	1.2	2.8%
TDS	mg/l	205	220	15	7.3%	415	390	-25	-6.0%
TOC	mg/l	BO	BO			BO	BO		
Turbidity	NTU	< 1	< 1			< 1	< 1		
Zinc	ug/l	BO	BO			BO	BO		

BO = Baseline Events Only



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 12/27/17)

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. (716) 773-6872
GRAND ISLAND, NEW YORK 14072 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		BEDROCK GROUNDWATER POTENTIOMETRIC SURFACE LOCKWOOD ASH DISPOSAL SITE	FIGURE 4-1
SCALE: 1" : 250'	REVISION # 0		
February 2018	TOWN OF TORREY	YATES COUNTY	NEW YORK

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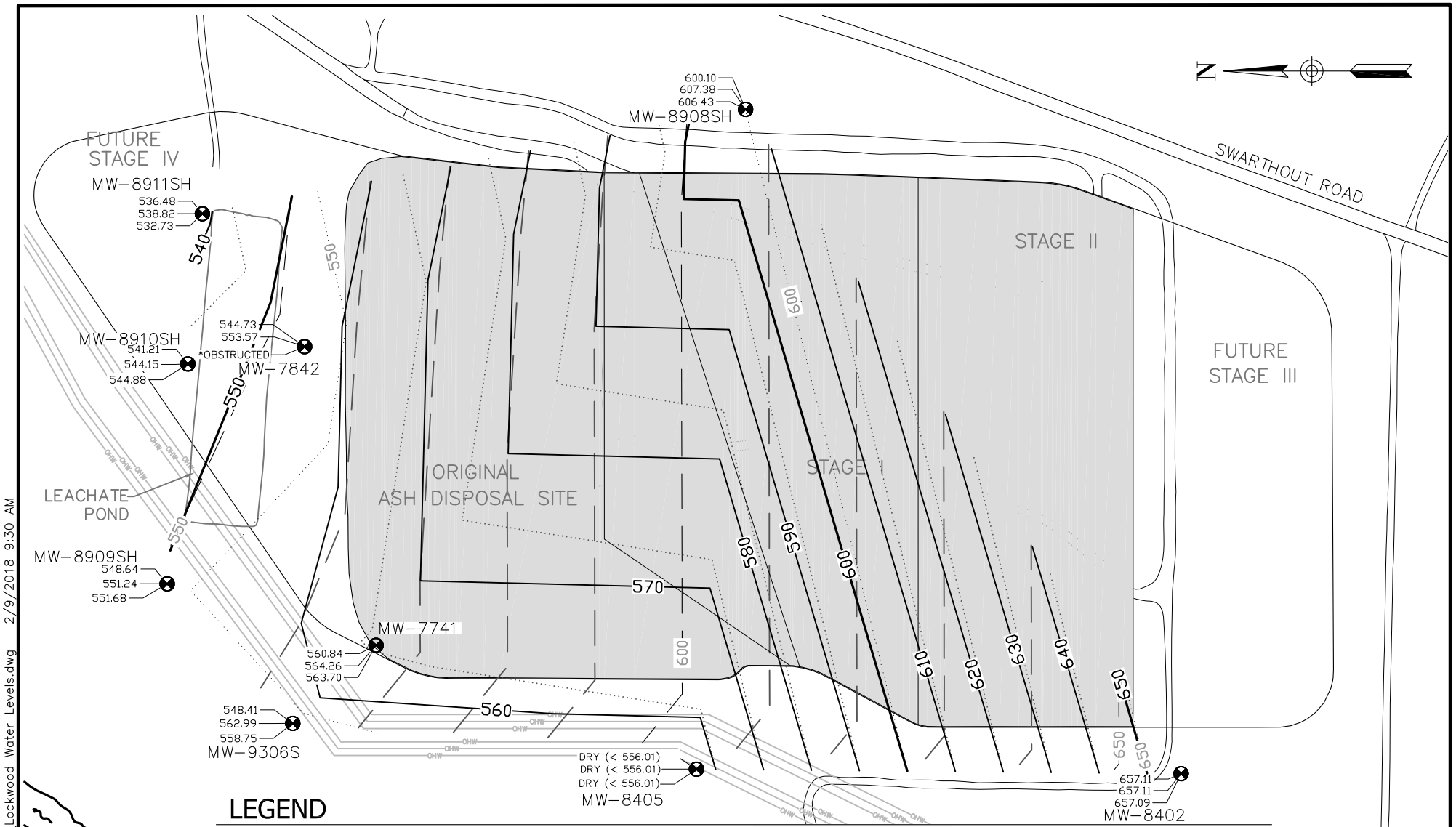

LEGEND

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 12/27/17)

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

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

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LOCKWOOD HILLS LLC		GLACIAL TILL GROUNDWATER POTENTIOMETRIC SURFACE	FIGURE 4-2
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE	
February 2018	TOWN OF TORREY	YATES COUNTY	NEW YORK

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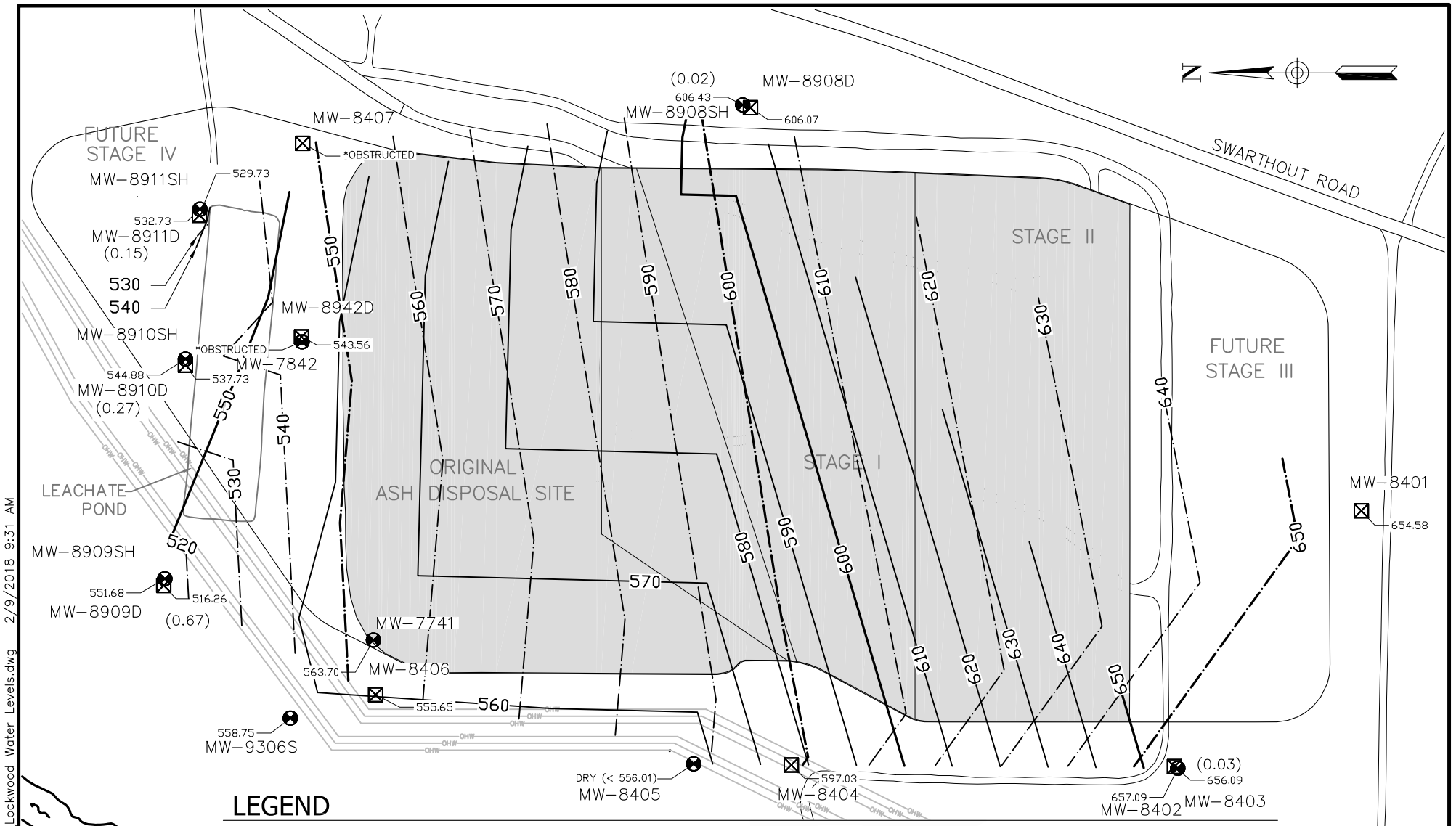

LEGEND

- GLACIAL TILL OBSERVATION/MONITORING WELL
- BEDROCK OBSERVATION/MONITORING WELL
  - Current Quarter's Groundwater Elevation (Measurements taken on 12/27/17)
  - (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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LOCKWOOD HILLS LLC		POTENTIOMETRIC SURFACES FOR FOURTH QUARTER 2017	FIGURE 4-3
SCALE: 1" : 250'	REVISION # 0	LOCKWOOD ASH DISPOSAL SITE	
February 2018	TOWN OF TORREY	YATES COUNTY	NEW YORK

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ATTACHMENT 1

NYSDEC 2017 Annual Report Form

Clear Form

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2018.

A. This annual/quarterly report is for the year of operation from January 01, 2017 to December 31, 2017

B. 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:	**FACILITY CITY:**	**STATE:**	**ZIP CODE:**
Swarthout Road	Dresden	NY	14441
FACILITY TOWN:	**FACILITY COUNTY:**	**FACILITY PHONE NUMBER:**	
Torrey	Yates		
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 #:	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:
8-5736-00005/00003-0	09/05/08	09/04/18	62N01

FACILITY CONTACT:		CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
Dale Irwin	☐ public ☒ private	(315) 536-2359	
CONTACT EMAIL ADDRESS: dirwin@greenidgellc.com			

OWNER INFORMATION

OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:	
Lockwood Hills LLC	(315) 536-2359		
OWNER ADDRESS:	**OWNER CITY:**	**STATE:**	**ZIP CODE:**
590 Plant Road, PO Box 187	Dresden	NY	14441
OWNER CONTACT:	**OWNER CONTACT EMAIL ADDRESS:**		
Dale Irwin	dirwin@greenidgellc.com		

OPERATOR INFORMATION

OPERATOR NAME:		
☒ *same as owner*	☐ public ☒ private	

PREFERENCES

Preferred address to receive correspondence:	☐ *Facility location address*	☒ *Owner address*
☐ *Other (provide):*		
Preferred email address:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		
Preferred individual to receive correspondence:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		

Did you operate in 2017? ☒ 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 .

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?

   70 Cubic Yards of Airspace

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

   Please do not report units as pounds per cubic yard.

   1.3 Tons/Cubic Yard

2. Remaining Constructed Capacity

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

   421,867 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	420,024											
February	411,326											
March	471,368											
April	678,004											
May	780,032											
June	641,244											
July	553,291											
August	528,358											
September	467,156											
October	447,862											
November	444,567											
December	445,758											
ANNUAL	6,288,990											

	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							420,024					
February							411,326					
March							471,368					
April							678,004					
May							780,032					
June							641,244					
July							553,291					
August							528,358					
September							467,156					
October							447,862					
November							444,567					
December							445,758					
ANNUAL							6,288,990					

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 2017 Annual Report, Section 4 and Attachments 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 2017 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: 28,401 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.

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	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	1,965											
February	2,485											
March	2,987											
April	4,565											
May	3,931											
June	3,043											
July	2,359											
August	1,376											
September	1,522											
October	1,769											
November	1,141											
December	1,258											
ANNUAL	28,401											

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January							1,965					
February							2,485					
March							2,987					
April							4,565					
May							3,931					
June							3,043					
July							2,359					
August							1,376					
September							1,522					
October							1,769					
November							1,141					
December							1,258					
ANNUAL							28,401					

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS

For each type of waste material that the Department has approved for use as alternative daily cover, intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., daily 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/Wood Ash						
Paper Mill Sludge						
Processed C&D						
Shredder Fluff						
Tire Chips						
Wood/Wood Chips						
Other (specify)						
Total ADC						
Total Beneficial Use Determination Materials						

Percent Alternative Daily Cover (ADC) Calculation

ADC Calculations: Total Tons ADC/Total Tons Waste Disposed x 100 = N/A

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

SECTION 6 - SOLID WASTE DISPOSED

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

_____% Scale Weight _____% Estimated

100 _____% Truck Count _____% Other (Specify: _____)

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

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)								
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)								
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge								
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Ash & Soil Mix	N/A*			91			91	91**
Total Tons Disposed				91			91	91

*Facility is a captive landfill with no tipping fees

**Daily average reflects that waste was disposed all within one day in October 2017

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Identify the service area of the waste. The Total Tons Received reported below should equal the Total Tons Disposed in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

1) Direct hauled from the generator of the waste. In the case where the waste is hauled to your facility from the generator (i.e. hauled from residences, commercial establishments, etc.), "Direct Haul" is the appropriate response in Column 2 under "Service Area." Please report the tonnage by waste type and identify the state, county and planning unit where it was generated; or

2) Sent to your facility from another solid waste management facility. Waste may be sent to your transfer station from another solid waste management facility. In this case, please report the tonnage by waste type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

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)					

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SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)					
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge					
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
Ash & Soil Mix	Lockwood Ash Disposal Site, stormwater separation excavation	NY	Yates County	Yates County	91
				TOTAL RECEIVED (tons):	91

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

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility <u>also</u> 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

Identify the service area of the material. DO NOT REPORT IN CUBIC YARDS!

1) <u>Direct hauled from the generator of the recyclables</u>. In the case where the recyclables are hauled to your facility from the generator (i.e. hauled from residences, commercial establishments, etc.), "Direct Haul" would be the appropriate response in Column 2 under "Service Area". Please report the tonnage by material type and identify the state, county and planning unit where it was generated; or

2) <u>Sent to your facility from another solid waste management facility</u>. Recyclables may be sent to your facility from another solid waste management facility. In this case, please report the tonnage by material type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

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

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 (metal, glass, plastic)					
Commingled Paper (all grades)					
Single Stream (total)					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
				TOTAL RECEIVED (tons):	0

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** (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)
Commingled Paper (all grades)					
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
				TOTAL PAPER RECOVERED (tons):	0

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
				TOTAL GLASS RECOVERED (tons):	

METAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal (from MSW)					
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	0

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):	0

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED 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)
Commingled Containers (metal, glass, plastic)					
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	0

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): 0					

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
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		67		285		18,919	I & II
2010			87,311		84		131		87,562	I & II
2009			88,308		272				97,343	I & II
2008-1979 (see add'l sheet)										
WIP Cumulative Total									2,028,202	I & II & OADS **

Overall in place volume 1,565,766 cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above Volume from OADS is included. OADS is closed.

**OADS = Original Ash Disposal Site

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
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
(2000			60,057						60,057	I & II
(1999-1979)			Unknown						1,246,091	I & II and OADS
WIP Cumulative Total										

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 2

Original* section used (years) from 1979 to 1992

Section Footprint 14.1 acres

Capped with approved final cover system Yes ■ No ☐

Percent capped 100%

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

Next* section used (years) from 1992 to present

Section Footprint 19.3 acres

Capped with approved final cover system Yes ☐ No ■

Percent capped 0%

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*, L_o _____ m^3/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

Please report units in cubic feet

Number of Internal Combustion Engines: n/a

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: _____

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Results of Condensate Sampling

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

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:

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SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

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

■ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan? See 2017 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 2017 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 2017 Annual Report, Section 4 and Attachment 5.

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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 2017 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 2017 Annual Report, Attachment 4 First 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 2017 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.

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SECTION 22 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit the completed form by email or mail to the appropriate Regional Office (See attachment for Regional Office email & mailing addresses and Solid Waste 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 Permitting and Planning
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits was prepared by me or under my supervision and direction and is true to the best of my knowledge and belief, and that I have the authority to sign this report form pursuant to 6 NYCRR Part 360. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Signature	Date
	2/28/2018

Name (Print or Type)	Title (Print or Type)
Dale Irwin	President/CEO

Email (Print or Type): dirwin@greenidgellc.com

Address	City
590 Plant Road	Dresden

State and Zip	Phone Number
New York, 14441	(315) 536-2359 ext. 3423

ATTACHMENTS: ☒ YES ☐ NO
(Please check appropriate line)

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ATTACHMENT 2

Monthly Inspection Logs

LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION

GEM312-ALOW

Inspector Harold Sexton

Date of Inspection 1/9/17 Time 11:45

Weather Conditions Snow flurries

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			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).
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

___ X ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

___ X ___ 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

X ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 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 Seal

Date of Inspection 2/22/17 Time _____

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	
X			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).	
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.	
			OPERATION CONTROL	
X			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).	
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.	
			WATER	
X			5. Solid waste is prevented from entering surface waters and/or groundwater.	
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).	
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.	
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.	
			ACCESS	
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.	
X			10. Access roads are passable.	

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

___ X ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

___ X ___ 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

X ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 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 Flow Meter.

Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

AES-ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **LOCKWOOD ASH LANDFILL**

DATE: 3/6/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE: 2/23/17 SAMPLE TYPE: **GRAB** SAMPLER: Kevin Ambra Adirondack Environmental

FIELD PH: **(6-9)** 8.1 Fe-T: **(<4)** .21 Mn-T: **(<3)** ND Zn-T: **(<2)** ND

NH3: As-T: **(<.1)** ND TSS: **(<50)** ND Se-T: **(<.07)** .006

AUTHORIZATION TO DRAIN POND

NAME: Harold Sexton DATE: 3/5/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE AND TIME: LEVEL: 5.0' 3/6 9:02

VOLUME: 2,680,000 FIELD PH: 8.2

END DATE AND TIME: LEVEL: 3/17/17 10:45 - 1.4'

VOLUME: 575,000 FIELD PH: 8.0

SITE OPERATOR(S): DLI GALLONS DISCHARGED: 2,105,000

OF DAYS OF DISCHARGE: 12
MAXIMUM GALLONS PER DAY: 178,000
AVERAGE GALLONS PER DAY: 175,000
FLOW RATE FOR RECEIVING BODY OF WATER: - 230 cfs.
COMPOSITE SAMPLE START - 3/6/17 - 3/9/17
COMPOSITE SAMPLE END: 3/9/17

COMMENTS: Summary of weekly pH's:

3/8/17 8.1

3/10/17 8.0

3/14 - 8.0

LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION

GEM312-ALOW

Inspector Harold Seyfu

Date of Inspection 3/21/17 Time 10:00

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			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).
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

___ X ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

___ X ___ 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

X ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 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 4/24/17 Time 10:20

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			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).
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

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___ X ___ 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

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___ X ___ 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.

X ___ ___ 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)

Leachate Flow on Flow meter 16.13 gpm
Calibrated Flow device. No adjust necessary.

Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

AES-ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **LOCKWOOD ASH LANDFILL**

DATE: 5/10/17

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE: 5/2/17 SAMPLE TYPE: **GRAB** SAMPLER: Adirondack

FIELD PH: **(6-9)** 8.4 Fe-T: **(<4)** .168 Mn-T: **(<3)** .02 Zn-T: **(<2)** ND

NH3: As-T: **(<.1)** ND TSS: **(<50)** 3.5 Se-T: **(<.07)** .01

AUTHORIZATION TO DRAIN POND

NAME: Harold Sexton DATE: 5/10/17

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE AND TIME: LEVEL: 5/10/17 10:00 AM

VOLUME: 5.3' 2,350,000 FIELD PH: 8.3

END DATE AND TIME: LEVEL: 5/22/17

VOLUME: 1.8 900,000 FIELD PH: 8.1

SITE OPERATOR(S): DLI GALLONS DISCHARGED: 1,450,000

OF DAYS OF DISCHARGE: 12
MAXIMUM GALLONS PER DAY: 125,000
AVERAGE GALLONS PER DAY: 120,800
FLOW RATE FOR RECEIVING BODY OF WATER: 550 cfs.
COMPOSITE SAMPLE START 5/10/17
COMPOSITE SAMPLE END: 5/11/17

COMMENTS: Summary of weekly pH's:

8.2 - 5/14
8.0 - 5/17

3.3" = 600
17.6

Sent to Bethany 6/2/17

LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION

GEM312-ALOW

Inspector Harold Sexton

Date of Inspection 5/21/17 Time 9:45

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
X			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).
X			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

___ X ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

___ X ___ 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

X ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

Some erosion noted, will repair when weather permitting

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 Scott Gibson

Date of Inspection 6-27-17 Time 15:30

Weather Conditions Pt. Cloudy 75°F

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit. NA
			OPERATION CONTROL
X			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).
		X	4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
X			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

___	X	___	11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas). NA
X	___	___	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

X	___	___	13. Monitoring wells are intact.

OTHER

X	___	___	14. All required equipment is on-site and operational.
___	X	___	15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris). NA
___	X	___	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. NA
X	___	___	17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

Item #4, Some rill erosion on east side. Corrective action will include fill & fabric and/or stone.

City will mowing site.

Level of Leachate Pond = 3.7'

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
LEACHATE COLLECTION POND
DISCHARGE REPORT FORM

Greenidge GENERATION

PRE-DISCHARGE POND WATER QUALITY

SAMPLE DATE: 7/21/17 SAMPLE TYPE: Pre-discharge SAMPLING COMPANY: Adirondack
NAME OF SAMPLER: Kevin Ambra

FIELD pH: (6-9) 8.0 Tot Fe: (<4.0) .08 Tot Mn: (<3.0) ND Tot Zn: (<2.0) ND
NH3: Tot As: (<0.1) .008 TSS: (<50.0) ND Tot Se: (<0.07) ND

POND DRAINAGE AUTHORIZATION

NAME: Ken Scott DATE: 7-26-17

SIGNATURE: OTHER/NOTES:

POND DISCHARGE DATA

START OF DISCHARGE							
DATE:	7-26-17				TIME:	2:00 pm	
POND LEVEL (FT):	4.91				POND VOLUME (GAL):		2650
FIELD pH:	8.42						
END OF DISCHARGE							
DATE:	8-9-17				TIME:	1:45 pm	
POND LEVEL (FT):	1.03				POND VOLUME (GAL):		700
FIELD pH	7.51						

COMPOSITE SAMPLE START DATE: 7-26-17
COMPOSITE SAMPLE END DATE: 7-27-17

DISCHARGE SUMMARY

TOTAL DISCHARGE (GAL): 1,950,000 0
OF DISCHARGE DAYS 14
MAX GAL/DAY: } 139285
AVG GAL/DAY: } 139285 #DIV/0!
AVG CUFT/DAY DISCHARGE: #DIV/0!
FLOW RATE OF KEUKA OUTLET (CFS) 427

WEEKLY pH SUMMARY		
	Date	pH

Volume: Calculated - 7-27-17 = 13.1
Leachate Flow

LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION

GEM312-ALOW

Inspector Ken Scott

Date of Inspection 7-26-17 Time 1:30

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
	X		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).
		X	4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X	___	___	11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).
X	___	___	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

X	___	___	13. Monitoring wells are intact.

OTHER

X	___	___	14. All required equipment is on-site and operational.
X	___	___	15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).
___	X	___	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.
X	___	___	17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

#4- Access Roads - MINOR "washouts" due to heavy RAIN events

- No Ash exposed or "trails" of Ash exposed

Remove Vegetation on fenceline -

Open Outlet: Discharge water -
2 Weeks MAX - OR Re-sample!

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 E. Scott

Date of Inspection 8/30/17 Time 1:30

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
X			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).
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			OPERATION CONTROL
	X		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).
		X	4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
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X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

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MONITORING

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___ X ___ 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.

X ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

- Access Road Needs maintenance
- No Ash exposed

- Volume - 12.400 gal/PM
- Pond Level - 2.4 ft

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 9-28-17 Time 3:00

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
	X	X	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).
		X	4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
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X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

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MONITORING

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OTHER

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X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

525 ml in 180 sec.

10.1 gal/min
3.1 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 T. Scott

Date of Inspection 10-30-17 Time 2:45

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	
X			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).	
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.	
			OPERATION CONTROL	
		X	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).	
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			WATER	
X			5. Solid waste is prevented from entering surface waters and/or groundwater.	
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X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.	
		X	8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.	
			ACCESS	
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.	
X			10. Access roads are passable.	

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

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X ___ ___ 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

Y ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

13.97 gal / min

4.2 pond

400 mL in 180 sec.

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

AES-ASH POND MANAGEMENT

DOCUMENTATION OF SEDIMENTATION POND DISCHARGE

FACILITY: **LOCKWOOD ASH LANDFILL**

DATE: 11-8-2017

DETERMINATION OF POND WATER QUALITY PRIOR TO DISCHARGE

SAMPLE DATE: 10/13/17 SAMPLE TYPE: **GRAB** SAMPLER: Adirondack

FIELD PH: **(6-9)** 8.0 Fe-T: **(<4)** 0.056 Mn-T: **(<3)** ND Zn-T: **(<2)** ND

NH3: —— As-T: **(<.1)** ND TSS: **(<50)** 2.3 Se-T: **(<.07)** ND

AUTHORIZATION TO DRAIN POND

NAME: Ken Scott DATE: 10/08/2017

OTHER DIRECTION:

POND DISCHARGE INFORMATION

START DATE AND TIME: LEVEL: 11/8/17 - 4 ft 4 3/4 inches

VOLUME: 2,250,000 FIELD PH: 8.1

END DATE AND TIME: LEVEL: 11/22/17 —

VOLUME: 580,000 FIELD PH: 8.0 — 6 (Inches)

SITE OPERATOR(S): DLI GALLONS DISCHARGED: 1,670,000

OF DAYS OF DISCHARGE: 14
MAXIMUM GALLONS PER DAY: 119,285
AVERAGE GALLONS PER DAY: 119,285
FLOW RATE FOR RECEIVING BODY OF WATER:
COMPOSITE SAMPLE START 10-12-17
COMPOSITE SAMPLE END: 10-13-17

COMMENTS: Summary of weekly pH's:

LOCKWOOD ASH LANDFILL
MONTHLY ASH SITE INSPECTION

GEM312-ALOW

Inspector K. Scott

Date of Inspection 11-29-17 Time 11:05 AM

Weather Conditions Clear - cold

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
X			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).
	X		2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
		X	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).
		X	4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
X			5. Solid waste is prevented from entering surface waters and/or groundwater.
X			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
X			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
		X	8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
X			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
X			10. Access roads are passable.

Lockwood Ash Landfill
Monthly Ash Site Inspection - Continued

WASTE HANDLING

X ___ ___ 11. Coal combustion by-products (CCBP's) are placed in accordance with operating procedures (6-8" lifts, well-compacted, in designated areas).

X ___ ___ 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

X ___ ___ 13. Monitoring wells are intact.

OTHER

X ___ ___ 14. All required equipment is on-site and operational.

X ___ ___ 15. Contractual sweeping requirements appear to have been performed (roads and ash unloading areas are clear of CCBP materials and debris).

___ X ___ 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.

X ___ ___ 17. There are no apparent unsafe site or operational conditions.

CORRECTIVE ACTIONS:
(Note Item #'s)

8.81 Gal. Per Minute
1.9 ft - Pond Level
220 m/L. Flow in 180 Sect.

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 12-30-17 Time 1:50

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
✓			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).
✓			2. Transport vehicles are marked in accordance with Part 364.6(b) and are covered during transit.
			OPERATION CONTROL
✓			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).
✓			4. Berms, dikes, and slopes are free of channeling, slumping, erosion, potentially damaging vegetation and damage caused by wildlife.
			WATER
✓			5. Solid waste is prevented from entering surface waters and/or groundwater.
✓			6. Leachate collection system appears to be functioning properly (no ponded water on active site, no obstructions in piping or manholes).
✓			7. Perimeter drainage ditches are sufficiently clear to allow water to flow freely.
✓			8. Sedimentation pond is free of potentially damaging vegetation and banks exhibit no apparent damage from wildlife.
			ACCESS
✓			9. Access to site and sedimentation pond discharge mechanisms are controlled by means of fencing, gates, locks, signs or other suitable means.
✓			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)

9.92 Cond/P.M.
3.1 Ef Pond C1
320 n/c Plan

Signature of Inspector

cc: Dan matias,
ECD, Greenidge Station
Site File

Kenneth Scott

From: Mark Swinnerton
Sent: Wednesday, December 13, 2017 9:11 AM
To: Kenneth Scott
Subject: RE: Inv. 2463 PO 17-0156

Bill Payment Information

PAYMENT CONFIRMATION	P17120901 - 2429367
VENDOR	JamKo
PROCESS DATE	12/12/17
PAYMENT AMOUNT	$4,546.80
PAYMENT METHOD	Bill.com
STATUS	Paid
PAYMENT ACCOUNT	1072 Bill.com Money Out Clearing
MEMO	Inv #2463a
PAID FROM	Silicon Valley Bank ******9576

Check Information

CHECK NUMBER	21748058
CHECK DATE	12/12/17
ESTIMATED ARRIVAL DATE	12/15/17
CLEARED DATE	
CHECK AMOUNT	$4,546.80
MEMO	Inv #2463a
EXPIRATION DATE	03/12/18

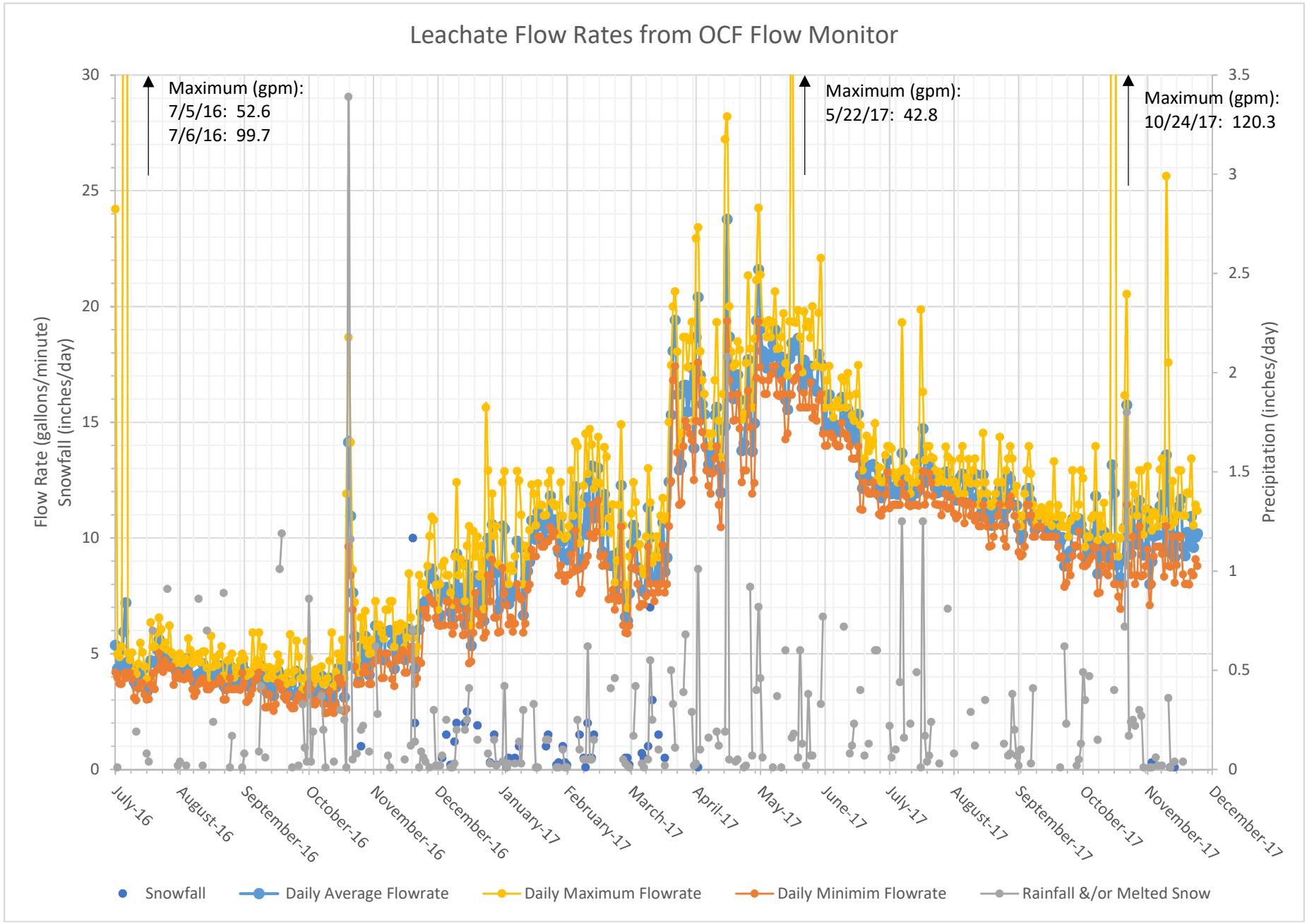
From: Kenneth Scott [mailto:kscott@greenidgellc.com]
Sent: Tuesday, December 12, 2017 2:04 PM
To: Mark Swinnerton <mswinnerton@greenidgellc.com>
Subject: FW: Inv. 2463 PO 17-0156
Importance: High

Mark. Let me know if you have processed the payment for JAMKO and I'll notify them that payment is enroute.

Ken Scott

ATTACHMENT 3

Leachate Flow Metering
Time-Series Plot


Leachate Flow Rates from OCF Flow Monitor
Maximum (gpm):
7/5/16: 52.6
7/6/16: 99.7
Maximum (gpm):
5/22/17: 42.8
Maximum (gpm):
10/24/17: 120.3
Flow Rate (gallons/minute)
Snowfall (inches/day)
Precipitation (inches/day)
30
25
20
15
10
5
0
3.5
3
2.5
2
1.5
1
0.5
0
July-16
August-16
September-16
October-16
November-16
December-16
January-17
February-17
March-17
April-17
May-17
June-17
July-17
August-17
September-17
October-17
November-17
December-17
Snowfall
Daily Average Flowrate
Daily Maximum Flowrate
Daily Minimim Flowrate
Rainfall &/or Melted Snow

ATTACHMENT 4

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

FIRST 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:

DAIGLER ENGINEERING P.C.
2620 Grand Island Blvd.
Grand Island, New York 14072-2131

June 2017

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:

DAIGLER ENGINEERING P.C.
2620 Grand Island Blvd.
Grand Island, New York 14072-2131

June 2017

Site Name: **Lockwood Ash Disposal Site**

Laboratory Receipt Date: **3/31/17**

Sample Data Group: **7842**

Client Sample ID	Laboratory Sample ID	Sample Matrix	Analyte Types
7842	170331010-001	Water	Total Metals, Field Parameters, Conventional Parameters
8401	170331010-002	Water	Total Metals, Field Parameters, Conventional Parameters
8404	170331010-003	Water	Total Metals, Field Parameters, Conventional Parameters
8908-D	170331010-004	Water	Total Metals, Field Parameters, Conventional Parameters
8908-SH	170331010-005	Water	Total Metals, Field Parameters, Conventional Parameters
8909-D	170331010-006	Water	Total Metals, Field Parameters, Conventional Parameters
8909-SH	170331010-007	Water	Total Metals, Field Parameters, Conventional Parameters
8910-D	170331010-008	Water	Total Metals, Field Parameters, Conventional Parameters
8911-D	170331010-010	Water	Total Metals, Field Parameters, Conventional Parameters
8911-SH	170331010-011	Water	Total Metals, Field Parameters, Conventional Parameters
8942-D	170331010-012	Water	Total Metals, Field Parameters, Conventional Parameters
9306-SH	170331010-013	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dup 8909D	170331010-014	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 1	170331010-015	Water	Total Metals, Field Parameters, Conventional Parameters
Leak Detection System	170331010-016	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 1	170331010-017	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 2	170331010-018	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 3	170331010-019	Water	Total Metals, Field Parameters, Conventional Parameters

Site Name: **Lockwood Ash Disposal Site**

Laboratory Receipt Date: **3/31/17**

Sample Data Group: **GW Dep Drain 3**

Client Sample ID	Laboratory Sample ID	Sample Matrix	Analyte Types
Inlet to Pond	170331010-020	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Upstream	170331010-021	Water	Total Metals, Field Parameters, Conventional Parameters
Keuka Downstream	170331010-022	Water	Total Metals, Field Parameters, Conventional Parameters
Surface Water Dup	170331010-023	Water	Total Metals, Field Parameters, Conventional Parameters
Pond Grab	170331010-024	Water	Total Metals, Field Parameters, Conventional Parameters
Field Blank	170331010-025	Water	Total Metals, Field Parameters, Conventional Parameters
GW Dep Drain 3	170331010-026	Water	Total Metals, Field Parameters, Conventional Parameters
Under Drain 5	170331010-027	Water	Total Metals, Field Parameters, Conventional Parameters

DATA VALIDATION REPORT
Review of Baseline Parameter Analytical Data

Lockwood Ash Disposal Site

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1 DATA PACKAGE ASSESSMENT

Two data packages containing the results for a total of 26 samples, including one field blank[1] 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 March 29th and 30th, 2017. 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 15 environmental samples taken on March 29th, including the groundwater field duplicate. The remaining 11 samples were taken on March 30th, 2017. 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. Three 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 85% completeness requirement for sample

[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.

collection per the SAP was exceeded; 29 samples collected or observed dry out of 30 required samples.

All samples for the event were shipped together and received by the laboratory on March 31st, 2017. Proper cooler temperatures and sample preservation was confirmed upon receipt as indicated on the Chain of Custody forms. Once received at the laboratory, the 26 samples were divided into two sample data group (SDGs). The GW Dep Drain 3 SDG contains eight samples including two leachate samples, the up and downstream surface water samples from the Keuka Outlet, the surface water field duplicate, GW Dep Drain 3, the field blank, and the Pond Grab. The remaining 18 samples, including all groundwater samples and four leachate samples were included in SDG 7842. 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 between the two packages. However, for total organic carbon (TOC), the raw results associated with data for SDG GW Dep Drain 3 were mistakenly reported in the data package for SDG 7842 and not in the data package for GW Dep Drain 3, even though no client sample results for SDG 7842 were associated with this TOC run. Otherwise, client samples and associated quality control samples were easily trackable through the packages.

All samples were received and analyzed within the proper holding times, with the exception of color (as discussed in Section 4.3). The accuracy of the summary data sheets was evaluated by examination of all data values against raw data printouts for the following samples; 8911SH and Under Drain 1 for the 7842 SDG and Keuka Upstream and Under Drain 5 for the GW Dep Drain 3 SDG. Data were examined for completeness, computation and transcriptional errors, and application of program QA/QC data.

Two errors were noted, both related to samples from SDG 7842. The concentration reported for potassium in Under Drain 3 was from a 10× dilution, but the potassium concentration measured in the undiluted sample (88.3 mg/L) was not greater than the linear range (0 – 100 mg/L). As long as the analyte concentration is not within 90% of the linear range it is not justified to use the concentration from the diluted sample. Therefore, the potassium concentration for Under Drain 3 was corrected to be consistent with the results from the undiluted sample on Form I. Also, hardness was miscalculated for Under Drain 1. The hardness concentration was corrected on the summary

sheet as shown on Page 286 of Attachment 2A. 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 1 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. Flow and dissolved oxygen measurements were reported for the two groundwater drains (GW Dep Drain 1 and GW Dep Drain 3) and five of the six leachate sampling locations (Leak Detection System, Under Drain 1, Under Drain 2, Under Drain 3, and the Inlet to Pond). Flow measurement was not obtained on one of the leachate sampling locations, Under Drain 5. Dissolved oxygen measurements were obtained for Under Drain 5 and for surface water samples per the SAP and as requested by the Chain of Custody.

Field observation sheets were not originally provided with the data packages but were provided by the laboratory's field crew upon request. 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 calibrations above this range (7.08 and 7.09) for both days of sampling. 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 both days of the sampling event. 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 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, but since independent field measurements for the GW Dup and Surface Water Dup samples and flow measurement on Under Drain 5 were not obtained, the percent completeness for this sampling event for field measurements is 96%. 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). One ICP-AES run and one AA run were included in both SDGs. 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)
	SDG 7842	SDG GW Dep Drain 3	
Antimony	87.6	91.1	60
Barium	884	929	200
Cadmium	79.4	73.8	5
Chromium	19.4	19.6	10
Copper	26.5	28.5	25
Iron	2,476	2,196	100
Manganese	344/761*	313	15
Nickel	380	363	40
Selenium	10.0	12.9	5
Zinc	989	1,003	20

*Initial calibration blank and single standard repeated for manganese in SDG 7842 only.

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.

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 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.

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%. Two failing results were observed in the CRDL check standard prepared for SDG GW Dep Drain 3. The results for selenium and chromium were below the acceptable percent recovery range for the initial CRI at 82.1 and 82.0%, respectively. However, only the chromium concentrations in Pond Grab and Field Blank were qualified as bias low (J-) based on these results. All other chromium results and all selenium results for SDG GW Dep Drain 3 did not fall within the applicable range of greater than the IDL but less than five times the CRDL.

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. A CRA check standard for mercury was not reported on the Analysis Run Log nor on Form IIB-IN. 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 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 0.3 and 5.0 µg/L. Therefore, the 2.0 µg/L was taken to be the CRA and 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 ICV 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.

All ICB/CCB and preparation blank quality control samples produced negative instrument readings that were less than or equal to the -IDL, but greater than the -CRDL for mercury in the AA run. As a result, all client sample results for mercury, which were all reported to be less than the IDL were qualified as usable estimates (UJ).

In the ICP-AES analytical run for SDG 7842, concentrations greater than the IDL, but less than the CRDL were reported for boron in the ICB and all of the six following CCBs. Also, barium, cadmium, calcium, copper, magnesium, manganese, nickel, potassium, sodium, and zinc all had at least one CCB with a detection above the IDL, but below the CRDL in SDG 7842. 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". Many results fell into the applicable range and the change in reported concentration was noted on Form I in Attachment 2a.

In SDG GW Dep Drain 3, concentrations of barium, boron, magnesium, nickel, potassium, and sodium were detected above the IDL but below the CRDL in one or more CCBs. Again, a number of results in client samples were within the applicable range and were qualified as CRDL with a "U".

Criteria for evaluation of negative bias using negative results found in the raw data for ICB and CCB samples are detailed in HW-3a. All sample results which are less than ten times the CRDL that are associated with an ICB or CCB whose raw data result is less than –CRDL, should be qualified as J- indicating an estimated, bias-low result. No blanks reported with SDG 7842 had a measured result less than it's –CRDL. One blank reported with SDG GW Dep Drain 3 fell into this category; selenium in CCB-4. No client samples were associated with this blank.

For an ICB or CCB whose raw data result is less than –IDL, but greater than or equal to –CRDL, professional judgment should be used to qualify any sample results that are non-detect or greater than the IDL. For this analysis, the threshold for qualification was taken to be two times the absolute value of the most negative failing blank result.

In the ICP-AES analytical run for SDG 7842, chromium and antimony had at least one ICB/CCB result observed in the raw data which was less than the –IDL, but greater than the –CRDL. Nearly all client samples for chromium and antimony in SDG 7842 were qualified as "UJ" or "J-" as a result. In the ICP-AES analytical run for SDG GW Dep Drain 3, aluminum, calcium, chromium, copper, selenium, and zinc all had at least one ICB/CCB result observed in the raw data which was less than the –IDL, but greater than the –CRDL. Aluminum and chromium results were largely qualified as result of this failing QC criterion.

One preparation blank or method blank was prepared with each SDG as required. All analytes in the preparation blank for SDG 7842 were less than the IDL, but not less than -CRDL, i.e., within the acceptable range. Measurable concentrations of calcium, magnesium, potassium, and zinc where found in the preparation blank for SDG GW Dep Drain 3. All failing preparation blank values were greater than the IDL, but less than their respective CRDL. All associated analytical sample results for these analytes with measured concentrations less than the CRDL but greater than the IDL should be reported on Form I as the CRDL concentration with a qualification of "U" per HW-3a. This change was noted on the Form Is in Attachments 2a and 3a, where applicable.

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.

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 the ICP-AES sample analysis run 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 ± CRDL of the true concentration according to HW-3a or within ± 2×CRDL according to the NYS ASP. No result in any of the four ICS-A samples (Initial and final for SDG 7842 and initial and final for SDG GW Dep Drain 3), for any of the four interfering compounds met even the less stringent state 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 as reported on Form XII. 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 the all four ICS samples, with reported percent recoveries between 68.2 and 74.4%.

Five client samples in the 7842 SDG (GW Dep Drain 1, Leak Detection System, Under Drain 1, Under Drain 2, and Under 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 five client samples. Similarly, three client samples in SDG GW Dep Drain 3 had concentrations of interferents within range; Pond Grab, Under Drain 5, and Inlet to Pond. The iron results in these three samples also were qualified as estimated low (J-).

In addition to analysis of the results presented on the summary form for the ICS check samples (Form IV), 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.

Barium, potassium, and sodium raw data in one or more of the interference check samples in both SDGs was greater than their IDL. The potassium and sodium results for Under Drain 2, Under Drain 3, Under Drain 5, and Inlet to Pond, and the sodium results for the Leak Detection System, Under Drain 1, and the Pond Grab were above the linear range for these analytes. 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 barium, potassium and sodium results were qualified as bias high (J+) for a possible false positive effect due to calcium interference.

Ten analytes not present in the ICS solutions, antimony, arsenic, boron, cadmium, chromium, copper, manganese, nickel, selenium, and zinc, produced a result that was less than –IDL in one or more ICS samples run with the SDG 7842. The same analytes, with the exception of chromium, produced a result that was less than –IDL in one or more ICS samples run with the SDG GW Dep

Drain 3. Associated client sample results less than 10 times the absolute value of the lowest negative ICS sample results were qualified as bias low (J-) or estimated (UJ).

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 7842 sample and Inlet to Pond sample were used to prepare the matrix spikes for the 7842 SDG and the GW Dep Drain 3 SDG, 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), chromium (0.02 mg/L), and selenium (0.01 mg/L) were made too low. While spike concentrations for aluminum (2.0 mg/L), antinomy (0.5 mg/L), barium (2.0 mg/L), copper (0.25 mg/L), iron (1.0 mg/L), manganese (0.05 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 7842 and Inlet to Pond client sample results were qualified as usable estimates due to the omitted matrix spikes. One analyte in each of the analytical runs failed to meet the acceptable percent recovery criteria of between 75 and 125% in the pre-digestion matrix spike when the unspiked sample concentration was less than four times that of the spike. In the matrix spike made with 7842, the percent recovery for iron was 127.2%, but the post-digestion spike recovery was less than 125%. The iron result in 7842 was qualified as estimated based on this failing QC result. In the matrix spike made with Inlet to Pond, the percent recovery for selenium was 70.4%, and the post-digestion spike's percent recovery was also less than 75%, at 68.4%. The selenium result for the Inlet to Pond sample was qualified as estimated low (J-) per HW-3a protocol. The "N"s reported for iron or selenium in all other client samples were stricken without qualification.

The 8401 and Keuka Upstream client samples were used for the AA matrix spikes. Both mercury matrix spikes were acceptable.

3.5 DUPLICATE SAMPLES

One duplicate was prepared in the laboratory per SDG. For SDG 7842, client sample 7842 was used for the ICP-AES laboratory duplicate sample and 8401 was used for the AA laboratory duplicate. For the GW Dep Drain 3 SDG, the Inlet to Pond client sample was used for the ICP-AES laboratory duplicate sample and Keuka Upstream was used for the AA laboratory duplicate. All appropriate criteria with respect to the duplicate samples were met.

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. The surface water duplicate was analyzed with the GW Dep Drain 3 SDG, while the groundwater duplicate was analyzed with the SDG 7842. A form (A.4) evaluating the field duplicates was appended to both SDG packages in their respective attachments.

Two analytes, iron and aluminum, were qualified in the groundwater field duplicate pair (GW Dup and 8909-D) based on the field duplicate results. For iron the relative percent difference (RPD) between the original sample and its field duplicate was greater than 20% and both results were greater than five times the CRDL for iron. For aluminum, one or both samples were less than five times the CRDL and the absolute difference between the original sample and its field duplicate was greater than the CRDL. All field surface water duplicate results are acceptable.

3.6 LABORATORY CONTROL SAMPLE

One ICP-AES laboratory control sample (LCS) was ran with each SDG at proper concentrations. One mercury LCS was also ran with each SDG. 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. 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.

In the 7842 SDG, the client sample 7842 was subject to serial dilution. Barium, boron, calcium, iron, magnesium, and manganese concentrations in the undiluted samples were over 50 times the IDL and the percent differences of the serially diluted samples were over 10%, but under 100%. The results for these six analytes are flagged with an "E" on Form IX and all Form Is in SDG 7842 as required.

In the GW Dep Drain 3 SDG, the Inlet to Pond sample was subject to serial dilution. Calcium, potassium, and sodium concentrations in the undiluted samples were over 50 times the IDL and the percent differences of the serially diluted samples were over 10%, but under 100%. The results for these three analytes are flagged with an "E" on Form IX and all Form Is in SDG GW Dep Drain 3 as required. However, it is noted that all three of these parameters were either over (calcium and sodium) or within 95% (potassium) of their respective linear ranges. Therefore, the results from the initial sample are not valid. In the case of calcium, even the 1:5 dilution result was within 95% of the linear range and the result from the serial dilution was also not valid. Therefore, the failing calcium results were disregarded. For sodium and potassium, results from the 1:10 dilution on the initial sample can be substituted for the initial sample results on Form IX-IN and the 1:5 dilution difference between the initial sample and the serial dilution is still maintained. After making the substitution, the % difference for potassium drops to 8.8% and result is no longer failing. The percent difference on the sodium result also decreases to 12.6%, but still qualifies as a valid failing result.

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 barium, boron, calcium, iron, magnesium, and manganese results in 7842 and the sodium results in Inlet to Pond were flagged as usable estimates. The "E"s reported on Form I for all other client samples were stricken without qualification.

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 heading on Form X, indicates the IDLs be verified quarterly. The Lockwood Ash Disposal Site's SAP indicates that the IDLs be determined within six months of the analysis. The federal guidance HW-3a has no guidance on the frequency with which IDLs should be verified. The ICP-AES IDL certification (dated 7/26/16 on Form X provided with both SDGs) was performed approximately eight 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, 12/27/2016, is acceptable, as analysis was completed within one year.

Another non-compliance issue of note is the IDLs for selenium and chromium are not less than half their corresponding CRDL. This is a requirement of both the state and EPA guidance documents. No data are flagged as a result of this observation.

ICP-AES linear range determinations were reported on Form XII provided with both SDGs. 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 quarterly per state guidance and as indicated by the heading on Form XII, and within six months of the analysis according to the SAP. The date of linear range determination (6/23/15) is significantly out-of-date per state guidance and SAP requirements. 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. There were no failing field duplicate results for the wet chemistry parameters in either SDG.

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 what appears to be one LCS, or reference standard, per day and one duplicate per SDG, not every ten client samples, as required. One matrix spike was also performed per SDG. All quality control samples were within acceptable limits. No qualifications were made based on the discrepancies in frequency.

4.2 AMMONIA

All samples for this event were analyzed within one ammonia run. 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 matrix spike/matrix spike duplicate pairs were used as the duplicate samples in lieu of a client sample. The SAP is not specific whether this is an

acceptable practice. No data were flagged based on this observation. Also, initial and final CRI samples were reported on Summary Form IIB-IN.

Reported quality control results were acceptable except for the CRI samples. The percent recoveries on both the initial and final CRI samples were less than the acceptable range of 80 - 115%, with an initial percent recovery of 59% and a final percent recovery of 62%. The same CRI samples apply to both SDGs. 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 estimate low (J-) based on this failing QC result.

4.3 COLOR

All samples for this event were analyzed in a single run for color. The color analysis was performed on April 3rd, six days after the first samples were collected on March 29th, and therefore, outside the recommended holding time of 48 hours. All color results were qualified as usable estimates (J).

One duplicate sample was performed per SDG and two blanks, one opening prior to any samples and one closing following all samples, were performed. 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

The event's samples were analyzed for conductivity on two separate days, but were not divided by SDG. One LCS was analyzed per day/run. The site's SAP requires the LCS to be positioned one in every ten client samples. Also, one duplicate was performed for the entire event 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 both LCS samples and the RPD of the one 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 on Form III 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 all analyzed in three analytical runs. 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 spike/matrix spike duplicate pairs, all three of which were associated with SDG 7842. Therefore, technically the frequency requirements were satisfied, but ideally one of the three matrix spike/matrix spike duplicate pairs should have been performed on a sample from SDG GW Dep Drain 3. The SAP is not specific on whether use of a matrix spike/matrix spike duplicate pair as the duplicate samples in lieu of a client sample is an acceptable practice. Also, 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 six matrix spikes and the RPD for each of the three pairs were all within acceptable range.

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 on Form III 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, but not split between SDGs. Only one passing duplicate analysis was performed for the event. The duplicate was performed on a sample from SDG 7842, no duplicate analyses were associated with SDG GW Dep

Drain 3. The Site's SAP also calls for one reference sample in ten client samples. One passing reference sample (LCS) was performed each day/run. No data was qualified based on the lower than required frequencies of these QC samples.

4.7 TOTAL ORGANIC CARBON

All client samples were analyzed within a single run; however, failing LCS and CCV samples towards the end of that run resulted in re-analysis of all samples not bracketed by passing CCVs, which coincidently split the data by SDGs. While no data from the SDG 7842 is associated with the second run both runs are included in the raw data package provided with SDG 7842. Conversely, while no data reported for the samples in SDG GW Dep Drain 3 was taken from the failing end of the initial run, only that run was provided in the raw data package for SDG GW Dep Drain 3. When contacted, the laboratory readily identified the misplacement of the raw data.

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. One matrix spike/matrix spike duplicate pair was performed with SDG 7842 and one duplicate analysis was performed on a sample from SDG GW Dep Drain 3. Two LCSs were reported per run. No results were qualified based on deviation from the required frequencies of these quality control samples. The percent recoveries are RPDs of the matrix spikes and duplicates, respectively, and were all within acceptable limits. In both runs, one of the two LCS samples reported on the summary sheets were above the acceptable range of 90 – 110%. The failing LCS reported with SDG 7842 was not reported at the proper concentration as seen in the raw data, this LCS result should be 33.9 not 33.4 mg/L. All TOC data in both SDGs greater than the IDL was qualified as a useable estimate based on the failing LCS data.

An initial and a mid-run CRI check standard were performed as part of each run prior to each of the LCSs. Both CRI check standards associated with SDG 7842 resulted in greater than acceptable percent recoveries at 215 and 125%. The acceptable range is between 90 and 110%. The mid-run CRI check standard associated with the SDG GW Dep Drain 3 also was recovered high at 118%, while the initial CRI check standard was recovered low with a percent recovery of only 52%. As a result, all TOC sample results above, but less than five times the reporting limit are qualified as estimated high (J+) in SDG 7842 and simply as useable estimates (J) in SDG GW Dep Drain 3.

5 CORRECTNESS AND USABILITY SUMMARY

A summary of all flagged data is presented in Table 5-1. Most data for these two SDGs are considered usable in their current form. Data flagged with a J, BJ, 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

March 2017 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	Color	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	C.U.	mg/L	mg/L
7842	All J[2]			86.8J[9,10]	62.3J[10]	109,000J[10]		6.9UJ[4]	25U[3]	1,060J[8,10]	0.03UJ[4]	5,000U[3]	51,900J[10]	93.4J[10]		40U[3]			20U[3]	5UJ[17]		2.90J+[14,18]
8401	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]					2.7UJ[4]			5UJ[17]		
8404	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]		1.53J+[14,18]
8908-D	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]			5UJ[17]	0.398J-[13]	1.15J+[14,18]
8908-SH	All J[2]				200U[3]			11.3J-[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]		1.11J+[14,18]
8909-D	All J[2]	1,430J[12]			200U[3]			6.9UJ[4]	25U[3]	3,540J[11]	0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	15J[17]	0.475J-[13]	3.01J+[14,18]
8909-SH	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]		
8910-D	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]			5UJ[17]		
8911-D	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]	0.240J-[13]	
8911-SH	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]					2.7UJ[4]		20U[3]	5UJ[17]	0.226J-[13]	
8942-D	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]		
9306-SH	All J[2]				200U[3]			6.9UJ[4]	25U[3]		0.03UJ[4]	5,000U[3]				40U[3]	2.7UJ[4]		20U[3]	5UJ[17]		
GW Dep Drain 1	All J[2]		4.4BJ-[7]		200UJ[3,6]		0.37UJ[7]	6.9UJ[4,7]	25UJ[3,7]	382J-[5]	0.03UJ[4]	5,000UJ+[3,6]		24.4J-[7]	43,700J+[6]	40UJ[3,7]	2.7UJ[7]	3.4UJ[7]	20UJ[3,7]	5UJ[17]		1.26J+[14,18]
GW Dup (8909-D)	All J[2]	905J[12]			200U[3]			6.9UJ[4]	25U[3]	2,630J[11]	0.03UJ[4]	5,000U[3]	5,000U[3]			40U[3]			20U[3]	15J[17]	0.467J-[13]	2.92J+[14,18]
Leak Detect Syst	All J[2]		7.1BJ-[7]	1,190J-[7]	200UJ[3,6]		0.37UJ[7]	6.9UJ[4,7]	25UJ[3,7]	47.7J-[5]	0.03UJ[4]	5,000U[3,6]		15UJ[3,7]		40UJ[3,7]	2.7UJ[7]	3.4UJ[7]	0.29UJ[7]	5UJ[17]		2.68J+[14,18]
Under Drain 1	All J[2]		5.4BJ-[7]		200U[3,6]		0.37UJ[7]	6.9UJ[4,7]	25UJ[3,7]	3,740J-[5]	0.03UJ[4]	16,600J+[6]				40UJ[3,7]	2.7UJ[7]	20.3J-[7]	0.29UJ[7]	5UJ[17]		
Under Drain 2	All J[2]		2.8UJ[7]		200U[3,6]		0.37UJ[7]	6.9UJ[4,7]	25UJ[3,7]	4,460J-[5]	0.03UJ[4]					40UJ[3,7]	2.7UJ[7]	30.0J-[7]	20UJ[3,7]	5UJ[17]		
Under Drain 3	All J[2]		2.8UJ[7]		200U[3,6]		0.94BJ-[7]	6.9UJ[4,7]	25UJ[3,7]	4,950J-[5]	0.03UJ[4]					41.7J-[7]	2.7UJ[7]	21.9J-[7]	66.1J-[7]	5UJ[17]	0.228J-[13]	
GW Dep Drain 3	All J[2]	16.6UJ[4]			200U[3]			6.9UJ[4]			0.03UJ[4]	5,000U[3,15]				40U[3]			20U[15]	5J[17]		2.84J[13,14,18]
Inlet to Pond	All J[2]	16.6UJ[4]	6.7J-[7]	12,500J[9]	200UJ[3,6]		0.37UJ[7]	6.9UJ[4]	2.7J-[7]		0.03UJ[4]				180,000J[10]	40U[3,7]	2.7UJ[7]	37.8J-[7,16]	20UJ[7,15]	5UJ[17]	0.168J-[13]	
Keuka Downstream	All J[2]	16.6UJ[4]		50U[3]	200U[3]			6.9UJ[4]			0.03UJ[4]	5,000U[3,15]				40U[3]			20UJ[15]	5J[17]		2.41J[13,14,18]
Keuka Upstream	All J[2]	16.6UJ[4]		50U[3]	200U[3]			6.9UJ[4]			0.03UJ[4]	5,000U[3,15]				40U[3]			20U[15]	5J[17]		2.31J[13,14,18]
Surface Water Dup	All J[2]	16.6UJ[4]		50U[3]	200U[3]			6.9UJ[4]			0.03UJ[4]	5,000U[3,15]				40U[3]			20U[15]	5J[17]		2.33J[13,14,18]
Pond Grab	All J[2]	16.6UJ[4]	9.9J-[7]		200UJ[3,6]		0.37UJ[7]	9.3BJ-[13,4]	1.7UJ-[7]		0.03UJ[4]	41,600J+[6]				40UJ[3,7]	2.7UJ[7]	3.4UJ[7]	20UJ[7,15]	5J[17]		3.42J[13,14,18]
Under Drain 5	All J[2]	16.6UJ[4]	10.0J-[7]		200UJ[3,6]		0.37UJ[7]	6.9UJ[4]	2.9J-[7]		0.03UJ[4]			1.6J-[7]		40UJ[3,7]	2.7UJ[7]	71.9J-[7]	20UJ[7,15]	5UJ[17]		
Field Blank/LLHG	All J[2]	31.5J-[4]		50U[3]	200U[3]	5000U[15]		7.9BJ-[13,4]			0.03UJ[4]	5,000U[3,15]	5,000U[3,15]		5,000U[3]				20U[15]	5UJ[17]		

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

[1]Includes temperature, pH, & turbidity
[2]No Reference Standard Measurements
[3]ICB or Associated CCB ≥ IDL, but < CRDL
[4]Associated ICB or CCB ≤ -IDL but > -CRDL
[5]ICS between 50 - 79% Recovery
[6]ICS-A or ICS-AB Indicates False Positive
[7]ICS-A or ICS-AB Indicates False Negative
[8]Matrix Spike Recovery >125%; Post-digestion %R ≤ 125%
[9]No Matrix Spike
[10]Serial Dilution > 10%, but < 100%
[11]Field Duplicate RDP > 20%
[12]Field Duplicate Difference > CRDL
[13]CRI/CRA Check Standard Recovery < 85%
[14]CRI Check Standard Recovery > 115%
[15]Preparation Blank ≥ IDL, but < CRDL
[16]Matrix Spike Recovery btw 30-74%; Post Digestion Spike Recovery < 75%
[17]Analyzed outside holding time
[18]Laboratory Check Standard %R > 110%

ATTACHMENT 1

Field Data Report & Chain of Custody

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

May 18, 2017

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

TEL: (315) 536-2359
FAX:

Work Order No: 170331010

RE: Lockwood Ash Landfill
Annual

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 3/31/2017 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

Adirondack Environmental Services, Inc — CASE NARRATIVE

CLIENT:	Lockwood Hills LLC	**Date:**	*18-May-17*
Project:	Lockwood Ash Landfill		
Lab Order:	170331010		

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.

Qualifiers:

	C - Details are above in Case Narrative
ND - Not Detected at reporting limit	S - LCS Spike recovery outside acceptable limits(+ is over - is under)
J - Analyte detected below quantitation limit	R - Duplication outside acceptable limits
B - Analyte detected in Blank	T - Tentatively Identified Compound-Estimated
X - Exceeds maximum contamination limit	E -Above quantitation range-Estimated
H - Hold time exceeded	M - Matrix Spike outside acceptable limits(+ is over - is under)

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: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	7842
Work Order:	**170331010**	**Collection Date:**	3/29/2017 5:20:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.1**			S.U.		3/29/2017 5:20:00 PM
Temperature (E170.1)	**9**			deg C		3/29/2017 5:20:00 PM
Turbidity (E180.1)	**61**	1.0		NTU		3/29/2017 5:20:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**170331010**	**Collection Date:**	3/30/2017 9:30:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.0**			S.U.		3/30/2017 9:30:00 AM
Temperature (E170.1)	**8**			deg C		3/30/2017 9:30:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		3/30/2017 9:30:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**170331010**	**Collection Date:**	3/30/2017 10:55:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.3**			S.U.		3/30/2017 10:55:00 AM
Temperature (E170.1)	**8**			deg C		3/30/2017 10:55:00 AM
Turbidity (E180.1)	**10**	1.0		NTU		3/30/2017 10:55:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**170331010**	**Collection Date:**	3/30/2017 11:35:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.4**			S.U.		3/30/2017 11:35:00 AM
Temperature (E170.1)	**9**			deg C		3/30/2017 11:35:00 AM
Turbidity (E180.1)	**3**	1.0		NTU		3/30/2017 11:35:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**170331010**	**Collection Date:**	3/30/2017 12:20:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.4**			S.U.		3/30/2017 12:20:00 PM
Temperature (E170.1)	**8**			deg C		3/30/2017 12:20:00 PM
Turbidity (E180.1)	**13**	1.0		NTU		3/30/2017 12:20:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**170331010**	**Collection Date:**	3/29/2017 1:30:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**9.3**			S.U.		3/29/2017 1:30:00 PM
Temperature (E170.1)	**12**			deg C		3/29/2017 1:30:00 PM
Turbidity (E180.1)	**> 999**	1.0		NTU		3/29/2017 1:30:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**170331010**	**Collection Date:**	3/29/2017 1:15:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.2**			S.U.		3/29/2017 1:15:00 PM
Temperature (E170.1)	**11**			deg C		3/29/2017 1:15:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		3/29/2017 1:15:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**170331010**	**Collection Date:**	3/29/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.0**			S.U.		3/29/2017 2:45:00 PM
Temperature (E170.1)	**12**			deg C		3/29/2017 2:45:00 PM
Turbidity (E180.1)	**3**	1.0		NTU		3/29/2017 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-SH
Work Order:	**170331010**	**Collection Date:**	3/29/2017
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Poor Recovery**			NA		3/29/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**170331010**	**Collection Date:**	3/29/2017 3:40:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		3/29/2017 3:40:00 PM
Temperature (E170.1)	**11**			deg C		3/29/2017 3:40:00 PM
Turbidity (E180.1)	**2**	1.0		NTU		3/29/2017 3:40:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**170331010**	**Collection Date:**	3/30/2017 10:15:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.4**			S.U.		3/30/2017 10:15:00 AM
Temperature (E170.1)	**10**			deg C		3/30/2017 10:15:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		3/30/2017 10:15:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**170331010**	**Collection Date:**	3/29/2017 5:50:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.8**			S.U.		3/29/2017 5:50:00 PM
Temperature (E170.1)	**10**			deg C		3/29/2017 5:50:00 PM
Turbidity (E180.1)	**23**	1.0		NTU		3/29/2017 5:50:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**170331010**	**Collection Date:**	3/30/2017 10:15:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.6**			S.U.		3/30/2017 10:15:00 AM
Temperature (E170.1)	**7**			deg C		3/30/2017 10:15:00 AM
Turbidity (E180.1)	**25**	1.0		NTU		3/30/2017 10:15:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**170331010**	**Collection Date:**	3/29/2017 1:30:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**9.3**			S.U.		3/29/2017 1:30:00 PM
Temperature (E170.1)	**12**			deg C		3/29/2017 1:30:00 PM
Turbidity (E180.1)	**> 999**	1.0		NTU		3/29/2017 1:30:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**170331010**	**Collection Date:**	3/29/2017 4:45:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.50**	0.10		mg/L		3/29/2017 4:45:00 PM
Flow, GPD	**476**			gal/day		3/29/2017 4:45:00 PM
pH (E150.1)	**7.4**			S.U.		3/29/2017 4:45:00 PM
Temperature (E170.1)	**8**			deg C		3/29/2017 4:45:00 PM
Turbidity (E180.1)	**300**	1.0		NTU		3/29/2017 4:45:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**170331010**	**Collection Date:**	3/29/2017 12:40:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.50**	0.10		mg/L		3/29/2017 12:40:00 PM
Flow, GPD	**251**			gal/day		3/29/2017 12:40:00 PM
pH (E150.1)	**7.7**			S.U.		3/29/2017 12:40:00 PM
Temperature (E170.1)	**12**			deg C		3/29/2017 12:40:00 PM
Turbidity (E180.1)	**26**	1.0		NTU		3/29/2017 12:40:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**170331010**	**Collection Date:**	3/29/2017 4:00:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**8.15**	0.10		mg/L		3/29/2017 4:00:00 PM
Flow, GPD	**5326**			gal/day		3/29/2017 4:00:00 PM
pH (E150.1)	**8.2**			S.U.		3/29/2017 4:00:00 PM
Temperature (E170.1)	**11**			deg C		3/29/2017 4:00:00 PM
Turbidity (E180.1)	**255**	1.0		NTU		3/29/2017 4:00:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 4/10/2017)						
Mercury	**11**	0.5		ng/L	1	4/11/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**170331010**	**Collection Date:**	3/29/2017 12:45:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-018
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.33**	0.10		mg/L		3/29/2017 12:45:00 PM
Flow, GPD	**4946**			gal/day		3/29/2017 12:45:00 PM
pH (E150.1)	**7.7**			S.U.		3/29/2017 12:45:00 PM
Temperature (E170.1)	**12**			deg C		3/29/2017 12:45:00 PM
Turbidity (E180.1)	**150**	1.0		NTU		3/29/2017 12:45:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**170331010**	**Collection Date:**	3/29/2017 12:25:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.39**	0.10		mg/L		3/29/2017 12:25:00 PM
Flow, GPD	**816**			gal/day		3/29/2017 12:25:00 PM
pH (E150.1)	**6.7**			S.U.		3/29/2017 12:25:00 PM
Temperature (E170.1)	**13**			deg C		3/29/2017 12:25:00 PM
Turbidity (E180.1)	**10**	1.0		NTU		3/29/2017 12:25:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Inlet To Pond
Work Order:	**170331010**	**Collection Date:**	3/29/2017 4:15:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-020
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.63**	0.10		mg/L		3/29/2017 4:15:00 PM
Flow, GPD	**18,642**			gal/day		3/29/2017 4:15:00 PM
pH (E150.1)	**8.2**			S.U.		3/29/2017 4:15:00 PM
Temperature (E170.1)	**10**			deg C		3/29/2017 4:15:00 PM
Turbidity (E180.1)	**10**	1.0		NTU		3/29/2017 4:15:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 4/10/2017)						
Mercury	**2.0**	0.5		ng/L	1	4/11/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**170331010**	**Collection Date:**	3/30/2017 9:15:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.37**	0.10		mg/L		3/30/2017 9:15:00 AM
pH (E150.1)	**7.9**			S.U.		3/30/2017 9:15:00 AM
Temperature (E170.1)	**4**			deg C		3/30/2017 9:15:00 AM
Turbidity (E180.1)	**712**	1.0		NTU		3/30/2017 9:15:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**170331010**	**Collection Date:**	3/30/2017 8:40:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.88**	0.10		mg/L		3/30/2017 8:40:00 AM
pH (E150.1)	**7.5**			S.U.		3/30/2017 8:40:00 AM
Temperature (E170.1)	**4**			deg C		3/30/2017 8:40:00 AM
Turbidity (E180.1)	**686**	1.0		NTU		3/30/2017 8:40:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water Dup
Work Order:	**170331010**	**Collection Date:**	3/30/2017 9:15:00 AM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-023
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.37**	0.10		mg/L		3/30/2017 9:15:00 AM
pH (E150.1)	**7.9**			S.U.		3/30/2017 9:15:00 AM
Temperature (E170.1)	**4**			deg C		3/30/2017 9:15:00 AM
Turbidity (E180.1)	**712**	1.0		NTU		3/30/2017 9:15:00 AM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**170331010**	**Collection Date:**	3/29/2017 3:10:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-024
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**8.80**	0.10		mg/L		3/29/2017 3:10:00 PM
pH (E150.1)	**8.3**			S.U.		3/29/2017 3:10:00 PM
Temperature (E170.1)	**11**			deg C		3/29/2017 3:10:00 PM
Turbidity (E180.1)	**74**	1.0		NTU		3/29/2017 3:10:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 4/10/2017)						
Mercury	**0.7**	0.5		ng/L	1	4/11/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**170331010**	**Collection Date:**	3/30/2017 12:35:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.16**	0.10		mg/L		3/30/2017 12:35:00 PM
pH (E150.1)	**7.0**			S.U.		3/30/2017 12:35:00 PM
Temperature (E170.1)	**18**			deg C		3/30/2017 12:35:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		3/30/2017 12:35:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**170331010**	**Collection Date:**	3/29/2017 12:55:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**8.43**	0.10		mg/L		3/29/2017 12:55:00 PM
Flow, GPD	**827**			gal/day		3/29/2017 12:55:00 PM
pH (E150.1)	**7.3**			S.U.		3/29/2017 12:55:00 PM
Temperature (E170.1)	**7**			deg C		3/29/2017 12:55:00 PM
Turbidity (E180.1)	**10**	1.0		NTU		3/29/2017 12:55:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 5
Work Order:	**170331010**	**Collection Date:**	3/30/2017 12:15:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-027
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.65**	0.10		mg/L		3/30/2017 12:15:00 PM
pH (E150.1)	**8.0**			S.U.		3/30/2017 12:15:00 PM
Temperature (E170.1)	**9**			deg C		3/30/2017 12:15:00 PM
Turbidity (E180.1)	**10**	1.0		NTU		3/30/2017 12:15:00 PM

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	LLHG Field blank
Work Order:	**170331010**	**Collection Date:**	3/29/2017 4:25:00 PM
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-028
PO#:		**Matrix:**	FIELD BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 4/10/2017)						
Mercury	**ND**	0.5		ng/L	1	4/11/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 2
Work Order:	**170331010**	**Collection Date:**	3/29/2017
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-029
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		3/29/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 4
Work Order:	**170331010**	**Collection Date:**	3/29/2017
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-030
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		3/29/2017

Adirondack Environmental Services, Inc

Date: *18-May-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8405
Work Order:	**170331010**	**Collection Date:**	3/29/2017
Reference:	Lockwood Ash Landfill / Annual	**Lab Sample ID:**	170331010-031
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		3/29/2017

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4545 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 170331010

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Lockwood Hills LLC	Address:	
Send Report to: Dale Irwin	Project Name (Location): Lockwood Ash LF Annual	Samplers Name: Paul Bast
Client Phone No:	PO #:	Samplers Signature: Paul Bast
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
001	7842	3/29/17	5:20	A (P)	GW		G	5	Lockwood Ash LF Annual
002	8401	3/30/17	9:30	(A) P	GW		G	5	Field pH, Temp, Turbidity
003	8404	3/30/17	10:55	(A) P	GW		G	5	
004	8908-D	3/30/17	11:35	(A) P	GW		G	5	
005	8908-SH	3/30/17	12:20	A (P)	GW		G	5	
006	8909-D	3/29/17	1:30	A (P)	GW		G	5	
007	8909-SH	3/29/17	1:15	A (P)	GW		G	5	
008	8910-D	3/29/17	2:45	A (P)	GW		G	5	
009	8910-SH	3/29/17	—	A P	GW		G	~~5~~ 0	observation only
010	8911-D	3/29/17	3:40	A (P)	GW		G	5	
011	8911-SH	3/30/17	10:15	(A) P	GW		G	5	
012	8942-D	3/29/17	5:50	A (P)	GW		G	5	

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

Special Instructions/Remarks:

Page 1 of 3

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Paul Bast	3/31/17	9:00			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
			[signature]	3/31/17	9:49 Am

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

170331010

Adirondack Environmental Services Inc.
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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#: 17033101O

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 Buist
Client Phone No:	PO #:	Samplers Signature: Paul Buist
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
013	9306-SH	3/30/17	10:15	(A) P	GW		G	5	Lockwood Ash LF Annual
014	GW Dup 8909-D	3/29/17	1:30	A (P)	GW		G	5	Field pH, Temp, Turbidity
015	GW Dep Drain 1	3/29/17	4:45	A (P)	GW		G	5	+ Field Flow Reading, DO
016	Leak Detection Syst.	3/29/17	12:40	A (P)	GW		G	5	+ Field Flow Reading, DO
017	Under Drain 1	3/29/17	4:00	A (P)	GW		G	6	+ Field Flow Reading, DO
018	Under Drain 2	3/29/17	12:45	A (P)	GW		G	5	+ Field Flow Reading, DO
019	Under Drain 3	3/29/17	12:25	A (P)	GW		G	5	+ Field Flow Reading, DO
020	Inlet to Pond	3/29/17	4:15	A (P)	GW		G	6	+ Field Flow Reading, DO
021	Keuka Upstream	3/30/17	9:15	(A) P	SF		G	5	Lockwood Annual + DO
022	Keuka Downstream	3/30/17	8:40	(A) P	SF		G	5	Lockwood Annual +DO
023	Surface Water Dup	3/30/17	9:15	(A) P	SF		G	5	Lockwood Annual +DO
024	Pond Grab	3/29/17	3:10	A (P)	GW		G	6	Lockwood Annual +DO

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)	Date	Time	Received by: (Signature)	Date	Time
Paul Buist	3/31/17	9:00			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
				3/31/17	9:49 am

Sample Temperature
Ambient (Chilled)
Chilling Process begun
4°C
Notes:_____

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N
Notes:_____

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CHAIN OF CUSTODY RECORD

AES Work Order#: 17033101C

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 Bast
Client Phone No:	PO #:	Samplers Signature: Paul Bast
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
025	**Field Blank**	3/30/17	1235	A (P)	**GW**		**G**	**5**	**Lockwood Ash LF Annual Field pH, Temp, Turbidity, D.O.**
026	**GW Dep Drain 3**	3/29/17	12:55	A (P)	**GW**		**G**	**5**	**+Field Flow Reading**
027	**Under Drain 5**	3/30/17	12:15	A (P)	**GW**		**G**	**5**	(AM) **+~~Field Flow Reading~~**
028	**LLHG Field Blank**	3/29/17	4:25	A (P)	**GW**			**1**	**EPA 1631**
029	**GW Dep Drain 2**	3/29/17	—	A P	**GW**			**0**	**Observation Only**
030	**GW Dep Drain 4**	3/29/17	—	A P	**GW**			**0**	**Observation Only**
031	**8405**	3/29/17	—	A P	**GW**			**0**	**Observation Only**
				A P					
				A P					
				A P					
				A P					
				A P					

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)	Date	Time	Received by: (Signature)	Date	Time
Paul Bast	3/31/17	9:00			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
				3/31/17	9:49 AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

Adirondack Environmental Services Inc.
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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.

ATTACHMENT 2

Sample Data Group 7842

2A

Sample Data Group 7842

Sample Results

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
7842

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-001D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	400			P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	62.3	B	~~E~~ J	P
7440-42-8	Boron	86.8		~~E~~ J	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	109000		~~E~~ J	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~12.5~~	~~B~~		P
7439-89-6	Iron	1060		~~NE~~ J	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	51900		~~E~~ J	P
7439-96-5	Manganese	93.4		~~E~~ J	P
7440-02-0	Nickel	40U ~~1.9~~	~~B~~		P
7440-09-7	Potassium	5000U ~~1770~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	11200			P
7440-66-6	Zinc	20U ~~4.5~~	~~B~~		P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8401

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-002D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	200 U ~~58.7~~	~~B~~	~~E~~	P
7440-42-8	Boron	863		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	81900		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25 U ~~5.2~~	~~B~~		P
7439-89-6	Iron	362		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	22400		~~E~~	P
7439-96-5	Manganese	65.4		~~E~~	P
7440-02-0	Nickel	0.40	U		P
7440-09-7	Potassium	5000 U ~~2220~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	89000			P
7440-66-6	Zinc	0.29	U		P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8404

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-003D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	200U ~~48.0~~	~~B~~	~~E~~	P
7440-42-8	Boron	141		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	118000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~14.5~~	~~B~~		P
7439-89-6	Iron	118		~~NR~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	23300		~~E~~	P
7439-96-5	Manganese	8.6	B	~~E~~	P
7440-02-0	Nickel	40U ~~2.4~~	~~B~~		P
7440-09-7	Potassium	5000U ~~890~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	9570			P
7440-66-6	Zinc	20U ~~3.7~~	~~B~~		P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8908-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-004D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	200U ~~16.6~~	~~B~~	~~E~~	P
7440-42-8	Boron	262		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	156000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~5.5~~	~~B~~		P
7439-89-6	Iron	994		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	65600		~~E~~	P
7439-96-5	Manganese	102		~~E~~	P
7440-02-0	Nickel	40U ~~0.45~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2800~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	33700			P
7440-66-6	Zinc	0.29	U		P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8908-SH

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-005D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	3.4	B		P
7440-39-3	Barium	200U ~~52.2~~	~~B~~	~~E~~	P
7440-42-8	Boron	148		E	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	159000		E	P
7440-47-3	Chromium	11.3		J-	P
7440-50-8	Copper	25U ~~10.0~~	~~B~~		P
7439-89-6	Iron	87.2	B	~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	57400		E	P
7439-96-5	Manganese	10.7	B	E	P
7440-02-0	Nickel	40U ~~2.6~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2380~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	32100			P
7440-66-6	Zinc	20U ~~8.5~~	~~B~~		P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8909-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-006D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1430		J	P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	200U ~~68.2~~	~~B~~	~~J~~	P
7440-42-8	Boron	770		~~J~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	14100		~~J~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~3.2~~	~~B~~		P
7439-89-6	Iron	3540		~~NR~~ J	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	5000U ~~3320~~	~~B~~	~~J~~	P
7439-96-5	Manganese	89.7		~~J~~	P
7440-02-0	Nickel	40U ~~4.1~~	~~B~~		P
7440-09-7	Potassium	5000U ~~1290~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	226000			P
7440-66-6	Zinc	20U ~~15.4~~	~~B~~		P

BMM
6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8909-SH

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-007D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	6.4	B		P
7440-39-3	Barium	200U ~~26.3~~	~~B~~	~~E~~	P
7440-42-8	Boron	271		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	30200		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~8.7~~	~~B~~		P
7439-89-6	Iron	136		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	17900		~~E~~	P
7439-96-5	Manganese	15.7		~~E~~	P
7440-02-0	Nickel	40U ~~0.80~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2020~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	72300			P
7440-66-6	Zinc	20U ~~2.6~~	~~B~~		P

BAM
6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8910-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-008D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	4.7	B		P
7440-39-3	Barium	200U ~~18.9~~	~~B~~	~~E~~	P
7440-42-8	Boron	2830		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	81400		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~3.5~~	~~B~~		P
7439-89-6	Iron	32.5	B	~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	24700		~~E~~	P
7439-96-5	Manganese	28.1		~~E~~	P
7440-02-0	Nickel	40U ~~1.1~~	~~B~~		P
7440-09-7	Potassium	5000U ~~3050~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	105000			P
7440-66-6	Zinc	0.29	U		P

BMM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8911-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-010D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	5.1	B		P
7440-39-3	Barium	200U ~~18.7~~	~~B~~	~~E~~	P
7440-42-8	Boron	1590		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	67200		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~2.5~~	~~B~~		P
7439-89-6	Iron	119		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	21400		~~E~~	P
7439-96-5	Manganese	75.9		~~E~~	P
7440-02-0	Nickel	40U ~~0.88~~	~~B~~		P
7440-09-7	Potassium	5000U ~~3030~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	131000			P
7440-66-6	Zinc	20U ~~1.6~~	~~B~~		P

BJM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8911-SH

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-011D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	17.9			P
7440-39-3	Barium	200U ~~28.0~~	~~B~~	~~E~~	P
7440-42-8	Boron	318		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	53400		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~4.8~~	~~B~~		P
7439-89-6	Iron	363		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	15100		~~E~~	P
7439-96-5	Manganese	64.5		~~E~~	P
7440-02-0	Nickel	0.40	U		P
7440-09-7	Potassium	5000U ~~1740~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	94500			P
7440-66-6	Zinc	20U ~~0.78~~	~~B~~		P

BAMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
8942-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: _____ SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-012D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	8.3	B		P
7440-39-3	Barium	200U ~~47.1~~	~~B~~	~~E~~	P
7440-42-8	Boron	295		~~E~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	87100		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~8.3~~	~~B~~		P
7439-89-6	Iron	522		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	65700		~~E~~	P
7439-96-5	Manganese	108		~~E~~	P
7440-02-0	Nickel	40U ~~1.6~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2670~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	41200			P
7440-66-6	Zinc	20U ~~3.9~~	~~B~~		P

BMM 6/23/17

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
9306-SH

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-013D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	8.8	B		P
7440-39-3	Barium	200U ~~41.0~~	~~B~~	~~E~~	P
7440-42-8	Boron	106		E	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	62500		E	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~9.9~~	~~B~~		P
7439-89-6	Iron	279		~~NE~~	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	58400		E	P
7439-96-5	Manganese	16.6		E	P
7440-02-0	Nickel	40U ~~1.0~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2670~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	21600			P
7440-66-6	Zinc	20U ~~2.4~~	~~B~~		P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GW Dep Drain 1

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-015D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	4.4	B	J-	P
7440-39-3	Barium	200U ~~28.7~~	~~B~~	~~E~~ J+	P
7440-42-8	Boron	2190		~~E~~	P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	342000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~5.9~~	~~B~~	J	P
7439-89-6	Iron	382		~~N~~ J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	84200		~~E~~	P
7439-96-5	Manganese	24.4		~~E~~ J-	P
7440-02-0	Nickel	40U ~~4.7~~	~~B~~	J	P
7440-09-7	Potassium	5000U ~~4960~~	~~B~~	J+	P
7782-49-2	Selenium	3.4	U	J	P
7440-23-5	Sodium	43700		J+	P
7440-66-6	Zinc	20U ~~3.6~~	~~B~~	J	P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
GW DUP 8909-D

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-014D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	905		J	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	2.8	U		P
7440-39-3	Barium	200U ~~66.4~~	~~B~~	~~J~~	P
7440-42-8	Boron	728		~~J~~	P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	14300		~~J~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~3.4~~	~~B~~		P
7439-89-6	Iron	2630		~~NE~~ J	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	5000U ~~3020~~	~~B~~	~~J~~	P
7439-96-5	Manganese	85.8		~~J~~	P
7440-02-0	Nickel	40U ~~3.1~~	~~B~~		P
7440-09-7	Potassium	5000U ~~1230~~	~~B~~		P
7782-49-2	Selenium	3.4	U		P
7440-23-5	Sodium	217000			P
7440-66-6	Zinc	20U ~~15.0~~	~~B~~		P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Leak Detection Syst.

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-016D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	7.1	B	J-	P
7440-39-3	Barium	200U ~~18.9~~	~~B~~	~~E~~ J+	P
7440-42-8	Boron	1190		~~E~~ J-	P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	397000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~6.8~~	~~B~~	J	P
7439-89-6	Iron	47.7	B	~~NE~~ J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	109000		~~E~~	P
7439-96-5	Manganese	15U ~~12.1~~	~~B~~	~~E~~ J	P
7440-02-0	Nickel	40U ~~1.6~~	~~B~~	J	P
7440-09-7	Potassium	5000U ~~4450~~	~~B~~	J+	P
7782-49-2	Selenium	3.4	U	J	P
7440-23-5	Sodium	44800	B		P
7440-66-6	Zinc	0.29	U	J	P

BJM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Under Drain 1

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-017D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	5.4	B	J-	P
7440-39-3	Barium	200U ~~50.3~~	~~B~~	~~E~~ J+	P
7440-42-8	Boron	3800		~~E~~	P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	383000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~3.0~~	~~B~~	J	P
7439-89-6	Iron	3740		~~N~~ J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	75700		~~E~~	P
7439-96-5	Manganese	766		~~E~~	P
7440-02-0	Nickel	40U ~~5.5~~	~~B~~	J	P
7440-09-7	Potassium	16600		J+	P
7782-49-2	Selenium	20.3		J-	P
7440-23-5	Sodium	48000	B		P
7440-66-6	Zinc	0.29	U	J	P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Under Drain 2

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-018D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U		P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U	J	P
7440-39-3	Barium	200U ~~23.4~~	B	~~E~~ J+	P
7440-42-8	Boron	24100		~~E~~	P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	634000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25U ~~2.1~~	B	J	P
7439-89-6	Iron	4460		~~NE~~ J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	70600		~~E~~	P
7439-96-5	Manganese	782		~~E~~	P
7440-02-0	Nickel	40U ~~5.5~~	B	J	P
7440-09-7	Potassium	84100			P
7782-49-2	Selenium	30.0		J-	P
7440-23-5	Sodium	211000			P
7440-66-6	Zinc	20U ~~8.3~~	B	J	P

BAM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Under Drain 3

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-019D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2170			P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	2.8	U	J	P
7440-39-3	Barium	200 U ~~14.7~~	~~B~~	~~J~~ J+	P
7440-42-8	Boron	8850		~~J~~	P
7440-43-9	Cadmium	0.94	B	J-	P
7440-70-2	Calcium	720000		~~J~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	25 U ~~4.5~~	~~B~~	J	P
7439-89-6	Iron	4950		~~J~~ J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	87500		~~J~~	P
7439-96-5	Manganese	504		~~J~~	P
7440-02-0	Nickel	41.7		J-	P
7440-09-7	Potassium	88,300 ~~60000~~			P
7782-49-2	Selenium	21.9		J-	P
7440-23-5	Sodium	187000			P
7440-66-6	Zinc	66.1		J-	P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Hardness Results

Lab Name: Adirondack Environmental Contract:

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Matrix (soil/water): Water Date Received: 3/31/17

Level (Low/Med): Low

Sample ID	Concentration (mg/L)
7842	486
8401	297
8404	391
8908-D	660
8908-SH	633
8909-D	49
8909-SH	149
8910-D	305
8911-D	256
8911-SH	196
8942-D	488
9306-SH	397
GW Dep Drain 1	1201
GW Dup 8909-D	48
Leak Detection System	1440
Under Drain 1	~~257~~
Under Drain 2	1874
Under Drain 3	2158

BMA 6/23/17

1,270 mg/L

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

7842

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-001B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	240			MG/L	
	Chloride	33.5			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	800			MG/L	
	Sulfate	180			MG/L	
	TDS (Residue, Filterable)	575			MG/L	
	Total Organic Carbon	2.9		J+	MG/L	

BJM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8401

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-002B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	345			MG/L	
	Chloride	36.8			MG/L	
	Sulfate	64.9			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.752			MG/L	
	Specific Conductance	719			MG/L	
	TDS (Residue, Filterable)	480			MG/L	
	Total Organic Carbon	1	U		MG/L	

BJM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8404

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-003B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	298			MG/L	
	Chloride	2	U		MG/L	
	Sulfate	94.8			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	660			MG/L	
	TDS (Residue, Filterable)	455			MG/L	
	Total Organic Carbon	1.53		J+	MG/L	

BMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8908-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-004B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	365			MG/L	
	Chloride	19.1			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.398		J-	MG/L	
	Specific Conductance	1060			MG/L	
	Sulfate	330			MG/L	
	TDS (Residue, Filterable)	820			MG/L	
	Total Organic Carbon	1.15		J+	MG/L	

BMM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8908-SH

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-005B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	395			MG/L	
	Chloride	13.5			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	977			MG/L	
	Sulfate	254			MG/L	
	TDS (Residue, Filterable)	730			MG/L	
	Total Organic Carbon	1.11		J+	MG/L	

BAM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8909-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-006B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	300			MG/L	
	Chloride	4.5			MG/L	
	Sulfate	85.6			MG/L	
	Color	15		J	MG/L	
	Nitrogen, Ammonia (As N)	0.475		J-	MG/L	
	Specific Conductance	657			MG/L	
	TDS (Residue, Filterable)	505			MG/L	
	Total Organic Carbon	3.01		J+	MG/L	

BAMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8909-SH

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-007B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	165			MG/L	
	Chloride	2	U		MG/L	
	Sulfate	126			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	495			MG/L	
	TDS (Residue, Filterable)	355			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8910-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-008B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	135			MG/L	
	Chloride	24.9			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	900			MG/L	
	Sulfate	363			MG/L	
	TDS (Residue, Filterable)	690			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8911-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-010B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	205			MG/L	
	Chloride	16.2			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.24		J-	MG/L	
	Specific Conductance	874			MG/L	
	Sulfate	305			MG/L	
	TDS (Residue, Filterable)	615			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8911-SH

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-011B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	90			MG/L	
	Chloride	10.2			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.226		J-	MG/L	
	Specific Conductance	634			MG/L	
	Sulfate	248			MG/L	
	TDS (Residue, Filterable)	440			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

8942-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-012B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	285			MG/L	
	Chloride	5.6			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	858			MG/L	
	Sulfate	280			MG/L	
	TDS (Residue, Filterable)	645			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

9306-SH

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-013B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	325			MG/L	
	Chloride	2	U		MG/L	
	Sulfate	83.3			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	634			MG/L	
	TDS (Residue, Filterable)	410			MG/L	
	Total Organic Carbon	1	U		MG/L	

BAMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW Dep Drain 1

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-015B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	315			MG/L	
	Chloride	55.6			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	1520			MG/L	
	Sulfate	654			MG/L	
	TDS (Residue, Filterable)	1280			MG/L	
	Total Organic Carbon	1.26		J+	MG/L	

BMA 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW DUP 8909-D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-014B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	315			MG/L	
	Chloride	4.35			MG/L	
	Sulfate	87.5			MG/L	
	Color	15		J	MG/L	
	Nitrogen, Ammonia (As N)	0.467		J-	MG/L	
	Specific Conductance	659			MG/L	
	TDS (Residue, Filterable)	495			MG/L	
	Total Organic Carbon	2.92		J+	MG/L	

BAM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Leak Detection

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-016B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	395			MG/L	
	Chloride	32.8			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	1910			MG/L	
	Sulfate	1080			MG/L	
	TDS (Residue, Filterable)	1820			MG/L	
	Total Organic Carbon	2.68		J+	MG/L	

BMM
6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Under Drain 1

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-017B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	570			MG/L	
	Chloride	23.3			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	1430			MG/L	
	Sulfate	468			MG/L	
	TDS (Residue, Filterable)	1250			MG/L	
	Total Organic Carbon	1	U		MG/L	

BAMA 6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Under Drain 2

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-018B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	310			MG/L	
	Chloride	264			MG/L	
	Sulfate	1470			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.759			MG/L	
	Specific Conductance	2960			MG/L	
	TDS (Residue, Filterable)	2850			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMA
6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Under Drain 3

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG NO.: 7842

Matrix (soil/water): WATER Lab Sample ID: 170331010-019B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	115			MG/L	
	Chloride	832			MG/L	
	Sulfate	1480			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.228		J-	MG/L	
	Specific Conductance	4090			MG/L	
	TDS (Residue, Filterable)	3790			MG/L	
	Total Organic Carbon	1	U		MG/L	

BMA
6/23/17

Comments:

A.4
FIELD DUPLICATES

Sample No. 170331010-006B Field Duplicate No. 170331010-014B SDG No. 7842

Lab Code: AES Case No. 17024LH Sample Matrix: Groundwater

% Solids Sample: 0.0 % Solids Duplicate: 0.0

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

Analyte	Sample Concentration	C	Duplicate Concentration	C	RPD	Q	M
Ammonia	0.475		0.467		1.7%		
Alkalinity	300		315		4.9%		
Color	15		15				
Conductivity	657		659		0.3%		
Chloride	4.50		4.35		3.4%		
Hardness	49		48		2.1%		
Sulfate	85.6		88		2.2%		
TDS	505		495		2.0%		
TOC	3.0		2.92		3.0%		

Parameter*	Sample Concentration	C	Duplicate Concentration	C	RPD	Units	Q
pH	9.3					SU	
Temperature	12					Deg C	
Turbidity	>999					NTU	

*Field parameters not measured on field duplicate.

A.4
FIELD DUPLICATES

Sample No. 170331010-006D Field Duplicate No. 170331010-014D SDG No. 7842

Lab Code: AES Case No. 17024LH Sample Matrix: Groundwater

% Solids Sample: 0.0 % Solids Duplicate: 0.0

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

Analyte	CRQL	Action Limit (5xCRQL)	Sample Concentration	C	Duplicate Concentration	C	RPD, %	Absolute Difference	Q	M
Aluminum	200	1,000	1,430		905			525	J	P
Antimony	60	300	2.7	U	2.7	U				P
Arsenic	10	50	2.8	U	2.8	U				P
Barium	200	1,000	68.2	B	66.4	B		2		P
Boron	50	250	770		728		5.61			P
Cadmium	5	25	0.37	U	0.37	U				P
Calcium	5,000	25,000	14,100		14,300			200		P
Chromium	10	50	6.9	U	6.9	U				P
Copper	25	125	3.2	B	3.4	B		0.2		P
Iron	100	500	3,540		2,630		29.50		J	P
Magnesium	5,000	25,000	3,320	B	3,020	B		300		P
Manganese	15	75	90		85.8		4.44			P
Mercury	0.2	1.0	0.03	U	0.03	U				CV
Nickel	40	200	4.10	B	3.1	B		1.0		P
Potassium	5,000	25,000	1,290	B	1,230	B		60		P
Selenium	5	25	3.4	U	3.4	U				P
Sodium	5,000	25,000	226,000		217,000		4.06			P
Zinc	20	100	15.4	B	15.0	B		0.4		P

2B

Sample Data Group 7842

Quality Control Documentation

BLANKS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17024LH SAS No.: _____ SDG No.: 7842

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	16.6	U	16.6	U	16.6	U	16.6	U	16.560	U	P
Antimony	2.7	U	2.7	U	2.7	U	2.7	U	2.680	U	P
Arsenic	2.8	U	2.8	U	2.8	U	2.8	U	2.760	U	P
Barium	1.1	U	1.1	U	1.1	U	1.1	B	1.050	U	P
Boron	2.3	B	5.1	B	4.3	B	5.1	B	1.040	U	P
Cadmium	0.4	U	0.6	B	0.4	U	0.4	U	0.370	U	P
Calcium	5.7	U	6.5	B	5.7	U	5.8	B	5.690	U	P
Chromium	6.9	U	6.9	U	6.9	U	6.9	U	6.870	U	P
Copper	2.1	B	1.7	U	3.1	B	1.7	U	1.740	U	P
Iron	1.7	U	1.7	U	1.7	U	1.7	U	1.720	U	P
Magnesium	13.3	U	13.3	U	21.7	B	13.3	U	13.250	U	P
Manganese	0.3	U	0.6	B	0.3	U	0.3	U	0.270	U	P
Nickel	0.4	U	0.6	B	0.4	B	0.4	U	0.400	U	P
Potassium	7.7	B	7.3	U	10.8	B	7.3	U	7.320	U	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	3.400	U	P
Sodium	12.8	U	12.8	U	12.8	U	26.7	B	12.810	U	P
Zinc	0.3	U	0.6	B	0.3	U	0.3	B	0.290	U	P

BLANKS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) CCB-4 (1)	C	CCB-5 (2)	C	CCB-6 (3)	C	Preparation Blank	C	M
Aluminum			16.6	U	16.6	U	16.6	U			P
Antimony			2.7	U	2.7	U	2.7	U			P
Arsenic			2.8	U	2.8	U	2.8	U			P
Barium			1.1	U	2.0	B	1.6	B			P
Boron			5.8	B	13.1	B	8.2	B			P
Cadmium			0.5	B	0.4	U	0.4	U			P
Calcium			5.7	U	5.7	U	5.7	U			P
Chromium			6.9	U	6.9	U	6.9	U			P
Copper			2.3	B	1.7	U	1.7	U			P
Iron			1.7	U	1.7	U	1.7	U			P
Magnesium			13.3	U	25.6	B	13.3	U			P
Manganese			0.4	B	0.5	B	0.4	B			P
Nickel			0.5	B	0.6	B	0.5	B			P
Potassium			7.3	U	11.6	B	7.3	U			P
Selenium			3.4	U	3.4	U	3.4	U			P
Sodium			12.8	U	19.9	B	23.0	B			P
Zinc			0.6	B	0.6	B	0.5	B			P

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

ICP ID Number: ICP4 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	500000	495340	501740.0	100.3	486080	492590.0	98.5
Barium		500		513.7	102.7		473.5	94.7
Cadmium		1000		950.7	95.1		1007.9	100.8
Calcium	500000	500000	432690	439860.0	88.0	473310	480030.0	96.0
Chromium		500		577.7	115.5		530.6	106.1
Copper		500		554.7	110.9		506.9	101.4
Iron	200000	200000	134570	136340.0	68.2	145320	148710.0	74.4
Magnesium	500000	500000	517780	525700.0	105.1	497030	504290.0	100.9
Manganese		500		470.3	94.1		406.4	81.3
Nickel		1000		1045.5	104.6		838.8	83.9
Zinc		1000		937.5	93.8		1009.4	100.9

Sample Name: ICB Acquired: 04/21/2017 10:11:04 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.06276**	**<.00000**	**<.00000**	**.37410**	**2.2735**	**<.00000**
Stddev	4.0634	12.695	3.6739	1.0226	.4053	.69212
%RSD	6474.2	187.05	307.11	273.33	17.827	4794.7
#1	-2.8105	2.1898	-3.7941	-.34895	2.5601	-.50384
#2	2.9360	-15.763	1.4015	1.0972	1.9869	.47497

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**.06994**	**.40961**	**<.00000**	**2.1325**
Stddev	.01811	2.2849	.06321	.01438	1.3225	1.1323
%RSD	20.924	70.707	90.379	3.5106	16.439	53.096
#1	-.07376	-1.6159	.02524	.41977	-8.9802	2.9332
#2	-.09937	-4.8472	.11463	.39944	-7.1099	1.3319

Avg = -8.04505 ≤ -IDL

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**7.7167**	**<.00000**	**<.00000**	**.02064**	**1.5560**
Stddev	.09685	5.7609	49.026	27.287	.00230	.7875
%RSD	22.318	74.655	376.74	1619.7	11.124	50.610
#1	-.36546	11.790	-47.680	17.610	.02226	2.1129
#2	-.50243	3.6431	21.654	-20.980	.01901	.99917

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**3.5731**	**.24892**	**.17475**	**<.00000**	**2.5053**	**<.00000**
Stddev	14.694	.29382	.08626	.45457	8.4126	1.6556
%RSD	411.25	118.04	49.361	55.627	335.80	2031.6
#1	-6.8174	.45668	.11376	-.49574	-3.4433	-1.2522
#2	13.964	.04116	.23575	-1.1386	8.4539	1.0892

Sample Name: CCB-1 Acquired: 04/21/2017 10:37:05 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**.12040**	**5.0664**	**<.00000**
Stddev	.35659	9.5330	4.8397	1.0043	3.0542	.45802
%RSD	7.8248	94.021	124.69	834.11	60.283	85.203
#1	-4.8094	-16.880	-.45932	-.58973	7.2260	-.21369
#2	-4.3051	-3.3983	-7.3037	.83053	2.9067	-.86143

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**6.4609**	**.55572**	**.88282**	**<.00000**	**<.00000**
Stddev	.06078	.8757	.81063	.87786	.90712	1.4216
%RSD	106.24	13.554	145.87	99.438	30.185	60.323
#1	-.01423	5.8417	1.1289	1.5036	-3.6466	-3.3618
#2	-.10019	7.0801	-.01748	.26208	-2.3638	-1.3514

Avg.= -2.3566 < -IDL

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.50554**	**5.1491**	**<.00000**	**7.0058**	**.57598**	**5.2906**
Stddev	.92992	.1760	41.104	8.1740	.74597	5.1421
%RSD	183.95	3.4188	145.26	116.67	129.51	97.194
#1	1.1631	5.0246	-57.361	12.786	1.1035	8.9266
#2	-.15201	5.2736	.7684	1.2259	.04850	1.6545

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**.56895**	**<.00000**	**12.212**	**1.4144**
Stddev	8.3424	1.3296	.96554	.49009	11.510	2.8507
%RSD	126.41	46.883	169.70	98.884	94.247	201.55
#1	-12.498	-1.8959	1.2517	-.14907	20.351	3.4301
#2	-.7004	-3.7763	-.11379	-.84216	4.0737	-.60139

Sample Name: CCB-3 Acquired: 04/21/2017 13:49:26 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.31237**	**13.014**	**<.00000**	**.53575**	**5.0569**	**1.0950**
Stddev	6.0068	18.222	1.1949	.22668	2.2157	.0345
%RSD	1923.0	140.02	56.133	42.310	43.816	3.1548
#1	-3.9351	25.900	-2.9736	.69604	6.6236	1.1195
#2	4.5598	.12921	-1.2838	.37547	3.4901	1.0706

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.05243**	**5.8421**	**.34009**	**.43001**	**<.00000**	**1.6006**
Stddev	.09822	7.3831	.06050	.00002	10.187	2.7911
%RSD	187.34	126.38	17.788	.00561	84.635	174.38
#1	-.01702	.62146	.29732	.42999	-19.239	3.5741
#2	.12188	11.063	.38287	.43002	-4.8329	-.37301

Avg.= -12.036 < -IDL

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**.26284**	**<.00000**	**7.2364**	**.19882**	**3.5710**
Stddev	.18787	5.2485	51.821	9.2117	.06398	3.1736
%RSD	74.122	1996.8	60.181	127.30	32.178	88.871
#1	-.12062	3.9741	-122.75	13.750	.24406	5.8151
#2	-.38631	-3.4484	-49.466	.72274	.15358	1.3269

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**26.679**	**7.2460**	**.34981**	**<.00000**	**23.169**	**<.00000**
Stddev	2.862	.8310	.13584	.87555	9.299	1.7933
%RSD	10.728	11.469	38.831	48.419	40.134	58.355
#1	24.655	6.6584	.25376	-1.1892	16.594	-1.8051
#2	28.703	7.8337	.44586	-2.4274	29.745	-4.3412

Avg.= -3.073 < -IDL

Sample Name: CCB-6 Acquired: 04/21/2017 17:14:44 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**1.4968**	**2.6229**	**8.1752**	**1.5754**
Stddev	3.7978	1.5179	3.0133	1.2116	3.7191	.2890
%RSD	152.04	88.301	201.32	46.195	45.493	18.343
#1	.18757	-2.7923	-.63392	3.4796	10.805	1.7798
#2	-5.1833	-.64567	3.6275	1.7661	5.5454	1.3711

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.17832**	**.86992**	**.32836**	**.83954**	**<.00000**	**.87259**
Stddev	.05220	1.7578	.26930	.01080	6.4480	2.3668
%RSD	29.274	202.07	82.012	1.2862	59.685	271.24
#1	.21523	2.1129	.51878	.84718	-15.363	-.80097
#2	.14141	-.37306	.13794	.83191	-6.2439	2.5461

Avg. = -10.803 < -IDL

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.28610**	**6.1075**	**<.00000**	**4.1032**	**.42400**	**4.0771**
Stddev	.00306	4.7857	58.755	6.8241	.09471	3.3729
%RSD	1.0692	78.359	27.149	166.31	22.337	82.728
#1	.28394	9.4915	-257.96	-.72217	.49096	6.4621
#2	.28826	2.7234	-174.87	8.9286	.35703	1.6921

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**23.003**	**<.00000**	**.51952**	**.07413**	**6.5757**	**<.00000**
Stddev	32.017	2.4525	.19894	1.9961	13.282	1.5404
%RSD	139.19	36.180	38.293	2692.8	201.99	1573.8
#1	.36339	-5.0444	.66020	-1.3373	15.968	.99136
#2	45.642	-8.5128	.37885	1.4856	-2.8163	-1.1871

Sample Name: ICSA-1 Acquired: 04/21/2017 10:21:38 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**495340.**	**<.00000**	**62.998**	**<.00000**	**3.0294**
Stddev	.44363	4568.	6.5768	1.218	1.0071	.1847
%RSD	.89008	.92210	.53410	1.9329	.60141	6.0975
#1	-50.156	492110.	-1226.7	62.137	-166.75	3.1600
#2	-49.529	498570.	-1236.0	63.859	-168.17	2.8988

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Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.9871**	**432690.**	**<.00000**	**2.4806**	**2.1222**	**<.00000**
Stddev	.0179	4443.	.03288	.2085	3.9292	2.0479
%RSD	.89996	1.0269	2.5990	8.4044	185.14	13.567
#1	1.9745	429550.	-1.2882	2.6280	-.65612	-16.543
#2	1.9998	435830.	-1.2418	2.3331	4.9005	-13.646

< - IDL
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Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**134570.**	**11.954**	**<.00000**	**517780.**	**<.00000**	**<.00000**
Stddev	1388.	2.646	121.23	3952.	.00954	.66044
%RSD	1.0318	22.138	6.9743	.76315	.07763	24.661
#1	133590.	10.083	-1823.9	514990.	-12.284	-2.2111
#2	135550.	13.825	-1652.5	520580.	-12.298	-3.1451

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Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**38.080**	**30.815**	**<.00000**	**<.00000**	**<.00000**	**<.00000**
Stddev	15.101	1.247	.53482	1.8329	.88624	4.3353
%RSD	39.655	4.0476	2.3059	1.7596	9.1321	55.860
#1	27.402	29.933	-22.816	-102.87	-10.331	-10.826
#2	48.758	31.697	-23.572	-105.46	-9.0780	-4.6954

Avg = -7.7607
> IDL
< - IDL
< - IDL

Sample Name: ICSA-1 Acquired: 04/21/2017 10:21:38 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**10.616**	**3.9209**	**33.609**	**<.00000**	**<.00000**
Stddev	.89758	2.729	.8963	.307	3.0741	2.9149
%RSD	2.7026	25.702	22.860	.91440	23.428	17.161
#1	-33.847	8.6869	3.2871	33.826	-15.295	-14.925
#2	-32.577	12.546	4.5547	33.392	-10.948	-19.047

<< - CRDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**
Stddev	.94684	.17077	2.4898
%RSD	2.7198	1.3758	26.443
#1	-34.143	-12.291	-7.6553
#2	-35.482	-12.533	-11.176

< - IDL

Avg.= -12.412

Sample Name: ICSAB-1 Acquired: 04/21/2017 10:26:05 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1065.9**	**501740.**	**<.00000**	**70.634**	**<.00000**	**513.67**
Stddev	6.3	826.	1.3080	.359	.83647	2.69
%RSD	.58750	.16461	.10460	.50779	.47824	.52425
#1	1061.5	501160.	-1249.6	70.380	-174.31	511.77
#2	1070.3	502330.	-1251.4	70.888	-175.50	515.58

Avg. = -174.905

<<- CRDL <<- CRDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**500.16**	**439860.**	**950.66**	**450.73**	**577.65**	**554.69**
Stddev	1.62	2307.	1.03	.79	6.10	.81
%RSD	.32386	.52443	.10836	.17554	1.0553	.14540
#1	499.01	438230.	949.93	450.17	581.96	554.12
#2	501.31	441490.	951.39	451.29	573.34	555.26

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**136340.**	**8.5766**	**<.00000**	**525700.**	**470.25**	**<.00000**
Stddev	474.	.4611	130.49	2496.	.95	.05793
%RSD	.34743	5.3758	7.2948	.47471	.20101	3.5911
#1	136010.	8.9026	-1881.0	523940.	469.58	-1.6541
#2	136680.	8.2506	-1696.5	527470.	470.92	-1.5722

> IDL

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**39.053**	**24.607**	**1045.5**	**922.29**	**<.00000**	**<.00000**
Stddev	12.801	.033	.8	3.38	13.777	4.8150
%RSD	32.780	.13260	.07767	.36622	40.040	194.50
#1	30.001	24.584	1046.1	924.68	-44.149	.92915
#2	48.105	24.630	1045.0	919.91	-24.666	-5.8803

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Sample Name: ICSAB-1 Acquired: 04/21/2017 10:26:05 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**5.7682**	**1.3626**	**1.3917**	**<.00000**	**<.00000**
Stddev	1.9900	27.344	.5240	.5918	.70504	.00034
%RSD	6.7947	474.06	38.459	42.526	4.6063	.00165
#1	-27.881	25.104	1.7331	.97319	-14.807	-20.623
#2	-30.695	-13.567	.99202	1.8101	-15.805	-20.623

<< - CRDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**443.73**	**937.51**	**<.00000**
Stddev	.28	.47	1.6704
%RSD	.06337	.05043	16.133
#1	443.93	937.17	-9.1729
#2	443.53	937.84	-11.535

Sample Name: ICSA-2 Acquired: 04/21/2017 17:00:44 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**486080.**	**<.00000**	**67.027**	**<.00000**	**4.3079**
Stddev	1.1383	4495.	22.036	.974	1.0861	.3213
%RSD	2.1958	.92468	1.7276	1.4535	.79718	7.4587
#1	-51.034	482900.	-1260.0	66.338	-137.01	4.5351
#2	-52.644	489260.	-1291.1	67.716	-135.48	4.0807

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2.0777**	**473310.**	**<.00000**	**2.8775**	**<.00000**	**<.00000**
Stddev	.0734	4678.	.24476	.1586	4.6749	6.5000
%RSD	3.5325	.98844	14.314	5.5132	59.998	39.136
#1	2.0258	470000.	-1.5369	2.7653	-4.4861	-21.205
#2	2.1296	476620.	-1.8831	2.9896	-11.097	-12.013

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**145320.**	**20.394**	**<.00000**	**497030.**	**<.00000**	**<.00000**
Stddev	3602.	2.051	142.31	3769.	.11583	.30959
%RSD	2.4782	10.058	5.8076	.75838	.92542	9.2046
#1	142780.	21.844	-2551.1	494360.	-12.434	-3.1445
#2	147870.	18.944	-2349.8	499690.	-12.598	-3.5824

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**165.39**	**69.615**	**<.00000**	**<.00000**	**<.00000**	**<.00000**
Stddev	57.28	31.284	.21086	2.1658	5.3040	.24370
%RSD	34.636	44.938	.86523	1.7347	13.134	3.3136
#1	124.88	91.736	-24.520	-123.32	-36.634	-7.5267
#2	205.89	47.494	-24.222	-126.38	-44.135	-7.1820

Sample Name: ICSA-2 Acquired: 04/21/2017 17:00:44 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**2.8231**	**48.413**	**<.00000**	**<.00000**
Stddev	6.3476	29.357	1.1358	.142	.61700	.95534
%RSD	17.040	357.73	40.233	.29370	5.4729	6.8402
#1	-32.762	12.552	2.0200	48.313	-11.710	-14.642
#2	-41.739	-28.965	3.6263	48.514	-10.837	-13.291

Avg. = -37.2505 <- CRDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**
Stddev	2.2179	.54972	1.5193
%RSD	5.9209	4.5059	17.904
#1	-39.027	-11.811	-7.4116
#2	-35.891	-12.589	-9.5603

<- IDL

Sample Name: ICSAB-2 Acquired: 04/21/2017 17:05:04 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1021.9**	**492590.**	**<.00000**	**77.314**	**<.00000**	**473.52**
Stddev	.7	1246.	15.139	.038	.08571	1.00
%RSD	.07087	.25302	1.1602	.04880	.05829	.21155
#1	1021.4	491710.	-1294.2	77.287	-147.09	472.81
#2	1022.4	493480.	-1315.7	77.341	-146.97	474.23

Avg. = -1304.95
<< - CRDL
<< - CRDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**516.99**	**480030.**	**1007.9**	**450.98**	**530.64**	**506.92**
Stddev	.76	1185.	1.7	.37	3.47	4.29
%RSD	.14703	.24687	.16672	.08152	.65420	.84611
#1	516.45	479190.	1006.7	451.24	528.19	503.88
#2	517.53	480860.	1009.1	450.72	533.10	509.95

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**148710.**	**11.815**	**<.00000**	**504290.**	**406.41**	**<.00000**
Stddev	1544.	1.704	145.20	770.	.07	.59865
%RSD	1.0380	14.423	6.1233	.15260	.01638	30.977
#1	147620.	10.610	-2473.9	503750.	406.46	-2.3559
#2	149800.	13.020	-2268.6	504840.	406.37	-1.5092

> IDL

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**172.95**	**28.293**	**838.76**	**854.62**	**<.00000**	**<.00000**
Stddev	70.75	5.109	2.04	.29	3.5633	1.7089
%RSD	40.910	18.057	.24299	.03349	8.4328	42.498
#1	122.92	31.906	837.32	854.83	-44.774	-5.2293
#2	222.98	24.681	840.20	854.42	-39.735	-2.8126

> IDL
<< - IDL

Sample Name: ICSAB-2 Acquired: 04/21/2017 17:05:04 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**.56972**	**15.772**	**<.00000**	**<.00000**
Stddev	5.6474	17.072	1.0255	.447	.07073	3.6707
%RSD	16.007	107.15	180.00	2.8331	.55293	14.189
#1	-31.288	-3.8607	1.2948	15.456	-12.742	-23.275
#2	-39.274	-28.004	-.15541	16.088	-12.842	-28.466

<- CRDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**454.82**	**1009.4**	**<.00000**
Stddev	10.10	.1	3.0500
%RSD	2.2214	.01058	29.077
#1	447.68	1009.4	-12.646
#2	461.97	1009.5	-8.3328

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

7842MS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2880.1000		399.7600		2000.00	124.0		P
Antimony	75 - 125	518.9200		2.6800	U	500.00	103.8		P
Arsenic	75 - 125	37.2720		2.7600	U	40.00	93.2		P
Barium	75 - 125	2188.1000		62.2550	B	2000.00	106.3		P
Boron		99.8680		86.7640		0.00	0.0		P
Cadmium	75 - 125	52.4250		0.3700	U	50.00	104.8		P
Calcium		113440.0000		109410.0000		0.00	0.0		P
Chromium	75 - 125	216.0400		6.8700	U	200.00	108.0		P
Copper	75 - 125	281.1000		12.5080	B	250.00	107.4		P
Iron	75 - 125	2328.4000		1055.9000		1000.00	127.2	N	P
Magnesium		53329.0000		51873.0000		0.00	0.0		P
Manganese	75 - 125	595.2100		93.3930		500.00	100.4		P
Nickel	75 - 125	465.5800		1.9371	B	500.00	92.7		P
Potassium		1848.8000	B	1767.8000	B	0.00	0.0		P
Selenium	75 - 125	7.8080		3.4000	U	10.00	78.1		P
Sodium		11751.0000		11225.0000		0.00	0.0		P
Zinc	75 - 125	543.8100		4.5421	B	500.00	107.9		P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

7842A

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

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

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Aluminum		4851.70		399.76		4000.0	111.3		P
Antimony		1025.50		2.68	U	1000.0	102.6		P
Arsenic		81.60		2.76	U	80.0	102.0		P
Barium		4214.70		62.26	B	4000.0	103.8		P
Boron		89.13		86.76		0.0	0.0		P
Cadmium		103.78		0.37	U	100.0	103.8		P
Calcium		112800.00		109410.00		0.0	0.0		P
Chromium		415.36		6.87	U	400.0	103.8		P
Copper		545.42		12.51	B	500.0	106.6		P
Iron		3126.90		1055.90		2000.0	103.6		P
Magnesium		52721.00		51873.00		0.0	0.0		P
Manganese		1073.00		93.39		1000.0	98.0		P
Nickel		919.18		1.94	B	1000.0	91.7		P
Potassium		1861.40	B	1767.80	B	0.0	0.0		P
Selenium		19.54		3.40	U	20.0	97.7		P
Sodium		11655.00		11225.00		0.0	0.0		P
Zinc		1061.10		4.54	B	1000.0	105.7		P

Comments:

9

ICP SERIAL DILUTIONS

SAMPLE NO.

7842L

Lab Name: Adirondack Environmental Contract: Lockwood As

Lab Code: AES Case No.: 17024LH SAS No.: SDG No.: 7842

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	399.76		122.41	B	69.4		P
Antimony	2.68	U	13.40	U			P
Arsenic	2.76	U	13.80	U			P
Barium	62.26	B	70.22	B	12.8	E	P
Boron	86.76		105.99	B	22.2	E	P
Cadmium	0.37	U	1.85	U			P
Calcium	109410.00		133125.00		21.7	E	P
Chromium	6.87	U	34.35	U			P
Copper	12.51	B	22.66	B	81.1		P
Iron	1055.90		1342.60		27.2	E	P
Magnesium	51873.00		60065.00		15.8	E	P
Manganese	93.39		117.92		26.3	E	P
Nickel	1.94	B	2.09	B	7.7		P
Potassium	1767.80	B	1811.80	B	2.5		P
Selenium	3.40	U	17.00	U			P
Sodium	11225.00		10928.50	B	2.6		P
Zinc	4.54	B	7.83	B	72.5		P

Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Blank	0.0000	0	-0.0711	0.00	11.4
0.2ppb	0.0025	0.200	0.1180	0.00	2.8
0.5ppb	0.0084	0.500	0.5574	0.00	1.3
1.00ppb	0.0145	1.000	1.0147	0.00	0.7
2.00ppb	0.0273	2.000	1.9756	0.00	1.3
5.00ppb	0.0703	5.000	5.2066	0.00	0.7
10.00ppb	0.1328	10.000	9.8989	0.00	0.8

Correlation Coef.: 0.999572 Slope: 0.01332 Intercept: 0.00095

Sequence No.: 8
Sample ID: ICV
Analyst:
Autosampler Location: 5
Date Collected: 4/3/2017 3:07:13 PM
Data Type: Original

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.060	2.060	0.0284	0.1237	0.0288	15:08:01	Yes
2	2.041	2.041	0.0281	0.1215	0.0285	15:08:29	Yes
Mean:	2.051	2.051	0.0283				
SD:	0.0135	0.0135	0.0002				
%RSD:	0.6560	0.6560	0.63				

QC value within limits for Hg 253.7 Recovery = 102.54%
All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICB
Analyst:
Autosampler Location: 1
Date Collected: 4/3/2017 3:08:48 PM
Data Type: Original

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0620	-0.0620	0.0001	0.0012	0.0005	15:09:35	Yes
2	-0.0607	-0.0607	0.0001	0.0014	0.0005	15:10:02	Yes
Mean:	-0.0613	-0.0613	0.0001				
SD:	0.0009	0.0009	0.0000				
%RSD:	1.481	1.481	9.32				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: 0.2ppb – CRA
Analyst:
Autosampler Location: 9
Date Collected: 4/3/2017 3:10:19 PM
Data Type: Original

Replicate Data: 0.2ppb = True conc.

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1138	0.1138	0.0025	0.0112	0.0029	15:11:06	Yes
2	0.0462	0.0462	0.0016	0.0052	0.0020	15:11:33	Yes
Mean:	0.0800	0.0800	0.0020				
SD:	0.0478	0.0478	0.0006				
%RSD:	59.78	59.78	31.65				

→ measured conc.

$\%R = \frac{0.08}{0.2} = 40\%$

Sequence No.: 11
Sample ID: 2.0ppb
Analyst:
Autosampler Location: 10
Date Collected: 4/3/2017 3:11:50 PM
Data Type: Original

Replicate Data: 2.0ppb

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Sequence No.: 21
Sample ID: CCB-1
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 3:27:33 PM
Data Type: Original

Replicate Data: CCB-1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0591	-0.0591	0.0002	0.0017	0.0006	15:28:20	Yes
2	-0.0616	-0.0616	0.0001	0.0016	0.0005	15:28:47	Yes
Mean:	-0.0604	-0.0604	0.0001				
SD:	0.0018	0.0018	0.0000				
%RSD:	2.924	2.924	16.50				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 22
Sample ID: 170331010-005D
Analyst:

Autosampler Location: 19
Date Collected: 4/3/2017 3:29:04 PM
Data Type: Original

Replicate Data: 170331010-005D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0754	-0.0754	-0.0001	0.0003	0.0003	15:29:51	Yes
2	-0.0733	-0.0733	-0.0000	0.0007	0.0004	15:30:18	Yes
Mean:	-0.0743	-0.0743	-0.0000				
SD:	0.0015	0.0015	0.0000				
%RSD:	1.968	1.968	44.94				

Sequence No.: 23
Sample ID: 170331010-006D
Analyst:

Autosampler Location: 20
Date Collected: 4/3/2017 3:30:36 PM
Data Type: Original

Replicate Data: 170331010-006D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0708	-0.0708	0.0000	0.0016	0.0004	15:31:23	Yes
2	-0.0679	-0.0679	0.0000	0.0021	0.0004	15:31:50	Yes
Mean:	-0.0694	-0.0694	0.0000				
SD:	0.0020	0.0020	0.0000				
%RSD:	2.931	2.931	119.04				

Sequence No.: 24
Sample ID: 170331010-007D
Analyst:

Autosampler Location: 21
Date Collected: 4/3/2017 3:32:08 PM
Data Type: Original

Replicate Data: 170331010-007D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0642	-0.0642	0.0001	0.0022	0.0005	15:32:55	Yes
2	-0.0709	-0.0709	0.0000	0.0003	0.0004	15:33:22	Yes
Mean:	-0.0675	-0.0675	0.0000				
SD:	0.0047	0.0047	0.0001				
%RSD:	7.024	7.024	132.74				

Sequence No.: 25
Sample ID: 170331010-008D
Analyst:

Autosampler Location: 22
Date Collected: 4/3/2017 3:33:40 PM
Data Type: Original

Replicate Data: 170331010-008D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0633	-0.0633	0.0001	0.0029	0.0005	15:34:28	Yes

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0686	-0.0686	0.0000	0.0014	0.0004	15:42:19	Yes
2	-0.0706	-0.0706	0.0000	0.0010	0.0004	15:42:46	Yes
Mean:	-0.0696	-0.0696	0.0000				
SD:	0.0014	0.0014	0.0000				
%RSD:	2.028	2.028	94.88				

Sequence No.: 31 **Autosampler Location: 28**
Sample ID: 170331010-015D **Date Collected: 4/3/2017 3:43:06 PM**
Analyst: **Data Type: Original**

Replicate Data: 170331010-015D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0824	-0.0824	-0.0002	0.0005	0.0002	15:43:55	Yes
2	-0.0811	-0.0811	-0.0001	0.0008	0.0003	15:44:22	Yes
Mean:	-0.0817	-0.0817	-0.0001				
SD:	0.0009	0.0009	0.0000				
%RSD:	1.122	1.122	8.64				

Sequence No.: 32 **Autosampler Location: 5**
Sample ID: CCV **Date Collected: 4/3/2017 3:44:42 PM**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.940	1.940	0.0268	0.1164	0.0272	15:45:30	Yes
2	1.976	1.976	0.0273	0.1171	0.0277	15:45:57	Yes
Mean:	1.958	1.958	0.0270				
SD:	0.0259	0.0259	0.0003				
%RSD:	1.321	1.321	1.27				

QC value within limits for Hg 253.7 Recovery = 97.90%
All analyte(s) passed QC.

Sequence No.: 33 **Autosampler Location: 1**
Sample ID: CCB-2 **Date Collected: 4/3/2017 3:46:17 PM**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0569	-0.0569	0.0002	0.0021	0.0006	15:47:03	Yes
2	-0.0585	-0.0585	0.0002	0.0021	0.0006	15:47:30	Yes
Mean:	-0.0577	-0.0577	0.0002				
SD:	0.0012	0.0012	0.0000				
%RSD:	1.993	1.993	8.58				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 34 **Autosampler Location: 29**
Sample ID: 170331010-016D **Date Collected: 4/3/2017 3:47:48 PM**
Analyst: **Data Type: Original**

Replicate Data: 170331010-016D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0699	-0.0699	0.0000	0.0013	0.0004	15:48:37	Yes
2	-0.0700	-0.0700	0.0000	0.0012	0.0004	15:49:04	Yes
Mean:	-0.0699	-0.0699	0.0000				
SD:	0.0001	0.0001	0.0000				
%RSD:	0.1838	0.1838	11.17				

1	1.945	1.945	0.0269	0.1147	0.0273	16:04:07	Yes
2	1.938	1.938	0.0268	0.1170	0.0272	16:04:34	Yes
Mean:	1.941	1.941	0.0268				
SD:	0.0052	0.0052	0.0001				
%RSD:	0.2694	0.2694	0.26				

QC value within limits for Hg 253.7 Recovery = 97.06%
All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB-3
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 4:04:53 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0547	-0.0547	0.0002	0.0027	0.0006	16:05:40	Yes
2	-0.0588	-0.0588	0.0002	0.0020	0.0006	16:06:07	Yes
Mean:	-0.0567	-0.0567	0.0002				
SD:	0.0029	0.0029	0.0000				
%RSD:	5.039	5.039	19.92				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 46
Sample ID: 170331010-022D
Analyst:

Autosampler Location: 39
Date Collected: 4/3/2017 4:06:24 PM
Data Type: Original

Replicate Data: 170331010-022D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0066	-0.0066	0.0009	0.0051	0.0013	16:07:12	Yes
2	-0.0068	-0.0068	0.0009	0.0049	0.0012	16:07:40	Yes
Mean:	-0.0067	-0.0067	0.0009				
SD:	0.0001	0.0001	0.0000				
%RSD:	1.629	1.629	0.17				

Sequence No.: 47
Sample ID: 170331010-023D
Analyst:

Autosampler Location: 40
Date Collected: 4/3/2017 4:07:58 PM
Data Type: Original

Replicate Data: 170331010-023D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0547	-0.0547	0.0002	0.0021	0.0006	16:08:46	Yes
2	-0.0531	-0.0531	0.0002	0.0025	0.0006	16:09:13	Yes
Mean:	-0.0539	-0.0539	0.0002				
SD:	0.0011	0.0011	0.0000				
%RSD:	2.094	2.094	6.54				

Sequence No.: 48
Sample ID: 170331010-024D
Analyst:

Autosampler Location: 41
Date Collected: 4/3/2017 4:09:32 PM
Data Type: Original

Replicate Data: 170331010-024D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0638	-0.0638	0.0001	0.0009	0.0005	16:10:20	Yes
2	-0.0611	-0.0611	0.0001	0.0023	0.0005	16:10:47	Yes
Mean:	-0.0625	-0.0625	0.0001				
SD:	0.0019	0.0019	0.0000				
%RSD:	3.065	3.065	22.27				

Sequence No.: 49

Autosampler Location: 42

Sequence No.: 54
Sample ID: LCS-53932
Analyst:

Autosampler Location: 34
Date Collected: 4/3/2017 4:19:04 PM
Data Type: Original

Replicate Data: LCS-53932

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.857	1.857	0.0257	0.1138	0.0261	16:19:50	Yes
2	1.925	1.925	0.0266	0.1176	0.0270	16:20:18	Yes
Mean:	1.891	1.891	0.0261				
SD:	0.0486	0.0486	0.0006				
%RSD:	2.568	2.568	2.48				

Sequence No.: 55
Sample ID: 170331010-021DMS
Analyst:

Autosampler Location: 38
Date Collected: 4/3/2017 4:20:35 PM
Data Type: Original

Replicate Data: 170331010-021DMS

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.980	1.980	0.0273	0.1183	0.0277	16:21:22	Yes
2	2.004	2.004	0.0277	0.1186	0.0280	16:21:49	Yes
Mean:	1.992	1.992	0.0275				
SD:	0.0169	0.0169	0.0002				
%RSD:	0.8490	0.8490	0.82				

Sequence No.: 56
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 4/3/2017 4:22:07 PM
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.927	1.927	0.0266	0.1163	0.0270	16:22:56	Yes
2	1.948	1.948	0.0269	0.1167	0.0273	16:23:23	Yes
Mean:	1.937	1.937	0.0268				
SD:	0.0151	0.0151	0.0002				
%RSD:	0.7791	0.7791	0.75				

QC value within limits for Hg 253.7 Recovery = 96.86%
All analyte(s) passed QC.

Sequence No.: 57
Sample ID: CCB-4
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 4:23:43 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0531	-0.0531	0.0002	0.0024	0.0006	16:24:29	Yes
2	-0.0531	-0.0531	0.0002	0.0030	0.0006	16:24:57	Yes
Mean:	-0.0531	-0.0531	0.0002				
SD:	0.0000	0.0000	0.0000				
%RSD:	0.0538	0.0538	0.16				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

2B-IN

CRQL CHECK STANDARD

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH NRAS No.: SDG No.: 7842

CRQL Check Standard Source: See Source Form

Concentration Units: mg/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Chloride	1	1.05	105		
Sulfate	2	2.01	100		
Nitrogen, Ammonia (As N)	0.1	0.0591	59.	0.0627	62.
Total Organic Carbon	1	2.16	215	1.25	125

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

7 - IN

LABORATORY CONTROL SAMPLE

Lab Name: AES Contract:

Lab Code: AES Case No.: 17024LH Mod. Ref. No.: SDG No.: 7842

Sources: See Source Form

Sample ID	Analyte	True	Found	%R	Units
LCS-R145884	Alkalinity, Total (As CaCO3)	98.1	95	96.	MG/L
LCS-R145940	Alkalinity, Total (As CaCO3)	98.1	95	96.	MG/L
LCS	Chloride	200	205	102	MG/L
LCS	Sulfate	400	401	100	MG/L
LCS	Chloride	200	205	102	MG/L
LCS	Sulfate	400	401	100	MG/L
LCS	Chloride	200	203	101	MG/L
LCS	Sulfate	400	404	101	MG/L
LCS	Chloride	200	204	102	MG/L
LCS	Sulfate	400	403	100	MG/L
LCS	Nitrogen, Ammonia (As N)	9.93	10.1	101	MG/L
LCS	Nitrogen, Ammonia (As N)	9.93	9.64	97.	MG/L
LCS	Nitrogen, Ammonia (As N)	9.93	9.58	96.	MG/L
LCS-R146081	Specific Conductance	704	709	100	MG/L
LCS-R146266	Specific Conductance	704	704	100	MG/L
LCS-R145871	TDS (Residue, Filterable)	615	660	107	MG/L
LCS-R145927	TDS (Residue, Filterable)	615	605	98.	MG/L
LCS	Total Organic Carbon	30	32.9	109	MG/L
LCS	Total Organic Carbon	30	~~33.4~~ 33.9	~~111~~ (113)	MG/L

Color

09-V

Sample ID	Standard	Cpcu	Time	pH	Date/Init
Blank	WCS-15-B	<5 cpu	18:15	6	3/10/17 KB
170310-37-1		5 cpu		7.5	
↓ -37-1 dup		5 cpu		7.5	↓ ✓
CCB		<5 cpu	↓	6	
Blank		<5 cpu	15:15	6	3/3/17 KD
Schc Lockwood 170331-10-1	WCS-15-D	<5 cpu		6	
10-2		<5 cpu		6	
10-3	* Color added out of hold time * Run anyway as per Pat	<5 cpu		7	
10-4		<5 cpu		7	
10-5		<5 cpu		7	
10-6		15 cpu		7	
10-7		<5 cpu		7	
10-8		<5 cpu		7	
10-10 (KMO)		<5 cpu		7	
10-10 dup		<5 cpu		7	
10-11		<5 cpu		7	
10-12		<5 cpu		7	
10-13		<5 cpu		7	
10-14		15 cpu		7	
10-15		<5 cpu		7	
10-16		<5 cpu		7	
10-17		<5 cpu		8	
10-18		<5 cpu		7.5	
10-19		<5 cpu		7	
10-20		<5 cpu		8	
10-20 dup		<5 cpu		8	
10-21		5 cpu		7	
10-22		5 cpu		7	
10-23		5 cpu		7	
10-24		5 cpu		8	
10-25		<5 cpu		6	
10-26		5 cpu		7.5	
10-27		<5 cpu		7	
↓ CCB		<5 cpu	↓	6	↓

ATTACHMENT 3

Sample Data Group GW Dep Drain 3

3A

Sample Data Group GW Dep Drain 3

Sample Results

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
GW Dep Drain 3

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-026D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	10.5			P
7440-39-3	Barium	200U ~~28.7~~	~~B~~		P
7440-42-8	Boron	155			P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	140000		~~J~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	3.1	B		P
7439-89-6	Iron	16.1	B		P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	29000			P
7439-96-5	Manganese	51.1			P
7440-02-0	Nickel	40U ~~3.3~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2420~~	~~B~~	~~J~~	P
7782-49-2	Selenium	3.4	U	~~J~~	P
7440-23-5	Sodium	11000		~~J~~	P
7440-66-6	Zinc	20U ~~4.8~~	~~B~~		P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Inlet To Pond

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-020D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	6.7	B	J-	P
7440-39-3	Barium	200U ~~31.5~~	~~B~~	J	P
7440-42-8	Boron	12500		J	P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	576000		~~J~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	2.7	B	J-	P
7439-89-6	Iron	2160		J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	74800			P
7439-96-5	Manganese	411			P
7440-02-0	Nickel	40U ~~5.6~~	~~B~~	J	P
7440-09-7	Potassium	95600		~~J~~ J	P
7782-49-2	Selenium	37.8		~~J~~ J-	P
7440-23-5	Sodium	180000		~~J~~ J	P
7440-66-6	Zinc	20U ~~4.9~~	~~B~~	J	P

BMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Keuka Downstream

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-022D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	4.4	B		P
7440-39-3	Barium	200U ~~21.4~~	~~B~~		P
7440-42-8	Boron	50U ~~35.5~~	~~B~~		P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	39400		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	3.9	B		P
7439-89-6	Iron	216			P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	22.4			P
7440-02-0	Nickel	40U ~~1.1~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2190~~	~~B~~	~~E~~	P
7782-49-2	Selenium	3.4	U	~~N~~	P
7440-23-5	Sodium	19300		~~E~~	P
7440-66-6	Zinc	20U ~~6.9~~	~~B~~		P

BMM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Keuka Upstream

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-021D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	3.4	B		P
7440-39-3	Barium	200U ~~22.0~~	~~B~~		P
7440-42-8	Boron	50U ~~35.1~~	~~B~~		P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	40000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	4.0	B		P
7439-89-6	Iron	200			P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	11300			P
7439-96-5	Manganese	21.0			P
7440-02-0	Nickel	40U ~~0.72~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2180~~	~~B~~	~~E~~	P
7782-49-2	Selenium	3.4	U	~~N~~	P
7440-23-5	Sodium	19500		~~E~~	P
7440-66-6	Zinc	20U ~~4.5~~	~~B~~		P

BMM 6/23/17

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Pond Grab

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-024D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	9.9	B	J-	P
7440-39-3	Barium	200U ~~24.6~~	B	J	P
7440-42-8	Boron	8250			P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	290000		~~E~~	P
7440-47-3	Chromium	9.3	B	J-	P
7440-50-8	Copper	1.7	U	J-	P
7439-89-6	Iron	289		J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	45300			P
7439-96-5	Manganese	157			P
7440-02-0	Nickel	40U ~~5.4~~	~~B~~	J	P
7440-09-7	Potassium	41600		~~E~~ J+	P
7782-49-2	Selenium	3.4	U	~~N~~ J	P
7440-23-5	Sodium	106000		~~E~~	P
7440-66-6	Zinc	20U ~~2.0~~	~~B~~	J	P

BJM 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Surface Water Dup

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-023D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	6.2	B		P
7440-39-3	Barium	200U ~~20.3~~	~~B~~		P
7440-42-8	Boron	50U ~~29.8~~	~~B~~		P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	39000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	5.7	B		P
7439-89-6	Iron	218			P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	11100			P
7439-96-5	Manganese	21.3			P
7440-02-0	Nickel	40U ~~1.1~~	~~B~~		P
7440-09-7	Potassium	5000U ~~2160~~	~~B~~	~~E~~	P
7782-49-2	Selenium	3.4	U	~~N~~	P
7440-23-5	Sodium	19300		~~E~~	P
7440-66-6	Zinc	20U ~~6.2~~	~~B~~		P

BAM
6/23/17

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Under Drain 5

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-027D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.6	U	J	P
7440-36-0	Antimony	2.7	U	J	P
7440-38-2	Arsenic	10.0	B	J-	P
7440-39-3	Barium	200U ~~21.8~~	~~B~~	J	P
7440-42-8	Boron	12400			P
7440-43-9	Cadmium	0.37	U	J	P
7440-70-2	Calcium	820000		~~E~~	P
7440-47-3	Chromium	6.9	U	J	P
7440-50-8	Copper	2.9	B	J-	P
7439-89-6	Iron	8.3	B	J-	P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	81600			P
7439-96-5	Manganese	1.6	B	J-	P
7440-02-0	Nickel	40U ~~3.1~~	~~B~~		P
7440-09-7	Potassium	185000		~~E~~	P
7782-49-2	Selenium	71.9		~~N~~ J-	P
7440-23-5	Sodium	226000		~~E~~	P
7440-66-6	Zinc	20U ~~14.9~~	~~B~~	J	P

BAMA 6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
Field Blank

Lab Name: Adirondack Environmental Contract: Lockwood Ash Lan

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-025D

Level (low/med): LOW Date Received: 3/31/2017

% Solids: 0.0 Total/Dissolved: TOTAL

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	31.5	B	J-	P
7440-36-0	Antimony	2.7	U		P
7440-38-2	Arsenic	3.6	B		P
7440-39-3	Barium	200U ~~1.8~~	~~B~~		P
7440-42-8	Boron	50U ~~24.3~~	~~B~~		P
7440-43-9	Cadmium	0.37	U		P
7440-70-2	Calcium	5000U ~~122~~	~~B~~	~~J~~	P
7440-47-3	Chromium	7.9	B	J-	P
7440-50-8	Copper	1.8	B		P
7439-89-6	Iron	10.5	B		P
7439-97-6	Mercury	0.03	U	J	CV
7439-95-4	Magnesium	5000U ~~23.7~~	~~B~~		P
7439-96-5	Manganese	0.27	U		P
7440-02-0	Nickel	0.40	U		P
7440-09-7	Potassium	5000U ~~11.4~~	~~B~~	~~J~~	P
7782-49-2	Selenium	3.4	U	~~J~~	P
7440-23-5	Sodium	5000U ~~62.5~~	~~B~~	~~J~~	P
7440-66-6	Zinc	20U ~~1.8~~	~~B~~		P

BAM
6/23/17

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Hardness Results

Lab Name: Adirondack Environmental Contract:

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain 3

Matrix (soil/water): Water Date Received: 3/31/17

Level (Low/Med): Low

Sample ID	Concentration (mg/L)
GW Dep Drain 3	469
Inlet to Pond	1746
Keuka Downstream	145
Keuka Upstream	146
Pond Grab	911
Surface Water Dup	143
Under Drain 5	2384
Field Blank	< 5

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW Dep Drain 3

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-026B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	280			MG/L	
	Chloride	4.27			MG/L	
	Color	5		J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	752			MG/L	
	Sulfate	209			MG/L	
	TDS (Residue, Filterable)	545			MG/L	
	Total Organic Carbon	2.84		J	MG/L	

BAM 6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Inlet To Pond

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-020B

Level (low/mad): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	355			MG/L	
	Chloride	276			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.168		J-	MG/L	
	Specific Conductance	2630			MG/L	
	Sulfate	1120			MG/L	
	TDS (Residue, Filterable)	2480			MG/L	
	Total Organic Carbon	1	U		MG/L	

BAM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Keuka Downstrea

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-022B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	105			MG/L	
	Chloride	38.9			MG/L	
	Sulfate	23.5			MG/L	
	Color	5		J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	336			MG/L	
	TDS (Residue, Filterable)	165			MG/L	
	Total Organic Carbon	2.41		J	MG/L	

BAM
6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Keuka Upstream

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-021B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	95			MG/L	
	Chloride	38.9			MG/L	
	Sulfate	23.4			MG/L	
	Color	5		J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	337			MG/L	
	TDS (Residue, Filterable)	175			MG/L	
	Total Organic Carbon	2.31		J	MG/L	

BAM
6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Pond Grab

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-024B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	195			MG/L	
	Chloride	110			MG/L	
	Color	5		J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	1530			MG/L	
	Sulfate	627			MG/L	
	TDS (Residue, Filterable)	1240			MG/L	
	Total Organic Carbon	3.42		J	MG/L	

BAM 6/23/17

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Surface Water D

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-023B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	100			MG/L	
	Chloride	39.1			MG/L	
	Sulfate	23.2			MG/L	
	Color	5		J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	317			MG/L	
	TDS (Residue, Filterable)	180			MG/L	
	Total Organic Carbon	2.33		J	MG/L	

BAMA 6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Under Drain 5

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-027B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	190			MG/L	
	Chloride	825			MG/L	
	Sulfate	1380			MG/L	
	Color	5	U	J	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	4070			MG/L	
	TDS (Residue, Filterable)	3600			MG/L	
	Total Organic Carbon	1	U		MG/L	

BAMA 6/23/17

Comments:

Form IA-IN

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Field Blank

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG NO.: GW Dep Drain

Matrix (soil/water): WATER Lab Sample ID: 170331010-025B

Level (low/med): Low Date Received: 03/31/2017

% Solids: 0.0

CAS No.	Analyte	Concentration	C	Q	Units	M
	Alkalinity, Total (As CaCO3)	1	U		MG/L	
	Chloride	2	U		MG/L	
	Sulfate	4	U		MG/L	
	Color	5	U	5	MG/L	
	Nitrogen, Ammonia (As N)	0.1	U		MG/L	
	Specific Conductance	1.54			MG/L	
	TDS (Residue, Filterable)	5	U		MG/L	
	Total Organic Carbon	1	U		MG/L	

BAM
6/23/17

Comments:

Form IA-IN

A.4
FIELD DUPLICATES

Sample No. 170331010-021D Field Duplicate No. 170331010-023D SDG No. GW Dep Drain 3

Lab Code: AES Case No. 17025LH Sample Matrix: Surface Water

% Solids Sample: 0.0 % Solids Duplicate: 0.0

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	16.6	U	16.6	U				P
Antimony	60	300	2.7	U	2.7	U				P
Arsenic	10	50	3.4	U	6.2	B		2.8		P
Barium	200	1,000	22.0	B	20.3	B		1.7		P
Boron	50	250	35.1	B	29.8	B		5.3		P
Cadmium	5	25	0.37	U	0.37	U				P
Calcium	5,000	25,000	40,000		39,000		2.53			P
Chromium	10	50	6.9	U	6.9	U				P
Copper	25	125	4.0	B	5.7	B		1.7		P
Iron	100	500	200.0		218			18		P
Magnesium	5,000	25,000	11,300		11,100			200		P
Manganese	15	75	21.0		21.3			0.3		P
Mercury	0.2	1.0	0.03	U	0.03	U				CV
Nickel	40	200	0.7	B	1.1	B		0.38		P
Potassium	5,000	25,000	2,180	B	2,160	B		20		P
Selenium	5	25	3.4	U	3.4	U				P
Sodium	5,000	25,000	19,500		19,300			200		P
Zinc	20	100	4.5	B	6.2	B		1.7		P

A.4
FIELD DUPLICATES

Sample No. 170331010-021B Field Duplicate No. 170331010-23B SDG No. GW Dep Drain 3

Lab Code: AES Case No. 17025LH Sample Matrix: Surface Water

% Solids Sample: 0.0 % Solids Duplicate: 0.0

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

Analyte	Sample Concentration	C	Duplicate Concentration	C	RPD	Q	M
Ammonia	0.1	U	0.1	U			
Alkalinity	95		100		5.1%		
Color	5		5				
Conductivity	337		317		6.1%		
Chloride	38.9		39.1		0.5%		
Hardness	146		143		2.1%		
Sulfate	23.4		23.2		0.9%		
TDS	175		180		2.8%		
TOC	2.31		2.33		0.9%		

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					mg/L	

*Field parameters not measured on the field duplicate.

3B

Sample Data Group GW Dep Drain 3

Quality Control Documentation

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain 3

AA CRDL Standard Source: _____

ICP CRDL Standard Source: INOR-VEN

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony				120.0	117.70	98.1	121.82	101.5
Arsenic				20.0	21.60	108.0	21.09	105.4
Cadmium				10.0	8.86	88.6	8.81	88.1
Chromium				20.0	16.39	82.0	18.68	93.4
Copper				50.0	50.48	101.0	47.51	95.0
Manganese				30.0	27.49	91.6	28.34	94.5
Nickel				80.0	78.88	98.6	71.82	89.8
Selenium				10.0	8.21	82.1	10.13	101.3
Zinc				40.0	41.14	102.8	42.34	105.8

Control Limits: no limits have been established by EPA at this time

BLANKS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain 3

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	16.6	U	16.6	U	16.6	U	16.6	U	16.560	U	P
Antimony	2.7	U	2.7	U	2.7	U	2.7	U	2.680	U	P
Arsenic	2.8	U	2.8	U	2.8	U	2.8	U	2.760	U	P
Barium	1.1	U	1.1	U	2.5	B	1.1	U	1.050	U	P
Boron	1.0	U	1.0	U	8.1	B	1.0	U	1.040	U	P
Cadmium	0.4	U	0.4	U	0.4	U	0.4	U	0.370	U	P
Calcium	5.7	U	5.7	U	5.7	U	5.7	U	6.751	B	P
Chromium	6.9	U	6.9	U	6.9	U	6.9	U	6.870	U	P
Copper	1.7	U	1.7	U	1.7	U	1.7	U	1.740	U	P
Iron	1.7	U	1.7	U	1.7	U	1.7	U	1.720	U	P
Magnesium	13.3	U	13.3	U	13.3	U	21.6	B	36.301	B	P
Manganese	0.3	U	0.3	U	0.3	U	0.3	U	0.270	U	P
Nickel	0.4	U	0.5	B	0.4	B	0.4	U	0.400	U	P
Potassium	7.3	U	7.3	U	15.7	B	7.3	U	8.808	B	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	3.400	U	P
Sodium	12.8	U	12.8	U	36.8	B	31.3	B	12.810	U	P
Zinc	0.3	U	0.3	U	0.3	U	0.3	U	0.613	B	P

BLANKS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain 3

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			16.6	U							P
Antimony			2.7	U							P
Arsenic			2.8	U							P
Barium			1.2	B							P
Boron			3.6	B							P
Cadmium			0.4	U							P
Calcium			5.7	U							P
Chromium			6.9	U							P
Copper			1.7	U							P
Iron			1.7	U							P
Magnesium			23.7	B							P
Manganese			0.3	U							P
Nickel			0.4	U							P
Potassium			8.5	B							P
Selenium			3.4	U							P
Sodium			35.5	B							P
Zinc			0.3	U							P

Sample Name: ICB-1 Acquired: 04/25/2017 12:24:30 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1.0109**	**.12457**	**.00039**	**.80229**	**<.00000**	**.84120**
Stddev	1.0083	8.8853	.34877	.34159	.19836	.78744
%RSD	99.739	7133.1	89790.	42.577	116890.	93.609
#1	.29796	-6.1583	.24700	1.0438	-.14043	.28439
#2	1.7239	6.4074	-.24623	.56075	.14009	1.3980

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.05107**	**<.00000**	**.16606**	**<.00000**	**<.00000**	**<.00000**
Stddev	.05317	5.0249	.15959	.02383	1.2471	.82801
%RSD	104.12	151.49	96.106	18.081	16.440	94.017
#1	.08867	.23616	.05321	-.14863	-6.7041	-.29521
#2	.01347	-6.8701	.27891	-.11493	-8.4678	-1.4662

Avg. = -7.585 95

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**.81760**	**<.00000**	**2.5287**	**<.00000**	**.01797**
Stddev	.09397	7.3833	57.878	6.1711	.06296	.03813
%RSD	36.811	903.04	722.33	244.05	234.66	212.15
#1	-.32171	6.0384	-48.939	-1.8350	-.07135	.04493
#2	-.18882	-4.4032	32.913	6.8923	.01769	-.00899

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**8.0063**	**<.00000**	**.17436**	**.38261**	**<.00000**	**1.5952**
Stddev	12.767	.23187	.02414	.73351	5.3165	1.6145
%RSD	159.46	102.67	13.845	191.71	339.52	101.21
#1	-1.0215	-.06188	.19143	.90128	2.1934	.45354
#2	17.034	-.38980	.15729	-.13606	-5.3253	2.7368

Sample Name: CCB-1 Acquired: 04/25/2017 13:16:56 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.77272**	**<.00000**	**.90373**	**.37423**	**<.00000**	**<.00000**
Stddev	.50416	13.534	.32338	.18902	.00001	.35869
%RSD	65.245	428.03	35.783	50.509	.00117	39.038
#1	.41623	-12.732	.67506	.24057	-.95351	-.66518
#2	1.1292	6.4079	1.1324	.50788	-.95353	-1.1724

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**.15425**	**<.00000**	**1.4861**
Stddev	.09909	3.6850	.35589	.05552	12.262	2.2426
%RSD	147.19	45.751	296.61	35.994	122.03	150.91
#1	-.13738	-10.660	-.37163	.19351	-18.718	-.09966
#2	.00274	-5.4488	.13166	.11499	-1.3777	3.0719

Avg.=-8.0544 Avg.=-10.04785

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**13.095**	**<.00000**	**<.00000**
Stddev	.08797	.38505	55.775	21.120	.00432	.17790
%RSD	11.236	75.253	248.35	161.28	5.7089	34.731
#1	-.84514	-.23940	-61.897	28.029	-.07867	-.38644
#2	-.72072	-.78395	16.981	-1.8391	-.07257	-.63803

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**.48918**	**.73718**	**1.2534**	**.82894**
Stddev	10.113	.40527	.15633	1.5438	2.2150	1.3722
%RSD	44.917	4.8515	31.958	209.42	176.72	165.53
#1	-29.665	-8.0669	.37863	1.8288	-.31285	1.7992
#2	-15.363	-8.6400	.59972	-.35446	2.8196	-.14134

Avg.=22.514

Sample Name: CCB-1 Acquired: 04/25/2017 13:16:56 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**1.1464**	**6.9130**	**.38334**	**3.4061**
Stddev	2.0344	3.8992	1.2563	8.6092	.25294	8.4388
%RSD	52.198	49.936	109.59	124.54	65.984	247.75
#1	-2.4590	-10.566	.25801	13.001	.20448	-2.5610
#2	-5.3361	-5.0513	2.0347	.82536	.56219	9.3733

Avg.= -3.89755

Elem	V	~~Zn~~	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**1.8800**	**<.00000**	**.80687**
Stddev	.6205	.01654	.17320
%RSD	33.007	5.4721	21.465
#1	2.3187	-.29058	.92934
#2	1.4412	-.31397	.68441

Avg.= -0.302275

Sample Name: CCB-2 Acquired: 04/25/2017 14:34:58 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B_	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2.0208**	**<.00000**	**<.00000**	**2.2765**	**8.0639**	**2.4518**
Stddev	2.9427	14.593	3.3463	.0379	2.3890	.0991
%RSD	145.62	60.680	125.05	1.6634	29.625	4.0418
#1	4.1016	-13.731	-.30980	2.3033	9.7532	2.5219
#2	-.05995	-34.369	-5.0422	2.2498	6.3747	2.3818

Avg.= -24.05

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**.01496**	**.17108**	**<.00000**	**<.00000**
Stddev	.02286	6.3657	.03184	.19832	.19185	5.0214
%RSD	42.524	111.96	212.82	115.93	9.5443	214.88
#1	-.03760	-1.1845	.03748	.03084	-2.1458	1.2139
#2	-.06993	-10.187	-.00755	.31131	-1.8744	-5.8875

Elem	Fe	K_	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**15.706**	**<.00000**	**<.00000**	**<.00000**	**<.00000**
Stddev	.07277	3.235	46.850	32.169	.01380	.29234
%RSD	14.455	20.598	27.868	1998.2	18.102	135.53
#1	-.45195	17.993	-201.25	21.137	-.06648	-.00899
#2	-.55486	13.418	-134.99	-24.357	-.08600	-.42242

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**36.810**	**3.5424**	**.42945**	**1.0292**	**<.00000**	**<.00000**
Stddev	34.215	2.3389	.01347	1.3703	3.9873	1.0845
%RSD	92.952	66.025	3.1371	133.14	23.569	123.82
#1	12.616	1.8886	.41993	.06028	-14.098	-1.6427
#2	61.004	5.1963	.43898	1.9982	-19.737	-.10903

Sample Name: CCB-3 Acquired: 04/25/2017 15:55:27 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**.78902**	**.61560**	**.93409**
Stddev	3.3632	14.358	1.5814	.09486	.59127	.63736
%RSD	628.18	60.118	1041.7	12.023	96.047	68.234
#1	1.8427	-13.730	-1.2700	.85610	1.0337	.48340
#2	-2.9135	-34.036	.96640	.72195	.19751	1.3848

Avg. = -23.883

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.08622**	**<.00000**	**.01895**	**<.00000**	**<.00000**	**.74560**
Stddev	.06090	2.1776	.01841	.03173	.65975	3.5537
%RSD	70.630	27.438	97.187	59.578	20.626	476.62
#1	.12928	-9.4759	.00593	-.07570	-2.7321	-1.7672
#2	.04316	-6.3964	.03197	-.03082	-3.6651	3.2584

Avg. = -7.93615

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**5.6152**	**<.00000**	**21.596**	**<.00000**	**.06152**
Stddev	.11596	3.2635	58.749	4.549	.02242	.07625
%RSD	18.825	58.118	82.696	21.063	23.418	123.95
#1	-.53396	7.9229	-112.58	18.380	-.07989	.00760
#2	-.69794	3.3076	-29.500	24.813	-.11159	.11544

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**31.321**	**<.00000**	**<.00000**	**<.00000**	**.62644**	**1.1263**
Stddev	7.675	.79185	.17626	.67127	19.051	1.5708
%RSD	24.505	12.360	69.608	287.75	3041.1	139.47
#1	25.894	-6.9664	-.12858	.24137	14.097	2.2371
#2	36.748	-5.8465	-.37785	-.70794	-12.844	.01554

Sample Name: CCB-4 Acquired: 04/25/2017 16:37:39 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.17819**	**<.00000**	**.36544**	**.45433**	**3.6430**	**1.1890**
Stddev	.50409	6.8251	.62121	.34004	1.8826	.6041
%RSD	282.89	34.318	169.99	74.843	51.678	50.809
#1	.53464	-15.062	-.07383	.21389	4.9743	.76181
#2	-.17825	-24.714	.80470	.69478	2.3118	1.6161

Avg.= -19.888

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.04041**	**<.00000**	**.03084**	**<.00000**	**<.00000**	**<.00000**
Stddev	.02293	.16742	.10253	.01981	.25471	1.4577
%RSD	56.750	8.3135	332.45	50.472	9.6417	33.750
#1	.05663	-2.1322	-.04166	-.02524	-2.4616	-3.2885
#2	.02419	-1.8954	.10334	-.05325	-2.8218	-5.3501

Avg.= -4.3193

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**8.5007**	**<.00000**	**23.664**	**<.00000**	**1.3459**
Stddev	.18249	8.8846	38.328	.325	.00001	.1175
%RSD	192.43	104.52	45.370	1.3731	.01548	8.7266
#1	.03421	14.783	-111.58	23.434	-.06160	1.4289
#2	-.22387	2.2184	-57.378	23.894	-.06158	1.2628

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**35.517**	**<.00000**	**.31905**	**<.00000**	**1.2532**	**<.00000**
Stddev	3.398	.80893	.24707	1.6984	2.2153	1.0618
%RSD	9.5683	7.1951	77.438	132.34	176.77	356.89
#1	33.114	-11.815	.14435	-.08244	-.31323	-1.0483
#2	37.920	-10.671	.49375	-2.4844	2.8197	.45328

Sample Name: CCB-4 Acquired: 04/25/2017 16:37:39 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: CCB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**5.5720**	**2.3258**	**2.6858**
Stddev	2.6261	5.1989	1.2748	6.7133	.6145	.1971
%RSD	43.461	161.71	135.79	120.48	26.421	7.3398
#1	-7.8993	.46121	-.03740	10.319	2.7603	2.8252
#2	-4.1855	-6.8911	-1.8402	.82501	1.8913	2.5464

Avg. = -6.0424

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**.62404**	**<.00000**	**1.5403**
Stddev	4.1585	.07616	.0349
%RSD	666.39	14.653	2.2659
#1	3.5645	-.46589	1.5156
#2	-2.3165	-.57360	1.5650

Avg. = -0.519745

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain 3

ICP ID Number: ICP4 ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	500000	491580	491060.0	98.2	492540	491670.0	98.3
Barium		500		504.6	100.9		489.2	97.8
Cadmium		1000		890.4	89.0		878.6	87.9
Calcium	500000	500000	430490	429600.0	85.9	451550	449720.0	89.9
Chromium		500		566.9	113.4		562.0	112.4
Copper		500		536.0	107.2		500.5	100.1
Iron	200000	200000	144330	144850.0	72.4	145930	147250.0	73.6
Magnesium	500000	500000	512770	510380.0	102.1	505500	503300.0	100.7
Manganese		500		485.8	97.2		500.7	100.1
Nickel		1000		841.4	84.1		874.1	87.4
Zinc		1000		938.3	93.8		964.7	96.5

Sample Name: ICSA-1 Acquired: 04/25/2017 12:42:10 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**491580.**	**<.00000**	**67.680**	**<.00000**	**2.8991**
Stddev	4.4953	1812.	3.7009	.827	1.5941	1.5763
%RSD	9.3301	.36865	.30334	1.2221	.81534	54.374
#1	-45.002	492860.	-1217.4	67.095	-194.38	4.0137
#2	-51.359	490300.	-1222.7	68.265	-196.64	1.7844

Avg = -1220.05 (As) — <-IDL
Avg = -195.51 (B) — <-IDL
4.0137 — >IDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2.2437**	**430490.**	**<.00000**	**2.1257**	**<.00000**	**<.00000**
Stddev	.0413	31.	.00118	.2813	3.5285	1.8353
%RSD	1.8389	.00728	.09381	13.231	292.41	10.417
#1	2.2729	430470.	-1.2620	2.3246	-3.7018	-18.916
#2	2.2145	430510.	-1.2603	1.9268	1.2883	-16.320

Avg = -1.26115 (Cd) — <-IDL
Avg = -17.618 (Cu) — <-IDL

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**144330.**	**5.0335**	**<.00000**	**512770.**	**<.00000**	**<.00000**
Stddev	751.	1.2769	138.61	331.	.05974	.07687
%RSD	.52000	25.369	8.5752	.06454	.43858	2.1654
#1	143800.	4.1305	-1714.4	512540.	-13.663	-3.4954
#2	144870.	5.9364	-1518.4	513010.	-13.579	-3.6041

Avg = -13.621 (Mn) — <-IDL

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**48.867**	**29.466**	**<.00000**	**<.00000**	**<.00000**	**<.00000**
Stddev	13.392	1.716	.03225	.18000	7.5513	2.6559
%RSD	27.404	5.8219	.12645	.14831	38.852	42.323
#1	39.398	28.253	-25.527	-121.24	-14.096	-8.1535
#2	58.337	30.679	-25.482	-121.50	-24.776	-4.3974

39.398 — >IDL
-25.527 — <-IDL
Avg. = -25.5045
-8.1535 — <-IDL
Avg. = -6.27545

Sample Name: ICSA-1 Acquired: 04/25/2017 12:42:10 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**21.159**	**2.6364**	**39.027**	**<.00000**	**<.00000**
Stddev	1.7059	3.203	1.5803	7.330	1.2900	1.0229
%RSD	5.4350	15.137	59.942	18.781	8.3521	7.7933
#1	-30.180	23.424	3.7539	33.844	-16.357	-13.848
#2	-32.592	18.895	1.5190	44.210	-14.533	-12.402

Avg. = -31.386
< - IDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**
Stddev	7.2982	.01874	.56442
%RSD	69.927	.14731	6.7835
#1	-15.598	-12.708	-7.9213
#2	-5.2764	-12.735	-8.7195

< - IDL
Avg. = -12.7215

Sample Name: ICSAB-1 Acquired: 04/25/2017 12:49:20 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1039.5**	**491060.**	**<.00000**	**72.890**	**<.00000**	**504.55**
Stddev	10.0	2730.	.93204	.700	.91732	2.61
%RSD	.95756	.55589	.07567	.96084	.46917	.51705
#1	1032.4	489130.	-1231.1	72.395	-196.17	502.71
#2	1046.5	492990.	-1232.4	73.385	-194.87	506.39

Avg. = -1231.75 <- IDL
Avg. = -195.52 <- IDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**490.55**	**429600.**	**890.37**	**422.18**	**566.87**	**535.96**
Stddev	3.15	2614.	.33	.04	2.31	.33
%RSD	.64234	.60845	.03703	.01049	.40836	.06219
#1	488.32	427750.	890.60	422.21	565.24	535.73
#2	492.78	431450.	890.13	422.15	568.51	536.20

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**144850.**	**2.5610**	**<.00000**	**510380.**	**485.83**	**<.00000**
Stddev	244.	4.4423	136.94	1968.	.12	1.6392
%RSD	.16829	173.46	8.3584	.38550	.02399	84.460
#1	144670.	-.58022	-1735.2	508980.	485.75	-.78173
#2	145020.	5.7022	-1541.5	511770.	485.91	-3.1000

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**38.260**	**25.155**	**841.41**	**1071.9**	**<.00000**	**<.00000**
Stddev	14.754	1.264	1.13	.5	5.3179	3.2636
%RSD	38.563	5.0239	.13384	.05014	12.039	135.66
#1	27.827	26.048	840.61	1071.6	-40.410	-.09807
#2	48.693	24.261	842.21	1072.3	-47.931	-4.7135

7 IDL

Sample Name: ICSAB-1 Acquired: 04/25/2017 12:49:20 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**1.0605**	**16.303**	**<.00000**	**<.00000**
Stddev	1.9231	20.135	.4863	1.752	.57782	7.4088
%RSD	8.0279	1095.9	45.852	10.745	4.1406	30.538
#1	-25.315	12.401	1.4043	15.065	-14.364	-29.500
#2	-22.596	-16.075	.71665	17.542	-13.546	-19.022

Avg. = -23.9555 < IDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**456.01**	**938.34**	**<.00000**
Stddev	7.91	.48	1.0033
%RSD	1.7349	.05100	10.942
#1	450.41	938.01	-8.4592
#2	461.60	938.68	-9.8780

Sample Name: ICSA-2 Acquired: 04/25/2017 16:19:54 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**492540.**	**<.00000**	**68.417**	**<.00000**	**4.2424**
Stddev	1.2618	747.	2.1060	.027	.09753	.0772
%RSD	2.7073	.15174	.16999	.03935	.06092	1.8190
#1	-45.713	493070.	-1237.4	68.436	-160.18	4.1879
#2	-47.497	492010.	-1240.4	68.398	-160.04	4.2970

Avg. = -1238.9 <-IDL
Avg. = -160.11 <-IDL
>IDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2.2404**	**451550.**	**<.00000**	**2.1033**	**<.00000**	**<.00000**
Stddev	.0496	769.	.01994	.1941	6.2800	1.3712
%RSD	2.2120	.17033	1.5613	9.2264	109.97	4.4952
#1	2.2054	452090.	-1.2630	2.2405	-1.2700	-29.534
#2	2.2755	451000.	-1.2912	1.9661	-10.151	-31.473

Avg. = -1.2771 <-IDL
Avg. = -30.502 <-IDL

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**145930.**	**21.265**	**<.00000**	**505500.**	**<.00000**	**<.00000**
Stddev	99.	2.704	124.60	1537.	.20489	.78649
%RSD	.06804	12.715	6.3633	.30395	1.4152	23.786
#1	146000.	19.353	-2046.3	506590.	-14.622	-2.7504
#2	145860.	23.177	-1870.1	504410.	-14.333	-3.8626

>IDL
Avg. = -14.4775 <-IDL

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**100.16**	**23.948**	**<.00000**	**<.00000**	**<.00000**	**<.00000**
Stddev	2.43	1.438	.22413	2.2474	5.3155	.43239
%RSD	2.4253	6.0052	.89462	1.7146	15.859	13.359
#1	101.88	24.965	-25.212	-129.48	-37.276	-2.9308
#2	98.442	22.932	-24.895	-132.66	-29.759	-3.5423

>IDL
Avg. = -25.0535 <-IDL
Avg. = -3.23655 <-IDL

Sample Name: ICSA-2 Acquired: 04/25/2017 16:19:54 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSA Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**5.0501**	**1.1839**	**53.757**	**<.00000**	**<.00000**
Stddev	4.1388	16.889	.1933	3.065	.68652	4.5630
%RSD	12.499	334.43	16.323	5.7018	5.3404	54.056
#1	-36.039	-6.8921	1.0472	51.590	-13.341	-11.668
#2	-30.186	16.992	1.3205	55.925	-12.370	-5.2148

Avg.= -33.1125
<-IDL

Elem	V	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**
Stddev	3.3154	.01529	.83001
%RSD	17.714	.12435	9.9858
#1	-16.372	-12.310	-7.7251
#2	-21.060	-12.288	-8.8989

<-IDL
Avg.=-12.299

Sample Name: ICSAB-2 Acquired: 04/25/2017 16:30:09 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Ag	Al	As	Au	B	Ba
Line	328.068 {102}	394.401 { 85}	193.759 {173}	242.795 {138}	249.678 {135}	493.409 { 68}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**1028.8**	**491670.**	**<.00000**	**73.277**	**<.00000**	**489.20**
Stddev	6.9	4648.	5.0048	.226	1.3295	5.02
%RSD	.67423	.94536	.40179	.30906	.83148	1.0257
#1	1023.9	488380.	-1242.1	73.117	-160.84	485.66
#2	1033.7	494960.	-1249.2	73.437	-158.96	492.75

Avg. = -1245.65 <- IDL
Avg. = -159.9 <- IDL

Elem	Be	Ca	Cd	Co	Cr	Cu
Line	313.042 {107}	317.933 {105}	228.802 {147}	228.616 {147}	357.869 { 94}	324.754 {103}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**498.05**	**449720.**	**878.58**	**440.28**	**562.03**	**500.45**
Stddev	6.50	5711.	10.72	1.84	16.62	3.75
%RSD	1.3053	1.2699	1.2198	.41788	2.9572	.74905
#1	493.45	445680.	886.16	441.58	550.27	497.80
#2	502.65	453760.	871.01	438.98	573.78	503.10

Elem	Fe	K	Li	Mg	Mn	Mo
Line	259.940 {129}	766.490 { 44}	610.362 { 55}	383.826 { 87}	257.610 {131}	202.030 {166}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**147250.**	**10.957**	**<.00000**	**503300.**	**500.69**	**<.00000**
Stddev	329.	2.409	136.16	4657.	6.40	.00878
%RSD	.22375	21.987	6.9901	.92534	1.2788	.40655
#1	147020.	12.661	-2044.2	500010.	505.22	-2.1530
#2	147480.	9.2536	-1851.6	506600.	496.16	-2.1654

>IDL

Elem	Na	2Na	Ni	Pb	Pd	Sb
Line	588.995 { 57}	589.592 { 57}	231.604 {145}	220.353 {152}	324.270 {103}	206.833 {162}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**76.042**	**19.833**	**874.12**	**836.92**	**<.00000**	**<.00000**
Stddev	17.159	2.233	8.34	3.53	2.2072	2.9735
%RSD	22.565	11.260	.95368	.42139	3.7479	259.38
#1	63.909	21.412	880.01	839.41	-60.453	-3.2489
#2	88.175	18.254	868.23	834.42	-57.331	.95618

>IDL

Sample Name: ICSAB-2 Acquired: 04/25/2017 16:30:09 Type: Unk
Method: SPEX-FIX2 Mode: CONC Corr. Factor: 1.000000
User: admin Test Code: CLPW Sample Type: ICSAB Dilution: 1
Comment:

Elem	Se	Si	Sn	Sr	Ti	Tl
Line	196.090 {171}	288.158 {116}	189.989 {176}	346.446 { 97}	336.121 {100}	190.864 {176}
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**<.00000**	**<.00000**	**<.00000**	**9.6987**	**<.00000**	**<.00000**
Stddev	3.6244	5.1934	2.3969	3.5004	.50796	1.3913
%RSD	12.622	23.074	265.36	36.091	3.7080	8.7979
#1	-31.277	-18.835	.79160	12.174	-13.340	-16.798
#2	-26.152	-26.180	-2.5981	7.2235	-14.058	-14.830

Elem	V_	Zn	Zr
Line	292.402 {115}	213.856 {157}	339.198 { 99}
Units	ppb	ppb	ppb
Avg	**455.96**	**964.70**	**<.00000**
Stddev	1.68	6.55	.79317
%RSD	.36792	.67932	8.8886
#1	454.77	969.34	-9.4843
#2	457.14	960.07	-8.3626

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

Inlet To PondMS

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain 3

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	1650.1000		16.5600	U	2000.00	82.5		P
Antimony	75 - 125	528.2400		2.6800	U	500.00	105.6		P
Arsenic	75 - 125	40.9700		6.6551	B	40.00	85.8		P
Barium	75 - 125	1973.8000		31.5300	B	2000.00	97.1		P
Boron		12675.0000		12543.0000		0.00	0.0		P
Cadmium	75 - 125	47.1310		0.3700	U	50.00	94.3		P
Chromium	75 - 125	200.1600		6.8700	U	200.00	100.1		P
Copper	75 - 125	260.2200		2.7106	B	250.00	103.0		P
Iron	75 - 125	3238.4000		2156.8000		1000.00	108.2		P
Magnesium		73068.0000		74756.0000		0.00	0.0		P
Manganese	75 - 125	912.0200		411.4200		500.00	100.1		P
Nickel	75 - 125	509.3200		5.6196	B	500.00	100.7		P
Selenium	75 - 125	44.8210		37.7860		10.00	70.4	N	P
Zinc	75 - 125	534.7300		4.9476	B	500.00	106.0		P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

Inlet To PondA

Lab Name: Adirondack Environmental Contract: Lockwood Ash Landfill

Lab Code: AES Case No.: 17025LH SAS No.: _____ SDG No.: GW Dep Drain 3

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

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		3672.80		16.56	U	4000.0	91.8		P
Antimony		1026.60		2.68	U	1000.0	102.7		P
Arsenic		78.52		6.66	B	80.0	89.8		P
Barium		3813.10		31.53	B	4000.0	94.5		P
Boron		12254.00		12543.00		0.0	0.0		P
Cadmium		92.98		0.37	U	100.0	93.0		P
Chromium		419.98		6.87	U	400.0	105.0		P
Copper		503.94		2.71	B	500.0	100.2		P
Iron		4103.50		2156.80		2000.0	97.3		P
Magnesium		70412.00		74756.00		0.0	0.0		P
Manganese		1368.20		411.42		1000.0	95.7		P
Nickel		1009.80		5.62	B	1000.0	100.4		P
Selenium		51.46		37.79		20.0	68.4		P
Zinc		1045.60		4.95	B	1000.0	104.1		P

Comments: _____

9

ICP SERIAL DILUTIONS

SAMPLE NO.

Inlet To PondL

Lab Name: Adirondack Environmental Contract: Lockwood As

Lab Code: AES Case No.: 17025LH SAS No.: SDG No.: GW Dep Drain

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C		Serial Dilution Result (S)	C		% Difference	Q	M
Aluminum	16.56	U		82.80	U				P
Antimony	2.68	U		13.40	U				P
Arsenic	6.66	B		38.16	B		~~473.0~~		P
Barium	31.53	B		39.99	B		~~26.8~~		P
Boron	12543.00			12523.00			0.2		P
Cadmium	0.37	U		1.85	U		95%		P
Calcium	418890.00		>L.R.	490900.00		>L.R.	~~17.2~~	E	P
Chromium	6.87	U		34.35	U				P
Copper	2.71	B		8.70	U		~~100.0~~		P
Iron	2156.80			2256.05			4.6		P
Magnesium	74756.00			72225.00			3.4		P
Manganese	411.42			431.14			4.8		P
Nickel	5.62	B		8.64	B		~~53.7~~		P
Potassium	98135.00		>95% L.R.	87190.00			~~11.2~~	E	P
Selenium	37.79			17.00	U		~~100.0~~		P
Sodium	126290.00		> L.R.	157355.00			~~24.6~~	E	P
Zinc	4.95	B		10.15	B		~~105.1~~		P

[Na] from 10x dilution = 180,310 ug/L

$\%D = \frac{180{,}310 - 157{,}355}{180{,}310} = 12.6\%$ E

[K] from 10x dilution = 95,588 ug/L

$\%D = \frac{95{,}588 - 87{,}190}{95{,}588} = 8.8\%$ ✓

Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Blank	0.0000	0	-0.0711	0.00	11.4
0.2ppb	0.0025	0.200	0.1180	0.00	2.8
0.5ppb	0.0084	0.500	0.5574	0.00	1.3
1.00ppb	0.0145	1.000	1.0147	0.00	0.7
2.00ppb	0.0273	2.000	1.9756	0.00	1.3
5.00ppb	0.0703	5.000	5.2066	0.00	0.7
10.00ppb	0.1328	10.000	9.8989	0.00	0.8

Correlation Coef.: 0.999572 Slope: 0.01332 Intercept: 0.00095

Sequence No.: 8
Sample ID: ICV
Analyst:

Autosampler Location: 5
Date Collected: 4/3/2017 3:07:13 PM
Data Type: Original

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.060	2.060	0.0284	0.1237	0.0288	15:08:01	Yes
2	2.041	2.041	0.0281	0.1215	0.0285	15:08:29	Yes
Mean:	2.051	2.051	0.0283				
SD:	0.0135	0.0135	0.0002				
%RSD:	0.6560	0.6560	0.63				

QC value within limits for Hg 253.7 Recovery = 102.54%
All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICB
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 3:08:48 PM
Data Type: Original

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0620	-0.0620	0.0001	0.0012	0.0005	15:09:35	Yes
2	-0.0607	-0.0607	0.0001	0.0014	0.0005	15:10:02	Yes
Mean:	-0.0613	-0.0613	0.0001				
SD:	0.0009	0.0009	0.0000				
%RSD:	1.481	1.481	9.32				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: 0.2ppb — CRA
Analyst:

Autosampler Location: 9
Date Collected: 4/3/2017 3:10:19 PM
Data Type: Original

Replicate Data: 0.2ppb

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.1138	0.1138	0.0025	0.0112	0.0029	15:11:06	Yes
2	0.0462	0.0462	0.0016	0.0052	0.0020	15:11:33	Yes
Mean:	0.0800	0.0800	0.0020				
SD:	0.0478	0.0478	0.0006				
%RSD:	59.78	59.78	31.65				

$\frac{0.08}{0.2} = 40\%$ R

Sequence No.: 11
Sample ID: 2.0ppb
Analyst:

Autosampler Location: 10
Date Collected: 4/3/2017 3:11:50 PM
Data Type: Original

Replicate Data: 2.0ppb

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Sequence No.: 21
Sample ID: CCB-1
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 3:27:33 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0591	-0.0591	0.0002	0.0017	0.0006	15:28:20	Yes
2	-0.0616	-0.0616	0.0001	0.0016	0.0005	15:28:47	Yes
Mean:	-0.0604	-0.0604	0.0001				
SD:	0.0018	0.0018	0.0000				
%RSD:	2.924	2.924	16.50				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 22
Sample ID: 170331010-005D
Analyst:

Autosampler Location: 19
Date Collected: 4/3/2017 3:29:04 PM
Data Type: Original

Replicate Data: 170331010-005D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0754	-0.0754	-0.0001	0.0003	0.0003	15:29:51	Yes
2	-0.0733	-0.0733	-0.0000	0.0007	0.0004	15:30:18	Yes
Mean:	-0.0743	-0.0743	-0.0000				
SD:	0.0015	0.0015	0.0000				
%RSD:	1.968	1.968	44.94				

Sequence No.: 23
Sample ID: 170331010-006D
Analyst:

Autosampler Location: 20
Date Collected: 4/3/2017 3:30:36 PM
Data Type: Original

Replicate Data: 170331010-006D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0708	-0.0708	0.0000	0.0016	0.0004	15:31:23	Yes
2	-0.0679	-0.0679	0.0000	0.0021	0.0004	15:31:50	Yes
Mean:	-0.0694	-0.0694	0.0000				
SD:	0.0020	0.0020	0.0000				
%RSD:	2.931	2.931	119.04				

Sequence No.: 24
Sample ID: 170331010-007D
Analyst:

Autosampler Location: 21
Date Collected: 4/3/2017 3:32:08 PM
Data Type: Original

Replicate Data: 170331010-007D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0642	-0.0642	0.0001	0.0022	0.0005	15:32:55	Yes
2	-0.0709	-0.0709	0.0000	0.0003	0.0004	15:33:22	Yes
Mean:	-0.0675	-0.0675	0.0000				
SD:	0.0047	0.0047	0.0001				
%RSD:	7.024	7.024	132.74				

Sequence No.: 25
Sample ID: 170331010-008D
Analyst:

Autosampler Location: 22
Date Collected: 4/3/2017 3:33:40 PM
Data Type: Original

Replicate Data: 170331010-008D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0633	-0.0633	0.0001	0.0029	0.0005	15:34:28	Yes

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0686	-0.0686	0.0000	0.0014	0.0004	15:42:19	Yes
2	-0.0706	-0.0706	0.0000	0.0010	0.0004	15:42:46	Yes
Mean:	-0.0696	-0.0696	0.0000				
SD:	0.0014	0.0014	0.0000				
%RSD:	2.028	2.028	94.88				

Sequence No.: 31
Sample ID: 170331010-015D
Analyst:

Autosampler Location: 28
Date Collected: 4/3/2017 3:43:06 PM
Data Type: Original

Replicate Data: 170331010-015D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0824	-0.0824	-0.0002	0.0005	0.0002	15:43:55	Yes
2	-0.0811	-0.0811	-0.0001	0.0008	0.0003	15:44:22	Yes
Mean:	-0.0817	-0.0817	-0.0001				
SD:	0.0009	0.0009	0.0000				
%RSD:	1.122	1.122	8.64				

Sequence No.: 32
Sample ID: CCV
Analyst:

Autosampler Location: 5
Date Collected: 4/3/2017 3:44:42 PM
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.940	1.940	0.0268	0.1164	0.0272	15:45:30	Yes
2	1.976	1.976	0.0273	0.1171	0.0277	15:45:57	Yes
Mean:	1.958	1.958	0.0270				
SD:	0.0259	0.0259	0.0003				
%RSD:	1.321	1.321	1.27				

QC value within limits for Hg 253.7 Recovery = 97.90%
All analyte(s) passed QC.

Sequence No.: 33
Sample ID: CCB-2
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 3:46:17 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0569	-0.0569	0.0002	0.0021	0.0006	15:47:03	Yes
2	-0.0585	-0.0585	0.0002	0.0021	0.0006	15:47:30	Yes
Mean:	-0.0577	-0.0577	0.0002				
SD:	0.0012	0.0012	0.0000				
%RSD:	1.993	1.993	8.58				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 34
Sample ID: 170331010-016D
Analyst:

Autosampler Location: 29
Date Collected: 4/3/2017 3:47:48 PM
Data Type: Original

Replicate Data: 170331010-016D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0699	-0.0699	0.0000	0.0013	0.0004	15:48:37	Yes
2	-0.0700	-0.0700	0.0000	0.0012	0.0004	15:49:04	Yes
Mean:	-0.0699	-0.0699	0.0000				
SD:	0.0001	0.0001	0.0000				
%RSD:	0.1838	0.1838	11.17				

1	1.945	1.945	0.0269	0.1147	0.0273	16:04:07	Yes
2	1.938	1.938	0.0268	0.1170	0.0272	16:04:34	Yes
Mean:	1.941	1.941	0.0268				
SD:	0.0052	0.0052	0.0001				
%RSD:	0.2694	0.2694	0.26				

QC value within limits for Hg 253.7 Recovery = 97.06%
All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB-3
Analyst:

Autosampler Location: 1
Date Collected: 4/3/2017 4:04:53 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0547	-0.0547	0.0002	0.0027	0.0006	16:05:40	Yes
2	-0.0588	-0.0588	0.0002	0.0020	0.0006	16:06:07	Yes
Mean:	-0.0567	-0.0567	0.0002				
SD:	0.0029	0.0029	0.0000				
%RSD:	5.039	5.039	19.92				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 46
Sample ID: 170331010-022D
Analyst:

Autosampler Location: 39
Date Collected: 4/3/2017 4:06:24 PM
Data Type: Original

Replicate Data: 170331010-022D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0066	-0.0066	0.0009	0.0051	0.0013	16:07:12	Yes
2	-0.0068	-0.0068	0.0009	0.0049	0.0012	16:07:40	Yes
Mean:	-0.0067	-0.0067	0.0009				
SD:	0.0001	0.0001	0.0000				
%RSD:	1.629	1.629	0.17				

Sequence No.: 47
Sample ID: 170331010-023D
Analyst:

Autosampler Location: 40
Date Collected: 4/3/2017 4:07:58 PM
Data Type: Original

Replicate Data: 170331010-023D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0547	-0.0547	0.0002	0.0021	0.0006	16:08:46	Yes
2	-0.0531	-0.0531	0.0002	0.0025	0.0006	16:09:13	Yes
Mean:	-0.0539	-0.0539	0.0002				
SD:	0.0011	0.0011	0.0000				
%RSD:	2.094	2.094	6.54				

Sequence No.: 48
Sample ID: 170331010-024D
Analyst:

Autosampler Location: 41
Date Collected: 4/3/2017 4:09:32 PM
Data Type: Original

Replicate Data: 170331010-024D

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0638	-0.0638	0.0001	0.0009	0.0005	16:10:20	Yes
2	-0.0611	-0.0611	0.0001	0.0023	0.0005	16:10:47	Yes
Mean:	-0.0625	-0.0625	0.0001				
SD:	0.0019	0.0019	0.0000				
%RSD:	3.065	3.065	22.27				

Sequence No.: 49

Autosampler Location: 42

Sequence No.: 54
Sample ID: LCS-53932
Analyst:
Autosampler Location: 34
Date Collected: 4/3/2017 4:19:04 PM
Data Type: Original

Replicate Data: LCS-53932

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.857	1.857	0.0257	0.1138	0.0261	16:19:50	Yes
2	1.925	1.925	0.0266	0.1176	0.0270	16:20:18	Yes
Mean:	1.891	1.891	0.0261				
SD:	0.0486	0.0486	0.0006				
%RSD:	2.568	2.568	2.48				

Sequence No.: 55
Sample ID: 170331010-021DMS
Analyst:
Autosampler Location: 38
Date Collected: 4/3/2017 4:20:35 PM
Data Type: Original

Replicate Data: 170331010-021DMS

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.980	1.980	0.0273	0.1183	0.0277	16:21:22	Yes
2	2.004	2.004	0.0277	0.1186	0.0280	16:21:49	Yes
Mean:	1.992	1.992	0.0275				
SD:	0.0169	0.0169	0.0002				
%RSD:	0.8490	0.8490	0.82				

Sequence No.: 56
Sample ID: CCV
Analyst:
Autosampler Location: 5
Date Collected: 4/3/2017 4:22:07 PM
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.927	1.927	0.0266	0.1163	0.0270	16:22:56	Yes
2	1.948	1.948	0.0269	0.1167	0.0273	16:23:23	Yes
Mean:	1.937	1.937	0.0268				
SD:	0.0151	0.0151	0.0002				
%RSD:	0.7791	0.7791	0.75				

QC value within limits for Hg 253.7 Recovery = 96.86%
All analyte(s) passed QC.

Sequence No.: 57
Sample ID: CCB-4
Analyst:
Autosampler Location: 1
Date Collected: 4/3/2017 4:23:43 PM
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.0531	-0.0531	0.0002	0.0024	0.0006	16:24:29	Yes
2	-0.0531	-0.0531	0.0002	0.0030	0.0006	16:24:57	Yes
Mean:	-0.0531	-0.0531	0.0002				
SD:	0.0000	0.0000	0.0000				
%RSD:	0.0538	0.0538	0.16				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

2B-IN

CRQL CHECK STANDARD

Lab Name: AES Contract:

Lab Code: AES Case No.: 17025LH NRAS No.: SDG No.: GW Dep Drain 3

CRQL Check Standard Source: See Source Form

Concentration Units: mg/L

Analyte	CRQL Check Standard				
	Initial			Final	
	True	Found*	%R (1)	Found*	%R (1)
Chloride	1	1.07	106		
Sulfate	2	2.05	102		
Nitrogen, Ammonia (As N)	0.1	0.0591	59.	0.0627	62.
Total Organic Carbon	1	0.525	52.	1.18	118

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150
ICP-MS - Cobalt, Manganese, and Zinc: 50-150

* if applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury)

Color

Sample ID	Standard	Cpu	Time	pH	Date/Init
Blank	wcs-15-B	<5 cpu	18:15	6	3/10/17 KB
[redacted] 170310-37-1		5 cpu		7.5	
-37-1 dup		5 cpu		7.5	
CCB		<5 cpu		6	
Blank		<5 cpu	15:15	6	3/13/17 KB
Schc Lockwood 170331-10-1	wcs-15-D	<5 cpu		6	
10-2		<5 cpu		6	
10-3		<5 cpu		7	
10-4		<5 cpu		7	
10-5		<5 cpu		7	
10-6		15 cpu		7	
10-7		<5 cpu		7	
10-8		<5 cpu		7	
10-10 (KLD)		<5 cpu		7	
10-10 dup		<5 cpu		7	
10-11		<5 cpu		7	
10-12		<5 cpu		7	
10-13		<5 cpu		7	
10-14		15 cpu		7	
10-15		<5 cpu		7	
10-16		<5 cpu		7	
10-17		<5 cpu		8	
10-18		<5 cpu		7.5	
10-19		<5 cpu		7	
10-20		<5 cpu		8	
10-20 dup		<5 cpu		8	
10-21		5 cpu		7	
10-22		5 cpu		7	
10-23		5 cpu		7	
10-24		5 cpu		8	
10-25		<5 cpu		6	
10-26		5 cpu		7.5	
10-27		<5 cpu		7	
CCB		<5 cpu		6	

* Color added out of Hold time
* Run anyway as per Part

SECOND QUARTER

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

July 18, 2017

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

TEL: (315) 536-2359
FAX:

Work Order No: 170630015

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 6/30/2017 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

ELAP#: 10709

Krzysztof Trafalski
Laboratory Manager

Adirondack Environmental Services, Inc — CASE NARRATIVE

CLIENT:	Lockwood Hills LLC	**Date:**	*18-Jul-17*
Project:	Lockwood Ash Landfill		
Lab Order:	170630015		

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.

Qualifiers:

- ND - Not Detected at reporting limit
- J - Analyte detected below quantitation limit
- B - Analyte detected in Blank
- X - Exceeds maximum contamination limit
- H - Hold time exceeded
- N - Matrix Spike below acceptable limits
- N+ - Matrix Spike is above acceptable limits
- C - Details are above in Case Narrative
- S - LCS Spike recovery is below acceptable limits
- S+ - LCS Spike recovery is above acceptable limits
- Z - Duplication outside acceptable limits
- T - Tentatively Identified Compound-Estimated
- 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: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**170630015**	**Collection Date:**	6/28/2017 6:05:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.1**			S.U.		6/28/2017 6:05:00 PM
Temperature (E170.1)	**13**			deg C		6/28/2017 6:05:00 PM
Turbidity (E180.1)	**8**	1.0		NTU		6/28/2017 6:05:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 3:30:56 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 3:30:56 PM
Boron	**170**	50.0		µg/L	1	7/13/2017 3:30:56 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 3:30:56 PM
Calcium	**105000**	50.0		µg/L	1	7/13/2017 3:30:56 PM
Copper	**8.81**	5.00		µg/L	1	7/13/2017 3:30:56 PM
Iron	**82.3**	50.0		µg/L	1	7/13/2017 3:30:56 PM
Magnesium	**21800**	50.0		µg/L	1	7/13/2017 3:30:56 PM
Manganese	**22.0**	20.0		µg/L	1	7/13/2017 3:30:56 PM
Potassium	**1110**	50.0		µg/L	1	7/13/2017 3:30:56 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 3:30:56 PM
Sodium	**12000**	50.0		µg/L	1	7/13/2017 3:30:56 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**352**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:43:44 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	7/14/2017 7:18:04 PM
Sulfate	**114**	4.00		mg/L	2	7/14/2017 7:18:04 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 1:41:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**170630015**	**Collection Date:**	6/28/2017 6:05:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**674**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**400**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**170630015**	**Collection Date:**	6/29/2017 12:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.1**			S.U.		6/29/2017 12:50:00 PM
Temperature (E170.1)	**12**			deg C		6/29/2017 12:50:00 PM
Turbidity (E180.1)	**203**	1.0		NTU		6/29/2017 12:50:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**165**	100		µg/L	1	7/13/2017 4:07:36 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 4:07:36 PM
Boron	**131**	50.0		µg/L	1	7/13/2017 4:07:36 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 4:07:36 PM
Calcium	**61500**	50.0		µg/L	1	7/13/2017 4:07:36 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 4:07:36 PM
Iron	**711**	50.0		µg/L	1	7/13/2017 4:07:36 PM
Magnesium	**29600**	50.0		µg/L	1	7/13/2017 4:07:36 PM
Manganese	**77.0**	20.0		µg/L	1	7/13/2017 4:07:36 PM
Potassium	**1430**	50.0		µg/L	1	7/13/2017 4:07:36 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 4:07:36 PM
Sodium	**27100**	50.0		µg/L	1	7/13/2017 4:07:36 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**276**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:45:15 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**16.8**	5.00		mg/L	5	7/14/2017 7:29:10 PM
Sulfate	**285**	10.0		mg/L	5	7/14/2017 7:29:10 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**370**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.5**	0.1		mg/L	1	7/12/2017 1:47:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**170630015**	**Collection Date:**	6/29/2017 12:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1090**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**805**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.2**			S.U.		6/29/2017 1:25:00 PM
Temperature (E170.1)	**12**			deg C		6/29/2017 1:25:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 1:25:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 4:18:14 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 4:18:14 PM
Boron	**169**	50.0		µg/L	1	7/13/2017 4:18:14 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 4:18:14 PM
Calcium	**128000**	50.0		µg/L	1	7/13/2017 4:18:14 PM
Copper	**6.45**	5.00		µg/L	1	7/13/2017 4:18:14 PM
Iron	**57.8**	50.0		µg/L	1	7/13/2017 4:18:14 PM
Magnesium	**56400**	50.0		µg/L	1	7/13/2017 4:18:14 PM
Manganese	**46.9**	20.0		µg/L	1	7/13/2017 4:18:14 PM
Potassium	**2450**	50.0		µg/L	1	7/13/2017 4:18:14 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 4:18:14 PM
Sodium	**23500**	50.0		µg/L	1	7/13/2017 4:18:14 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**552**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:46:47 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**16.4**	5.00		mg/L	5	7/14/2017 7:40:15 PM
Sulfate	**341**	10.0		mg/L	5	7/14/2017 7:40:15 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**400**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1		mg/L	1	7/12/2017 1:49:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1090**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**805**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.5**			S.U.		6/28/2017 2:55:00 PM
Temperature (E170.1)	**16**			deg C		6/28/2017 2:55:00 PM
Turbidity (E180.1)	**565**	1.0		NTU		6/28/2017 2:55:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**1590**	100		µg/L	1	7/13/2017 5:00:46 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 5:00:46 PM
Boron	**793**	50.0		µg/L	1	7/13/2017 5:00:46 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 5:00:46 PM
Calcium	**7820**	50.0		µg/L	1	7/13/2017 5:00:46 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 5:00:46 PM
Iron	**3460**	50.0		µg/L	1	7/13/2017 5:00:46 PM
Magnesium	**2420**	50.0		µg/L	1	7/13/2017 5:00:46 PM
Manganese	**64.1**	20.0		µg/L	1	7/13/2017 5:00:46 PM
Potassium	**1260**	50.0		µg/L	1	7/13/2017 5:00:46 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 5:00:46 PM
Sodium	**177000**	500		µg/L	10	7/13/2017 5:05:52 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**30**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:48:20 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.64**	2.00		mg/L	2	7/14/2017 7:51:21 PM
Sulfate	**96.3**	4.00		mg/L	2	7/14/2017 7:51:21 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.6**	0.1		mg/L	1	7/12/2017 1:51:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**680**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**445**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**170630015**	**Collection Date:**	6/28/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.7**			S.U.		6/28/2017 2:50:00 PM
Temperature (E170.1)	**13**			deg C		6/28/2017 2:50:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/28/2017 2:50:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**118**	100		µg/L	1	7/13/2017 5:10:57 PM
Arsenic	**6.49**	5.00		µg/L	1	7/13/2017 5:10:57 PM
Boron	**281**	50.0		µg/L	1	7/13/2017 5:10:57 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 5:10:57 PM
Calcium	**22000**	50.0		µg/L	1	7/13/2017 5:10:57 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 5:10:57 PM
Iron	**112**	50.0		µg/L	1	7/13/2017 5:10:57 PM
Magnesium	**16500**	50.0		µg/L	1	7/13/2017 5:10:57 PM
Manganese	**30.6**	20.0		µg/L	1	7/13/2017 5:10:57 PM
Potassium	**1990**	50.0		µg/L	1	7/13/2017 5:10:57 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 5:10:57 PM
Sodium	**51500**	500		µg/L	10	7/13/2017 5:16:15 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**123**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:49:53 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**2.15**	2.00		mg/L	2	7/14/2017 8:36:56 PM
Sulfate	**122**	4.00		mg/L	2	7/14/2017 8:36:56 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**190**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 1:53:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**170630015**	**Collection Date:**	6/28/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**498**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**275**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 3:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.4**			S.U.		6/28/2017 3:55:00 PM
Temperature (E170.1)	**14**			deg C		6/28/2017 3:55:00 PM
Turbidity (E180.1)	**7**	1.0		NTU		6/28/2017 3:55:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 5:21:21 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 5:21:21 PM
Boron	**3160**	50.0		µg/L	1	7/13/2017 5:21:21 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 5:21:21 PM
Calcium	**62700**	50.0		µg/L	1	7/13/2017 5:21:21 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 5:21:21 PM
Iron	**120**	50.0		µg/L	1	7/13/2017 5:21:21 PM
Magnesium	**22300**	50.0		µg/L	1	7/13/2017 5:21:21 PM
Manganese	**79.8**	20.0		µg/L	1	7/13/2017 5:21:21 PM
Potassium	**3160**	50.0		µg/L	1	7/13/2017 5:21:21 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 5:21:21 PM
Sodium	**88300**	500		µg/L	10	7/13/2017 5:26:45 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**249**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:54:35 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**26.2**	5.00		mg/L	5	7/14/2017 8:48:11 PM
Sulfate	**368**	10.0		mg/L	5	7/14/2017 8:48:11 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**140**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 1:55:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 3:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**907**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**635**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 4:40:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.6**			S.U.		6/28/2017 4:40:00 PM
Temperature (E170.1)	**14**			deg C		6/28/2017 4:40:00 PM
Turbidity (E180.1)	**140**	1.0		NTU		6/28/2017 4:40:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**570**	100		µg/L	1	7/13/2017 5:31:52 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 5:31:52 PM
Boron	**1940**	50.0		µg/L	1	7/13/2017 5:31:52 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 5:31:52 PM
Calcium	**56300**	50.0		µg/L	1	7/13/2017 5:31:52 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 5:31:52 PM
Iron	**1370**	50.0		µg/L	1	7/13/2017 5:31:52 PM
Magnesium	**21100**	50.0		µg/L	1	7/13/2017 5:31:52 PM
Manganese	**382**	20.0		µg/L	1	7/13/2017 5:31:52 PM
Potassium	**3440**	50.0		µg/L	1	7/13/2017 5:31:52 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 5:31:52 PM
Sodium	**104000**	500		µg/L	10	7/13/2017 5:37:16 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**228**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 12:59:16 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**16.2**	5.00		mg/L	5	7/14/2017 8:59:17 PM
Sulfate	**318**	10.0		mg/L	5	7/14/2017 8:59:17 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**210**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.9**	0.1		mg/L	1	7/12/2017 1:57:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 4:40:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**878**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**620**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		6/29/2017 10:55:00 AM
Temperature (E170.1)	**14**			deg C		6/29/2017 10:55:00 AM
Turbidity (E180.1)	**7**	1.0		NTU		6/29/2017 10:55:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**ND**	100		µg/L	1	7/13/2017 5:49:50 PM
Arsenic	**10.8**	5.00		µg/L	1	7/13/2017 5:49:50 PM
Boron	**321**	50.0		µg/L	1	7/13/2017 5:49:50 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 5:49:50 PM
Calcium	**36500**	50.0		µg/L	1	7/13/2017 5:49:50 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 5:49:50 PM
Iron	**255**	50.0		µg/L	1	7/13/2017 5:49:50 PM
Magnesium	**13000**	50.0		µg/L	1	7/13/2017 5:49:50 PM
Manganese	**50.4**	20.0		µg/L	1	7/13/2017 5:49:50 PM
Potassium	**1760**	50.0		µg/L	1	7/13/2017 5:49:50 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 5:49:50 PM
Sodium	**63700**	500		µg/L	10	7/13/2017 6:11:09 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**145**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:00:52 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**10.8**	5.00		mg/L	5	7/14/2017 9:10:22 PM
Sulfate	**271**	10.0		mg/L	5	7/14/2017 9:10:22 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**88**	4		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	7/12/2017 1:59:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**633**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**410**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 1:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.5**			S.U.		6/28/2017 1:50:00 PM
Temperature (E170.1)	**15**			deg C		6/28/2017 1:50:00 PM
Turbidity (E180.1)	**10**	1.0		NTU		6/28/2017 1:50:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 6:16:16 PM
Arsenic	**6.38**	5.00		µg/L	1	7/13/2017 6:16:16 PM
Boron	**296**	50.0		µg/L	1	7/13/2017 6:16:16 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 6:16:16 PM
Calcium	**60900**	50.0		µg/L	1	7/13/2017 6:16:16 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 6:16:16 PM
Iron	**316**	50.0		µg/L	1	7/13/2017 6:16:16 PM
Magnesium	**60100**	50.0		µg/L	1	7/13/2017 6:16:16 PM
Manganese	**244**	20.0		µg/L	1	7/13/2017 6:16:16 PM
Potassium	**2580**	50.0		µg/L	1	7/13/2017 6:16:16 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 6:16:16 PM
Sodium	**30900**	50.0		µg/L	1	7/13/2017 6:16:16 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**400**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:02:25 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**3.84**	2.00		mg/L	2	7/14/2017 9:32:32 PM
Sulfate	**285**	20.0		mg/L	10	7/14/2017 9:21:27 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1		mg/L	1	7/12/2017 2:01:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**170630015**	**Collection Date:**	6/28/2017 1:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**847**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**610**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.5**			S.U.		6/29/2017 1:55:00 PM
Temperature (E170.1)	**13**			deg C		6/29/2017 1:55:00 PM
Turbidity (E180.1)	**9**	1.0		NTU		6/29/2017 1:55:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**125**	100		µg/L	1	7/13/2017 6:26:50 PM
Arsenic	**7.93**	5.00		µg/L	1	7/13/2017 6:26:50 PM
Boron	**106**	50.0		µg/L	1	7/13/2017 6:26:50 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 6:26:50 PM
Calcium	**43800**	50.0		µg/L	1	7/13/2017 6:26:50 PM
Copper	**5.38**	5.00		µg/L	1	7/13/2017 6:26:50 PM
Iron	**161**	50.0		µg/L	1	7/13/2017 6:26:50 PM
Magnesium	**53800**	50.0		µg/L	1	7/13/2017 6:26:50 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 6:26:50 PM
Potassium	**2650**	50.0		µg/L	1	7/13/2017 6:26:50 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 6:26:50 PM
Sodium	**15300**	50.0		µg/L	1	7/13/2017 6:26:50 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**331**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:03:59 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	7/14/2017 9:43:37 PM
Sulfate	**86.2**	4.00		mg/L	2	7/14/2017 9:43:37 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**340**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:02:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**652**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**370**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.5**			S.U.		6/29/2017 2:55:00 PM
Temperature (E170.1)	**16**			deg C		6/29/2017 2:55:00 PM
Turbidity (E180.1)	**565**	1.0		NTU		6/29/2017 2:55:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**1510**	100		µg/L	1	7/13/2017 6:37:25 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 6:37:25 PM
Boron	**768**	50.0		µg/L	1	7/13/2017 6:37:25 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 6:37:25 PM
Calcium	**7640**	50.0		µg/L	1	7/13/2017 6:37:25 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 6:37:25 PM
Iron	**3350**	50.0		µg/L	1	7/13/2017 6:37:25 PM
Magnesium	**2450**	50.0		µg/L	1	7/13/2017 6:37:25 PM
Manganese	**72.9**	20.0		µg/L	1	7/13/2017 6:37:25 PM
Potassium	**1330**	50.0		µg/L	1	7/13/2017 6:37:25 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 6:37:25 PM
Sodium	**142000**	500		µg/L	10	7/13/2017 6:42:31 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**29**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:05:34 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.62**	2.00		mg/L	2	7/14/2017 9:54:42 PM
Sulfate	**99.9**	4.00		mg/L	2	7/14/2017 9:54:42 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**280**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.6**	0.1		mg/L	1	7/12/2017 2:04:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**659**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**485**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**170630015**	**Collection Date:**	6/28/2017 1:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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		6/28/2017 1:35:00 PM
Flow, GPD	**457**			gal/day		6/28/2017 1:35:00 PM
pH (E150.1)	**7.4**			S.U.		6/28/2017 1:35:00 PM
Temperature (E170.1)	**14**			deg C		6/28/2017 1:35:00 PM
Turbidity (E180.1)	**4**	1.0		NTU		6/28/2017 1:35:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 6:47:38 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 6:47:38 PM
Boron	**3440**	50.0		µg/L	1	7/13/2017 6:47:38 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 6:47:38 PM
Calcium	**195000**	50.0		µg/L	1	7/13/2017 6:47:38 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 6:47:38 PM
Iron	**ND**	50.0		µg/L	1	7/13/2017 6:47:38 PM
Magnesium	**98900**	50.0		µg/L	1	7/13/2017 6:47:38 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 6:47:38 PM
Potassium	**6740**	50.0		µg/L	1	7/13/2017 6:47:38 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 6:47:38 PM
Sodium	**34400**	50.0		µg/L	1	7/13/2017 6:47:38 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**895**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:07:10 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**93.0**	10.0		mg/L	10	7/14/2017 10:05:48 PM
Sulfate	**967**	20.0		mg/L	10	7/14/2017 10:05:48 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**370**	10		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**170630015**	**Collection Date:**	6/28/2017 1:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	7/12/2017 2:12:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1880**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1850**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**170630015**	**Collection Date:**	6/29/2017 11:15:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.22**	0.10		mg/L		6/29/2017 11:15:00 AM
Flow, GPD	**95**			gal/day		6/29/2017 11:15:00 AM
pH (E150.1)	**7.5**			S.U.		6/29/2017 11:15:00 AM
Temperature (E170.1)	**16**			deg C		6/29/2017 11:15:00 AM
Turbidity (E180.1)	**20**	1.0		NTU		6/29/2017 11:15:00 AM
ICP METALS - EPA 200.7 (Prep: SW3010A - 7/5/2017)						Analyst: **SM**
Aluminum	**ND**	100		µg/L	1	7/13/2017 6:58:21 PM
Arsenic	**7.91**	5.00		µg/L	1	7/13/2017 6:58:21 PM
Boron	**1150**	50.0		µg/L	1	7/13/2017 6:58:21 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 6:58:21 PM
Calcium	**368000**	500		µg/L	10	7/13/2017 7:03:52 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 6:58:21 PM
Iron	**86.3**	50.0		µg/L	1	7/13/2017 6:58:21 PM
Magnesium	**159000**	50.0		µg/L	1	7/13/2017 6:58:21 PM
Manganese	**22.0**	20.0		µg/L	1	7/13/2017 6:58:21 PM
Potassium	**6290**	50.0		µg/L	1	7/13/2017 6:58:21 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 6:58:21 PM
Sodium	**93900**	500		µg/L	10	7/13/2017 7:03:52 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**1575**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 7/6/2017)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:08:47 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**37.0**	20.0		mg/L	20	7/14/2017 10:40:27 PM
Sulfate	**1510**	40.0		mg/L	20	7/14/2017 10:40:27 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**550**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**170630015**	**Collection Date:**	6/29/2017 11:15:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	7/12/2017 2:14:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2530**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2570**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.64**	0.10		mg/L		6/29/2017 2:20:00 PM
Flow, GPD	**10272**			gal/day		6/29/2017 2:20:00 PM
pH (E150.1)	**7.6**			S.U.		6/29/2017 2:20:00 PM
Temperature (E170.1)	**13**			deg C		6/29/2017 2:20:00 PM
Turbidity (E180.1)	**75**	1.0		NTU		6/29/2017 2:20:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 7:09:08 PM
Arsenic	**43.7**	5.00		µg/L	1	7/13/2017 7:09:08 PM
Boron	**3960**	50.0		µg/L	1	7/13/2017 7:09:08 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 7:09:08 PM
Calcium	**185000**	50.0		µg/L	1	7/13/2017 7:09:08 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 7:09:08 PM
Iron	**7400**	50.0		µg/L	1	7/13/2017 7:09:08 PM
Magnesium	**64100**	50.0		µg/L	1	7/13/2017 7:09:08 PM
Manganese	**674**	20.0		µg/L	1	7/13/2017 7:09:08 PM
Potassium	**12700**	50.0		µg/L	1	7/13/2017 7:09:08 PM
Selenium	**16.1**	5.00		µg/L	1	7/13/2017 7:09:08 PM
Sodium	**29900**	50.0		µg/L	1	7/13/2017 7:09:08 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 6/30/2017)						
Mercury	**1.0**	0.5		ng/L	1	7/6/2017
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**726**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:53:37 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**30.3**	10.0		mg/L	10	7/14/2017 11:14:00 PM
Sulfate	**556**	20.0		mg/L	10	7/14/2017 11:14:00 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**660**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1		mg/L	1	7/12/2017 2:16:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1680**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1480**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**170630015**	**Collection Date:**	6/29/2017 11:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.12**	0.10		mg/L		6/29/2017 11:40:00 AM
Flow, GPD	**4565**			gal/day		6/29/2017 11:40:00 AM
pH (E150.1)	**7.6**			S.U.		6/29/2017 11:40:00 AM
Temperature (E170.1)	**14**			deg C		6/29/2017 11:40:00 AM
Turbidity (E180.1)	**50**	1.0		NTU		6/29/2017 11:40:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**116**	100		µg/L	1	7/13/2017 7:35:36 PM
Arsenic	**9.04**	5.00		µg/L	1	7/13/2017 7:35:36 PM
Boron	**38600**	50.0		µg/L	1	7/13/2017 7:35:36 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 7:35:36 PM
Calcium	**298000**	500		µg/L	10	7/13/2017 7:40:54 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 7:35:36 PM
Iron	**5380**	50.0		µg/L	1	7/13/2017 7:35:36 PM
Magnesium	**72200**	50.0		µg/L	1	7/13/2017 7:35:36 PM
Manganese	**920**	20.0		µg/L	1	7/13/2017 7:35:36 PM
Potassium	**52100**	50.0		µg/L	1	7/13/2017 7:35:36 PM
Selenium	**35.7**	5.00		µg/L	1	7/13/2017 7:35:36 PM
Sodium	**145000**	500		µg/L	10	7/13/2017 7:40:54 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**1042**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:55:07 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**314**	20.0		mg/L	20	7/14/2017 11:25:06 PM
Sulfate	**1750**	40.0		mg/L	20	7/14/2017 11:25:06 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**320**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**170630015**	**Collection Date:**	6/29/2017 11:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**1.7**	0.1		mg/L	1	7/12/2017 2:22:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3370**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**3320**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:50:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**3.57**	0.10		mg/L		6/29/2017 10:50:00 AM
Flow, GPD	**228**			gal/day		6/29/2017 10:50:00 AM
pH (E150.1)	**6.9**			S.U.		6/29/2017 10:50:00 AM
Temperature (E170.1)	**17**			deg C		6/29/2017 10:50:00 AM
Turbidity (E180.1)	**58**	1.0		NTU		6/29/2017 10:50:00 AM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**229**	100		µg/L	1	7/13/2017 7:46:17 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 7:46:17 PM
Boron	**18100**	50.0		µg/L	1	7/13/2017 7:46:17 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 7:46:17 PM
Calcium	**467000**	500		µg/L	10	7/13/2017 7:51:35 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 7:46:17 PM
Iron	**706**	50.0		µg/L	1	7/13/2017 7:46:17 PM
Magnesium	**85200**	50.0		µg/L	1	7/13/2017 7:46:17 PM
Manganese	**321**	20.0		µg/L	1	7/13/2017 7:46:17 PM
Potassium	**84600**	500		µg/L	10	7/13/2017 7:51:35 PM
Selenium	**20.2**	5.00		µg/L	1	7/13/2017 7:46:17 PM
Sodium	**177000**	500		µg/L	10	7/13/2017 7:51:35 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**1518**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:56:38 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**996**	20.0		mg/L	20	7/14/2017 11:36:11 PM
Sulfate	**1720**	40.0		mg/L	20	7/14/2017 11:36:11 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:50:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	7/12/2017 2:24:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**4910**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**4480**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Inlet To Pond
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-018
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.28**	0.10		mg/L		6/29/2017 2:35:00 PM
Flow, GPD	**19974**			gal/day		6/29/2017 2:35:00 PM
pH (E150.1)	**7.6**			S.U.		6/29/2017 2:35:00 PM
Temperature (E170.1)	**14**			deg C		6/29/2017 2:35:00 PM
Turbidity (E180.1)	**22**	1.0		NTU		6/29/2017 2:35:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 7:56:58 PM
Arsenic	**38.6**	5.00		µg/L	1	7/13/2017 7:56:58 PM
Boron	**17400**	50.0		µg/L	1	7/13/2017 7:56:58 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 7:56:58 PM
Calcium	**287000**	500		µg/L	10	7/13/2017 8:02:18 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 7:56:58 PM
Iron	**6690**	50.0		µg/L	1	7/13/2017 7:56:58 PM
Magnesium	**71200**	50.0		µg/L	1	7/13/2017 7:56:58 PM
Manganese	**560**	20.0		µg/L	1	7/13/2017 7:56:58 PM
Potassium	**42300**	50.0		µg/L	1	7/13/2017 7:56:58 PM
Selenium	**37.3**	5.00		µg/L	1	7/13/2017 7:56:58 PM
Sodium	**118000**	500		µg/L	10	7/13/2017 8:02:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 6/30/2017)						
Mercury	**0.9**	0.5		ng/L	1	7/6/2017
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**1011**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:58:10 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**165**	20.0		mg/L	20	7/14/2017 11:47:17 PM
Sulfate	**1260**	40.0		mg/L	20	7/14/2017 11:47:17 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Inlet To Pond
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-018
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**500**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.4**	0.1		mg/L	1	7/12/2017 2:26:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2640**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2470**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.25**	0.10		mg/L		6/29/2017 1:20:00 PM
pH (E150.1)	**8.5**			S.U.		6/29/2017 1:20:00 PM
Temperature (E170.1)	**22**			deg C		6/29/2017 1:20:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 1:20:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**111**	100		µg/L	1	7/13/2017 8:07:42 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 8:07:42 PM
Boron	**66.3**	50.0		µg/L	1	7/13/2017 8:07:42 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 8:07:42 PM
Calcium	**31100**	50.0		µg/L	1	7/13/2017 8:07:42 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 8:07:42 PM
Iron	**72.0**	50.0		µg/L	1	7/13/2017 8:07:42 PM
Magnesium	**12300**	50.0		µg/L	1	7/13/2017 8:07:42 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 8:07:42 PM
Potassium	**2980**	50.0		µg/L	1	7/13/2017 8:07:42 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 8:07:42 PM
Sodium	**16900**	50.0		µg/L	1	7/13/2017 8:07:42 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**128**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 1:59:42 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**46.3**	2.00		mg/L	2	7/14/2017 11:58:22 PM
Sulfate	**27.0**	4.00		mg/L	2	7/14/2017 11:58:22 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**120**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:28:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**371**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**225**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**170630015**	**Collection Date:**	6/29/2017 12:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**8.18**	0.10		mg/L		6/29/2017 12:45:00 PM
pH (E150.1)	**8.1**			S.U.		6/29/2017 12:45:00 PM
Temperature (E170.1)	**21**			deg C		6/29/2017 12:45:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 12:45:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 7/5/2017)						Analyst: **SM**
Aluminum	**140**	100		µg/L	1	7/13/2017 8:44:08 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 8:44:08 PM
Boron	**64.8**	50.0		µg/L	1	7/13/2017 8:44:08 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 8:44:08 PM
Calcium	**30400**	50.0		µg/L	1	7/13/2017 8:44:08 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 8:44:08 PM
Iron	**79.4**	50.0		µg/L	1	7/13/2017 8:44:08 PM
Magnesium	**12400**	50.0		µg/L	1	7/13/2017 8:44:08 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 8:44:08 PM
Potassium	**3140**	50.0		µg/L	1	7/13/2017 8:44:08 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 8:44:08 PM
Sodium	**17700**	50.0		µg/L	1	7/13/2017 8:44:08 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**127**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 7/6/2017)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:01:14 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**46.0**	2.00		mg/L	2	7/15/2017 12:09:29 AM
Sulfate	**27.0**	4.00		mg/L	2	7/15/2017 12:09:29 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**130**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:34:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**170630015**	**Collection Date:**	6/29/2017 12:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**370**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**220**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.25**	0.10		mg/L		6/29/2017 1:20:00 PM
pH (E150.1)	**8.5**			S.U.		6/29/2017 1:20:00 PM
Temperature (E170.1)	**22**			deg C		6/29/2017 1:20:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 1:20:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**134**	100		µg/L	1	7/13/2017 9:05:09 PM
Arsenic	**5.70**	5.00		µg/L	1	7/13/2017 9:05:09 PM
Boron	**54.6**	50.0		µg/L	1	7/13/2017 9:05:09 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 9:05:09 PM
Calcium	**29900**	50.0		µg/L	1	7/13/2017 9:05:09 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 9:05:09 PM
Iron	**68.7**	50.0		µg/L	1	7/13/2017 9:05:09 PM
Magnesium	**12500**	50.0		µg/L	1	7/13/2017 9:05:09 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 9:05:09 PM
Potassium	**3180**	50.0		µg/L	1	7/13/2017 9:05:09 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 9:05:09 PM
Sodium	**17600**	50.0		µg/L	1	7/13/2017 9:05:09 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**126**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:02:47 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**46.4**	2.00		mg/L	2	7/15/2017 12:20:35 AM
Sulfate	**26.7**	4.00		mg/L	2	7/15/2017 12:20:35 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**130**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:36:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**170630015**	**Collection Date:**	6/29/2017 1:20:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**367**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**235**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**170630015**	**Collection Date:**	6/28/2017 5:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**5.90**	0.10		mg/L		6/28/2017 5:25:00 PM
pH (E150.1)	**8.1**			S.U.		6/28/2017 5:25:00 PM
Temperature (E170.1)	**25**			deg C		6/28/2017 5:25:00 PM
Turbidity (E180.1)	**4**	1.0		NTU		6/28/2017 5:25:00 PM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 9:15:33 PM
Arsenic	**5.42**	5.00		µg/L	1	7/13/2017 9:15:33 PM
Boron	**14400**	50.0		µg/L	1	7/13/2017 9:15:33 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 9:15:33 PM
Calcium	**142000**	50.0		µg/L	1	7/13/2017 9:15:33 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 9:15:33 PM
Iron	**96.6**	50.0		µg/L	1	7/13/2017 9:15:33 PM
Magnesium	**68500**	50.0		µg/L	1	7/13/2017 9:15:33 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 9:15:33 PM
Potassium	**45800**	50.0		µg/L	1	7/13/2017 9:15:33 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 9:15:33 PM
Sodium	**121000**	500		µg/L	10	7/13/2017 9:20:56 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**637**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:07:29 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**160**	20.0		mg/L	20	7/14/2017 6:40:35 PM
Sulfate	**927**	40.0		mg/L	20	7/14/2017 6:40:35 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**88**	4		mg/L CaCO3	1	7/12/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:38:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**170630015**	**Collection Date:**	6/28/2017 5:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2060**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1800**	5		mg/L	1	7/5/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.62**	0.10		mg/L		6/29/2017 2:30:00 PM
pH (E150.1)	**7.0**			S.U.		6/29/2017 2:30:00 PM
Temperature (E170.1)	**22**			deg C		6/29/2017 2:30:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 2:30:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 7/5/2017)						Analyst: **SM**
Aluminum	**ND**	100		µg/L	1	7/13/2017 9:42:32 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 9:42:32 PM
Boron	**ND**	50.0		µg/L	1	7/13/2017 9:42:32 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 9:42:32 PM
Calcium	**94.8**	50.0		µg/L	1	7/13/2017 9:42:32 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 9:42:32 PM
Iron	**ND**	50.0		µg/L	1	7/13/2017 9:42:32 PM
Magnesium	**ND**	50.0		µg/L	1	7/13/2017 9:42:32 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 9:42:32 PM
Potassium	**ND**	50.0		µg/L	1	7/13/2017 9:42:32 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 9:42:32 PM
Sodium	**ND**	50.0		µg/L	1	7/13/2017 9:42:32 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**237**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 7/6/2017)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:12:13 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	7/14/2017 6:57:11 PM
Sulfate	**ND**	4.00		mg/L	2	7/14/2017 6:57:11 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**5**	1		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/12/2017 2:40:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**ND**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	LLHg Field Blank
Work Order:	**170630015**	**Collection Date:**	6/29/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-024
PO#:		**Matrix:**	FIELD BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 6/30/2017)						
Mercury	**ND**	0.5		ng/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:05:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.3**			S.U.		6/29/2017 10:05:00 AM
Temperature (E170.1)	**13**			deg C		6/29/2017 10:05:00 AM
Turbidity (E180.1)	**3**	1.0		NTU		6/29/2017 10:05:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 7/5/2017)**						Analyst: **SM**
Aluminum	**ND**	100		µg/L	1	7/13/2017 9:52:48 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 9:52:48 PM
Boron	**828**	50.0		µg/L	1	7/13/2017 9:52:48 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 9:52:48 PM
Calcium	**54400**	50.0		µg/L	1	7/13/2017 9:52:48 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 9:52:48 PM
Iron	**228**	50.0		µg/L	1	7/13/2017 9:52:48 PM
Magnesium	**22300**	50.0		µg/L	1	7/13/2017 9:52:48 PM
Manganese	**58.7**	20.0		µg/L	1	7/13/2017 9:52:48 PM
Potassium	**2730**	50.0		µg/L	1	7/13/2017 9:52:48 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 9:52:48 PM
Sodium	**56100**	500		µg/L	10	7/13/2017 9:58:13 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**228**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 7/6/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:13:48 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**35.2**	2.00		mg/L	2	7/14/2017 7:13:47 PM
Sulfate	**62.0**	4.00		mg/L	2	7/14/2017 7:13:47 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**370**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**1.0**	0.1		mg/L	1	7/12/2017 2:42:00 PM

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:05:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**792**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**480**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**2.98**	0.10		mg/L		6/29/2017 10:30:00 AM
Flow, GPD	**88**			gal/day		6/29/2017 10:30:00 AM
pH (E150.1)	**6.9**			S.U.		6/29/2017 10:30:00 AM
Temperature (E170.1)	**17**			deg C		6/29/2017 10:30:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		6/29/2017 10:30:00 AM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/5/2017)						
Aluminum	**ND**	100		µg/L	1	7/13/2017 10:03:27 PM
Arsenic	**ND**	5.00		µg/L	1	7/13/2017 10:03:27 PM
Boron	**260**	50.0		µg/L	1	7/13/2017 10:03:27 PM
Cadmium	**ND**	5.00		µg/L	1	7/13/2017 10:03:27 PM
Calcium	**150000**	50.0		µg/L	1	7/13/2017 10:03:27 PM
Copper	**ND**	5.00		µg/L	1	7/13/2017 10:03:27 PM
Iron	**ND**	50.0		µg/L	1	7/13/2017 10:03:27 PM
Magnesium	**54900**	50.0		µg/L	1	7/13/2017 10:03:27 PM
Manganese	**ND**	20.0		µg/L	1	7/13/2017 10:03:27 PM
Potassium	**4090**	50.0		µg/L	1	7/13/2017 10:03:27 PM
Selenium	**ND**	5.00		µg/L	1	7/13/2017 10:03:27 PM
Sodium	**16400**	50.0		µg/L	1	7/13/2017 10:03:27 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**601**	5		mg/L CaCO3	1	7/13/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/6/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/6/2017 2:15:24 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**8.41**	5.00		mg/L	5	7/14/2017 7:30:23 PM
Sulfate	**383**	10.0		mg/L	5	7/14/2017 7:30:23 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**460**	10		mg/L CaCO3	1	7/13/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**170630015**	**Collection Date:**	6/29/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	7/12/2017 2:43:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1350**	1		µmhos/cm	1	7/14/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1170**	5		mg/L	1	7/6/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 2
Work Order:	**170630015**	**Collection Date:**	6/28/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-027
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		6/28/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 4
Work Order:	**170630015**	**Collection Date:**	6/28/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-028
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		6/28/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 5
Work Order:	**170630015**	**Collection Date:**	6/28/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-029
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		6/28/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-SH
Work Order:	**170630015**	**Collection Date:**	6/28/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-030
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Poor Recovery**			NA		6/28/2017

Adirondack Environmental Services, Inc

Date: *18-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8405
Work Order:	**170630015**	**Collection Date:**	6/28/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170630015-031
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		6/28/2017

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CHAIN OF CUSTODY RECORD

AES Work Order#: 170630015

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: Paul Buist
Client Phone No:	PO #:	Samplers Signature: Paul Buist
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
001	7842	6/28/17	—	A P	GW		G	0	Observation Only
002	8404	6/28/17	6:05	A (P)	GW		G	4	Lockwood Ash LF Quarterly
003	8908-D	6/29/17	12:50	A (P)	GW		G	4	Field pH, Temp, Turbidity
004	8908-SH	6/29/17	1:25	A (P)	GW		G	4	
005	8909-D	6/28/17	2:55	A (P)	GW		G	4	
006	8909-SH	6/28/17	2:50	A (P)	GW		G	4	
007	8910-D	6/28/17	3.55	A (P)	GW		G	4	
008	8911-D	6/28/17	4.40	A (P)	GW		G	4	
009	8911-SH	6/29/17	10:55	(A) P	GW		G	4	
010	8942-D	6/28/17	1:50	A (P)	GW		G	4	
011	9306-SH 10AM 7/11/17 D	6/29/17	1:55	A (P)	GW		G	4	
012	GW Dup 8909-SH	6/28/17	2:50	(P)	GW		G	4	

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Special Instructions/Remarks:

Page 1 of 3

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Paul Buist	6/30/17	9:30			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
				6/30/17	10:00AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

170630015

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CHAIN OF CUSTODY RECORD

AES Work Order#: 17063001S

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: Paul Burst
Client Phone No:	PO #:	Samplers Signature: Paul Burst
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
013	GW Dep Drain 1	6/28/17	1:35	A (P)	GW		G	4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
014	Leak Detection Syst.	6/29/17	11:15	(A) P	GW		G	4	+ Field Flow Reading, DO
015	Under Drain 1	6/29/17	2:20	A (P)	GW		G	5	+ Field Flow Reading, DO
016	Under Drain 2	6/29/17	11:40	(A) P	GW		G	4	+ Field Flow Reading, DO
017	Under Drain 3	6/29/17	10:50	(A) P	GW		G	4	+ Field Flow Reading, DO
018 (MS)	~~21~~" Inlet to Pond	6/29/17	2:35	A (P)	GW		G	5	+ Field Flow Reading, DO
019	Keuka Upstream	6/29/17	1:20	A (P)	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream	6/29/17	12:45	A (P)	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup	6/29/17	1:20	A (P)	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab	6/28/17	5:25	A (P)	SF		G	4	Lockwood Quarterly +DO
023	Field Blank	6/29/17	2:30	A (P)	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank	6/29/17	2:45	(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)	Date	Time	Received by: (Signature)	Date	Time
Paul Burst	6/30/17	9:30			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
			[signature]	6/30/17	10:02AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

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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:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
025	8401	6/29/17	10:05	(A)	GW			4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026	GW Dep Drain 3	6/29/17	10:30	(A) P	GW			4	+ Field Flow Reading, DO
027	GW Dep Drain 2	6/28/17	/	A P	GW			0	Observation Only
028	GW Dep Drain 4	6/28/17	/	A P	GW			0	Observation Only
029	Under Drain 5	6/28/17	/	A P	GW			0	Observation Only
030	8910-SH	6/28/17	/	A P	GW			0	Observation Only
031	8405	6/28/17	/	A	GW			0	Observation Only
				P					
				A P					
				A P					
				A P					
				A P					

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)	Date	Time	Received by: (Signature)	Date	Time
Paul Buist	6/30/17	9:30			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
			[signature]	6/30/17	1002 AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
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.

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July 19, 2017

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

TEL: (315) 536-2359
FAX:

Work Order No: 170710048

RE: Lockwood Ash Landfill

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 1 sample on 7/10/2017 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

ELAP#: 10709

Krzysztof Trafalski
Laboratory Manager

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	Lockwood Hills LLC	**Date:**	*19-Jul-17*
Project:	Lockwood Ash Landfill		
Lab Order:	170710048		

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.

Qualifiers:

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

Note : All Results are reported as wet weight unless noted

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

Adirondack Environmental Services, Inc

Date: *19-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	7842
Work Order:	**170710048**	**Collection Date:**	7/7/2017 11:20:00 AM
Reference:	Lockwood Ash Landfill /	**Lab Sample ID:**	170710048-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.6**			S.U.		7/7/2017 11:20:00 AM
Temperature (E170.1)	**19**			deg C		7/7/2017 11:20:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		7/7/2017 11:20:00 AM
ICP METALS - EPA 200.7						Analyst: **SM**
(Prep: SW3010A - 7/17/2017)						
Aluminum	**118**	100		µg/L	1	7/17/2017 8:39:56 PM
Arsenic	**ND**	5.00		µg/L	1	7/17/2017 8:39:56 PM
Boron	**93.0**	50.0		µg/L	1	7/17/2017 8:39:56 PM
Cadmium	**ND**	5.00		µg/L	1	7/17/2017 8:39:56 PM
Calcium	**114000**	500		µg/L	10	7/17/2017 8:45:14 PM
Copper	**64.2**	5.00		µg/L	1	7/17/2017 8:39:56 PM
Iron	**133**	50.0		µg/L	1	7/17/2017 8:39:56 PM
Magnesium	**33900**	50.0		µg/L	1	7/17/2017 8:39:56 PM
Manganese	**45.2**	20.0		µg/L	1	7/17/2017 8:39:56 PM
Potassium	**1840**	50.0		µg/L	1	7/17/2017 8:39:56 PM
Selenium	**ND**	5.00		µg/L	1	7/17/2017 8:39:56 PM
Sodium	**7490**	50.0		µg/L	1	7/17/2017 8:39:56 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
Total Hardness (As CaCO3)	**424**	5		mg/L CaCO3	1	7/17/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 7/17/2017)						
Mercury	**ND**	0.0002		mg/L	1	7/17/2017 2:08:43 PM
Mercury	**ND**	0.0002		mg/L	1	7/17/2017 1:45:18 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**20.3**	2.00		mg/L	2	7/17/2017 6:56:04 PM
Sulfate	**119**	20.0		mg/L	10	7/17/2017 6:44:59 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	7/17/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	7/14/2017 2:13:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	7842
Work Order:	**170710048**	**Collection Date:**	7/7/2017 11:20:00 AM
Reference:	Lockwood Ash Landfill /	**Lab Sample ID:**	170710048-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**735**	1		µmhos/cm	1	7/17/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**510**	5		mg/L	1	7/12/2017

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EXPERIENCE IS THE SOLUTION

CHAIN OF CUSTODY RECORD

AES Work Order#: 170710048

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: Kevin Ambra
Client Phone No:	PO #:	Samplers Signature:
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
801	7842	7/7/17	1120	(A) P	GW		G	4	Lockwood Ash LF Quarterly
				A P					Field pH, Temp, Turbidity
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Special Instructions/Remarks:

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

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			Paul Burt	7/7/17	3:00
Relinquished by: (Signature) Paul Burt	Date	Time	Received by: (Signature)	Date 7/10/17	Time 9:15
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:** Kevin Ambra	Date 7/10/17	Time 2:26 pm

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

170710048

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(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.

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(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.

THIRD QUARTER

Adirondack Environmental Services, Inc.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 10, 2017

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

TEL: (315) 536-2359
FAX:

Work Order No: 170922003

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 9/22/2017 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

ELAP#: 10709

Krzysztof Trafalski
Laboratory Manager

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	Lockwood Hills LLC	**Date:**	*10-Oct-17*
Project:	Lockwood Ash Landfill		
Lab Order:	170922003		

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.

Qualifiers:

ND - Not Detected at reporting limit
J - Analyte detected below quantitation limit
B - Analyte detected in Blank
X - Exceeds maximum contamination limit
H - Hold time exceeded
N - Matrix Spike below acceptable limits
N+ - Matrix Spike is above acceptable limits
C - Details are above in Case Narrative
S - LCS Spike recovery is below acceptable limits
S+ - LCS Spike recovery is above acceptable limits
Z - Duplication outside acceptable limits
T - Tentatively Identified Compound-Estimated
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: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	7842
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Obstructed**			NA		9/20/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**170922003**	**Collection Date:**	9/21/2017 11:15:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**6.8**			S.U.		9/21/2017 11:15:00 AM
Temperature (E170.1)	**16**			deg C		9/21/2017 11:15:00 AM
Turbidity (E180.1)	**75**	1.0		NTU		9/21/2017 11:15:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	10/3/2017 2:27:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/3/2017 2:27:00 PM
Boron	**249**	50.0		µg/L	1	10/3/2017 2:27:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/3/2017 2:27:00 PM
Calcium	**128000**	50.0		µg/L	1	10/3/2017 2:27:00 PM
Copper	**9.51**	5.00		µg/L	1	10/3/2017 2:27:00 PM
Iron	**348**	50.0		µg/L	1	10/3/2017 2:27:00 PM
Magnesium	**23900**	50.0		µg/L	1	10/3/2017 2:27:00 PM
Manganese	**84.9**	20.0		µg/L	1	10/3/2017 2:27:00 PM
Potassium	**1230**	50.0		µg/L	1	10/3/2017 2:27:00 PM
Selenium	**ND**	5.00		µg/L	1	10/3/2017 2:27:00 PM
Sodium	**15400**	50.0		µg/L	1	10/3/2017 2:27:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**418**	5		mg/L CaCO3	1	10/3/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:11:56 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	10/5/2017 11:58:06 PM
Sulfate	**109**	4.00		mg/L	2	10/5/2017 11:58:06 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**300**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:15:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**170922003**	**Collection Date:**	9/21/2017 11:15:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**717**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**535**	5		mg/L	1	9/25/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**170922003**	**Collection Date:**	9/21/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.3**			S.U.		9/21/2017 12:00:00 PM
Temperature (E170.1)	**13**			deg C		9/21/2017 12:00:00 PM
Turbidity (E180.1)	**62**	1.0		NTU		9/21/2017 12:00:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/3/2017 4:01:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/3/2017 4:01:00 PM
Boron	**240**	50.0		µg/L	1	10/3/2017 4:01:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/3/2017 4:01:00 PM
Calcium	**174000**	50.0		µg/L	1	10/3/2017 4:01:00 PM
Copper	**ND**	5.00		µg/L	1	10/3/2017 4:01:00 PM
Iron	**1540**	50.0		µg/L	1	10/3/2017 4:01:00 PM
Magnesium	**67100**	50.0		µg/L	1	10/3/2017 4:01:00 PM
Manganese	**187**	20.0		µg/L	1	10/3/2017 4:01:00 PM
Potassium	**2780**	50.0		µg/L	1	10/3/2017 4:01:00 PM
Selenium	**ND**	5.00		µg/L	1	10/3/2017 4:01:00 PM
Sodium	**33700**	50.0		µg/L	1	10/3/2017 4:01:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**710**	5		mg/L CaCO3	1	10/3/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:13:34 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**17.5**	2.00		mg/L	2	10/6/2017 12:46:27 AM
Sulfate	**311**	20.0		mg/L	10	10/6/2017 12:34:22 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**350**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	9/27/2017 6:17:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**170922003**	**Collection Date:**	9/21/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1170**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**885**	5		mg/L	1	9/25/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 1:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**6.8**			S.U.		9/21/2017 1:00:00 PM
Temperature (E170.1)	**15**			deg C		9/21/2017 1:00:00 PM
Turbidity (E180.1)	**2**	1.0		NTU		9/21/2017 1:00:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	10/3/2017 4:05:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/3/2017 4:05:00 PM
Boron	**177**	50.0		µg/L	1	10/3/2017 4:05:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/3/2017 4:05:00 PM
Calcium	**190000**	50.0		µg/L	1	10/3/2017 4:05:00 PM
Copper	**ND**	5.00		µg/L	1	10/3/2017 4:05:00 PM
Iron	**66.8**	50.0		µg/L	1	10/3/2017 4:05:00 PM
Magnesium	**64200**	50.0		µg/L	1	10/3/2017 4:05:00 PM
Manganese	**116**	20.0		µg/L	1	10/3/2017 4:05:00 PM
Potassium	**2570**	50.0		µg/L	1	10/3/2017 4:05:00 PM
Selenium	**ND**	5.00		µg/L	1	10/3/2017 4:05:00 PM
Sodium	**29000**	50.0		µg/L	1	10/3/2017 4:05:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**738**	5		mg/L CaCO3	1	10/3/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:15:12 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**15.3**	2.00		mg/L	2	10/6/2017 1:10:38 AM
Sulfate	**317**	20.0		mg/L	10	10/6/2017 12:58:33 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**380**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:19:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 1:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1190**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**955**	5		mg/L	1	9/25/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		9/20/2017 2:50:00 PM
Temperature (E170.1)	**19**			deg C		9/20/2017 2:50:00 PM
Turbidity (E180.1)	**189**	1.0		NTU		9/20/2017 2:50:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**427**	100		µg/L	1	10/3/2017 4:08:00 PM
Arsenic	**10.5**	5.00		µg/L	1	10/3/2017 4:08:00 PM
Boron	**510**	50.0		µg/L	1	10/3/2017 4:08:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/3/2017 4:08:00 PM
Calcium	**6970**	50.0		µg/L	1	10/3/2017 4:08:00 PM
Copper	**ND**	5.00		µg/L	1	10/3/2017 4:08:00 PM
Iron	**962**	50.0		µg/L	1	10/3/2017 4:08:00 PM
Magnesium	**1850**	50.0		µg/L	1	10/3/2017 4:08:00 PM
Manganese	**36.2**	20.0		µg/L	1	10/3/2017 4:08:00 PM
Potassium	**1430**	50.0		µg/L	1	10/3/2017 4:08:00 PM
Selenium	**ND**	5.00		µg/L	1	10/3/2017 4:08:00 PM
Sodium	**172000**	50000		µg/L	10	10/3/2017 4:30:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**25**	5		mg/L CaCO3	1	10/3/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:20:10 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.02**	2.00		mg/L	2	10/6/2017 1:22:43 AM
Sulfate	**63.3**	4.00		mg/L	2	10/6/2017 1:22:43 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.4**	0.1		mg/L	1	9/27/2017 6:21:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**672**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**460**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.5**			S.U.		9/20/2017 2:35:00 PM
Temperature (E170.1)	**19**			deg C		9/20/2017 2:35:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/20/2017 2:35:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/3/2017 4:12:00 PM
Arsenic	**7.32**	5.00		µg/L	1	10/3/2017 4:12:00 PM
Boron	**250**	50.0		µg/L	1	10/3/2017 4:12:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/3/2017 4:12:00 PM
Calcium	**29400**	50.0		µg/L	1	10/3/2017 4:12:00 PM
Copper	**ND**	5.00		µg/L	1	10/3/2017 4:12:00 PM
Iron	**ND**	50.0		µg/L	1	10/3/2017 4:12:00 PM
Magnesium	**18000**	50.0		µg/L	1	10/3/2017 4:12:00 PM
Manganese	**ND**	20.0		µg/L	1	10/3/2017 4:12:00 PM
Potassium	**1910**	50.0		µg/L	1	10/3/2017 4:12:00 PM
Selenium	**ND**	5.00		µg/L	1	10/3/2017 4:12:00 PM
Sodium	**55200**	50000		µg/L	10	10/3/2017 4:34:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**148**	5		mg/L CaCO3	1	10/3/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:21:42 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	10/6/2017 1:34:48 AM
Sulfate	**108**	4.00		mg/L	2	10/6/2017 1:34:48 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**160**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:29:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**507**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**355**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 3:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.8**			S.U.		9/20/2017 3:45:00 PM
Temperature (E170.1)	**14**			deg C		9/20/2017 3:45:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/20/2017 3:45:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 12:54:00 PM
Arsenic	**5.07**	5.00		µg/L	1	10/4/2017 12:54:00 PM
Boron	**3280**	50.0		µg/L	1	10/4/2017 12:54:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 12:54:00 PM
Calcium	**88100**	50.0		µg/L	1	10/4/2017 12:54:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 12:54:00 PM
Iron	**ND**	50.0		µg/L	1	10/4/2017 12:54:00 PM
Magnesium	**27200**	50.0		µg/L	1	10/4/2017 12:54:00 PM
Manganese	**ND**	20.0		µg/L	1	10/4/2017 12:54:00 PM
Potassium	**3120**	50.0		µg/L	1	10/4/2017 12:54:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 12:54:00 PM
Sodium	**99900**	500		µg/L	10	10/4/2017 12:59:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**332**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:23:15 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**26.8**	2.00		mg/L	2	10/5/2017 6:14:32 PM
Sulfate	**366**	20.0		mg/L	10	10/5/2017 6:02:26 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**150**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:30:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 3:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**952**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**745**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		9/21/2017 10:40:00 AM
Temperature (E170.1)	**13**			deg C		9/21/2017 10:40:00 AM
Turbidity (E180.1)	**27**	1.0		NTU		9/21/2017 10:40:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	10/4/2017 1:03:00 PM
Arsenic	**6.73**	5.00		µg/L	1	10/4/2017 1:03:00 PM
Boron	**1920**	50.0		µg/L	1	10/4/2017 1:03:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 1:03:00 PM
Calcium	**68800**	50.0		µg/L	1	10/4/2017 1:03:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 1:03:00 PM
Iron	**326**	50.0		µg/L	1	10/4/2017 1:03:00 PM
Magnesium	**23100**	50.0		µg/L	1	10/4/2017 1:03:00 PM
Manganese	**116**	20.0		µg/L	1	10/4/2017 1:03:00 PM
Potassium	**3090**	50.0		µg/L	1	10/4/2017 1:03:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 1:03:00 PM
Sodium	**130000**	500		µg/L	10	10/4/2017 1:32:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**267**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:27:59 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**15.4**	2.00		mg/L	2	10/5/2017 6:38:43 PM
Sulfate	**304**	20.0		mg/L	10	10/5/2017 6:26:37 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**200**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	9/27/2017 6:32:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**958**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**610**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:25:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.1**			S.U.		9/21/2017 10:25:00 AM
Temperature (E170.1)	**13**			deg C		9/21/2017 10:25:00 AM
Turbidity (E180.1)	**4**	1.0		NTU		9/21/2017 10:25:00 AM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 1:36:00 PM
Arsenic	**15.5**	5.00		µg/L	1	10/4/2017 1:36:00 PM
Boron	**294**	50.0		µg/L	1	10/4/2017 1:36:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 1:36:00 PM
Calcium	**49700**	50.0		µg/L	1	10/4/2017 1:36:00 PM
Copper	**7.19**	5.00		µg/L	1	10/4/2017 1:36:00 PM
Iron	**258**	50.0		µg/L	1	10/4/2017 1:36:00 PM
Magnesium	**15100**	50.0		µg/L	1	10/4/2017 1:36:00 PM
Manganese	**56.6**	20.0		µg/L	1	10/4/2017 1:36:00 PM
Potassium	**1740**	50.0		µg/L	1	10/4/2017 1:36:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 1:36:00 PM
Sodium	**71400**	500		µg/L	10	10/4/2017 1:40:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**186**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:29:32 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**9.97**	2.00		mg/L	2	10/5/2017 7:02:54 PM
Sulfate	**252**	20.0		mg/L	10	10/5/2017 6:50:48 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**100**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1		mg/L	1	9/27/2017 6:34:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:25:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**681**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**420**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 5:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.4**			S.U.		9/20/2017 5:30:00 PM
Temperature (E170.1)	**17**			deg C		9/20/2017 5:30:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/20/2017 5:30:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 1:44:00 PM
Arsenic	**8.19**	5.00		µg/L	1	10/4/2017 1:44:00 PM
Boron	**290**	50.0		µg/L	1	10/4/2017 1:44:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 1:44:00 PM
Calcium	**80900**	50.0		µg/L	1	10/4/2017 1:44:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 1:44:00 PM
Iron	**523**	50.0		µg/L	1	10/4/2017 1:44:00 PM
Magnesium	**66800**	50.0		µg/L	1	10/4/2017 1:44:00 PM
Manganese	**426**	20.0		µg/L	1	10/4/2017 1:44:00 PM
Potassium	**2640**	50.0		µg/L	1	10/4/2017 1:44:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 1:44:00 PM
Sodium	**40000**	50.0		µg/L	1	10/4/2017 1:44:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**477**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:31:07 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**3.03**	2.00		mg/L	2	10/5/2017 7:27:05 PM
Sulfate	**261**	20.0		mg/L	10	10/5/2017 7:15:00 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.1**	0.1		mg/L	1	9/27/2017 6:36:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 5:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**876**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**670**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**6.9**			S.U.		9/21/2017 10:30:00 AM
Temperature (E170.1)	**14**			deg C		9/21/2017 10:30:00 AM
Turbidity (E180.1)	**500**	1.0		NTU		9/21/2017 10:30:00 AM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 1:57:00 PM
Arsenic	**14.3**	5.00		µg/L	1	10/4/2017 1:57:00 PM
Boron	**97.5**	50.0		µg/L	1	10/4/2017 1:57:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 1:57:00 PM
Calcium	**61100**	50.0		µg/L	1	10/4/2017 1:57:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 1:57:00 PM
Iron	**463**	50.0		µg/L	1	10/4/2017 1:57:00 PM
Magnesium	**59700**	50.0		µg/L	1	10/4/2017 1:57:00 PM
Manganese	**35.7**	20.0		µg/L	1	10/4/2017 1:57:00 PM
Potassium	**2600**	50.0		µg/L	1	10/4/2017 1:57:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 1:57:00 PM
Sodium	**20800**	50.0		µg/L	1	10/4/2017 1:57:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**398**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:32:42 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	10/5/2017 8:03:50 PM
Sulfate	**74.2**	4.00		mg/L	2	10/5/2017 8:03:50 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:38:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**170922003**	**Collection Date:**	9/21/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**686**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**390**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		9/20/2017 2:50:00 PM
Temperature (E170.1)	**19**			deg C		9/20/2017 2:50:00 PM
Turbidity (E180.1)	**189**	1.0		NTU		9/20/2017 2:50:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**454**	100		µg/L	1	10/4/2017 2:04:00 PM
Arsenic	**9.31**	5.00		µg/L	1	10/4/2017 2:04:00 PM
Boron	**523**	50.0		µg/L	1	10/4/2017 2:04:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 2:04:00 PM
Calcium	**7430**	50.0		µg/L	1	10/4/2017 2:04:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 2:04:00 PM
Iron	**1010**	50.0		µg/L	1	10/4/2017 2:04:00 PM
Magnesium	**1980**	50.0		µg/L	1	10/4/2017 2:04:00 PM
Manganese	**44.5**	20.0		µg/L	1	10/4/2017 2:04:00 PM
Potassium	**1410**	50.0		µg/L	1	10/4/2017 2:04:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 2:04:00 PM
Sodium	**206000**	500		µg/L	10	10/4/2017 2:08:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**27**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:34:18 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.20**	2.00		mg/L	2	10/5/2017 8:40:13 PM
Sulfate	**66.8**	4.00		mg/L	2	10/5/2017 8:40:13 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**300**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.4**	0.1	N	mg/L	1	9/27/2017 6:40:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:50:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**677**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**470**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.03**	0.10		mg/L		9/20/2017 2:00:00 PM
Flow, GPD	**457**			gal/day		9/20/2017 2:00:00 PM
pH (E150.1)	**7.8**			S.U.		9/20/2017 2:00:00 PM
Temperature (E170.1)	**15**			deg C		9/20/2017 2:00:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/20/2017 2:00:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	10/4/2017 2:17:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/4/2017 2:17:00 PM
Boron	**3150**	50.0		µg/L	1	10/4/2017 2:17:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 2:17:00 PM
Calcium	**307000**	500		µg/L	10	10/4/2017 2:22:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 2:17:00 PM
Iron	**ND**	50.0		µg/L	1	10/4/2017 2:17:00 PM
Magnesium	**115000**	50.0		µg/L	1	10/4/2017 2:17:00 PM
Manganese	**ND**	20.0		µg/L	1	10/4/2017 2:17:00 PM
Potassium	**6630**	50.0		µg/L	1	10/4/2017 2:17:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 2:17:00 PM
Sodium	**35700**	500		µg/L	10	10/4/2017 2:22:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1240**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:35:53 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**80.6**	2.00		mg/L	2	10/5/2017 9:04:24 PM
Sulfate	**896**	40.0		mg/L	20	10/5/2017 8:52:19 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**340**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	9/27/2017 6:50:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1940**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1770**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**170922003**	**Collection Date:**	9/20/2017 12:10:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.57**	0.10		mg/L		9/20/2017 12:01:00 PM
Flow, GPD	**57**			gal/day		9/20/2017 12:01:00 PM
pH (E150.1)	**7.5**			S.U.		9/20/2017 12:01:00 PM
Temperature (E170.1)	**16**			deg C		9/20/2017 12:01:00 PM
Turbidity (E180.1)	**65**	1.0		NTU		9/20/2017 12:01:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 2:29:00 PM
Arsenic	**6.82**	5.00		µg/L	1	10/4/2017 2:29:00 PM
Boron	**2720**	50.0		µg/L	1	10/4/2017 2:29:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 2:29:00 PM
Calcium	**482000**	500		µg/L	10	10/4/2017 2:54:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 2:29:00 PM
Iron	**144**	50.0		µg/L	1	10/4/2017 2:29:00 PM
Magnesium	**216000**	500		µg/L	10	10/4/2017 2:54:00 PM
Manganese	**56.8**	20.0		µg/L	1	10/4/2017 2:29:00 PM
Potassium	**10700**	50.0		µg/L	1	10/4/2017 2:29:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 2:29:00 PM
Sodium	**125000**	500		µg/L	10	10/4/2017 2:54:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**2016**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:37:30 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**34.8**	5.00		mg/L	5	10/5/2017 9:28:35 PM
Sulfate	**1440**	100		mg/L	50	10/5/2017 9:16:30 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**480**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**170922003**	**Collection Date:**	9/20/2017 12:10:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	9/27/2017 6:52:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2730**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2620**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**170922003**	**Collection Date:**	9/20/2017 1:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.66**	0.10		mg/L		9/20/2017 1:25:00 PM
Flow, GPD	**6848**			gal/day		9/20/2017 1:25:00 PM
pH (E150.1)	**6.5**			S.U.		9/20/2017 1:25:00 PM
Temperature (E170.1)	**16**			deg C		9/20/2017 1:25:00 PM
Turbidity (E180.1)	**200**	1.0		NTU		9/20/2017 1:25:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 2:59:00 PM
Arsenic	**56.0**	5.00		µg/L	1	10/4/2017 2:59:00 PM
Boron	**3930**	50.0		µg/L	1	10/4/2017 2:59:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 2:59:00 PM
Calcium	**352000**	500		µg/L	10	10/4/2017 3:05:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 2:59:00 PM
Iron	**6640**	50.0		µg/L	1	10/4/2017 2:59:00 PM
Magnesium	**80500**	50.0		µg/L	1	10/4/2017 2:59:00 PM
Manganese	**815**	20.0		µg/L	1	10/4/2017 2:59:00 PM
Potassium	**16000**	50.0		µg/L	1	10/4/2017 2:59:00 PM
Selenium	**ND**	5.00		µg/L	1	10/4/2017 2:59:00 PM
Sodium	**40200**	500		µg/L	10	10/4/2017 3:05:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 9/28/2017)						
Mercury	**1.3**	0.5		ng/L	1	10/3/2017
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1211**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:39:07 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**30.3**	2.00		mg/L	2	10/5/2017 9:52:46 PM
Sulfate	**521**	40.0		mg/L	20	10/5/2017 9:40:40 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**170922003**	**Collection Date:**	9/20/2017 1:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**570**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 6:54:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1750**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1490**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**170922003**	**Collection Date:**	9/20/2017 12:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.19**	0.10		mg/L		9/20/2017 12:35:00 PM
Flow, GPD	**4451**			gal/day		9/20/2017 12:35:00 PM
pH (E150.1)	**7.9**			S.U.		9/20/2017 12:35:00 PM
Temperature (E170.1)	**16**			deg C		9/20/2017 12:35:00 PM
Turbidity (E180.1)	**25**	1.0		NTU		9/20/2017 12:35:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 3:10:00 PM
Arsenic	**16.0**	5.00		µg/L	1	10/4/2017 3:10:00 PM
Boron	**41200**	50.0		µg/L	1	10/4/2017 3:10:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 3:10:00 PM
Calcium	**579000**	500		µg/L	10	10/4/2017 3:14:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 3:10:00 PM
Iron	**2430**	50.0		µg/L	1	10/4/2017 3:10:00 PM
Magnesium	**93900**	50.0		µg/L	1	10/4/2017 3:10:00 PM
Manganese	**1140**	20.0		µg/L	1	10/4/2017 3:10:00 PM
Potassium	**74500**	500		µg/L	10	10/4/2017 3:14:00 PM
Selenium	**14.0**	5.00		µg/L	1	10/4/2017 3:10:00 PM
Sodium	**227000**	500		µg/L	10	10/4/2017 3:14:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1833**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:40:44 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**307**	5.00		mg/L	5	10/5/2017 10:54:37 PM
Sulfate	**1760**	100		mg/L	50	10/5/2017 10:42:22 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**300**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**170922003**	**Collection Date:**	9/20/2017 12:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**1.4**	0.1		mg/L	1	9/27/2017 6:56:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3710**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**3410**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**170922003**	**Collection Date:**	9/20/2017 11:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**2.46**	0.10		mg/L		9/20/2017 11:40:00 AM
Flow, GPD	**216**			gal/day		9/20/2017 11:40:00 AM
pH (E150.1)	**7.9**			S.U.		9/20/2017 11:40:00 AM
Temperature (E170.1)	**16**			deg C		9/20/2017 11:40:00 AM
Turbidity (E180.1)	**25**	1.0		NTU		9/20/2017 11:40:00 AM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/4/2017 3:18:00 PM
Arsenic	**5.18**	5.00		µg/L	1	10/4/2017 3:18:00 PM
Boron	**25500**	50.0		µg/L	1	10/4/2017 3:18:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/4/2017 3:18:00 PM
Calcium	**804000**	500		µg/L	10	10/4/2017 3:22:00 PM
Copper	**ND**	5.00		µg/L	1	10/4/2017 3:18:00 PM
Iron	**ND**	50.0		µg/L	1	10/4/2017 3:18:00 PM
Magnesium	**115000**	50.0		µg/L	1	10/4/2017 3:18:00 PM
Manganese	**317**	20.0		µg/L	1	10/4/2017 3:18:00 PM
Potassium	**133000**	500		µg/L	10	10/4/2017 3:22:00 PM
Selenium	**11.8**	5.00		µg/L	1	10/4/2017 3:18:00 PM
Sodium	**337000**	500		µg/L	10	10/4/2017 3:22:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**2478**	5		mg/L CaCO3	1	10/4/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:42:22 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**745**	50.0		mg/L	50	10/5/2017 11:06:43 PM
Sulfate	**1720**	100		mg/L	50	10/5/2017 11:06:43 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**340**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**170922003**	**Collection Date:**	9/20/2017 11:40:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	9/27/2017 6:58:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**4870**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**4290**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:** ~~21" Inlet To Pond~~ Inlet to Pond (A-2) 12/18/17
Work Order:	**170922003**	**Collection Date:** 9/20/2017 4:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:** 170922003-018
PO#:		**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**0.95**	0.10		mg/L		9/20/2017 4:00:00 PM
Flow, GPD	**14,838**			gal/day		9/20/2017 4:00:00 PM
pH (E150.1)	**8.3**			S.U.		9/20/2017 4:00:00 PM
Temperature (E170.1)	**14**			deg C		9/20/2017 4:00:00 PM
Turbidity (E180.1)	**75**	1.0		NTU		9/20/2017 4:00:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **WB**
Aluminum	**ND**	100		µg/L	1	10/5/2017 12:27:00 PM
Arsenic	**30.5**	5.00		µg/L	1	10/5/2017 12:27:00 PM
Boron	**20400**	50.0		µg/L	1	10/5/2017 12:27:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 12:27:00 PM
Calcium	**448000**	500		µg/L	10	10/5/2017 1:28:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 12:27:00 PM
Iron	**3540**	50.0		µg/L	1	10/5/2017 12:27:00 PM
Magnesium	**88300**	50.0		µg/L	1	10/5/2017 12:27:00 PM
Manganese	**668**	20.0		µg/L	1	10/5/2017 12:27:00 PM
Potassium	**75700**	50.0		µg/L	1	10/5/2017 12:27:00 PM
Selenium	**22.1**	5.00		µg/L	1	10/5/2017 12:27:00 PM
Sodium	**173000**	500		µg/L	10	10/5/2017 1:28:00 PM
LOW LEVEL MERCURY - EPA 1631E **(Prep: Method - 9/28/2017)**						Analyst: **SM**
Mercury	**ND**	0.5		ng/L	1	10/3/2017
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**1481**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:47:13 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**144**	5.00		mg/L	5	10/5/2017 11:42:59 PM
Sulfate	**1280**	100		mg/L	50	10/5/2017 11:30:53 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT: Lockwood Hills LLC
Work Order: **170922003**
Reference: Lockwood Ash Landfill / Quarterly
PO#:

Client Sample ID: ~~21" Inlet To Pond~~ Inlet to Pond (13) 12/18/17
Collection Date: 9/20/2017 4:00:00 PM
Lab Sample ID: 170922003-018
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**440**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1		mg/L	1	9/27/2017 7:00:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2960**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2660**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.44**	0.10		mg/L		9/21/2017 9:55:00 AM
pH (E150.1)	**7.0**			S.U.		9/21/2017 9:55:00 AM
Temperature (E170.1)	**19**			deg C		9/21/2017 9:55:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/21/2017 9:55:00 AM
ICP METALS - EPA 200.7						Analyst: **WB**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/5/2017 1:35:00 PM
Arsenic	**5.13**	5.00		µg/L	1	10/5/2017 1:35:00 PM
Boron	**ND**	50.0		µg/L	1	10/5/2017 1:35:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 1:35:00 PM
Calcium	**42900**	50.0		µg/L	1	10/5/2017 1:35:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 1:35:00 PM
Iron	**69.7**	50.0		µg/L	1	10/5/2017 1:35:00 PM
Magnesium	**11800**	50.0		µg/L	1	10/5/2017 1:35:00 PM
Manganese	**ND**	20.0		µg/L	1	10/5/2017 1:35:00 PM
Potassium	**2790**	50.0		µg/L	1	10/5/2017 1:35:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 1:35:00 PM
Sodium	**26300**	50.0		µg/L	1	10/5/2017 1:35:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**156**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:48:51 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**44.5**	2.00		mg/L	2	10/5/2017 11:55:04 PM
Sulfate	**26.1**	4.00		mg/L	2	10/5/2017 11:55:04 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**120**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 7:02:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**395**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**205**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**3.85**	0.10		mg/L		9/21/2017 9:30:00 AM
pH (E150.1)	**6.5**			S.U.		9/21/2017 9:30:00 AM
Temperature (E170.1)	**19**			deg C		9/21/2017 9:30:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/21/2017 9:30:00 AM
ICP METALS - EPA 200.7						Analyst: **WB**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/5/2017 1:41:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/5/2017 1:41:00 PM
Boron	**ND**	50.0		µg/L	1	10/5/2017 1:41:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 1:41:00 PM
Calcium	**43700**	50.0		µg/L	1	10/5/2017 1:41:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 1:41:00 PM
Iron	**64.3**	50.0		µg/L	1	10/5/2017 1:41:00 PM
Magnesium	**12000**	50.0		µg/L	1	10/5/2017 1:41:00 PM
Manganese	**ND**	20.0		µg/L	1	10/5/2017 1:41:00 PM
Potassium	**2830**	50.0		µg/L	1	10/5/2017 1:41:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 1:41:00 PM
Sodium	**27300**	50.0		µg/L	1	10/5/2017 1:41:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**159**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:50:30 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**44.7**	2.00		mg/L	2	10/6/2017 12:56:55 AM
Sulfate	**26.0**	4.00		mg/L	2	10/6/2017 12:56:55 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**150**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 7:04:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**403**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**220**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.44**	0.10		mg/L		9/21/2017 9:55:00 AM
pH (E150.1)	**7.0**			S.U.		9/21/2017 9:55:00 AM
Temperature (E170.1)	**19**			deg C		9/21/2017 9:55:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/21/2017 9:55:00 AM
ICP METALS - EPA 200.7						Analyst: **WB**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/5/2017 1:48:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/5/2017 1:48:00 PM
Boron	**ND**	50.0		µg/L	1	10/5/2017 1:48:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 1:48:00 PM
Calcium	**42800**	50.0		µg/L	1	10/5/2017 1:48:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 1:48:00 PM
Iron	**67.9**	50.0		µg/L	1	10/5/2017 1:48:00 PM
Magnesium	**11900**	50.0		µg/L	1	10/5/2017 1:48:00 PM
Manganese	**ND**	20.0		µg/L	1	10/5/2017 1:48:00 PM
Potassium	**2740**	50.0		µg/L	1	10/5/2017 1:48:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 1:48:00 PM
Sodium	**26500**	50.0		µg/L	1	10/5/2017 1:48:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**156**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:52:10 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**44.1**	2.00		mg/L	2	10/6/2017 1:09:16 AM
Sulfate	**25.4**	4.00		mg/L	2	10/6/2017 1:09:16 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**110**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 7:06:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**398**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**210**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**1.04**	0.10		mg/L		9/20/2017 2:35:00 PM
pH (E150.1)	**8.3**			S.U.		9/20/2017 2:35:00 PM
Temperature (E170.1)	**26**			deg C		9/20/2017 2:35:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/20/2017 2:35:00 PM
ICP METALS - EPA 200.7						Analyst: **WB**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/5/2017 1:57:00 PM
Arsenic	**6.81**	5.00		µg/L	1	10/5/2017 1:57:00 PM
Boron	**17500**	50.0		µg/L	1	10/5/2017 1:57:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 1:57:00 PM
Calcium	**270000**	500		µg/L	10	10/5/2017 2:03:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 1:57:00 PM
Iron	**75.8**	50.0		µg/L	1	10/5/2017 1:57:00 PM
Magnesium	**82000**	50.0		µg/L	1	10/5/2017 1:57:00 PM
Manganese	**ND**	20.0		µg/L	1	10/5/2017 1:57:00 PM
Potassium	**70500**	50.0		µg/L	1	10/5/2017 1:57:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 1:57:00 PM
Sodium	**140000**	50.0		µg/L	1	10/5/2017 1:57:00 PM
Sodium	**165000**	500		µg/L	10	10/5/2017 2:03:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**1012**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:56:47 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**156**	5.00		mg/L	5	10/6/2017 1:33:27 AM
Sulfate	**1090**	100		mg/L	50	10/6/2017 1:21:22 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**110**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**170922003**	**Collection Date:**	9/20/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	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	9/27/2017 7:08:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2310**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2020**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.67**	0.10		mg/L		9/21/2017 9:55:00 AM
pH (E150.1)	**7.0**			S.U.		9/21/2017 9:55:00 AM
Temperature (E170.1)	**21**			deg C		9/21/2017 9:55:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		9/21/2017 9:55:00 AM
ICP METALS - EPA 200.7						Analyst: **WB**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/5/2017 2:09:00 PM
Arsenic	**ND**	5.00		µg/L	1	10/5/2017 2:09:00 PM
Boron	**ND**	50.0		µg/L	1	10/5/2017 2:09:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 2:09:00 PM
Calcium	**101**	50.0		µg/L	1	10/5/2017 2:09:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 2:09:00 PM
Iron	**ND**	50.0		µg/L	1	10/5/2017 2:09:00 PM
Magnesium	**ND**	50.0		µg/L	1	10/5/2017 2:09:00 PM
Manganese	**ND**	20.0		µg/L	1	10/5/2017 2:09:00 PM
Potassium	**ND**	50.0		µg/L	1	10/5/2017 2:09:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 2:09:00 PM
Sodium	**287**	50.0		µg/L	1	10/5/2017 2:09:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:58:21 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	10/6/2017 1:45:32 AM
Sulfate	**ND**	4.00		mg/L	2	10/6/2017 1:45:32 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**1**	1	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	9/27/2017 7:15:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:55:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**2**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**ND**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	LLHg Field Blank
Work Order:	**170922003**	**Collection Date:**	9/20/2017 1:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-024
PO#:		**Matrix:**	FIELD BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: Method - 9/28/2017)						
Mercury	**ND**	0.5		ng/L	1	10/3/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:35:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.2**			S.U.		9/21/2017 9:35:00 AM
Temperature (E170.1)	**13**			deg C		9/21/2017 9:35:00 AM
Turbidity (E180.1)	**8**	1.0		NTU		9/21/2017 9:35:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 9/25/2017)**						Analyst: **WB**
Aluminum	**ND**	100		µg/L	1	10/5/2017 2:14:00 PM
Arsenic	**5.34**	5.00		µg/L	1	10/5/2017 2:14:00 PM
Boron	**820**	50.0		µg/L	1	10/5/2017 2:14:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/5/2017 2:14:00 PM
Calcium	**92900**	50.0		µg/L	1	10/5/2017 2:14:00 PM
Copper	**ND**	5.00		µg/L	1	10/5/2017 2:14:00 PM
Iron	**251**	50.0		µg/L	1	10/5/2017 2:14:00 PM
Magnesium	**23900**	50.0		µg/L	1	10/5/2017 2:14:00 PM
Manganese	**70.3**	20.0		µg/L	1	10/5/2017 2:14:00 PM
Potassium	**2300**	50.0		µg/L	1	10/5/2017 2:14:00 PM
Selenium	**ND**	5.00		µg/L	1	10/5/2017 2:14:00 PM
Sodium	**70100**	500		µg/L	10	10/5/2017 2:19:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **WB**
Total Hardness (As CaCO3)	**330**	5		mg/L CaCO3	1	10/5/2017
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 9/26/2017)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 2:59:56 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**47.7**	2.00		mg/L	2	10/6/2017 1:57:37 AM
Sulfate	**86.9**	4.00		mg/L	2	10/6/2017 1:57:37 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**350**	10	H	mg/L CaCO3	1	10/6/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.6**	0.1		mg/L	1	9/27/2017 7:17:00 PM

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**170922003**	**Collection Date:**	9/21/2017 9:35:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**883**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**520**	5		mg/L	1	9/26/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**170922003**	**Collection Date:**	9/20/2017 11:10:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**4.83**	0.10		mg/L		9/20/2017 11:10:00 AM
Flow, GPD	**105**			gal/day		9/20/2017 11:10:00 AM
pH (E150.1)	**7.6**			S.U.		9/20/2017 11:10:00 AM
Temperature (E170.1)	**19**			deg C		9/20/2017 11:10:00 AM
Turbidity (E180.1)	**20**	1.0		NTU		9/20/2017 11:10:00 AM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 9/25/2017)						
Aluminum	**ND**	100		µg/L	1	10/6/2017 12:49:00 PM
Arsenic	**5.63**	5.00		µg/L	1	10/6/2017 12:49:00 PM
Boron	**236**	50.0		µg/L	1	10/6/2017 12:49:00 PM
Cadmium	**ND**	5.00		µg/L	1	10/6/2017 12:49:00 PM
Calcium	**276000**	500		µg/L	10	10/6/2017 12:54:00 PM
Copper	**ND**	5.00		µg/L	1	10/6/2017 12:49:00 PM
Iron	**ND**	50.0		µg/L	1	10/6/2017 12:49:00 PM
Magnesium	**51300**	50.0		µg/L	1	10/6/2017 12:49:00 PM
Manganese	**ND**	20.0		µg/L	1	10/6/2017 12:49:00 PM
Potassium	**3620**	50.0		µg/L	1	10/6/2017 12:49:00 PM
Selenium	**ND**	5.00	N	µg/L	1	10/6/2017 12:49:00 PM
Sodium	**25900**	50.0		µg/L	1	10/6/2017 12:49:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**900**	5		mg/L CaCO3	1	10/6/2017
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 9/26/2017)						
Mercury	**ND**	0.0002		mg/L	1	9/26/2017 3:01:30 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**8.88**	5.00		mg/L	5	10/6/2017 2:21:48 AM
Sulfate	**420**	100		mg/L	50	10/6/2017 2:09:43 AM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**430**	10		mg/L CaCO3	1	10/3/2017
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**170922003**	**Collection Date:**	9/20/2017 11:10:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	9/27/2017 7:19:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1320**	1		µmhos/cm	1	9/27/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1080**	5		mg/L	1	9/22/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 2
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-027
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		9/20/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 4
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-028
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		9/20/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 5
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-029
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		9/20/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-SH
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-030
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Poor Recovery**			NA		9/20/2017

Adirondack Environmental Services, Inc

Date: *10-Oct-17*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8405
Work Order:	**170922003**	**Collection Date:**	9/20/2017
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	170922003-031
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		9/20/2017

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CHAIN OF CUSTODY RECORD

AES Work Order#: 170922003

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: Paul Buist
Client Phone No:	PO #:	Samplers Signature: Paul Buist
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis (Observation Only)
001	7842	9/20/17	—	A P	GW		G	40	Lockwood Ash LF Quarterly
002	8404	9/21/17	11:15	(A) P	GW		G	4	Field pH, Temp, Turbidity
003	8908-D	9/21/17	12:00	A (P)	GW		G	4	
004	8908-SH	9/21/17	1:00	A (P)	GW		G	4	
005	8909-D	9/20/17	2:50	A (P)	GW		G	4	
006	8909-SH	9/20/17	2:35	A (P)	GW		G	4	
007	8910-D	9/20/17	3:45	A (P)	GW		G	4	
008	8911-D	9/21/17	10:40	(A) P	GW		G	4	
009	8911-SH	9/21/17	10:25	(A) P	GW		G	4	
010	8942-D	9/20/17	5:30	A (P)	GW		G	4	
011	9306-SH	9/21/17	10:30	(A)	GW		G	4	
012	GW Dup 8909-D	9/20/17	2:50	(P)	GW		G	4	

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Special Instructions/Remarks:

Page 1 of 3

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

		Date	Time
Relinquished by: (Signature) Paul Buist	Received by: (Signature)	9/22/17	9:30
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	**Received for Laboratory by:**	Date 9/22/17	Time 9:30AM

Sample Temperature	Properly Preserved	Received Within Holding Times
Ambient (Chilled)	(Y) N	(Y) N
Chilling Process begun 4°C		
Notes:	Notes:	Notes:

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CHAIN OF CUSTODY RECORD

AES Work Order#: 17092003

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: Paul Bast
Client Phone No:	PO #:	Samplers Signature: Paul Bast
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
013	**GW Dep Drain 1**	9/20/17	2:00	A (P)	GW		G	4	Lockwood Q Field pH, Temp, Turb, Field Flow Reading, DO
014	**Leak Detection Syst.**	9/20/17	12:10	A (P)	GW		G	4	"
015	**Under Drain 1**	9/20/17	1:25	A (P)	GW		G	5	"
016	**Under Drain 2**	9/20/17	12:35	A (P)	GW		G	4	"
017	**Under Drain 3**	9/20/17	11:40	(A) P	GW		G	4	"
018	**21" Inlet to Pond**	9/20/17	4:00	A (P)	GW		G	5	"
019	**Keuka Upstream**	9/21/17	9:55	(A) P	GW		G	4	Lockwood Quarterly +DO
020	**Keuka Downstream**	9/21/17	9:30	(A) P	SF		G	4	Lockwood Quarterly +DO
021	**Surface Water Dup**	9/21/17	9:55	(A) P	SF		G	4	Lockwood Quarterly +DO
022	**Pond Grab**	9/20/17	2:35	A (P)	SF		G	4	Lockwood Quarterly +DO
023	**Field Blank**	9/21/17	9:55	(A)	GW		G	4	Lockwood Quarterly +DO
024	**LLHg Field Blank**	9/20/17	1:35	(P)	GW		G	1	EPA 1631

018 JM 9/20/17

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

		Date	Time
Relinquished by: (Signature) Paul Bast	Received by: (Signature)	9/22/17	9:30
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	**Received for Laboratory by:**	Date 9/22/17	Time 9:30 AM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

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CHAIN OF CUSTODY RECORD

AES Work Order#: 1709 22003

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: Paul Buist
Client Phone No:	PO #:	Samplers Signature: Paul Buist
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
025	8401	9/21/17	9:35	(A)	GW			4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026	GW Dep Drain 3	9/20/17	11:10	(A) P	GW			4	+ Field Flow Reading, DO
027	GW Dep Drain 2	9/20/17	—	A P	GW			0	Observation Only
028	GW Dep Drain 4	9/20/17	—	A P	GW			0	Observation Only
029	Under Drain 5	9/20/17	—	A P	GW			0	Observation Only
030	8910-SH	9/20/17	—	A P	GW			0	Observation Only
031	8405	9/20/17	—	A	GW			0	Observation Only
				P					
				A P					
				A P					
				A P					
				A P					

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

		Date	Time
Relinquished by: (Signature) Paul Buist	Received by: (Signature)	9/22/17	9:30
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	**Received for Laboratory by:** J. M	Date 9/22/17	Time 9:30 A.M.

Sample Temperature
Ambient (Chilled)
Chilling Process ~~begun~~
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
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.

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 23, 2018

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

TEL: (315) 536-2359

Work Order No: 171229039

RE: Lockwood Ash Landfill
Quarterly

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 31 samples on 12/29/2017 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	Lockwood Hills LLC	**Date:**	*23-Jan-18*
Project:	Lockwood Ash Landfill		
Lab Order:	171229039		

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.

Qualifiers:

ND - Not Detected at reporting limit
J - Analyte detected below quantitation limit
B - Analyte detected in Blank
X - Exceeds maximum contamination limit
H - Hold time exceeded
N - Matrix Spike below acceptable limits
N+ - Matrix Spike is above acceptable limits
C - Details are above in Case Narrative
S - LCS Spike recovery is below acceptable limits
S+ - LCS Spike recovery is above acceptable limits
Z - Duplication outside acceptable limits
T - Tentatively Identified Compound-Estimated
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: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	7842
Work Order:	**171229039**	**Collection Date:**	
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-001
PO#:		**Matrix:**	GROUNDWATER

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

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:33:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**6.8**			S.U.		12/27/2017 2:33:00 PM
Temperature (E170.1)	**6**			deg C		12/27/2017 2:33:00 PM
Turbidity (E180.1)	**68.4**	1.0		NTU		12/27/2017 2:33:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/8/2018 2:10:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 2:10:00 PM
Boron	**186**	50.0		µg/L	1	1/8/2018 2:10:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 2:10:00 PM
Calcium	**120000**	50.0		µg/L	1	1/8/2018 2:10:00 PM
Copper	**6.99**	5.00		µg/L	1	1/8/2018 2:10:00 PM
Iron	**63.8**	50.0		µg/L	1	1/8/2018 2:10:00 PM
Magnesium	**24900**	50.0		µg/L	1	1/8/2018 2:10:00 PM
Manganese	**ND**	20.0		µg/L	1	1/8/2018 2:10:00 PM
Potassium	**1790**	50.0		µg/L	1	1/8/2018 2:10:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 2:10:00 PM
Sodium	**14400**	50.0		µg/L	1	1/8/2018 2:10:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**403**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 12:37:43 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	1/4/2018 4:48:59 PM
Sulfate	**96.2**	4.00		mg/L	2	1/4/2018 4:48:59 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 1:47:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8404
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:33:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**735**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**380**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:20:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.4**			S.U.		12/27/2017 11:20:00 AM
Temperature (E170.1)	**7**			deg C		12/27/2017 11:20:00 AM
Turbidity (E180.1)	**3**	1.0		NTU		12/27/2017 11:20:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/8/2018 2:38:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 2:38:00 PM
Boron	**228**	50.0		µg/L	1	1/8/2018 2:38:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 2:38:00 PM
Calcium	**152000**	50.0		µg/L	1	1/8/2018 2:38:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 2:38:00 PM
Iron	**1010**	50.0		µg/L	1	1/8/2018 2:38:00 PM
Magnesium	**67000**	50.0		µg/L	1	1/8/2018 2:38:00 PM
Manganese	**121**	20.0		µg/L	1	1/8/2018 2:38:00 PM
Potassium	**3070**	50.0		µg/L	1	1/8/2018 2:38:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 2:38:00 PM
Sodium	**33300**	50.0		µg/L	1	1/8/2018 2:38:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**654**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 12:39:24 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**14.1**	5.00		mg/L	5	1/4/2018 5:06:05 PM
Sulfate	**260**	10.0		mg/L	5	1/4/2018 5:06:05 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**340**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.5**	0.1		mg/L	1	1/4/2018 1:49:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:20:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1230**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**825**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 12:15:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.4**			S.U.		12/27/2017 12:15:00 PM
Temperature (E170.1)	**9**			deg C		12/27/2017 12:15:00 PM
Turbidity (E180.1)	**47**	1.0		NTU		12/27/2017 12:15:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/8/2018 2:43:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 2:43:00 PM
Boron	**154**	50.0		µg/L	1	1/8/2018 2:43:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 2:43:00 PM
Calcium	**173000**	50.0		µg/L	1	1/8/2018 2:43:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 2:43:00 PM
Iron	**264**	50.0		µg/L	1	1/8/2018 2:43:00 PM
Magnesium	**64800**	50.0		µg/L	1	1/8/2018 2:43:00 PM
Manganese	**82.3**	20.0		µg/L	1	1/8/2018 2:43:00 PM
Potassium	**2760**	50.0		µg/L	1	1/8/2018 2:43:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 2:43:00 PM
Sodium	**28900**	50.0		µg/L	1	1/8/2018 2:43:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**699**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 12:40:57 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**12.3**	5.00		mg/L	5	1/4/2018 5:23:10 PM
Sulfate	**243**	10.0		mg/L	5	1/4/2018 5:23:10 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**390**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 1:51:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8908-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 12:15:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1220**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**740**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 1:12:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**9.0**			S.U.		12/27/2017 1:12:00 PM
Temperature (E170.1)	**8**			deg C		12/27/2017 1:12:00 PM
Turbidity (E180.1)	**> 999**	1.0		NTU		12/27/2017 1:12:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**506**	100		µg/L	1	1/8/2018 2:49:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 2:49:00 PM
Boron	**723**	50.0		µg/L	1	1/8/2018 2:49:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 2:49:00 PM
Calcium	**19900**	50.0		µg/L	1	1/8/2018 2:49:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 2:49:00 PM
Iron	**2200**	50.0		µg/L	1	1/8/2018 2:49:00 PM
Magnesium	**4730**	50.0		µg/L	1	1/8/2018 2:49:00 PM
Manganese	**114**	20.0		µg/L	1	1/8/2018 2:49:00 PM
Potassium	**1520**	50.0		µg/L	1	1/8/2018 2:49:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 2:49:00 PM
Sodium	**180000**	50000		µg/L	10	1/8/2018 3:55:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**69**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 12:58:10 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.27**	2.00		mg/L	2	1/4/2018 5:40:15 PM
Sulfate	**63.8**	4.00		mg/L	2	1/4/2018 5:40:15 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**320**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.6**	0.1		mg/L	1	1/4/2018 1:53:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 1:12:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**757**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**535**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 1:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.8**			S.U.		12/27/2017 1:55:00 PM
Temperature (E170.1)	**15**			deg C		12/27/2017 1:55:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 1:55:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/8/2018 2:55:00 PM
Arsenic	**7.73**	5.00		µg/L	1	1/8/2018 2:55:00 PM
Boron	**231**	50.0		µg/L	1	1/8/2018 2:55:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 2:55:00 PM
Calcium	**28800**	50.0		µg/L	1	1/8/2018 2:55:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 2:55:00 PM
Iron	**ND**	50.0		µg/L	1	1/8/2018 2:55:00 PM
Magnesium	**17800**	50.0		µg/L	1	1/8/2018 2:55:00 PM
Manganese	**ND**	20.0		µg/L	1	1/8/2018 2:55:00 PM
Potassium	**2130**	50.0		µg/L	1	1/8/2018 2:55:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 2:55:00 PM
Sodium	**68600**	50000		µg/L	10	1/8/2018 4:03:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**145**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 12:59:44 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	1/4/2018 5:57:21 PM
Sulfate	**117**	4.00		mg/L	2	1/4/2018 5:57:21 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**160**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 1:55:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8909-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 1:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**564**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**320**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:40:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.9**			S.U.		12/27/2017 2:40:00 PM
Temperature (E170.1)	**10**			deg C		12/27/2017 2:40:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 2:40:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/8/2018 3:01:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 3:01:00 PM
Boron	**2840**	50.0		µg/L	1	1/8/2018 3:01:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 3:01:00 PM
Calcium	**82100**	50.0		µg/L	1	1/8/2018 3:01:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 3:01:00 PM
Iron	**ND**	50.0		µg/L	1	1/8/2018 3:01:00 PM
Magnesium	**27500**	50.0		µg/L	1	1/8/2018 3:01:00 PM
Manganese	**44.4**	20.0		µg/L	1	1/8/2018 3:01:00 PM
Potassium	**3410**	50.0		µg/L	1	1/8/2018 3:01:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 3:01:00 PM
Sodium	**109000**	500		µg/L	10	1/8/2018 4:10:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	319 ~~39~~	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0	2/27/18					Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:01:18 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**25.4**	5.00		mg/L	5	1/4/2018 7:06:24 PM
Sulfate	**343**	10.0		mg/L	5	1/4/2018 7:06:24 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**130**	10		mg/L CaCO3	1	1/4/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	1/4/2018 1:57:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:40:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1060**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**675**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.2**			S.U.		12/27/2017 3:25:00 PM
Temperature (E170.1)	**6**			deg C		12/27/2017 3:25:00 PM
Turbidity (E180.1)	**28**	1.0		NTU		12/27/2017 3:25:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/8/2018 4:17:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/8/2018 4:17:00 PM
Boron	**1410**	50.0		µg/L	1	1/8/2018 4:17:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 4:17:00 PM
Calcium	**64800**	50.0		µg/L	1	1/8/2018 4:17:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 4:17:00 PM
Iron	**467**	50.0		µg/L	1	1/8/2018 4:17:00 PM
Magnesium	**22800**	50.0		µg/L	1	1/8/2018 4:17:00 PM
Manganese	**92.1**	20.0		µg/L	1	1/8/2018 4:17:00 PM
Potassium	**3340**	50.0		µg/L	1	1/8/2018 4:17:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 4:17:00 PM
Sodium	**95200**	500		µg/L	10	1/8/2018 4:21:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**256**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:02:54 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**12.1**	5.00		mg/L	5	1/4/2018 7:57:47 PM
Sulfate	**247**	10.0		mg/L	5	1/4/2018 7:57:47 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**170**	10		mg/L CaCO3	1	1/4/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	1/4/2018 2:04:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**954**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**560**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**8.6**			S.U.		12/27/2017 10:30:00 AM
Temperature (E170.1)	**10**			deg C		12/27/2017 10:30:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 10:30:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/8/2018 4:27:00 PM
Arsenic	**13.0**	5.00		µg/L	1	1/8/2018 4:27:00 PM
Boron	**241**	50.0		µg/L	1	1/8/2018 4:27:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 4:27:00 PM
Calcium	**41200**	50.0		µg/L	1	1/8/2018 4:27:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 4:27:00 PM
Iron	**248**	50.0		µg/L	1	1/8/2018 4:27:00 PM
Magnesium	**13800**	50.0		µg/L	1	1/8/2018 4:27:00 PM
Manganese	**47.8**	20.0		µg/L	1	1/8/2018 4:27:00 PM
Potassium	**1810**	50.0		µg/L	1	1/8/2018 4:27:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 4:27:00 PM
Sodium	**60400**	500		µg/L	10	1/8/2018 4:33:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**160**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:04:29 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**9.35**	5.00		mg/L	5	1/4/2018 8:14:52 PM
Sulfate	**233**	10.0		mg/L	5	1/4/2018 8:14:52 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**100**	10		mg/L CaCO3	1	1/4/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1	N+	mg/L	1	1/4/2018 2:06:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8911-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 10:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**718**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**395**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:32:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.5**			S.U.		12/27/2017 3:32:00 PM
Temperature (E170.1)	**9**			deg C		12/27/2017 3:32:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 3:32:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/8/2018 4:38:00 PM
Arsenic	**13.3**	5.00		µg/L	1	1/8/2018 4:38:00 PM
Boron	**280**	50.0		µg/L	1	1/8/2018 4:38:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 4:38:00 PM
Calcium	**72700**	50.0		µg/L	1	1/8/2018 4:38:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 4:38:00 PM
Iron	**735**	50.0		µg/L	1	1/8/2018 4:38:00 PM
Magnesium	**66300**	50.0		µg/L	1	1/8/2018 4:38:00 PM
Manganese	**182**	20.0		µg/L	1	1/8/2018 4:38:00 PM
Potassium	**2760**	50.0		µg/L	1	1/8/2018 4:38:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 4:38:00 PM
Sodium	**39700**	50.0		µg/L	1	1/8/2018 4:38:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**454**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:06:06 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**2.80**	2.00		mg/L	2	1/4/2018 8:49:03 PM
Sulfate	**239**	20.0		mg/L	10	1/4/2018 8:31:57 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**270**	10		mg/L CaCO3	1	1/4/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.3**	0.1		mg/L	1	1/4/2018 2:10:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8942-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:32:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**928**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**555**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:21:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**6.8**			S.U.		12/27/2017 11:21:00 AM
Temperature (E170.1)	**8**			deg C		12/27/2017 11:21:00 AM
Turbidity (E180.1)	**56.5**	1.0		NTU		12/27/2017 11:21:00 AM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/8/2018 4:42:00 PM
Arsenic	**15.7**	5.00		µg/L	1	1/8/2018 4:42:00 PM
Boron	**89.0**	50.0		µg/L	1	1/8/2018 4:42:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/8/2018 4:42:00 PM
Calcium	**65600**	50.0		µg/L	1	1/8/2018 4:42:00 PM
Copper	**ND**	5.00		µg/L	1	1/8/2018 4:42:00 PM
Iron	**813**	50.0		µg/L	1	1/8/2018 4:42:00 PM
Magnesium	**62000**	50.0		µg/L	1	1/8/2018 4:42:00 PM
Manganese	**79.6**	20.0		µg/L	1	1/8/2018 4:42:00 PM
Potassium	**2880**	50.0		µg/L	1	1/8/2018 4:42:00 PM
Selenium	**ND**	5.00		µg/L	1	1/8/2018 4:42:00 PM
Sodium	**20400**	50.0		µg/L	1	1/8/2018 4:42:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**419**	5		mg/L CaCO3	1	1/8/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:07:42 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	1/4/2018 9:06:08 PM
Sulfate	**69.1**	4.00		mg/L	2	1/4/2018 9:06:08 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	1/4/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	9306-SH
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:21:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**738**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**420**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**9.0**			S.U.		12/27/2017 2:45:00 PM
Temperature (E170.1)	**8**			deg C		12/27/2017 2:45:00 PM
Turbidity (E180.1)	**> 999**	1.0		NTU		12/27/2017 2:45:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**592**	100		µg/L	1	1/10/2018 4:00:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/10/2018 4:00:00 PM
Boron	**709**	50.0		µg/L	1	1/10/2018 4:00:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/10/2018 4:00:00 PM
Calcium	**18000**	50.0		µg/L	1	1/10/2018 4:00:00 PM
Copper	**ND**	5.00		µg/L	1	1/10/2018 4:00:00 PM
Iron	**1960**	50.0		µg/L	1	1/10/2018 4:00:00 PM
Magnesium	**3990**	50.0		µg/L	1	1/10/2018 4:00:00 PM
Manganese	**96.0**	20.0		µg/L	1	1/10/2018 4:00:00 PM
Potassium	**1900**	50.0		µg/L	1	1/10/2018 4:00:00 PM
Selenium	**ND**	5.00		µg/L	1	1/10/2018 4:00:00 PM
Sodium	**164000**	500		µg/L	10	1/10/2018 4:05:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**61**	5		mg/L CaCO3	1	1/10/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:09:19 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**4.48**	2.00		mg/L	2	1/4/2018 9:23:15 PM
Sulfate	**69.3**	4.00		mg/L	2	1/4/2018 9:23:15 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.6**	0.1		mg/L	1	1/4/2018 2:28:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW DUP 8909-D
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**756**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**535**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**5.6**	0.10		mg/L		12/27/2017 3:30:00 PM
Flow, ~~GPD~~	**1.45**			~~gal/day~~ L/min		12/27/2017 3:30:00 PM
pH (E150.1)	**7.4**			S.U.		12/27/2017 3:30:00 PM
Temperature (E170.1)	**7**			deg C incorrect		12/27/2017 3:30:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU units per lab (HB) 3/1/18		12/27/2017 3:30:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/10/2018 4:12:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/10/2018 4:12:00 PM
Boron	**2640**	50.0		µg/L	1	1/10/2018 4:12:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/10/2018 4:12:00 PM
Calcium	**342000**	500		µg/L	10	1/10/2018 4:17:00 PM
Copper	**ND**	5.00		µg/L	1	1/10/2018 4:12:00 PM
Iron	**ND**	50.0		µg/L	1	1/10/2018 4:12:00 PM
Magnesium	**104000**	50.0		µg/L	1	1/10/2018 4:12:00 PM
Manganese	**ND**	20.0		µg/L	1	1/10/2018 4:12:00 PM
Potassium	**6390**	50.0		µg/L	1	1/10/2018 4:12:00 PM
Selenium	**ND**	5.00		µg/L	1	1/10/2018 4:12:00 PM
Sodium	**42000**	50.0		µg/L	1	1/10/2018 4:12:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1281**	5		mg/L CaCO3	1	1/10/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:10:56 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**65.1**	20.0		mg/L	20	1/5/2018 5:05:40 PM
Sulfate	**709**	40.0		mg/L	20	1/5/2018 5:05:40 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**330**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 1
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:30:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	1/4/2018 2:30:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1970**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1380**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**171229039**	**Collection Date:**	12/27/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**9.8**	0.10		mg/L		12/27/2017 12:00:00 PM
Flow, ~~GPD~~	**0.15**			~~gal/day~~ L/min		12/27/2017 12:00:00 PM
pH (E150.1)	**7.8**			S.U.		12/27/2017 12:00:00 PM
Temperature (E170.1)	**6**			deg C incorrect		12/27/2017 12:00:00 PM
Turbidity (E180.1)	**56.7**	1.0		NTU units per lab (AB) 3/1/18		12/27/2017 12:00:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/11/2018 3:22:00 PM
Arsenic	**26.4**	5.00		µg/L	1	1/11/2018 3:22:00 PM
Boron	**26600**	50.0		µg/L	1	1/11/2018 3:22:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/11/2018 3:22:00 PM
Calcium	**570000**	500		µg/L	10	1/11/2018 3:26:00 PM
Copper	**ND**	5.00		µg/L	1	1/11/2018 3:22:00 PM
Iron	**17200**	50.0		µg/L	1	1/11/2018 3:22:00 PM
Magnesium	**129000**	50.0		µg/L	1	1/11/2018 3:22:00 PM
Manganese	**716**	20.0		µg/L	1	1/11/2018 3:22:00 PM
Potassium	**83600**	50.0		µg/L	1	1/11/2018 3:22:00 PM
Selenium	**ND**	5.00		µg/L	1	1/11/2018 3:22:00 PM
Sodium	**198000**	500		µg/L	10	1/11/2018 3:26:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1956**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:12:34 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**271**	20.0		mg/L	20	1/5/2018 5:22:45 PM
Sulfate	**1560**	40.0		mg/L	20	1/5/2018 5:22:45 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**420**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Leak Detection Syst.
Work Order:	**171229039**	**Collection Date:**	12/27/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-014
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.8**	0.1		mg/L	1	1/4/2018 2:31:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3760**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**3100**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**8.4**	0.10		mg/L		12/28/2017 3:00:00 PM
Flow, ~~GPD~~	**7.7**			~~gal/day~~ L/min		12/28/2017 3:00:00 PM
pH (E150.1)	**8.2**			S.U.		12/28/2017 3:00:00 PM
Temperature (E170.1)	**5**			deg C incorrect units per lab (AB) 3/1/18		12/28/2017 3:00:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/28/2017 3:00:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/11/2018 3:30:00 PM
Arsenic	**9.63**	5.00		µg/L	1	1/11/2018 3:30:00 PM
Boron	**3860**	50.0		µg/L	1	1/11/2018 3:30:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/11/2018 3:30:00 PM
Calcium	**359000**	500		µg/L	10	1/11/2018 3:39:00 PM
Copper	**ND**	5.00		µg/L	1	1/11/2018 3:30:00 PM
Iron	**261**	50.0		µg/L	1	1/11/2018 3:30:00 PM
Magnesium	**78600**	50.0		µg/L	1	1/11/2018 3:30:00 PM
Manganese	**726**	20.0		µg/L	1	1/11/2018 3:30:00 PM
Potassium	**16300**	50.0		µg/L	1	1/11/2018 3:30:00 PM
Selenium	**ND**	5.00		µg/L	1	1/11/2018 3:30:00 PM
Sodium	**43800**	50.0		µg/L	1	1/11/2018 3:30:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 12/29/2017)						
Mercury	**7.2**	0.5		ng/L	1	1/2/2018
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1219**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:17:24 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**23.6**	10.0		mg/L	10	1/5/2018 5:39:51 PM
Sulfate	**442**	20.0		mg/L	10	1/5/2018 5:39:51 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 1
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-015
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**550**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/8/2018 1:32:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1690**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**1320**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**171229039**	**Collection Date:**	12/28/2017 12:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**11.6**	0.10		mg/L		12/28/2017 12:45:00 PM
Flow, ~~GPD~~	**5.4**			~~gal/day~~ L/min		12/28/2017 12:45:00 PM
pH (E150.1)	**7.7**			S.U.		12/28/2017 12:45:00 PM
Temperature (E170.1)	**8**			deg C incorrect units per lab (AE) 3/1/18		12/28/2017 12:45:00 PM
Turbidity (E180.1)	**27.9**	1.0		NTU		12/28/2017 12:45:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 1/2/2018)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/11/2018 3:46:00 PM
Arsenic	**16.4**	5.00		µg/L	1	1/11/2018 3:46:00 PM
Boron	**39500**	50.0		µg/L	1	1/11/2018 3:46:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/11/2018 3:46:00 PM
Calcium	**560000**	500		µg/L	10	1/11/2018 4:07:00 PM
Copper	**ND**	5.00		µg/L	1	1/11/2018 3:46:00 PM
Iron	**5860**	50.0		µg/L	1	1/11/2018 3:46:00 PM
Magnesium	**92000**	50.0		µg/L	1	1/11/2018 3:46:00 PM
Manganese	**984**	20.0		µg/L	1	1/11/2018 3:46:00 PM
Potassium	**82700**	500		µg/L	10	1/11/2018 4:07:00 PM
Selenium	**ND**	5.00		µg/L	1	1/11/2018 3:46:00 PM
Sodium	**219000**	500		µg/L	10	1/11/2018 4:07:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1776**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 1/2/2018)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:19:04 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**341**	50.0		mg/L	50	1/5/2018 5:56:56 PM
Sulfate	**1640**	100		mg/L	50	1/5/2018 5:56:56 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**290**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 2
Work Order:	**171229039**	**Collection Date:**	12/28/2017 12:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-016
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**1.6**	0.1		mg/L	1	1/8/2018 1:39:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**4160**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**3360**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**171229039**	**Collection Date:**	12/28/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**7.9**	0.10		mg/L		12/28/2017 12:00:00 PM
Flow, ~~GPD~~	**0.9**			~~gal/day~~ L/min		12/28/2017 12:00:00 PM
pH (E150.1)	**7.4**			S.U.		12/28/2017 12:00:00 PM
Temperature (E170.1)	**8**			deg C incorrect		12/28/2017 12:00:00 PM
Turbidity (E180.1)	**35.4**	1.0		NTU units per lab (AB) 3/1/18		12/28/2017 12:00:00 PM
ICP METALS - EPA 200.7 (**Prep: SW3010A - 1/2/2018**)						Analyst: **KH**
Aluminum	**554**	100		µg/L	1	1/11/2018 4:11:00 PM
Arsenic	**10.3**	5.00		µg/L	1	1/11/2018 4:11:00 PM
Boron	**19300**	50.0		µg/L	1	1/11/2018 4:11:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/11/2018 4:11:00 PM
Calcium	**706000**	500		µg/L	10	1/12/2018 1:47:00 PM
Copper	**ND**	5.00		µg/L	1	1/11/2018 4:11:00 PM
Iron	**1530**	50.0		µg/L	1	1/11/2018 4:11:00 PM
Magnesium	**110000**	50.0		µg/L	1	1/11/2018 4:11:00 PM
Manganese	**542**	20.0		µg/L	1	1/11/2018 4:11:00 PM
Potassium	**106000**	500		µg/L	10	1/12/2018 1:47:00 PM
Selenium	**ND**	5.00		µg/L	1	1/11/2018 4:11:00 PM
Sodium	**262000**	500		µg/L	10	1/12/2018 1:47:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**2215**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (**Prep: E245.1 - 1/2/2018**)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:23:55 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**853**	50.0		mg/L	50	1/5/2018 6:14:03 PM
Sulfate	**1610**	100		mg/L	50	1/5/2018 6:14:03 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**250**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 3
Work Order:	**171229039**	**Collection Date:**	12/28/2017 12:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-017
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.2**	0.1	N+	mg/L	1	1/8/2018 1:41:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**5380**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**4090**	5		mg/L	1	1/2/2018

AB 1/29/18

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:** 24" Inlet To Pond
Work Order:	**171229039**	**Collection Date:** 12/28/2017 1:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:** 171229039-018
PO#:		**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**11.5**	0.10		mg/L		12/28/2017 1:35:00 PM
Flow, ~~GPD~~	**30.0**			~~gal/day~~ L/min		12/28/2017 1:35:00 PM
pH (E150.1)	**8.2**			S.U.		12/28/2017 1:35:00 PM
Temperature (E170.1)	**7**			deg C incorrect		12/28/2017 1:35:00 PM
Turbidity (E180.1)	**24.2**	1.0		NTU units per lab AB 3/1/18		12/28/2017 1:35:00 PM
ICP METALS - EPA 200.7 (**Prep: SW3010A - 1/2/2018**)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 1:50:00 PM
Arsenic	**20.9**	5.00		µg/L	1	1/12/2018 1:50:00 PM
Boron	**20400**	50.0		µg/L	1	1/12/2018 1:50:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 1:50:00 PM
Calcium	**577000**	500		µg/L	10	1/12/2018 2:19:00 PM
Copper	**ND**	5.00		µg/L	1	1/12/2018 1:50:00 PM
Iron	**2420**	50.0		µg/L	1	1/12/2018 1:50:00 PM
Magnesium	**89000**	50.0		µg/L	1	1/12/2018 1:50:00 PM
Manganese	**553**	20.0		µg/L	1	1/12/2018 1:50:00 PM
Potassium	**87100**	50.0		µg/L	1	1/12/2018 1:50:00 PM
Selenium	**22.6**	5.00		µg/L	1	1/12/2018 1:50:00 PM
Sodium	**249000**	500		µg/L	10	1/12/2018 2:19:00 PM
LOW LEVEL MERCURY - EPA 1631E (**Prep: 1631E - 12/29/2017**)						Analyst: **SM**
Mercury	**ND**	0.5		ng/L	1	1/2/2018
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1806**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (**Prep: E245.1 - 1/2/2018**)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 1:25:28 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**208**	20.0		mg/L	20	1/5/2018 7:41:10 PM
Sulfate	**1240**	40.0		mg/L	20	1/5/2018 7:41:10 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**

AB 1/29/18

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	24" Inlet To Pond
Work Order:	**171229039**	**Collection Date:**	12/28/2017 1:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-018
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**380**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**0.4**	0.1		mg/L	1	1/8/2018 1:47:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3220**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2530**	5		mg/L	1	1/2/2018

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**9.8**	0.10		mg/L		12/27/2017 2:35:00 PM
pH (E150.1)	**8.3**			S.U.		12/27/2017 2:35:00 PM
Temperature (E170.1)	**0**			deg C		12/27/2017 2:35:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 2:35:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 1/2/2018)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 2:25:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 2:25:00 PM
Boron	**ND**	50.0		µg/L	1	1/12/2018 2:25:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 2:25:00 PM
Calcium	**73300**	50.0		µg/L	1	1/12/2018 2:25:00 PM
Copper	**7.16**	5.00		µg/L	1	1/12/2018 2:25:00 PM
Iron	**77.5**	50.0		µg/L	1	1/12/2018 2:25:00 PM
Magnesium	**20500**	50.0		µg/L	1	1/12/2018 2:25:00 PM
Manganese	**ND**	20.0		µg/L	1	1/12/2018 2:25:00 PM
Potassium	**4260**	50.0		µg/L	1	1/12/2018 2:25:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 2:25:00 PM
Sodium	**38900**	50.0		µg/L	1	1/12/2018 2:25:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**267**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 1/2/2018)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:02:14 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**79.8**	2.00		mg/L	2	1/5/2018 8:32:36 PM
Sulfate	**42.9**	4.00		mg/L	2	1/5/2018 8:32:36 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**190**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 2:33:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Upstream
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-019
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**745**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**415**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**11.8**	0.10		mg/L		12/27/2017 2:45:00 PM
pH (E150.1)	**8.9**			S.U.		12/27/2017 2:45:00 PM
Temperature (E170.1)	**0**			deg C		12/27/2017 2:45:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 2:45:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 1/2/2018)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 2:28:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 2:28:00 PM
Boron	**ND**	50.0		µg/L	1	1/12/2018 2:28:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 2:28:00 PM
Calcium	**75000**	50.0		µg/L	1	1/12/2018 2:28:00 PM
Copper	**5.34**	5.00		µg/L	1	1/12/2018 2:28:00 PM
Iron	**66.8**	50.0		µg/L	1	1/12/2018 2:28:00 PM
Magnesium	**21000**	50.0		µg/L	1	1/12/2018 2:28:00 PM
Manganese	**ND**	20.0		µg/L	1	1/12/2018 2:28:00 PM
Potassium	**4140**	50.0		µg/L	1	1/12/2018 2:28:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 2:28:00 PM
Sodium	**40600**	50.0		µg/L	1	1/12/2018 2:28:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**274**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 1/2/2018)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:03:49 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**81.7**	2.00		mg/L	2	1/5/2018 8:49:41 PM
Sulfate	**44.1**	4.00		mg/L	2	1/5/2018 8:49:41 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**190**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/4/2018 2:34:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Keuka Downstream
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:45:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-020
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**752**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**390**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**9.8**	0.10		mg/L		12/27/2017 2:55:00 PM
pH (E150.1)	**8.3**			S.U.		12/27/2017 2:55:00 PM
Temperature (E170.1)	**0**			deg C		12/27/2017 2:55:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/27/2017 2:55:00 PM
ICP METALS - EPA 200.7 (Prep: SW3010A - 1/2/2018)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 2:31:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 2:31:00 PM
Boron	**ND**	50.0		µg/L	1	1/12/2018 2:31:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 2:31:00 PM
Calcium	**72100**	50.0		µg/L	1	1/12/2018 2:31:00 PM
Copper	**ND**	5.00		µg/L	1	1/12/2018 2:31:00 PM
Iron	**60.3**	50.0		µg/L	1	1/12/2018 2:31:00 PM
Magnesium	**20500**	50.0		µg/L	1	1/12/2018 2:31:00 PM
Manganese	**ND**	20.0		µg/L	1	1/12/2018 2:31:00 PM
Potassium	**3950**	50.0		µg/L	1	1/12/2018 2:31:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 2:31:00 PM
Sodium	**39900**	50.0		µg/L	1	1/12/2018 2:31:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**264**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 1/2/2018)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:05:25 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**80.2**	2.00		mg/L	2	1/5/2018 9:06:46 PM
Sulfate	**43.4**	4.00		mg/L	2	1/5/2018 9:06:46 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**190**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/8/2018 1:49:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Surface Water DUP
Work Order:	**171229039**	**Collection Date:**	12/27/2017 2:55:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-021
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**740**	1		µmhos/cm	1	1/12/2017
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**415**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:07:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**6.5**	0.10		mg/L		12/28/2017 3:07:00 PM
pH (E150.1)	**6.9**			S.U.		12/28/2017 3:07:00 PM
Temperature (E170.1)	**1**			deg C		12/28/2017 3:07:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/28/2017 3:07:00 PM
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/12/2018 2:38:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 2:38:00 PM
Boron	**20100**	50.0		µg/L	1	1/12/2018 2:38:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 2:38:00 PM
Calcium	**443000**	500		µg/L	10	1/12/2018 2:49:00 PM
Copper	**ND**	5.00		µg/L	1	1/12/2018 2:38:00 PM
Iron	**222**	50.0		µg/L	1	1/12/2018 2:38:00 PM
Magnesium	**94900**	50.0		µg/L	1	1/12/2018 2:38:00 PM
Manganese	**265**	20.0		µg/L	1	1/12/2018 2:38:00 PM
Potassium	**81400**	50.0		µg/L	1	1/12/2018 2:38:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 2:38:00 PM
Sodium	**232000**	500		µg/L	10	1/12/2018 2:49:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**1498**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:07:01 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**197**	20.0		mg/L	20	1/5/2018 9:23:52 PM
Sulfate	**1240**	40.0		mg/L	20	1/5/2018 9:23:52 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**300**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/8/2018 1:51:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Pond Grab
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:07:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-022
PO#:		**Matrix:**	SURFACE WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**3180**	1		µmhos/cm	1	1/12/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**2500**	5		mg/L	1	1/2/2018

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS - EPA 200.7						Analyst: **KH**
(Prep: SW3010A - 1/2/2018)						
Aluminum	**ND**	100		µg/L	1	1/12/2018 2:53:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 2:53:00 PM
Boron	**ND**	50.0		µg/L	1	1/12/2018 2:53:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 2:53:00 PM
Calcium	**ND**	50.0		µg/L	1	1/12/2018 2:53:00 PM
Copper	**ND**	5.00		µg/L	1	1/12/2018 2:53:00 PM
Iron	**ND**	50.0		µg/L	1	1/12/2018 2:53:00 PM
Magnesium	**ND**	50.0		µg/L	1	1/12/2018 2:53:00 PM
Manganese	**ND**	20.0		µg/L	1	1/12/2018 2:53:00 PM
Potassium	**186**	50.0		µg/L	1	1/12/2018 2:53:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 2:53:00 PM
Sodium	**638**	50.0		µg/L	1	1/12/2018 2:53:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0						Analyst: **AVB**
(Prep: E245.1 - 1/2/2018)						
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:08:38 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**ND**	2.00		mg/L	2	1/5/2018 9:40:57 PM
Sulfate	**ND**	4.00		mg/L	2	1/5/2018 9:40:57 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**2**	1		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**ND**	0.1		mg/L	1	1/8/2018 1:53:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**9540**	1		µmhos/cm	1	1/12/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Field Blank
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:25:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-023
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**15**	5		mg/L	1	1/2/2018

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	LLHg Field Blank
Work Order:	**171229039**	**Collection Date:**	12/28/2017 3:35:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-024
PO#:		**Matrix:**	FIELD BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 12/29/2017)						
Mercury	**ND**	0.5		ng/L	1	1/2/2018

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**171229039**	**Collection Date:**	12/26/2017 5:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
pH (E150.1)	**7.7**			S.U.		12/26/2017 5:00:00 PM
Temperature (E170.1)	**15**			deg C		12/26/2017 5:00:00 PM
Turbidity (E180.1)	**< 1**	1.0		NTU		12/26/2017 5:00:00 PM
ICP METALS - EPA 200.7 **(Prep: SW3010A - 1/2/2018)**						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 4:00:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 4:00:00 PM
Boron	**823**	50.0		µg/L	1	1/12/2018 4:00:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 4:00:00 PM
Calcium	**82700**	50.0		µg/L	1	1/12/2018 4:00:00 PM
Copper	**ND**	5.00		µg/L	1	1/12/2018 4:00:00 PM
Iron	**218**	50.0		µg/L	1	1/12/2018 4:00:00 PM
Magnesium	**23800**	50.0		µg/L	1	1/12/2018 4:00:00 PM
Manganese	**64.7**	20.0		µg/L	1	1/12/2018 4:00:00 PM
Potassium	**2720**	50.0		µg/L	1	1/12/2018 4:00:00 PM
Selenium	**ND**	5.00		µg/L	1	1/12/2018 4:00:00 PM
Sodium	**90400**	500		µg/L	10	1/12/2018 4:04:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**304**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 **(Prep: E245.1 - 1/2/2018)**						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:10:16 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**53.2**	2.00		mg/L	2	1/8/2018 5:33:40 PM
Sulfate	**83.3**	4.00		mg/L	2	1/8/2018 5:33:40 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**360**	10		mg/L CaCO3	1	1/3/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**
Nitrogen, Ammonia (As N)	**1.0**	0.1		mg/L	1	1/4/2018 1:45:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8401
Work Order:	**171229039**	**Collection Date:**	12/26/2017 5:00:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-025
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**960**	1		µmhos/cm	1	1/12/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**505**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:35:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Dissolved Oxygen (E360.1)	**2.2**	0.10		mg/L		12/27/2017 11:35:00 AM
Flow, ~~GPD~~	**0.84**			~~gal/day~~ L/min		12/27/2017 11:35:00 AM
pH (E150.1)	**7.2**			S.U.		12/27/2017 11:35:00 AM
Temperature (E170.1)	**5**			deg C incorrect		12/27/2017 11:35:00 AM
Turbidity (E180.1)	**< 1**	1.0		NTU units per lab (AE) 3/1/18		12/27/2017 11:35:00 AM
ICP METALS - EPA 200.7 (Prep: SW3010A - 1/2/2018)						Analyst: **KH**
Aluminum	**ND**	100		µg/L	1	1/12/2018 4:07:00 PM
Arsenic	**ND**	5.00		µg/L	1	1/12/2018 4:07:00 PM
Boron	**155**	50.0		µg/L	1	1/12/2018 4:07:00 PM
Cadmium	**ND**	5.00		µg/L	1	1/12/2018 4:07:00 PM
Calcium	**261000**	500		µg/L	10	1/12/2018 4:13:00 PM
Copper	**5.30**	5.00		µg/L	1	1/12/2018 4:07:00 PM
Iron	**ND**	50.0		µg/L	1	1/12/2018 4:07:00 PM
Magnesium	**42800**	50.0		µg/L	1	1/12/2018 4:07:00 PM
Manganese	**96.8**	20.0		µg/L	1	1/12/2018 4:07:00 PM
Potassium	**2970**	50.0		µg/L	1	1/12/2018 4:07:00 PM
Selenium	**ND**	5.00	N	µg/L	1	1/12/2018 4:07:00 PM
Sodium	**18000**	50.0		µg/L	1	1/12/2018 4:07:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**827**	5		mg/L CaCO3	1	1/12/2018
MERCURY - EPA 245.1 REV 3.0 (Prep: E245.1 - 1/2/2018)						Analyst: **AVB**
Mercury	**ND**	0.0002		mg/L	1	1/2/2018 2:11:53 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	**6.73**	5.00		mg/L	5	1/8/2018 5:50:45 PM
Sulfate	**284**	10.0		mg/L	5	1/8/2018 5:50:45 PM
ALKALINITY TO PH 4.5 -SM 2320B-97,-11						Analyst: **CC**
Alkalinity, Total (As CaCO3)	**310**	10		mg/L CaCO3	1	1/8/2018
AMMONIA (NON-DISTILLED) - EPA 350.1 REV 2.0						Analyst: **PL**

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 3
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:35:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-026
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	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	1/8/2018 1:55:00 PM
CONDUCTANCE AT 25C - SM 2510B-97,-11						Analyst: **CA**
Specific Conductance	**1150**	1		µmhos/cm	1	1/12/2018
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	**785**	5		mg/L	1	12/29/2017

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 2
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:28:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-027
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		12/27/2017 11:28:00 AM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	GW Dep Drain 4
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:30:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-028
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		12/27/2017 11:30:00 AM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	Under Drain 5
Work Order:	**171229039**	**Collection Date:**	12/27/2017 11:35:00 AM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-029
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		12/27/2017 11:35:00 AM

Adirondack Environmental Services, Inc

Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8910-SH
Work Order:	**171229039**	**Collection Date:**	
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-030
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	~~Dry~~ Inadequate Recovery per field crew 1/31/18			NA		

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Date: *23-Jan-18*

CLIENT:	Lockwood Hills LLC	**Client Sample ID:**	8405
Work Order:	**171229039**	**Collection Date:**	12/27/2017 3:17:00 PM
Reference:	Lockwood Ash Landfill / Quarterly	**Lab Sample ID:**	171229039-031
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	**Dry**			NA		12/27/2017 3:17:00 PM

Adirondack Environmental Services, Inc.®
314 North Pearl Street
Albany, New York 12207
518-434-4546♦ Fax: 518-434-0891

EXPERIENCE IS THE SOLUTION

CHAIN OF CUSTODY RECORD

AES Work Order#: 171229039

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: P. Morrissey
Client Phone No:	PO #:	Samplers Signature:
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis (observation only PB)
001	7842			A/P	GW		G	40	Lockwood Ash LF Quarterly
002	8404	12/27/17	1433	A/P	GW		G	4	Field pH, Temp, Turbidity
003	8908-D	12/27/17	1120	A/P	GW		G	4	
004	8908-SH	12/27/17	1215	A/P	GW		G	4	
005	8909-D	12/27/17	1312	A/P	GW		G	4	
006	8909-SH	12/27/17	1355	A/P	GW		G	4	
007	8910-D	12/27/17	1440	A/P	GW		G	4	
008	8911-D	12/27/17	1525	A/P	GW		G	4	
009	8911-SH	12/27/17	1030	A/P	GW		G	4	
010	8942-D	12/27/17	1532	A/P	GW		G	4	
011	9306-SH	12/27/17	1121	A/P	GW		G	4	
012	GW Dup 8909-D	12/27/17	1445	A/P	GW		G	4	

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Special Instructions/Remarks:

Page 1 of 3

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

		Date	Time
Relinquished by: (Signature)	Received by: (Signature)		
Relinquished by: (Signature)	Received by: (Signature)		
Relinquished by: (Signature)	**Received for Laboratory by:**	Date: 12/29/17	Time: 2:05 PM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

Demo
171229039

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#: 17122903 9

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: P. Morrissey
Client Phone No:	PO #:	Samplers Signature:
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
013	GW Dep Drain 1	12/27/17	1530	A P	GW		G	4	Lockwood Q Field pH, Temp, Turb, Field Flow Reading, DO
014	Leak Detection Syst.	12/27/17	1200	A P	GW		G	4	"
015	Under Drain 1	12/28/17	1500	A P	GW		G	5	"
016	Under Drain 2	12/28/17	1245	A P	GW		G	4	"
017	Under Drain 3	12/28/17	1200	A P	GW		G	4	"
018	21" Inlet to Pond	12/28/17	1335	A P	GW		G	5	"
019	Keuka Upstream	12/27/17	1435	A P	GW		G	4	Lockwood Quarterly +DO
020	Keuka Downstream	12/27/17	1445	A P	SF		G	4	Lockwood Quarterly +DO
021	Surface Water Dup	12/27/17	1455	A P	SF		G	4	Lockwood Quarterly +DO
022	Pond Grab	12/28/17	1507	A P	SF		G	4	Lockwood Quarterly +DO
023	Field Blank	12/28/17	1525	A P	GW		G	4	Lockwood Quarterly +DO
024	LLHg Field Blank	12/28/17	1535	A P	GW		G	1	EPA 1631

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

		Date	Time
Relinquished by: (Signature)	Received by: (Signature)		
Relinquished by: (Signature)	Received by: (Signature)		
Relinquished by: (Signature)	**Received for Laboratory by:**	Date 12/29/17	Time 2:05 PM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order#: 17122903 9

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: P. Morrissey
Client Phone No:	PO #:	Samplers Signature:
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
025	8401	12/26/17	1700	A P	GW			4	Lockwood Ash LF Quarterly Field pH, Temp, Turbidity
026	GW Dep Drain 3	12/27/17	1135	A P	GW			4	+ Field Flow Reading, DO
027	GW Dep Drain 2	12/27/17	1128	A P	GW			0	Observation Only
028	GW Dep Drain 4	12/27/17	1130	A P	GW			0	Observation Only
029	Under Drain 5	12/27/17	1135	A P	GW			0	Observation Only
030	8910-SH			A P	GW			0	Observation Only
031	8405	12/27/17	1517	A P	GW			0	Observation Only
				A P					
				A P					
				A P					
				A P					
				A P					

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
		12/29/17	2:05 PM

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°c

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
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.

ATTACHMENT 5

Time-Series Plots

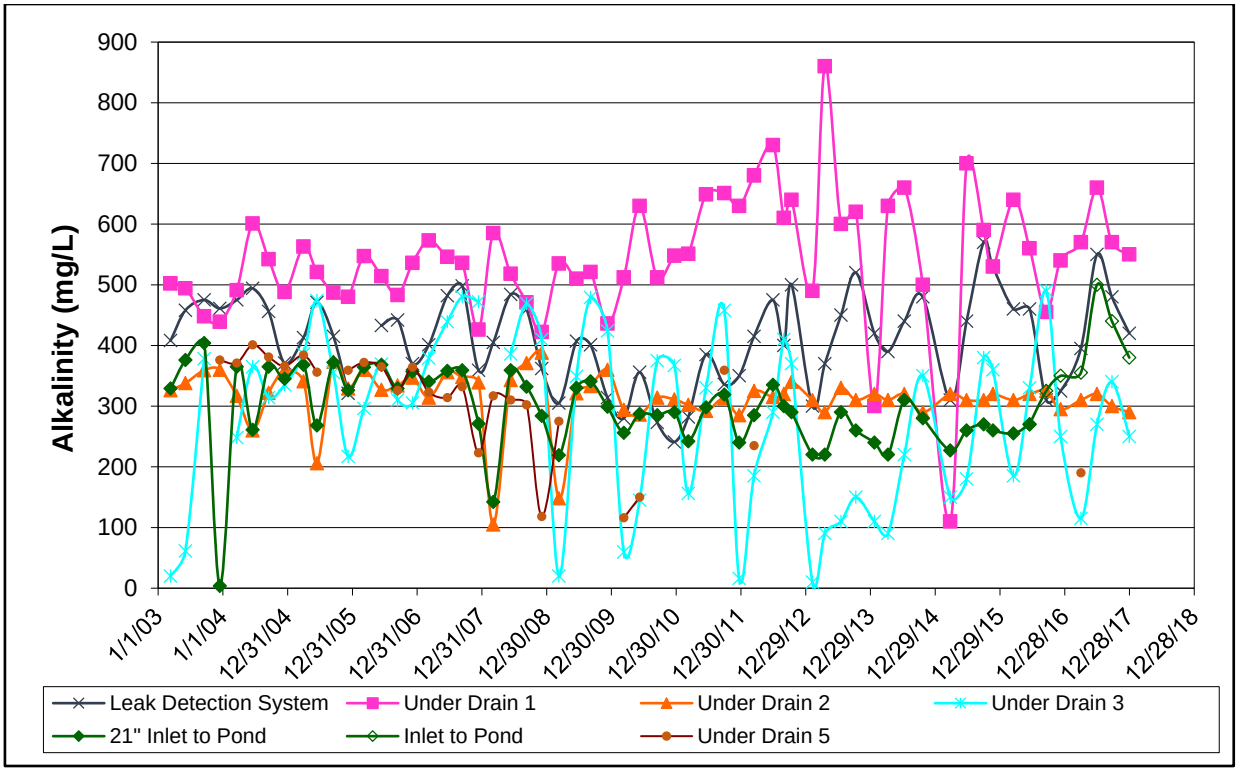
Baseline Parameters in the Leachate and Monitoring Wells

Updated Through 4th Quarter 2017

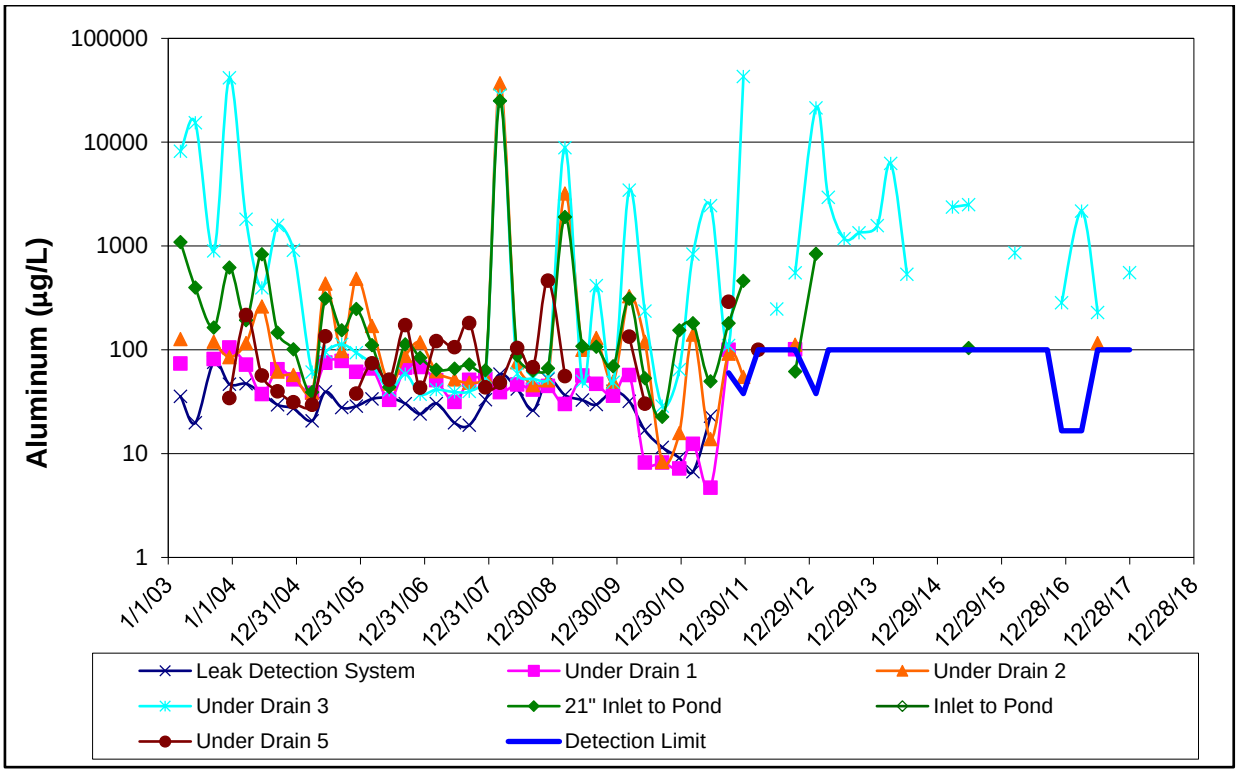
Table of Contents:

LEACHATE TIME-SERIES PLOTS

ALKALINITY

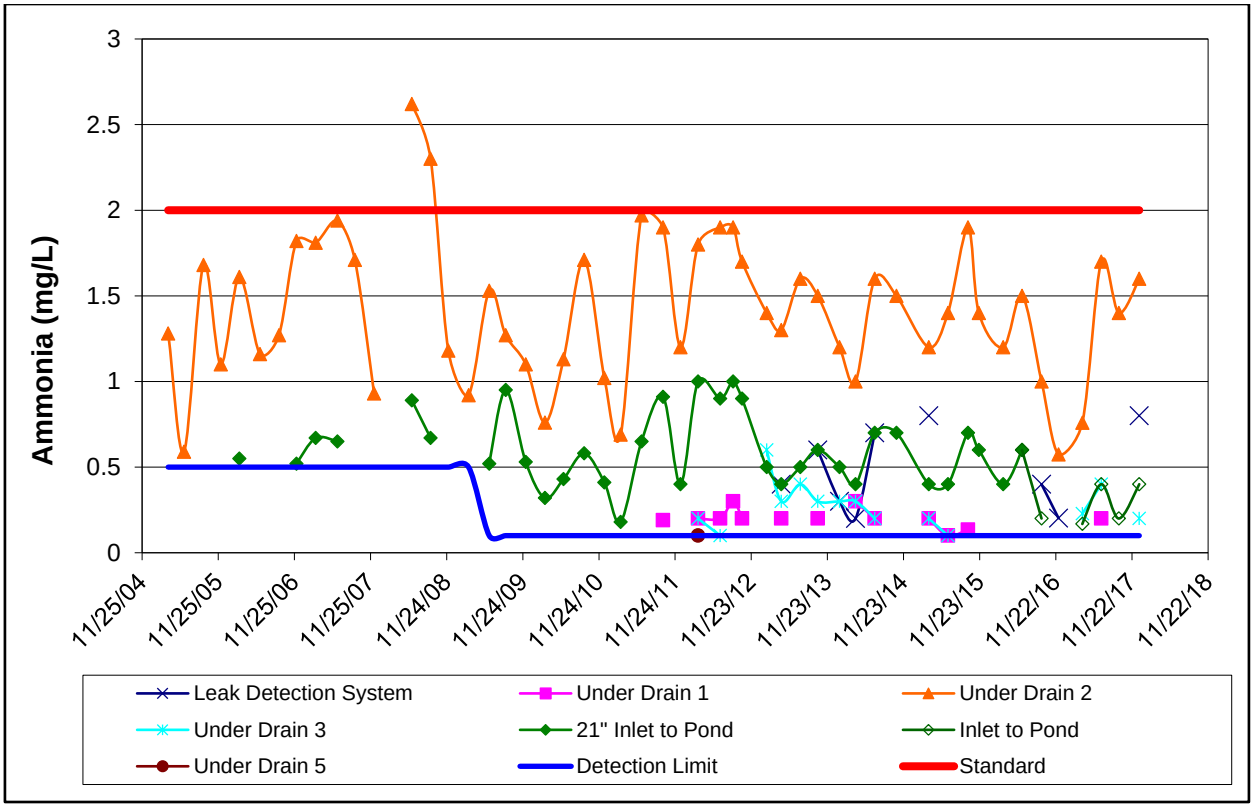


ALUMINUM

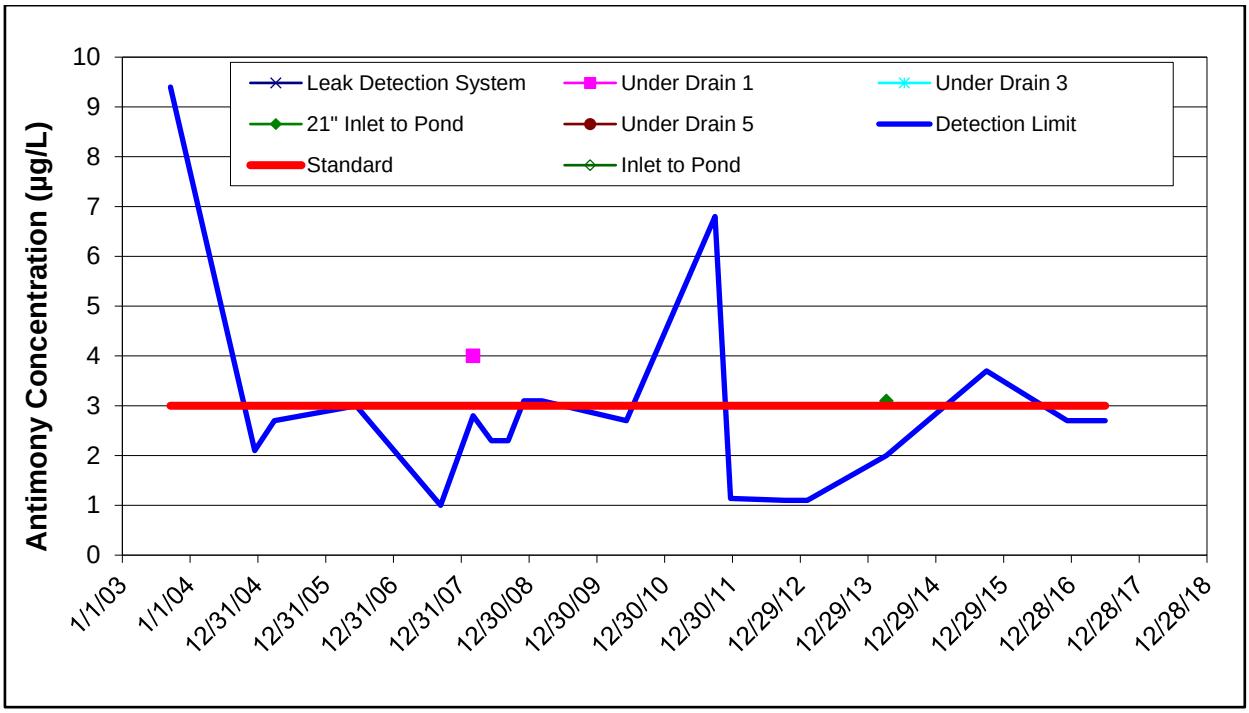


LEACHATE TIME-SERIES PLOTS, CONT.

AMMONIA (Note: Only data above detection has been included in this plot)

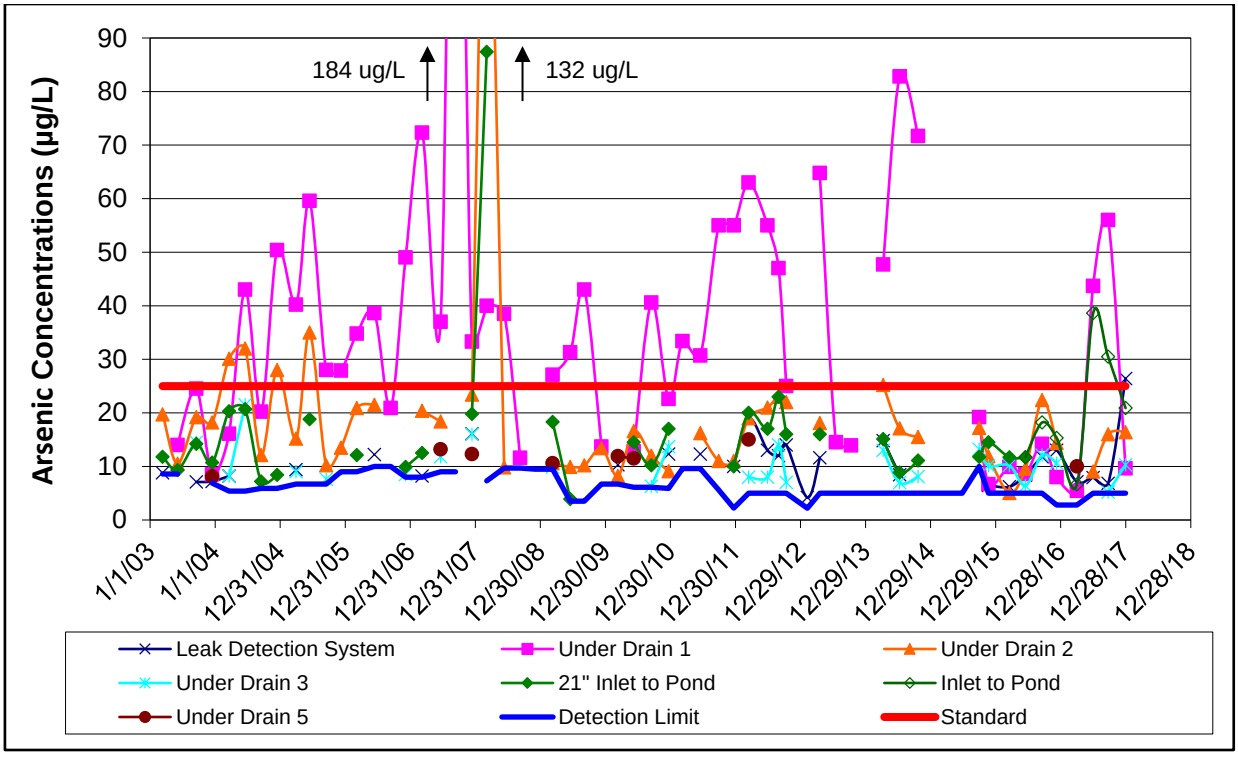


ANTIMONY (Note: Only data above detection has been included in this plot)

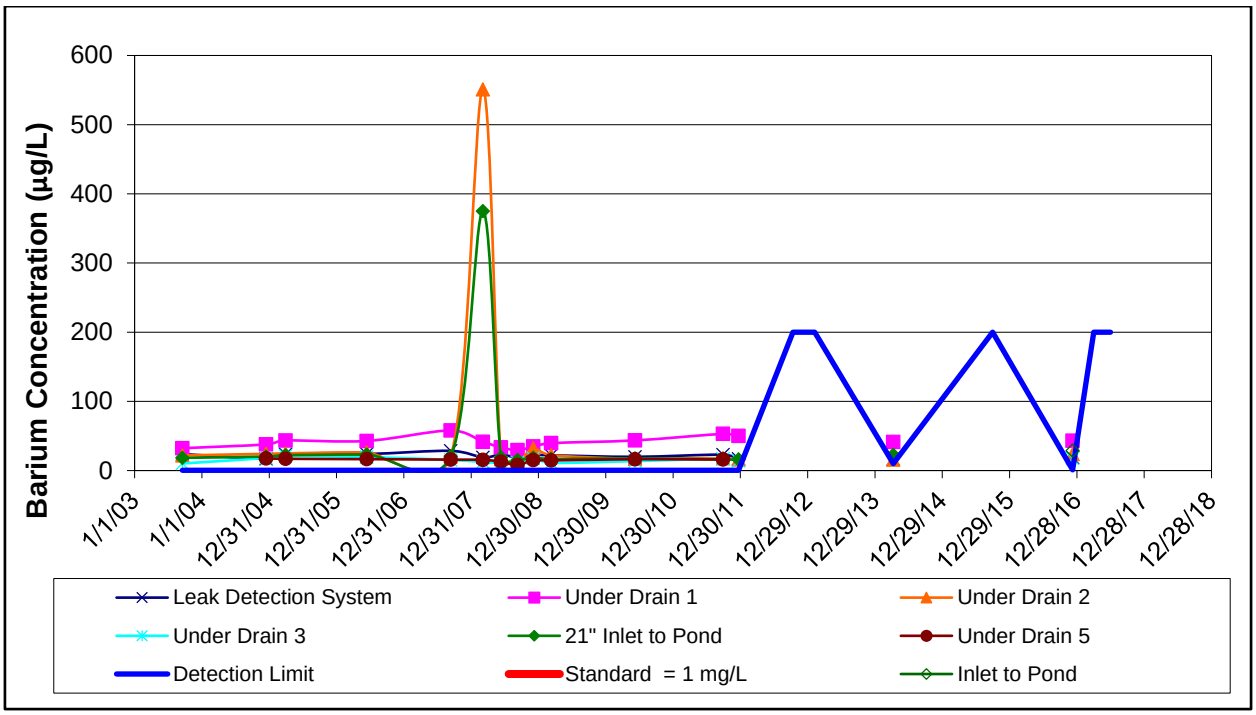


LEACHATE TIME-SERIES PLOTS, CONT.

ARSENIC (Note: Only data above detection has been included in this plot)

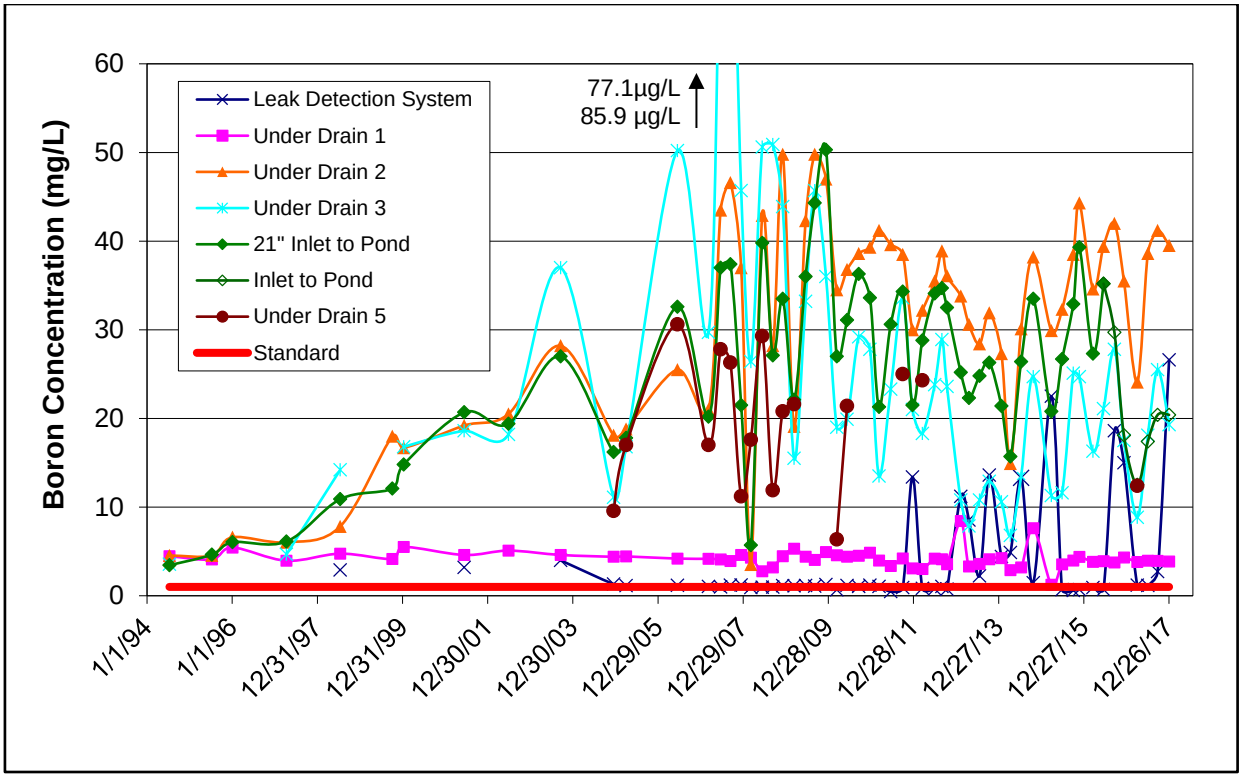


BARIUM

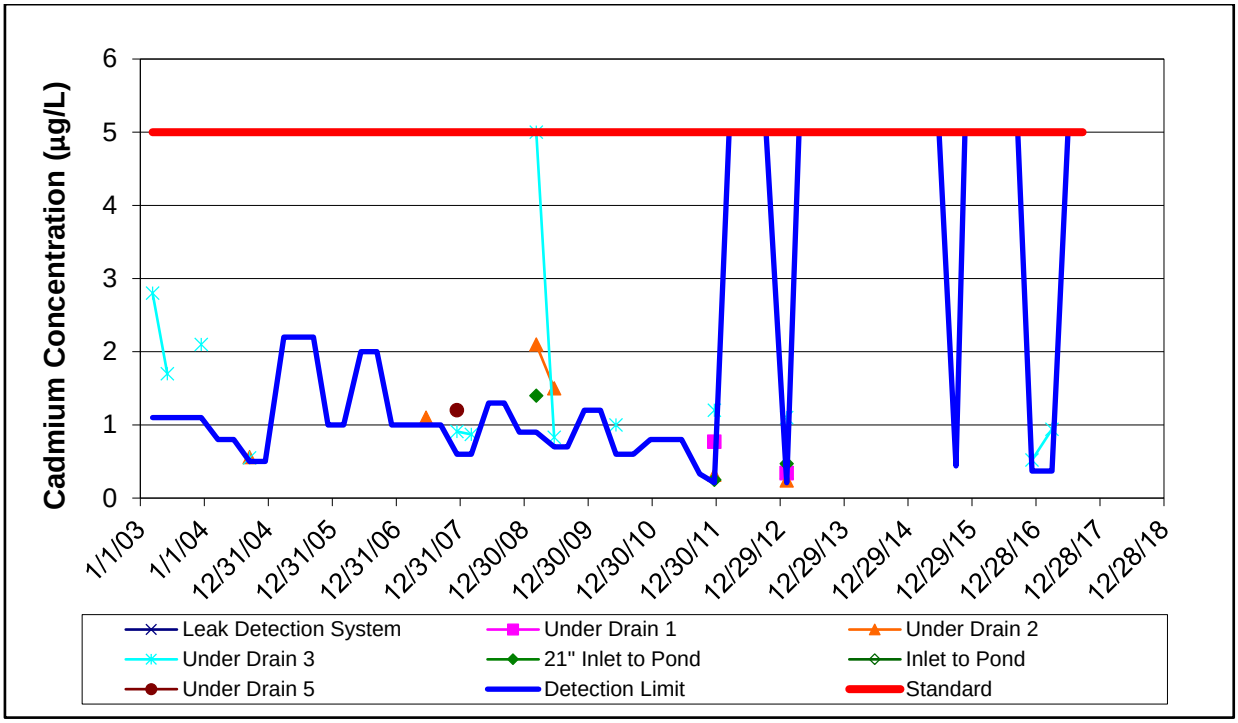


LEACHATE TIME-SERIES PLOTS, CONT.

BORON

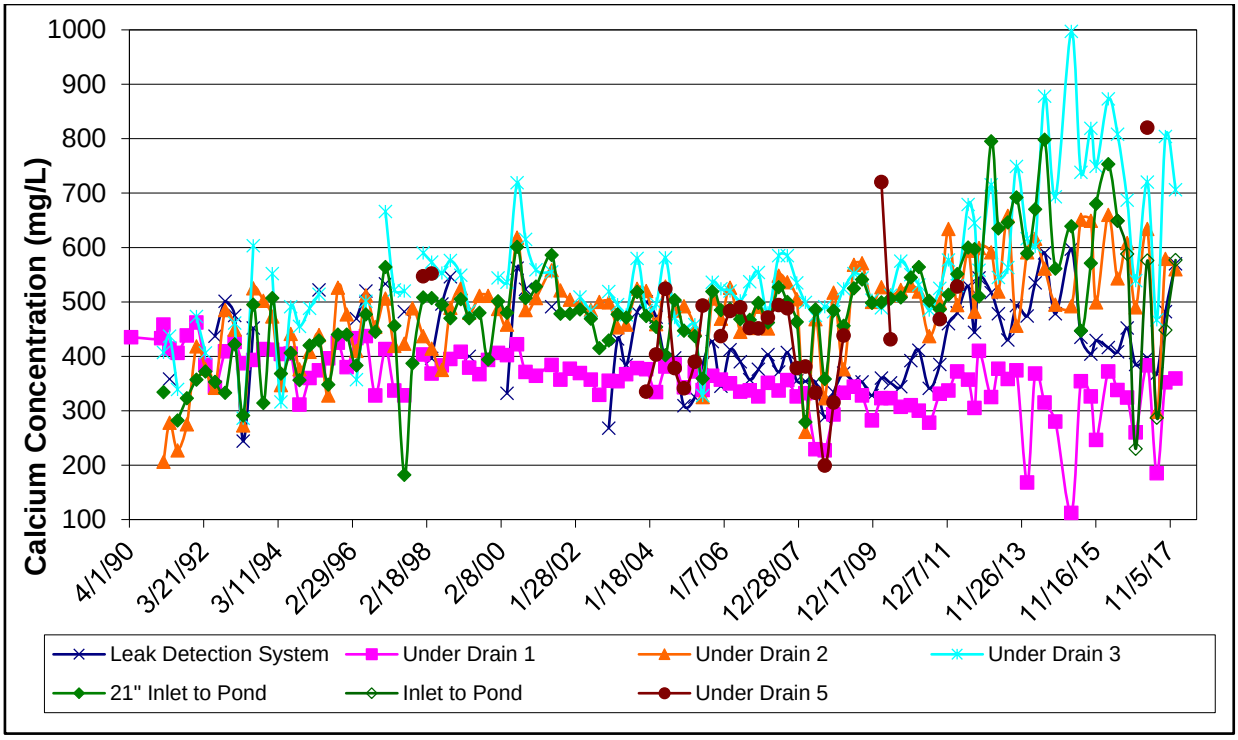


CADMIUM (Note: Only data above detection has been included in this plot)

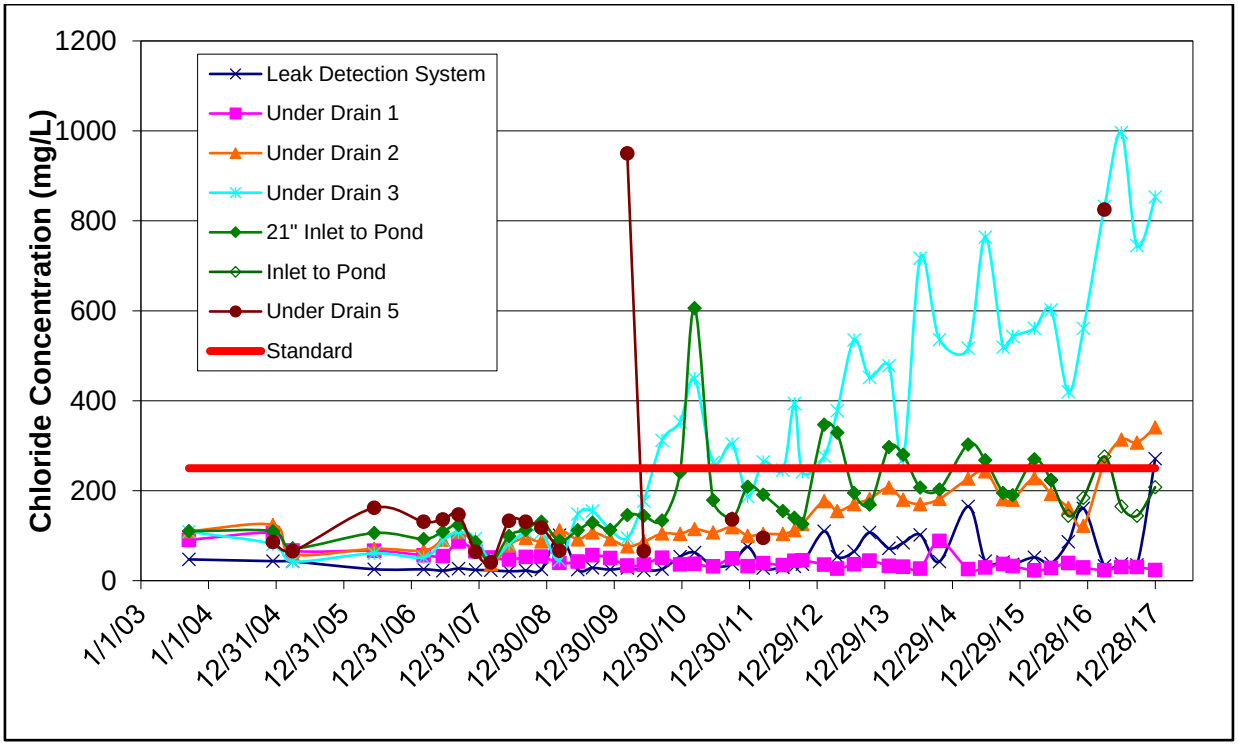


LEACHATE TIME-SERIES PLOTS, CONT.

CALCIUM

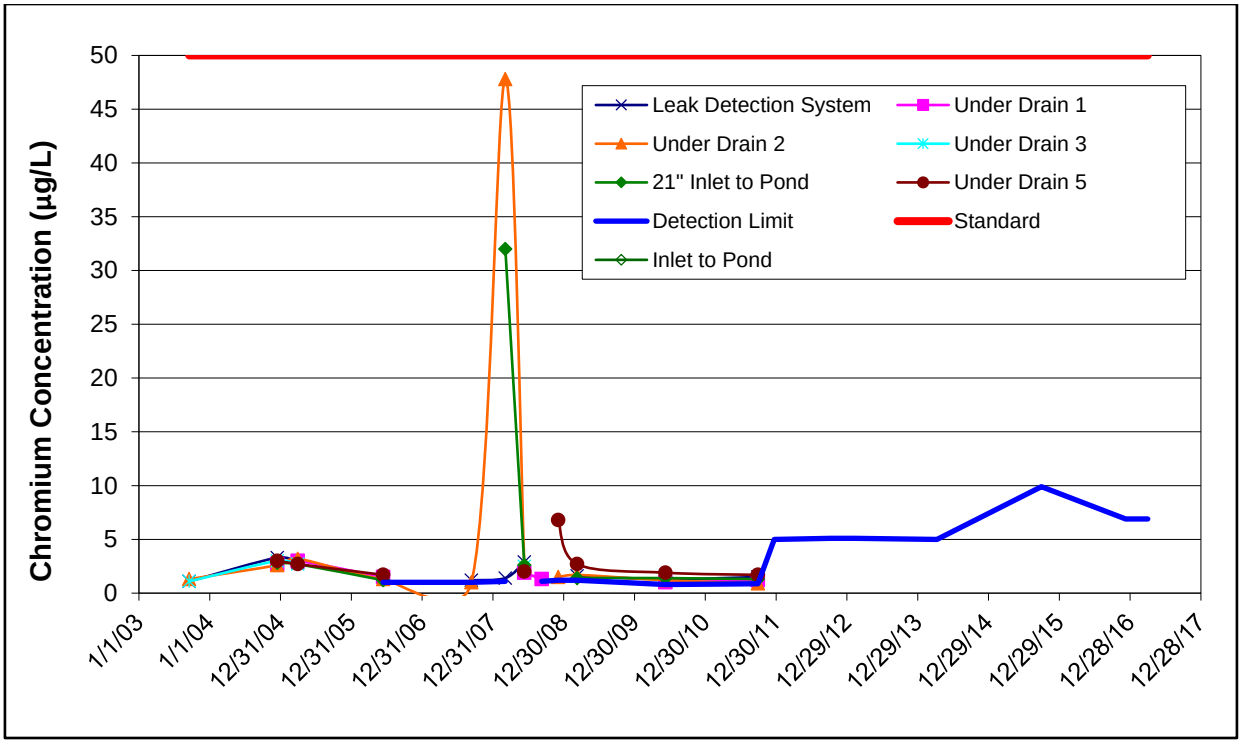


CHLORIDE

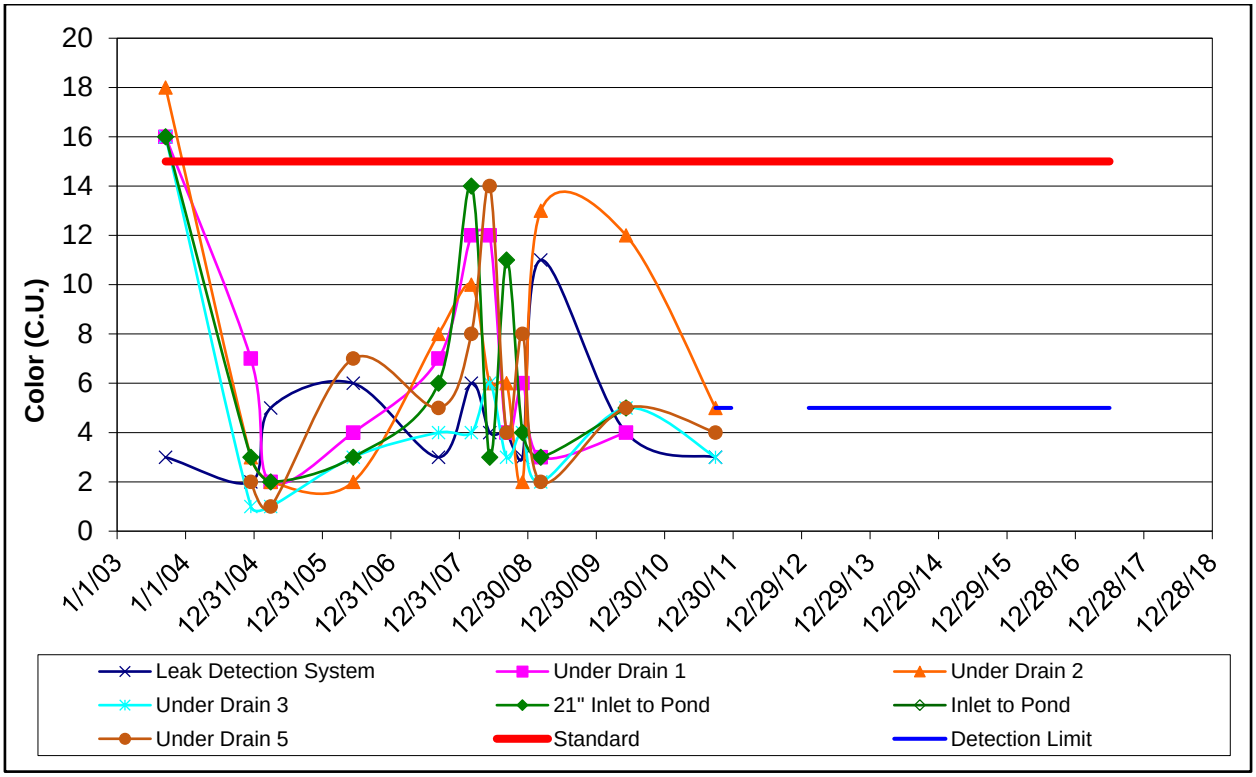


LEACHATE TIME-SERIES PLOTS, CONT.

CHROMIUM (Note: Only data above detection has been included in this plot)

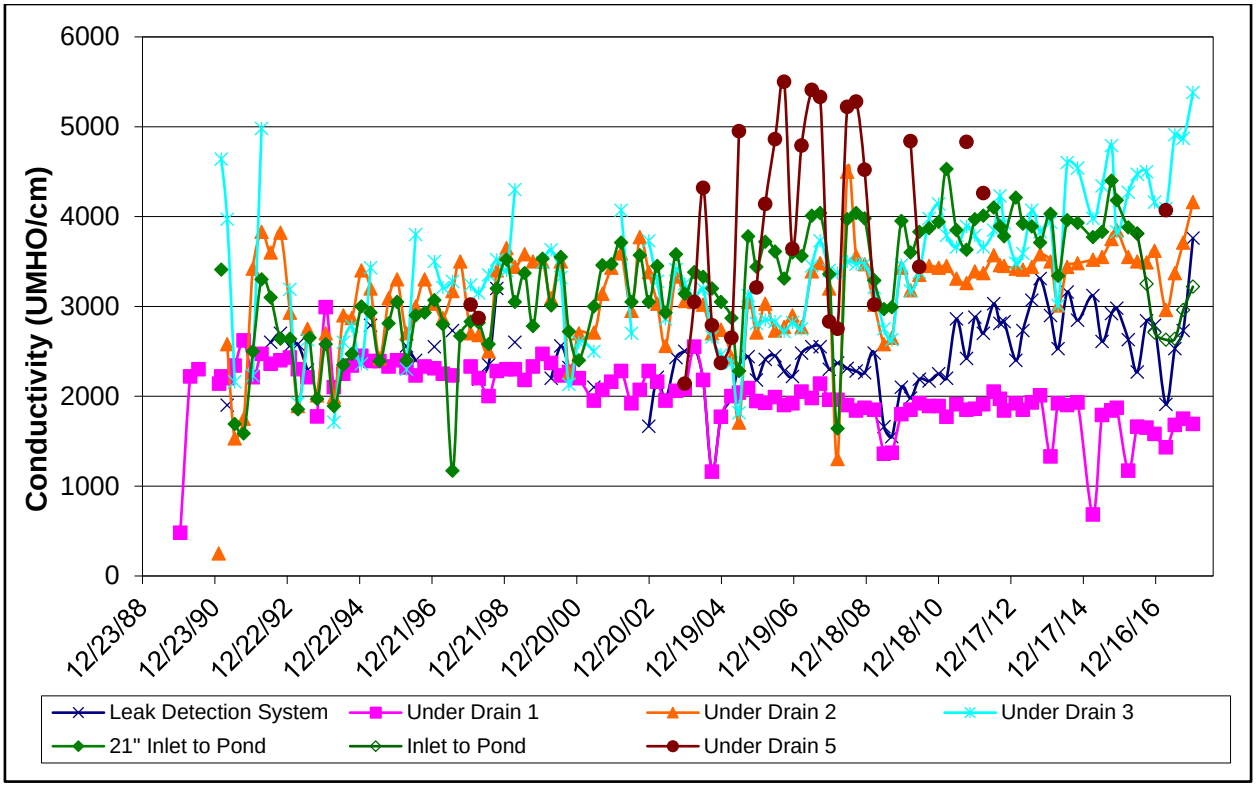


COLOR

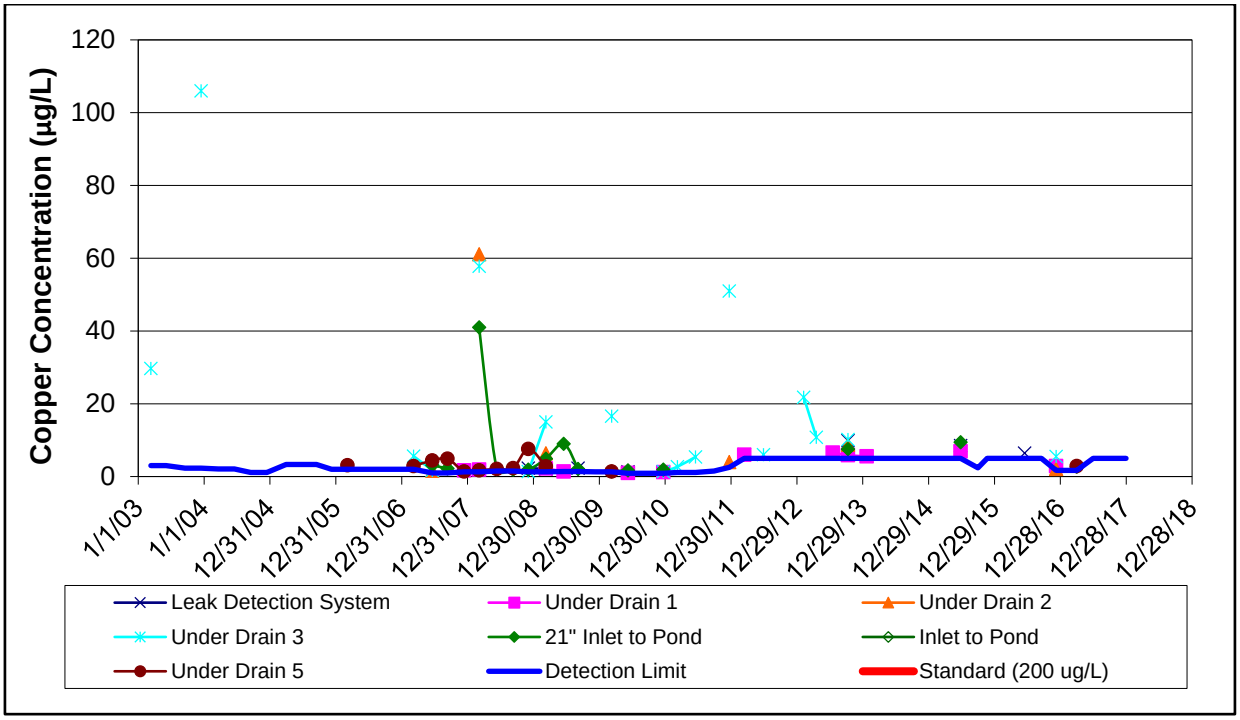


LEACHATE TIME-SERIES PLOTS, CONT.

CONDUCTIVITY

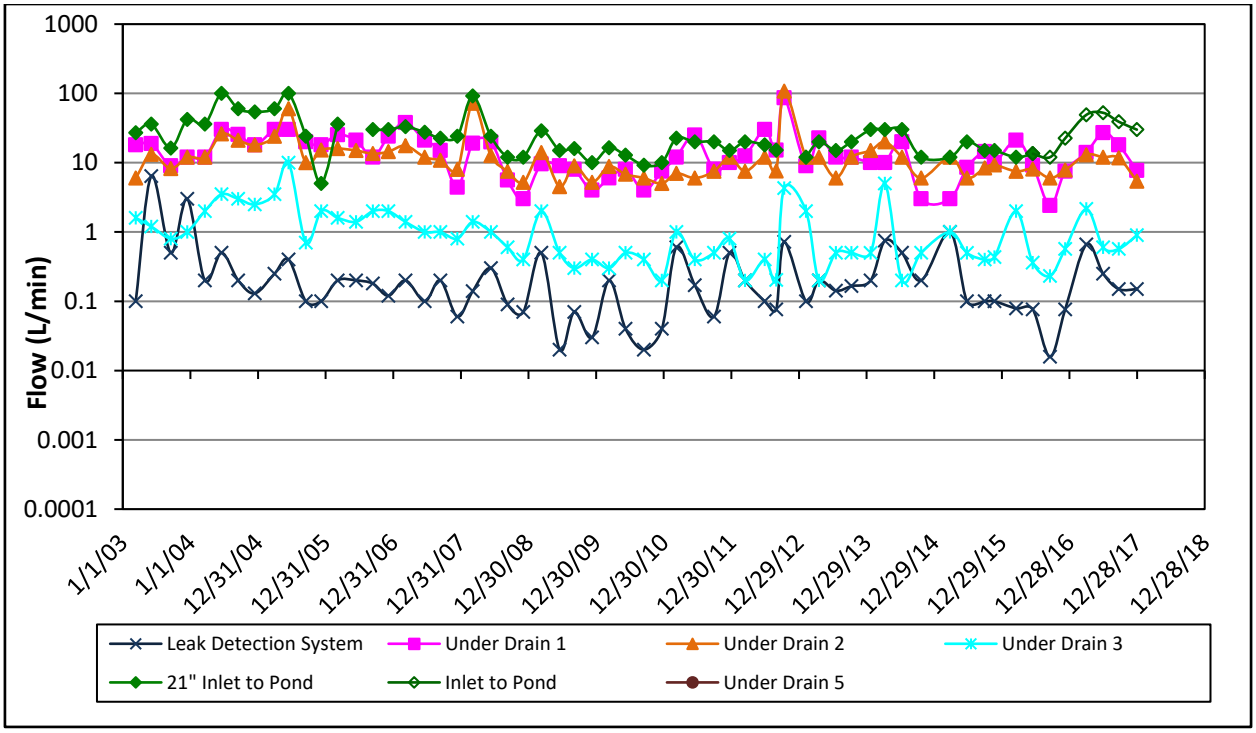


COPPER (Note: Only data above detection has been included in this plot)

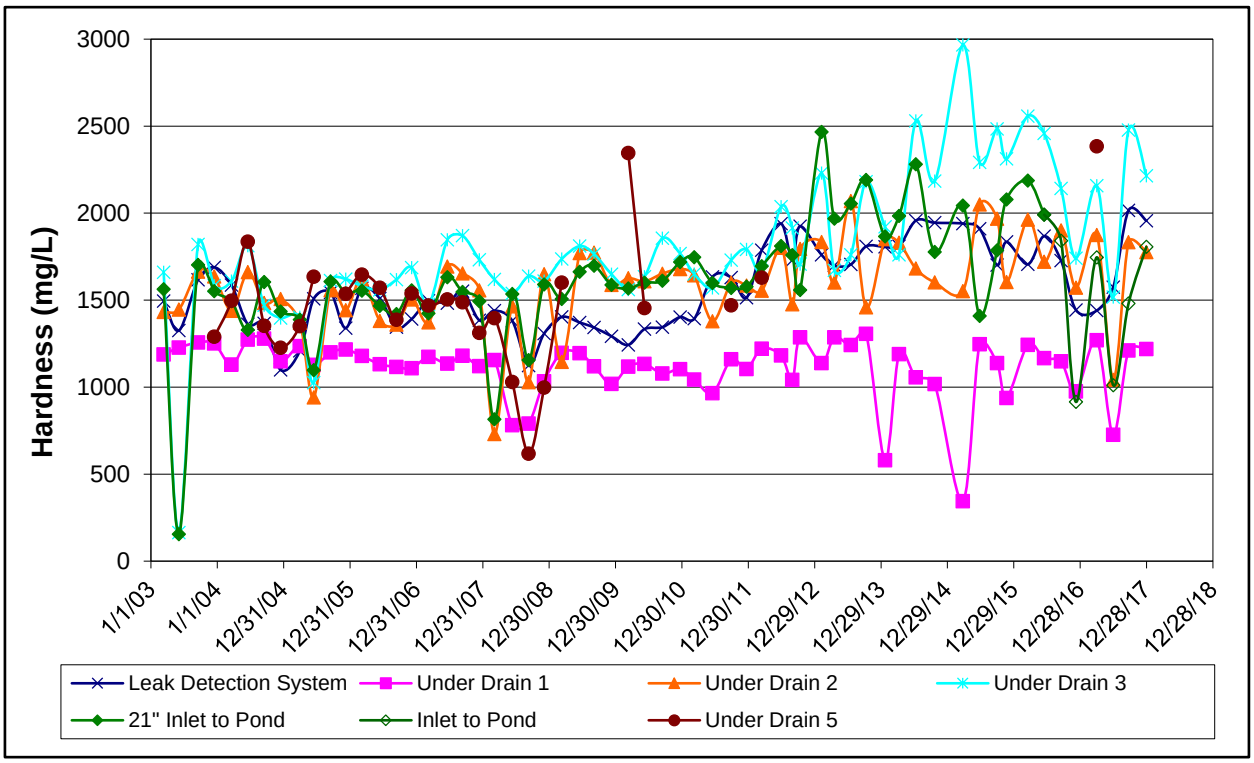


LEACHATE TIME-SERIES PLOTS, CONT.

FLOW

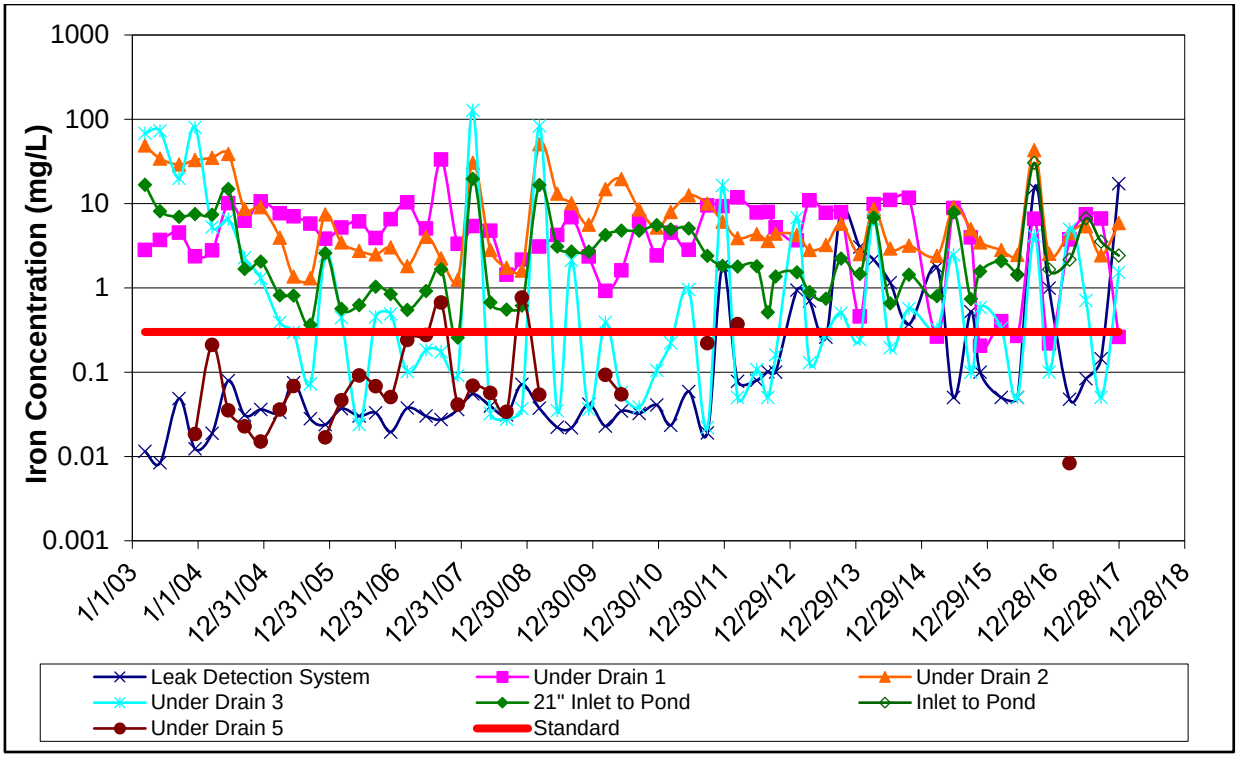


HARDNESS

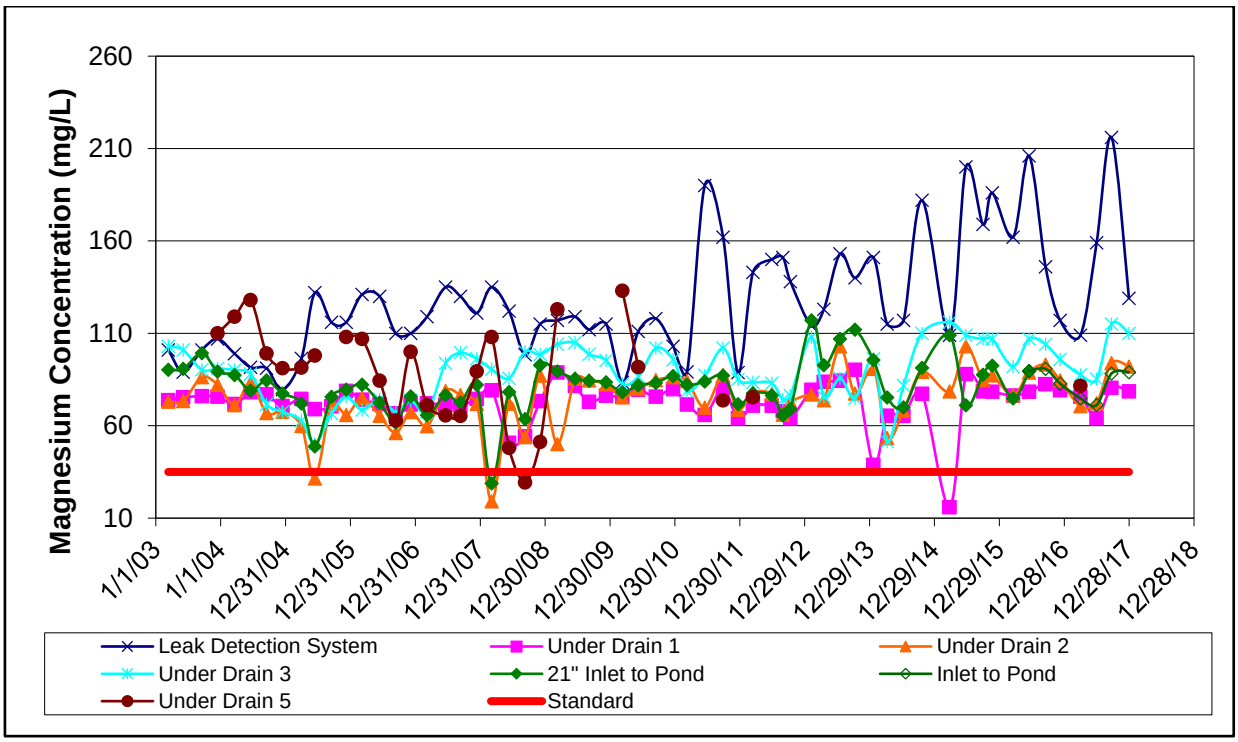


LEACHATE TIME-SERIES PLOTS, CONT.

IRON

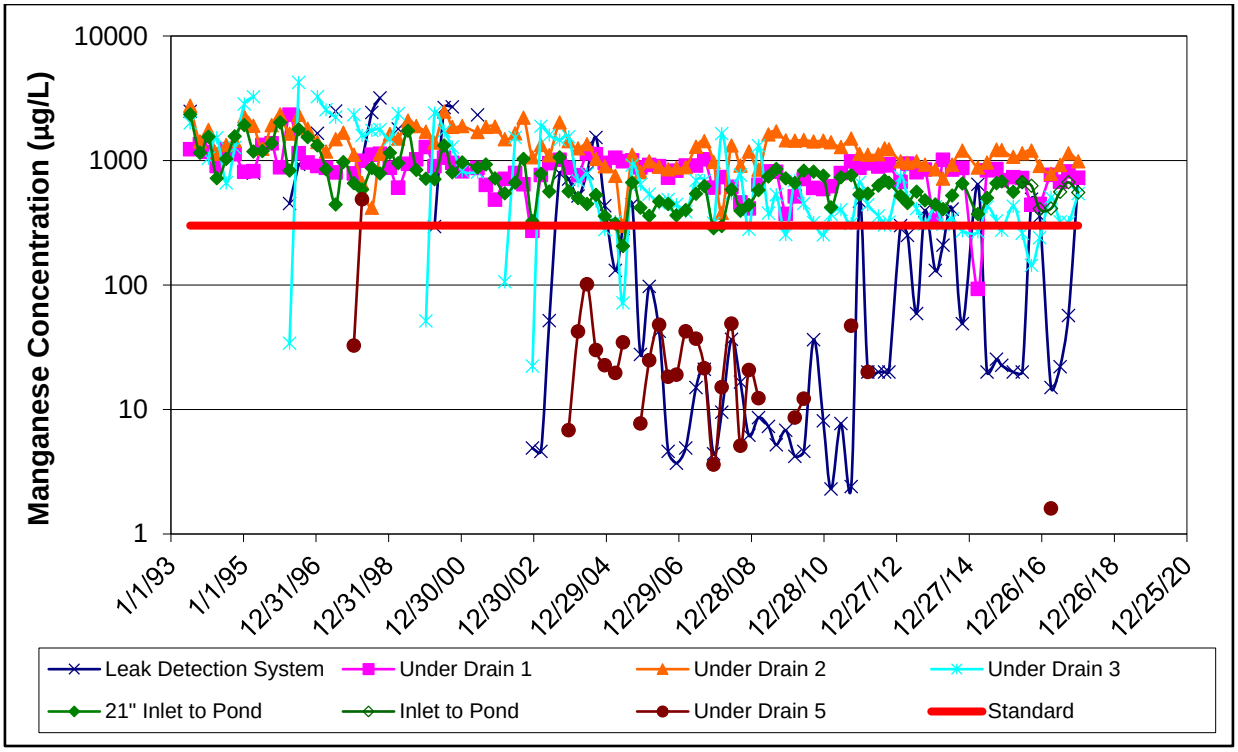


MAGNESIUM

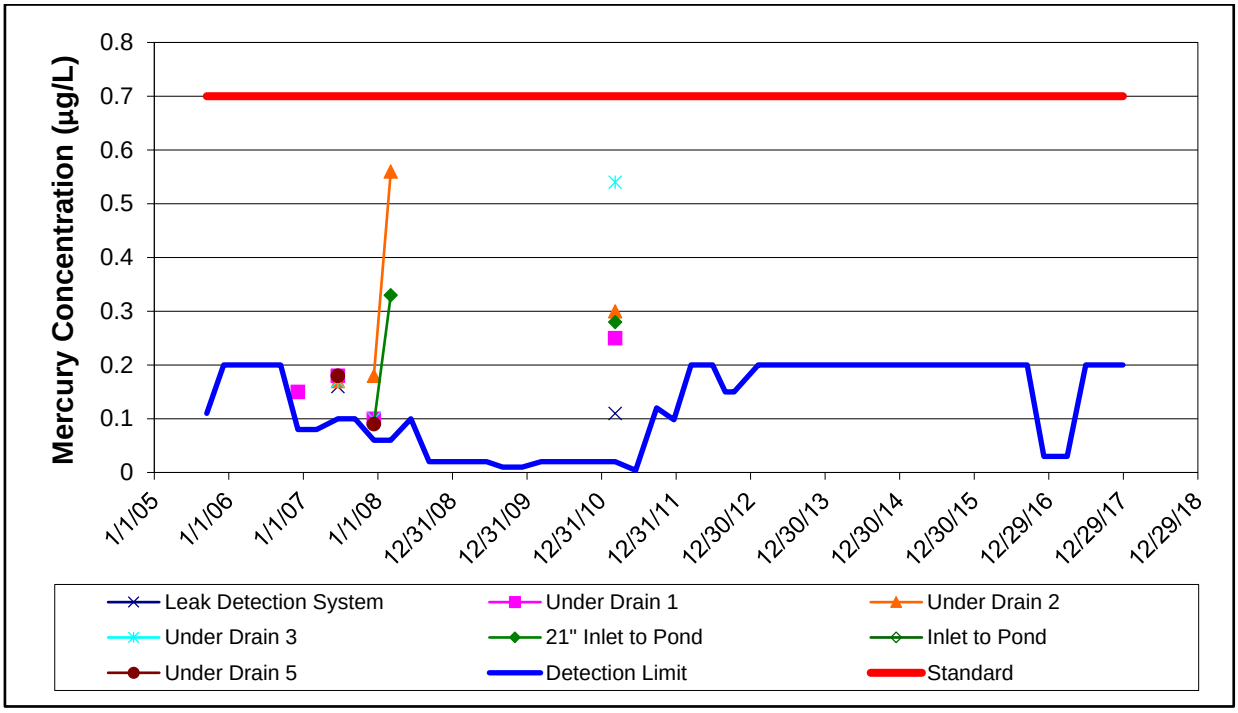


LEACHATE TIME-SERIES PLOTS, CONT.

MANGANESE

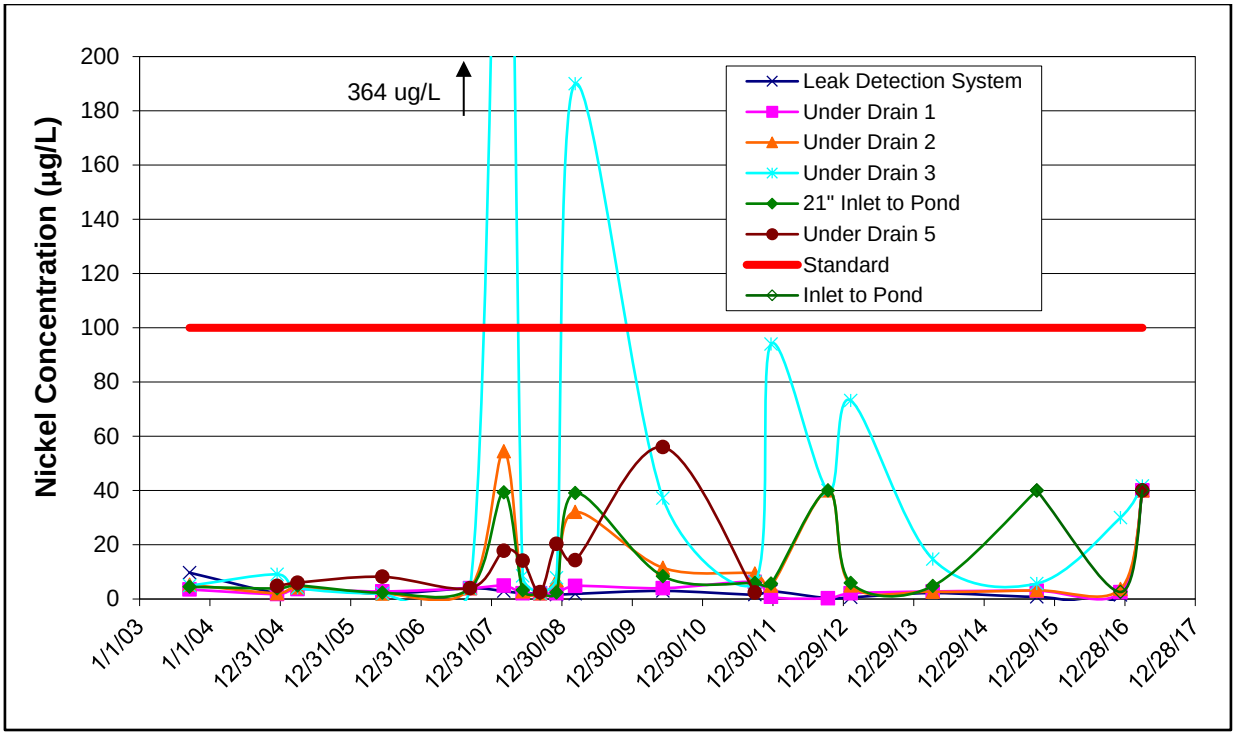


MERCURY (Note: Only data above detection has been included in this plot)

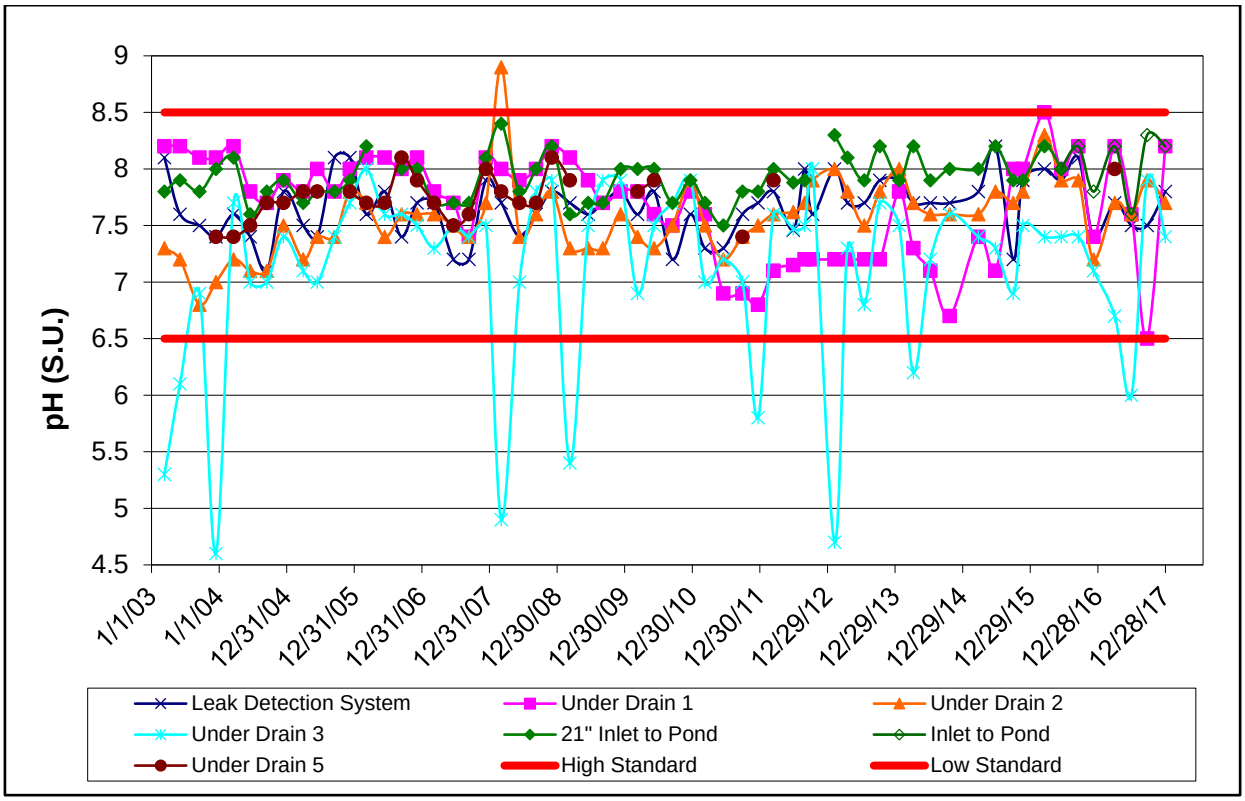


LEACHATE TIME-SERIES PLOTS, CONT.

NICKEL

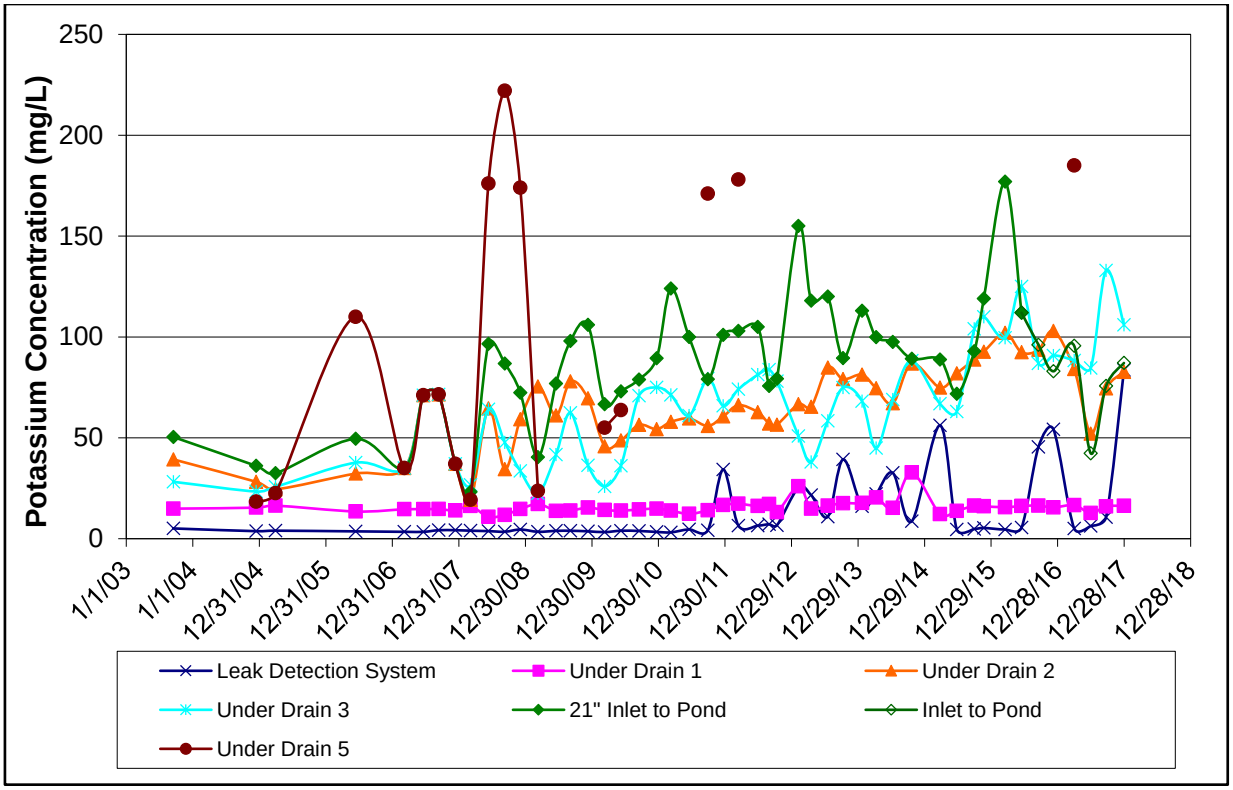


pH

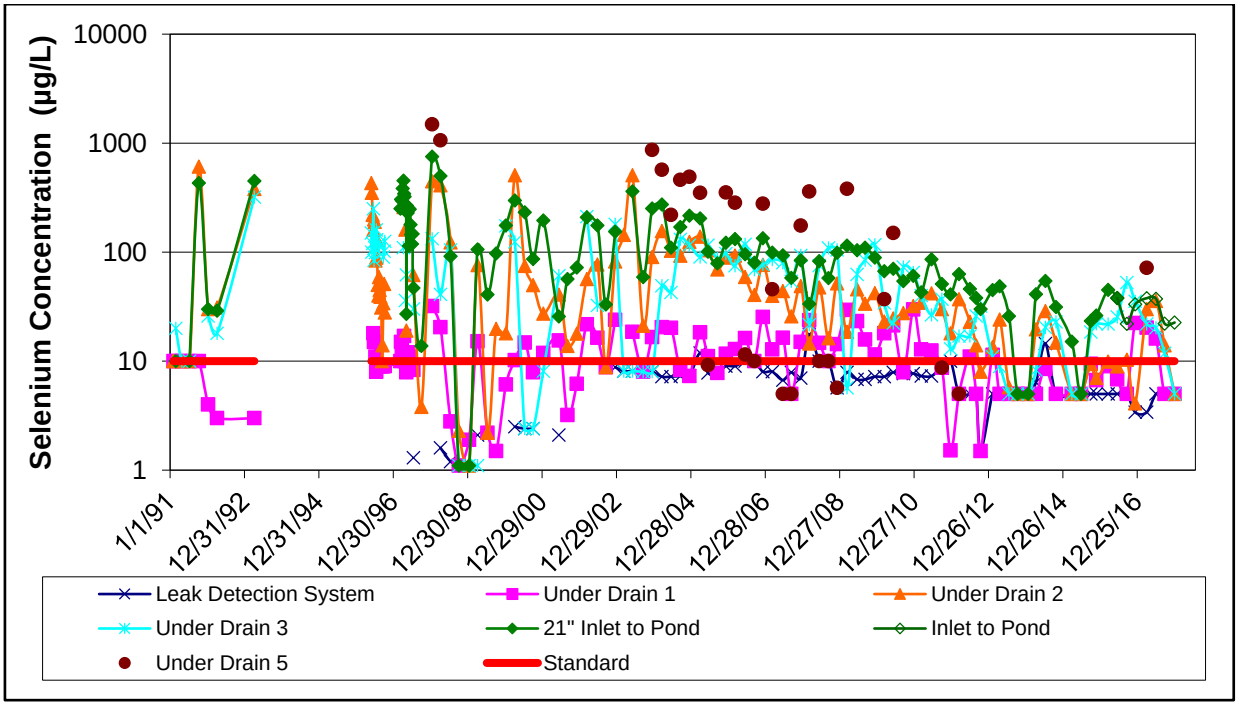


LEACHATE TIME-SERIES PLOTS, CONT.

POTASSIUM

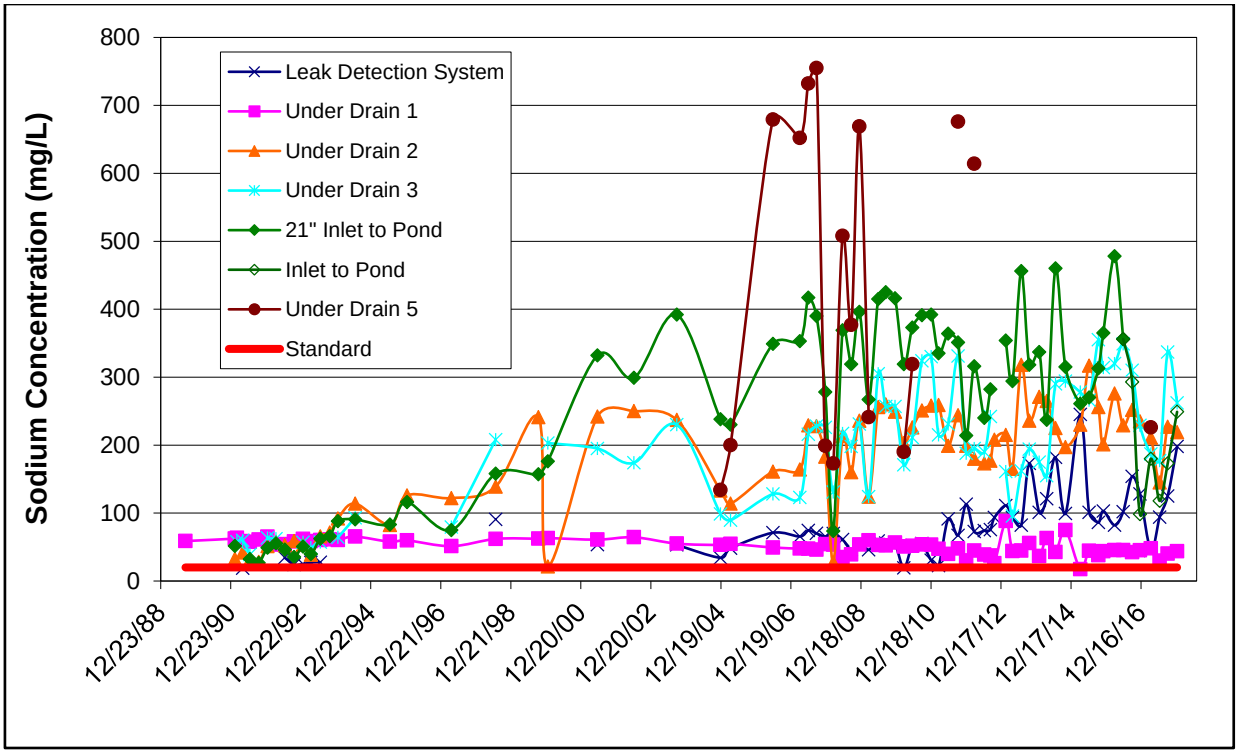


SELENIUM

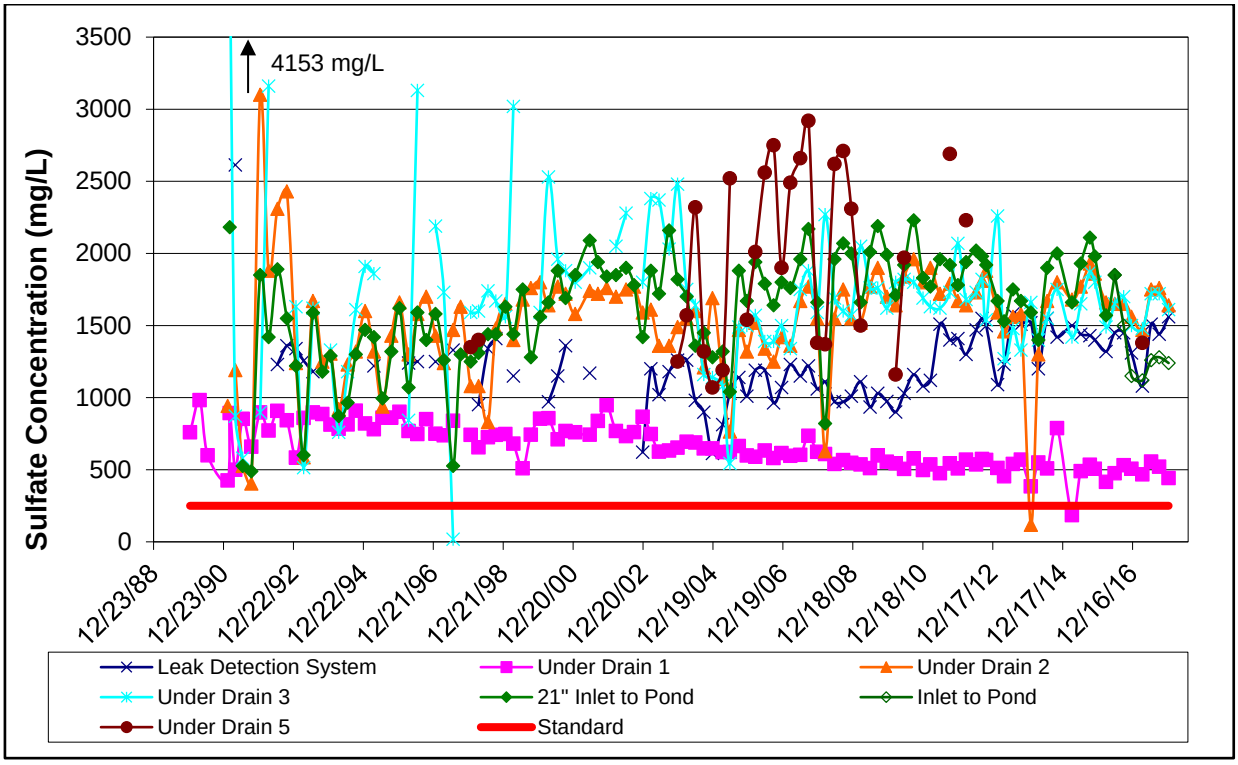


LEACHATE TIME-SERIES PLOTS, CONT.

SODIUM

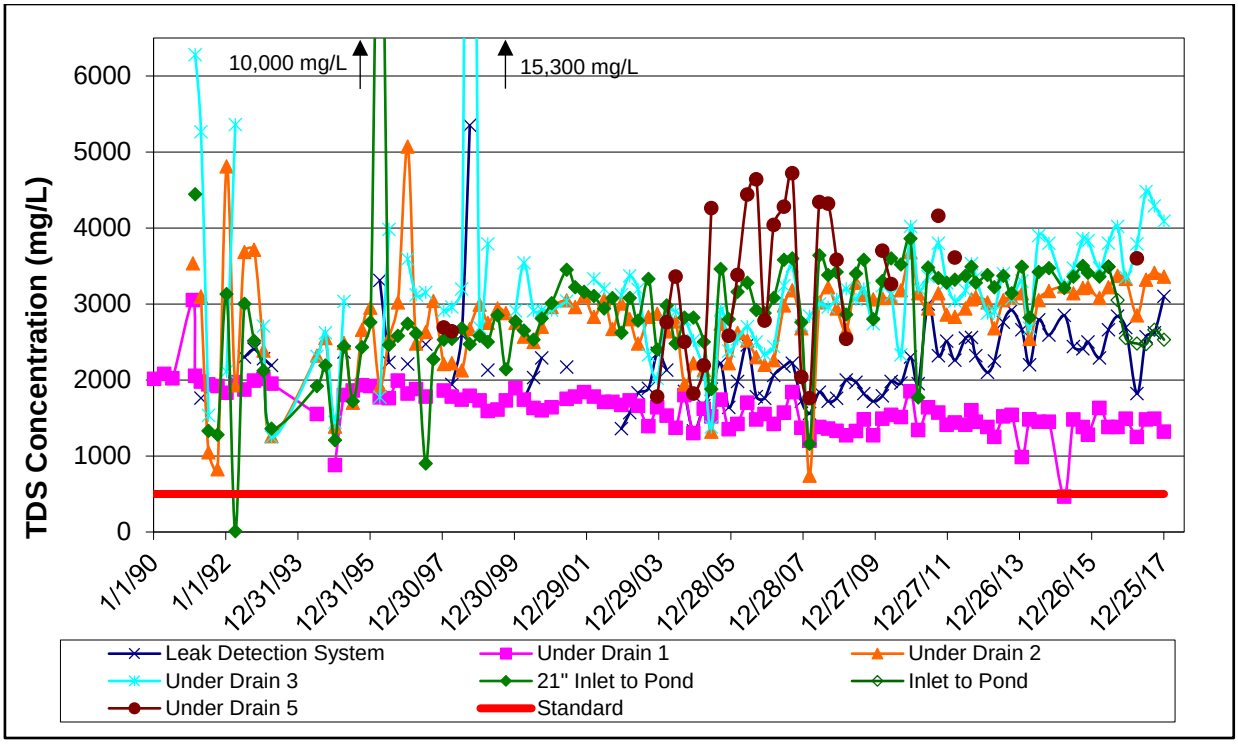


SULFATE

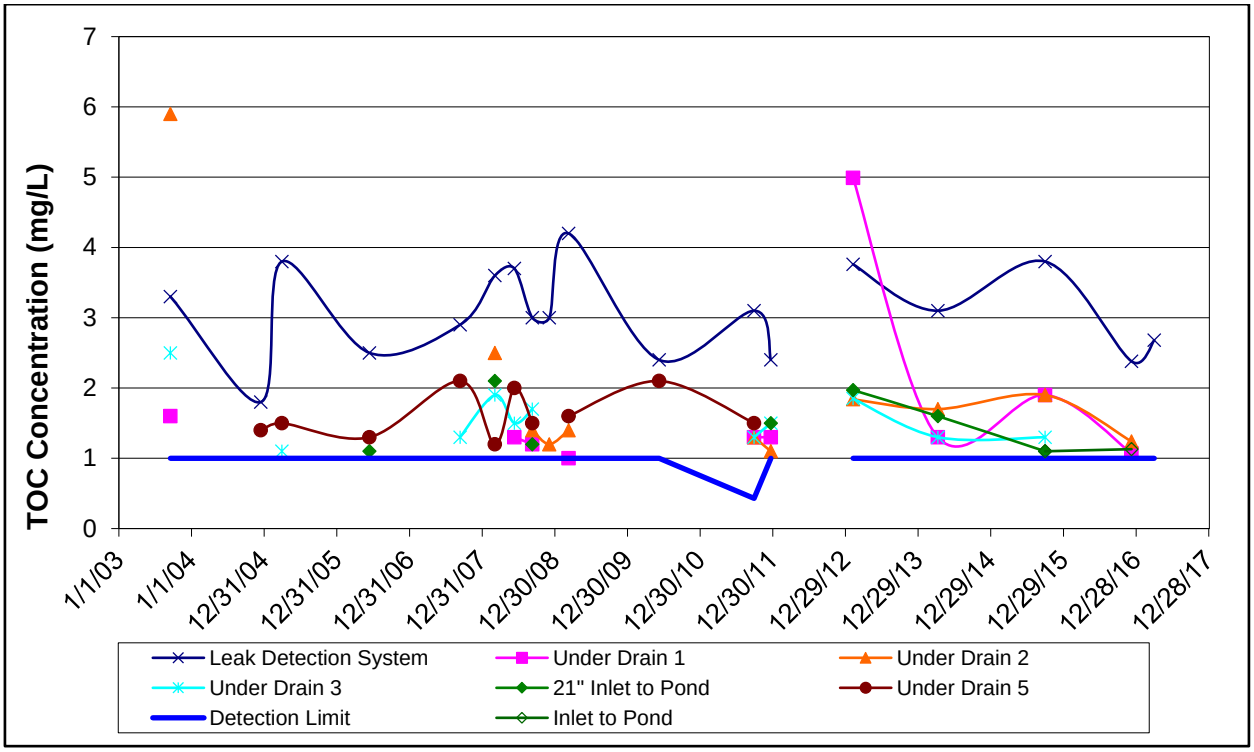


LEACHATE TIME-SERIES PLOTS, CONT.

TOTAL DISSOLVED SOLIDS

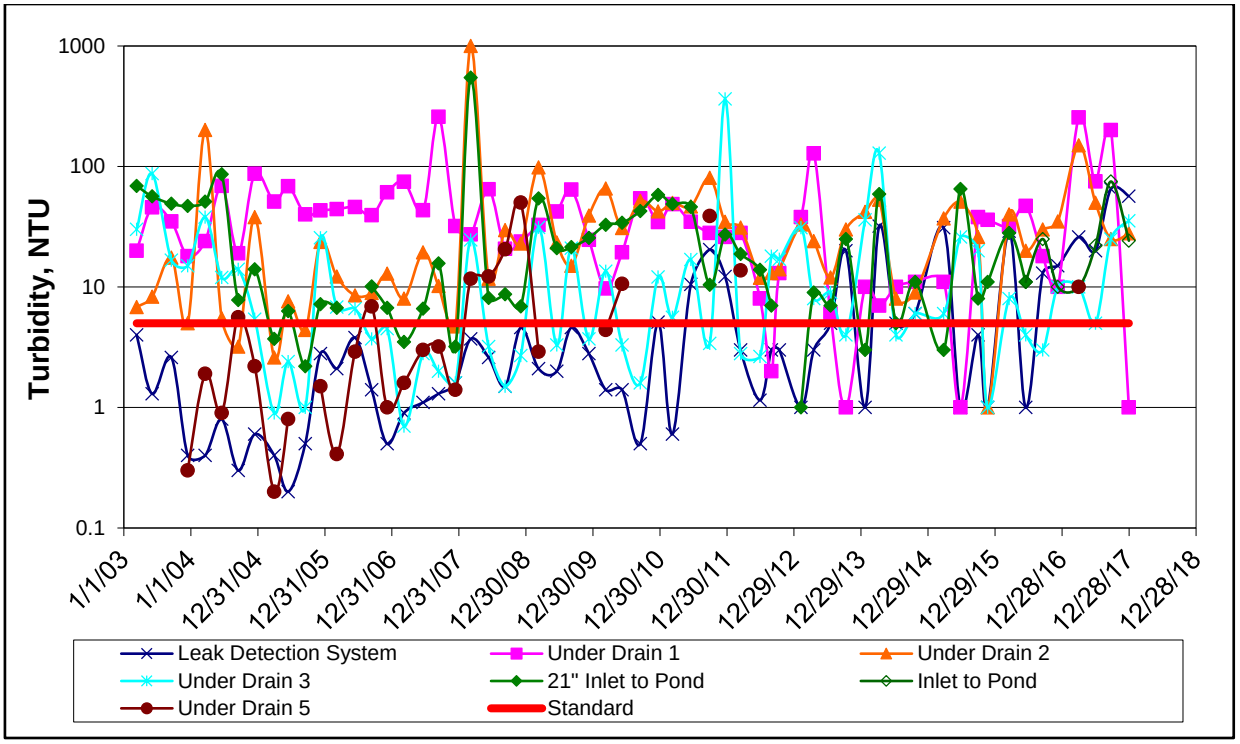


TOTAL ORGANIC CARBON (Note: Only data above detection is included in this plot)

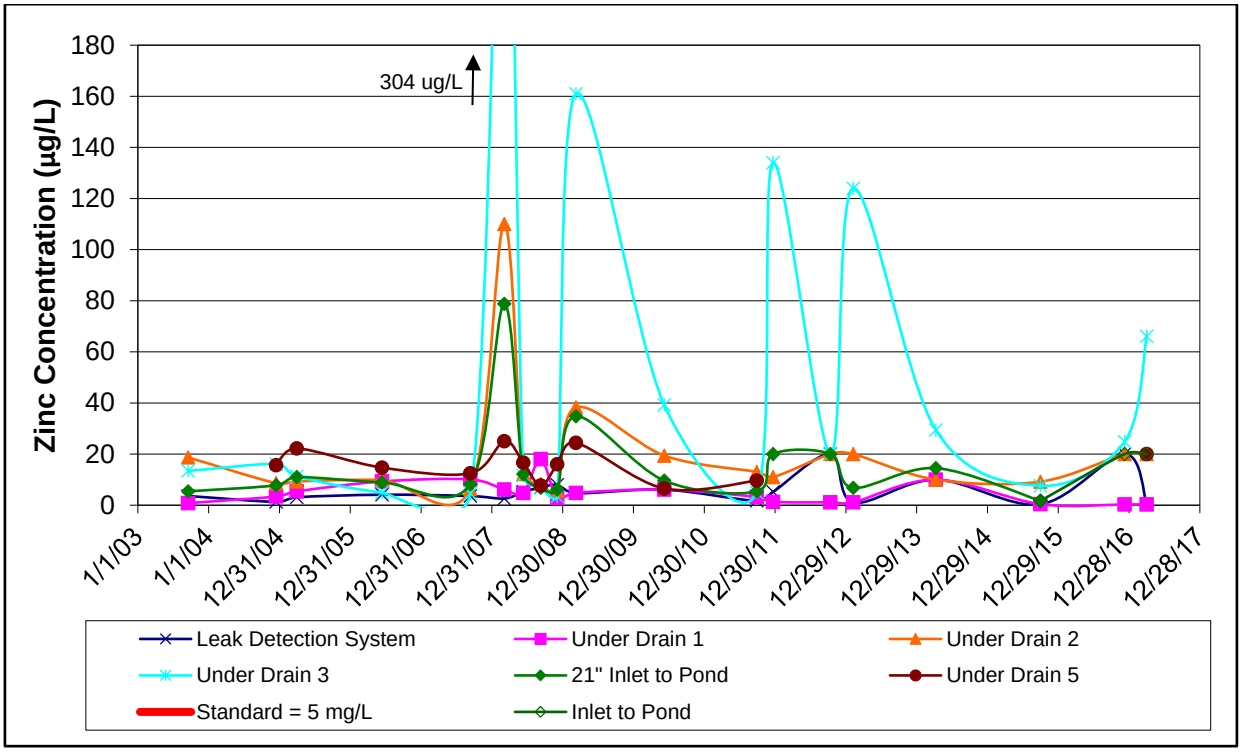


LEACHATE TIME-SERIES PLOTS, CONT.

TURBIDITY

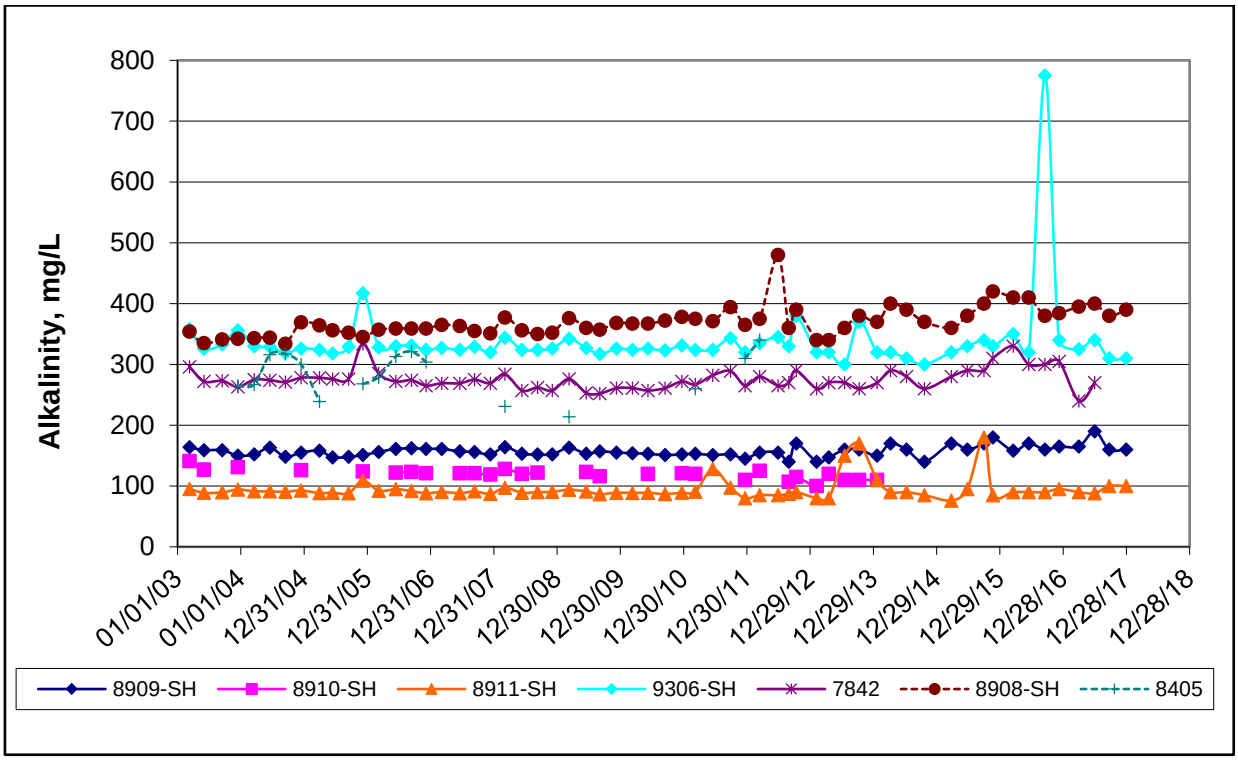


ZINC

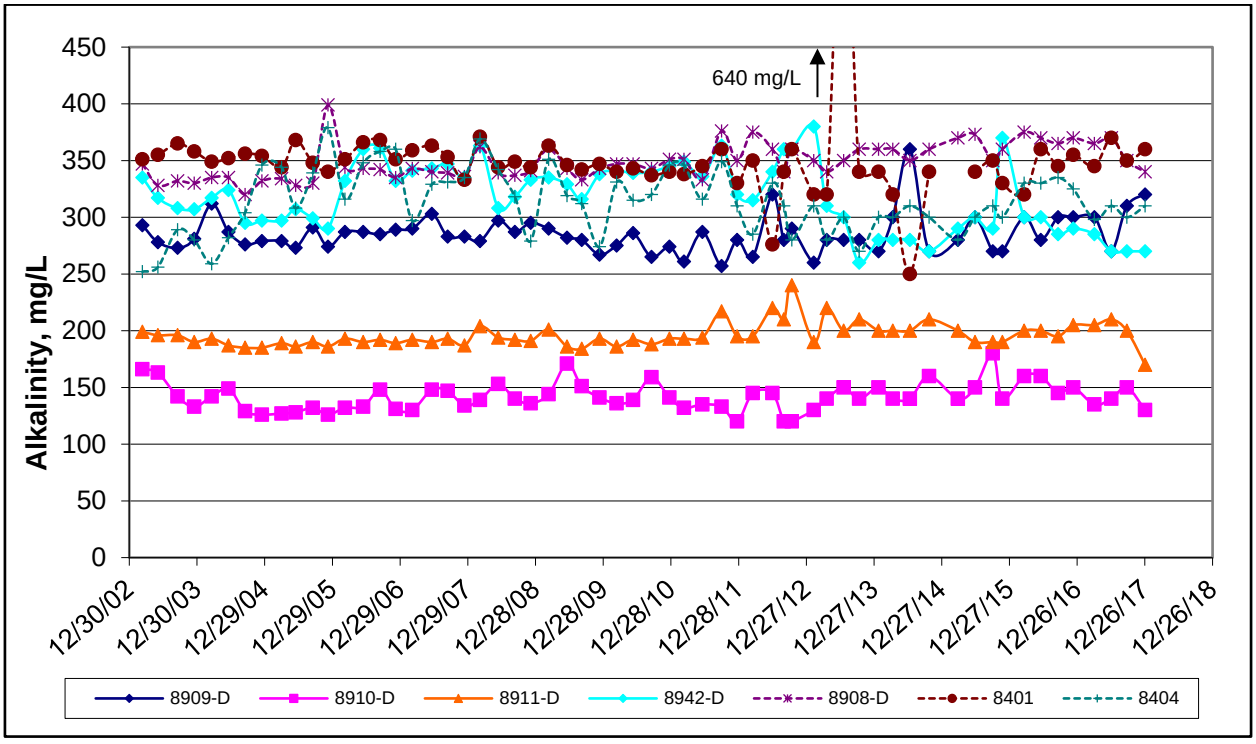


MONITORING WELL TIME-SERIES PLOTS
ALKALINITY

GLACIAL TILL



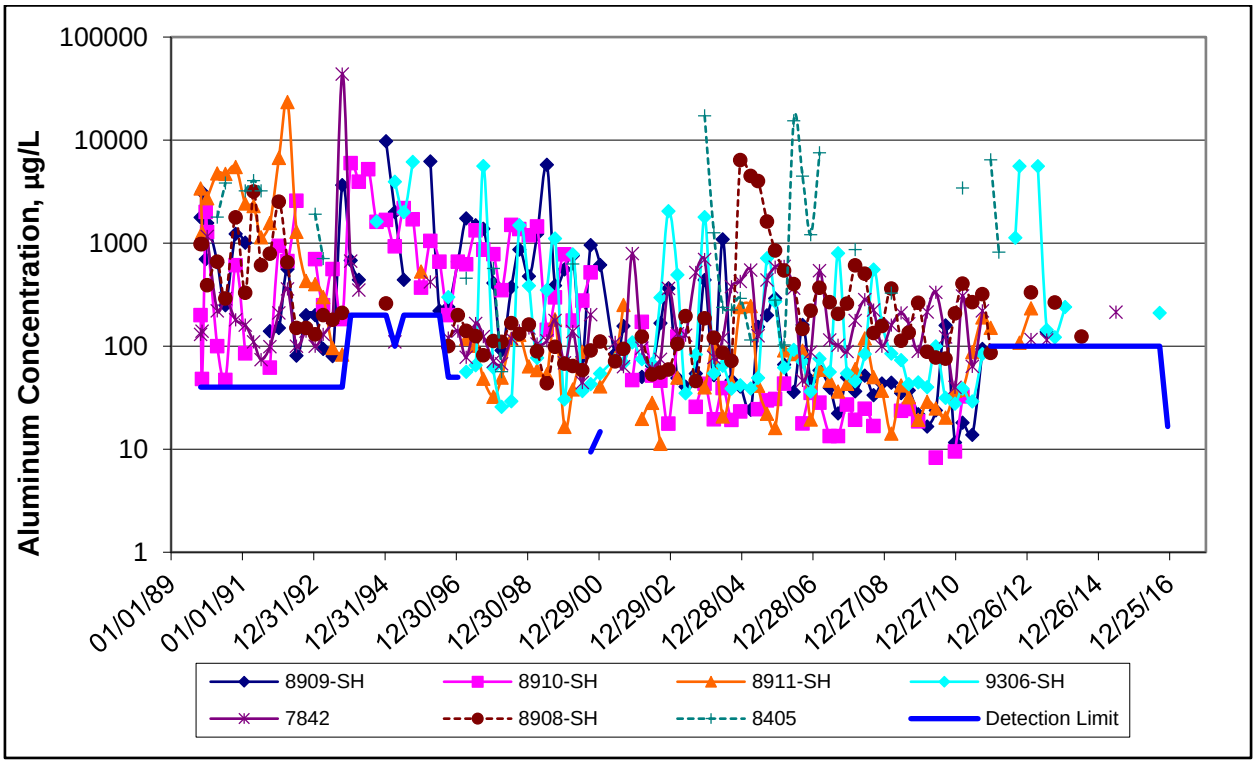
BEDROCK



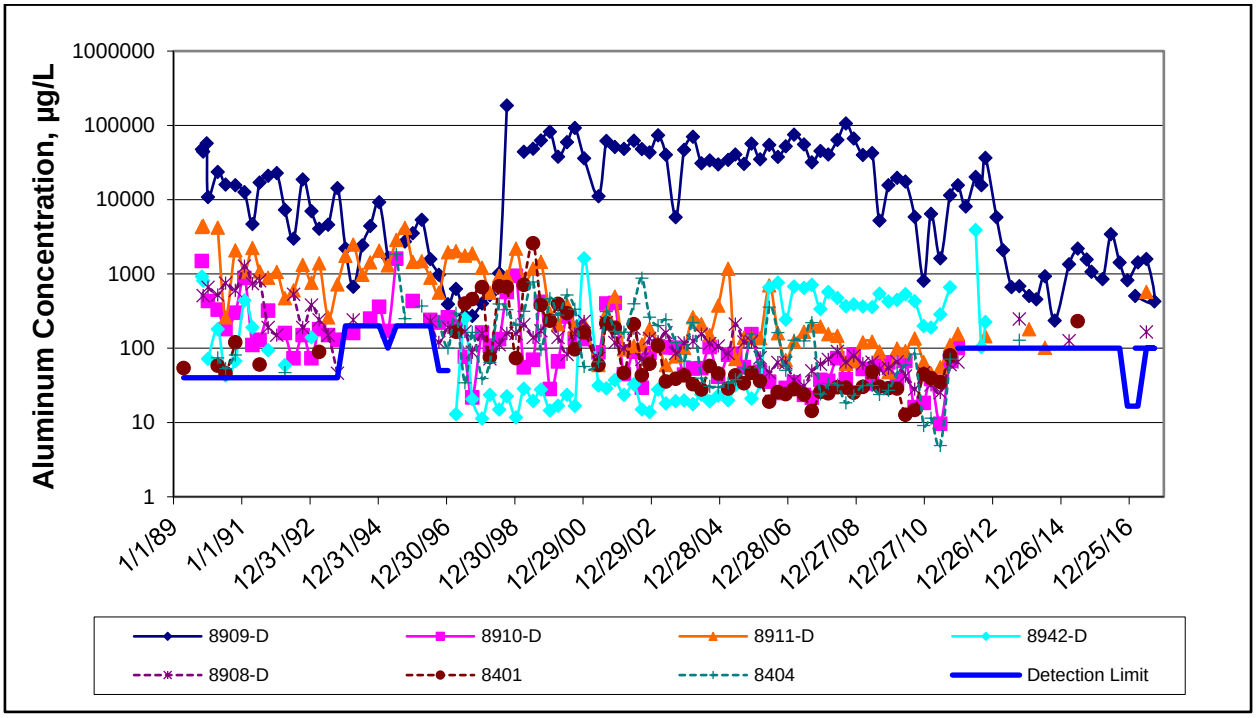
MONITORING WELL TIME-SERIES PLOTS, CONT.

ALUMINUM

GLACIAL TILL

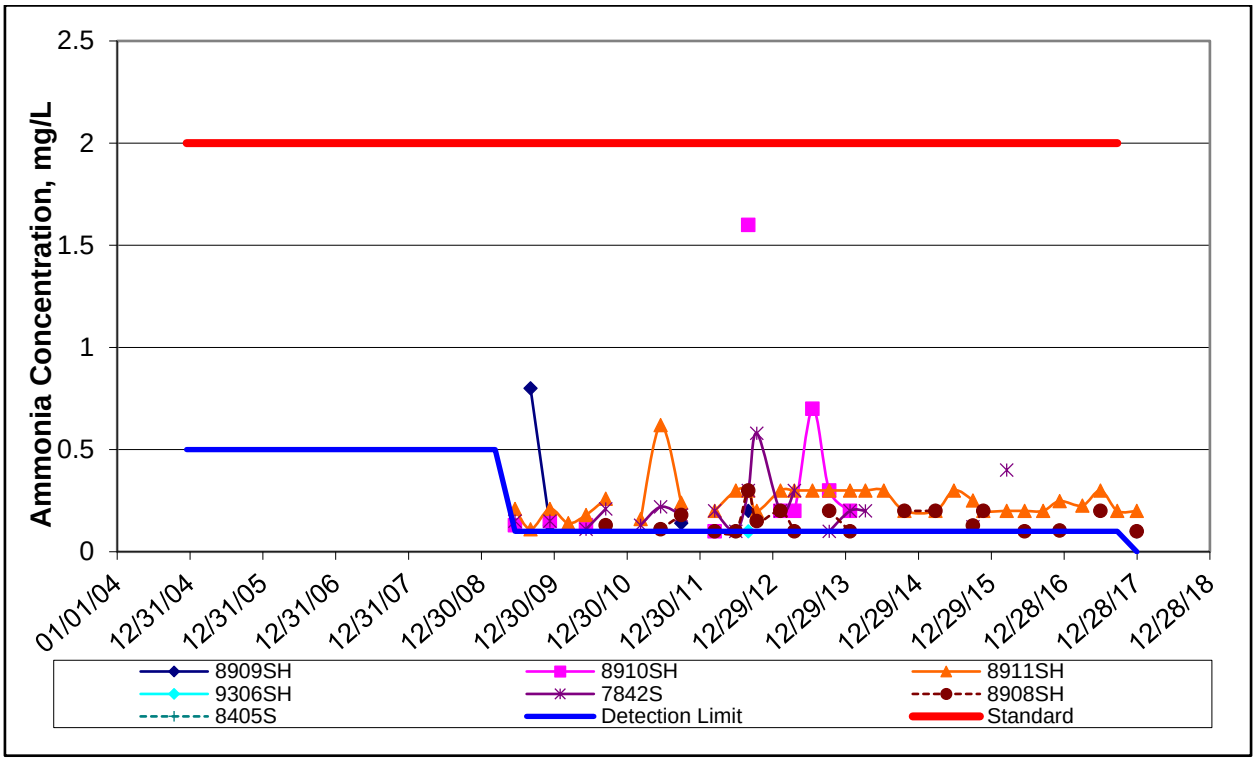


BEDROCK

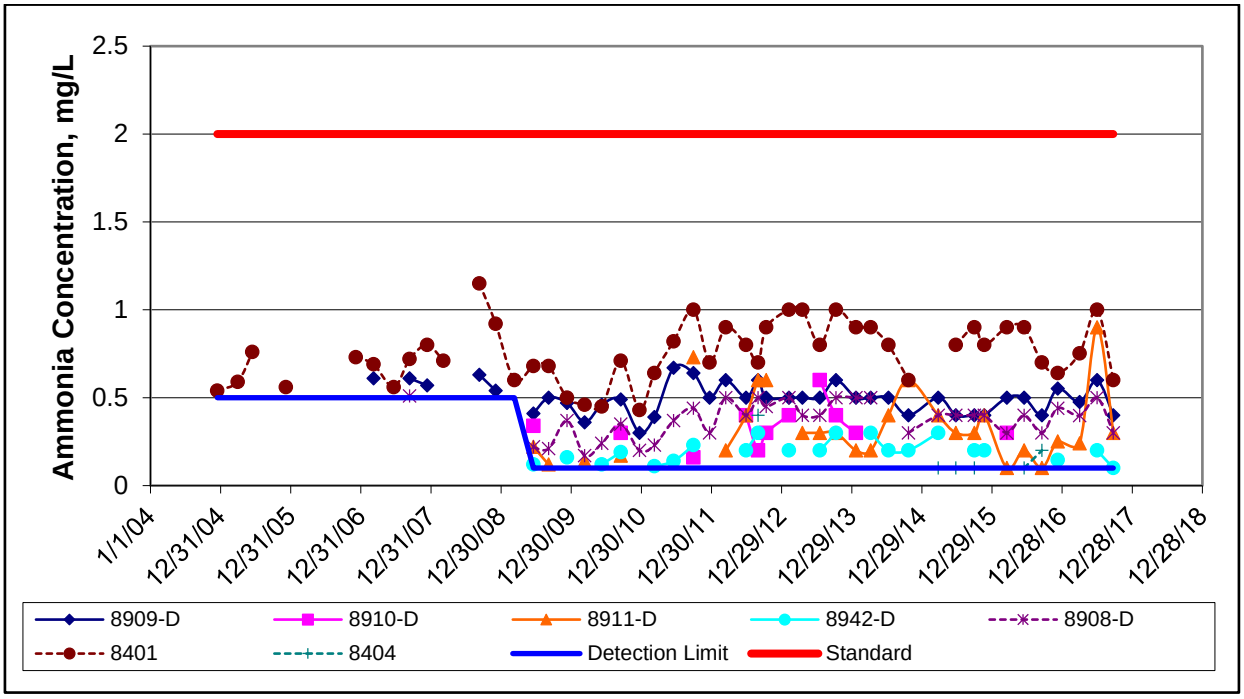


MONITORING WELL TIME-SERIES PLOTS, CONT.
AMMONIA

GLACIAL TILL (Note: Only data above detection has been included in this plot)

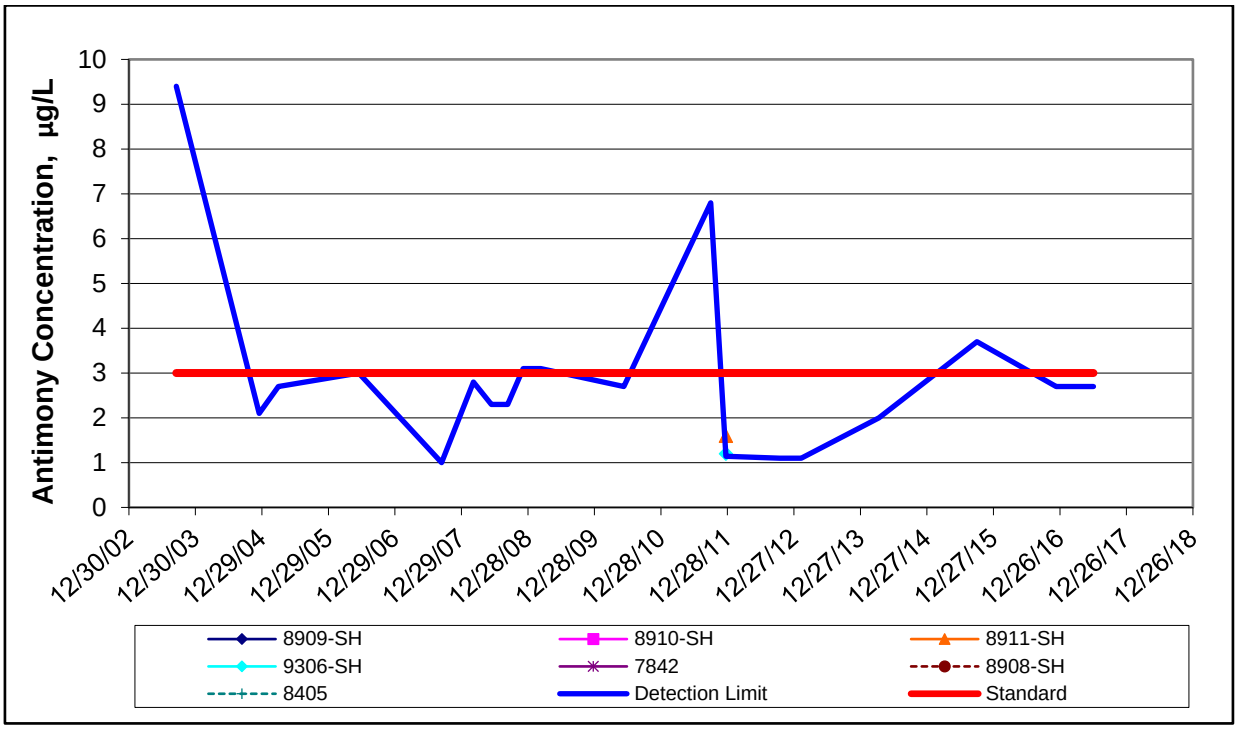


BEDROCK (Note: Only data above detection has been included in this plot)

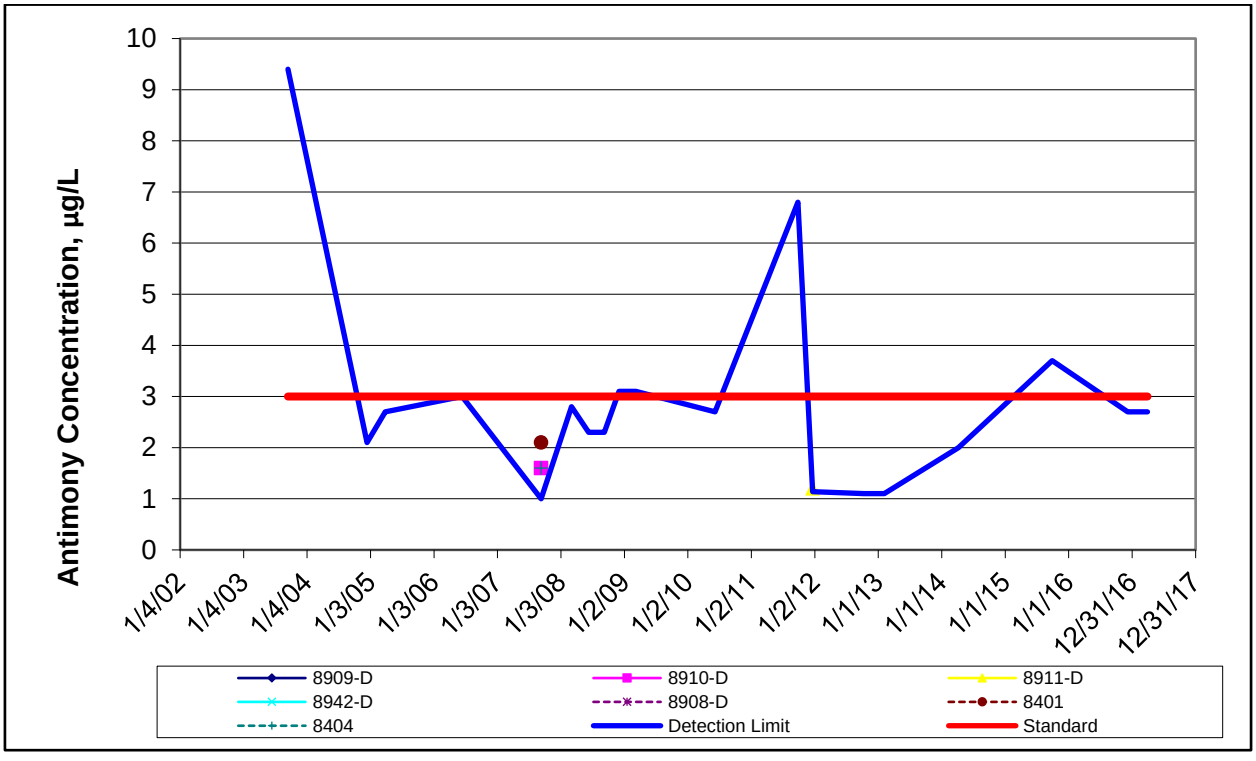


MONITORING WELL TIME-SERIES PLOTS, CONT.
ANTIMONY

GLACIAL TILL (Note: Only data above detection has been included in this plot)

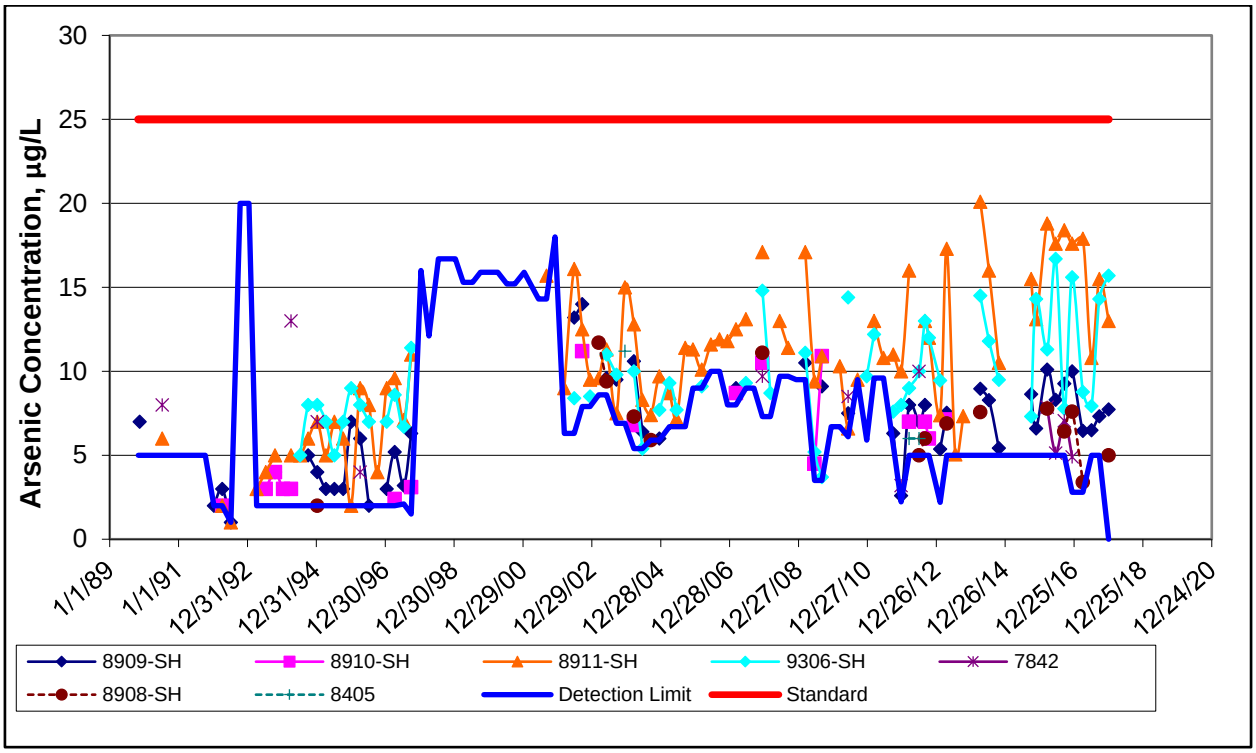


BEDROCK (Note: Only data above detection has been included in this plot)

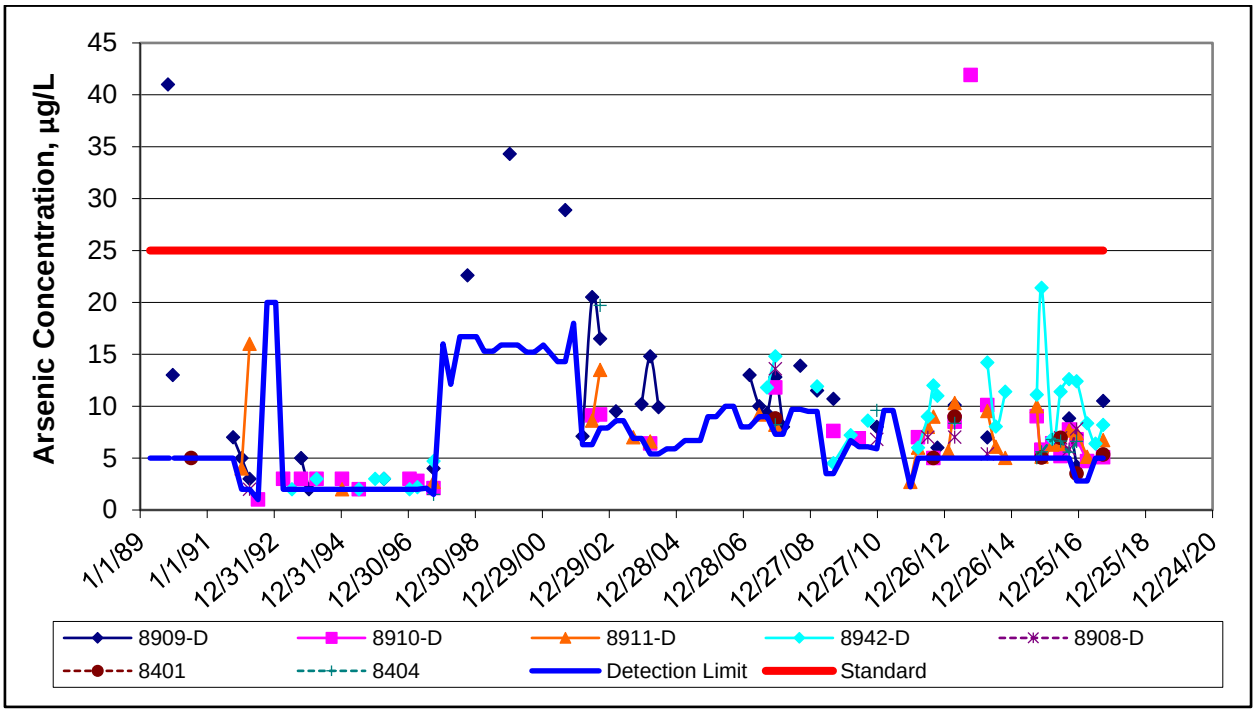


MONITORING WELL TIME-SERIES PLOTS, CONT.
ARSENIC

GLACIAL TILL (Note: Only data above detection has been included in this plot)



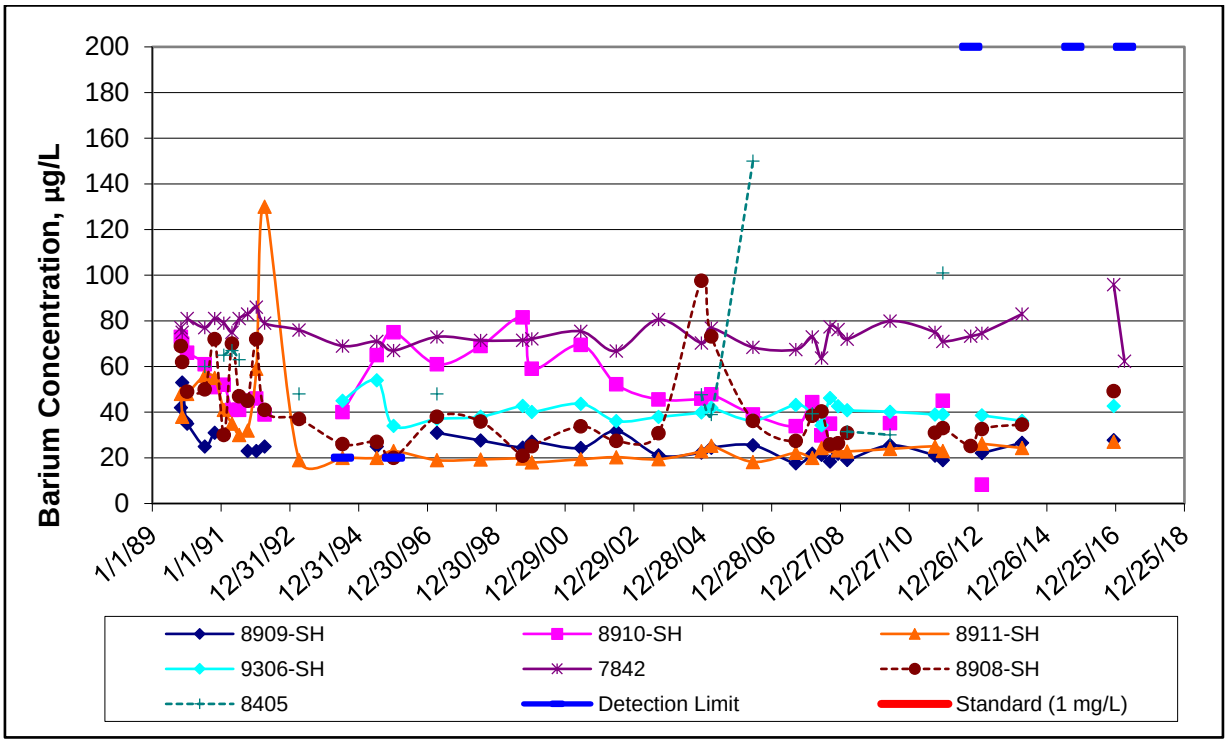
BEDROCK (Note: Only data above detection has been included in this plot)



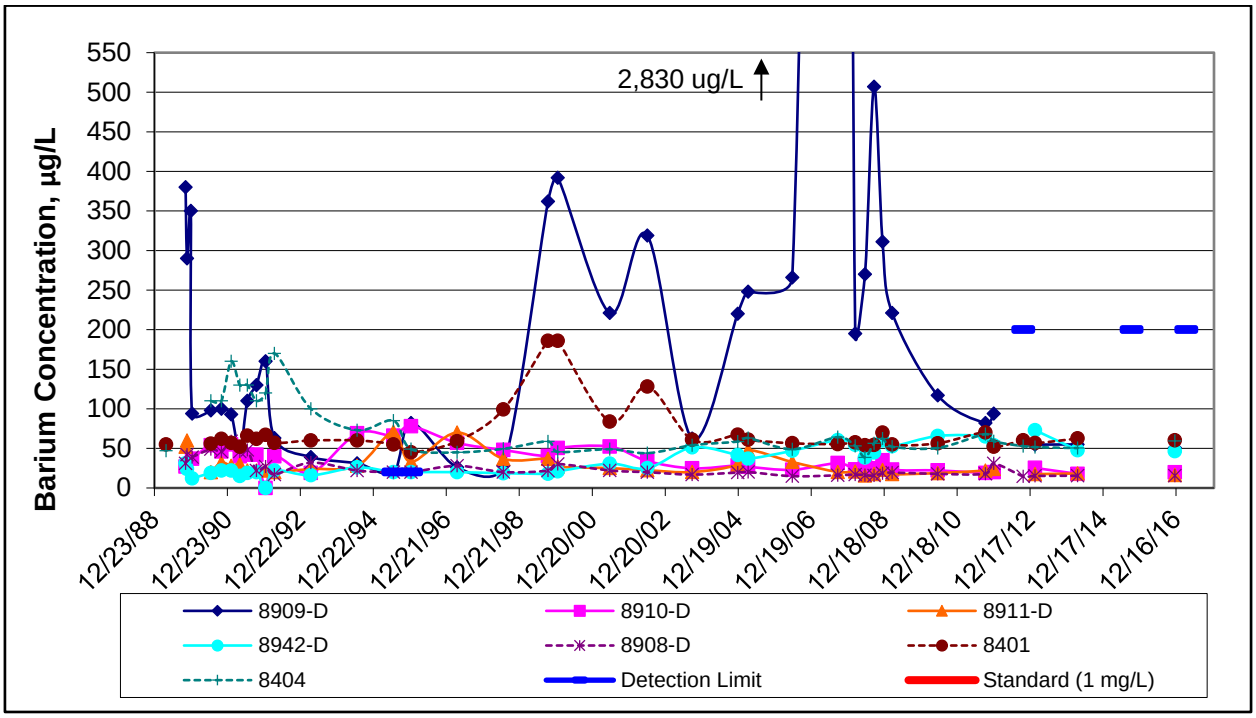
MONITORING WELL TIME-SERIES PLOTS, CONT.

BARIUM

GLACIAL TILL



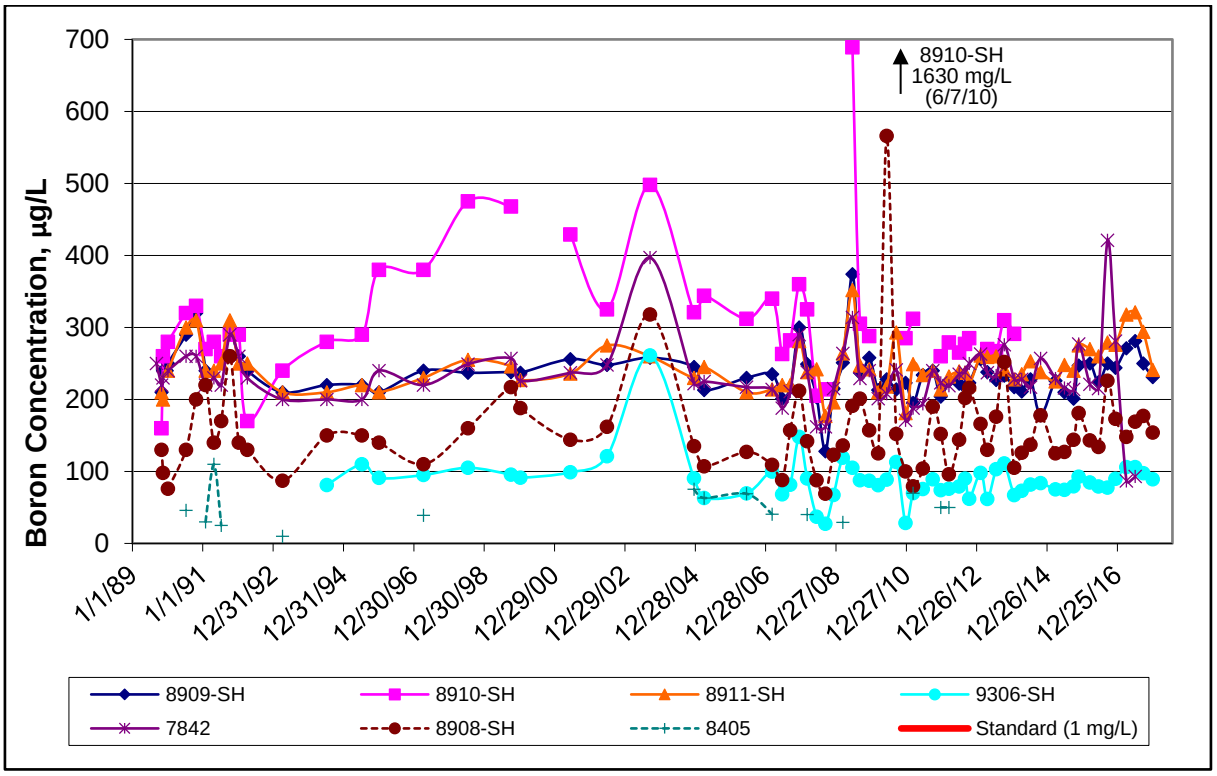
BEDROCK



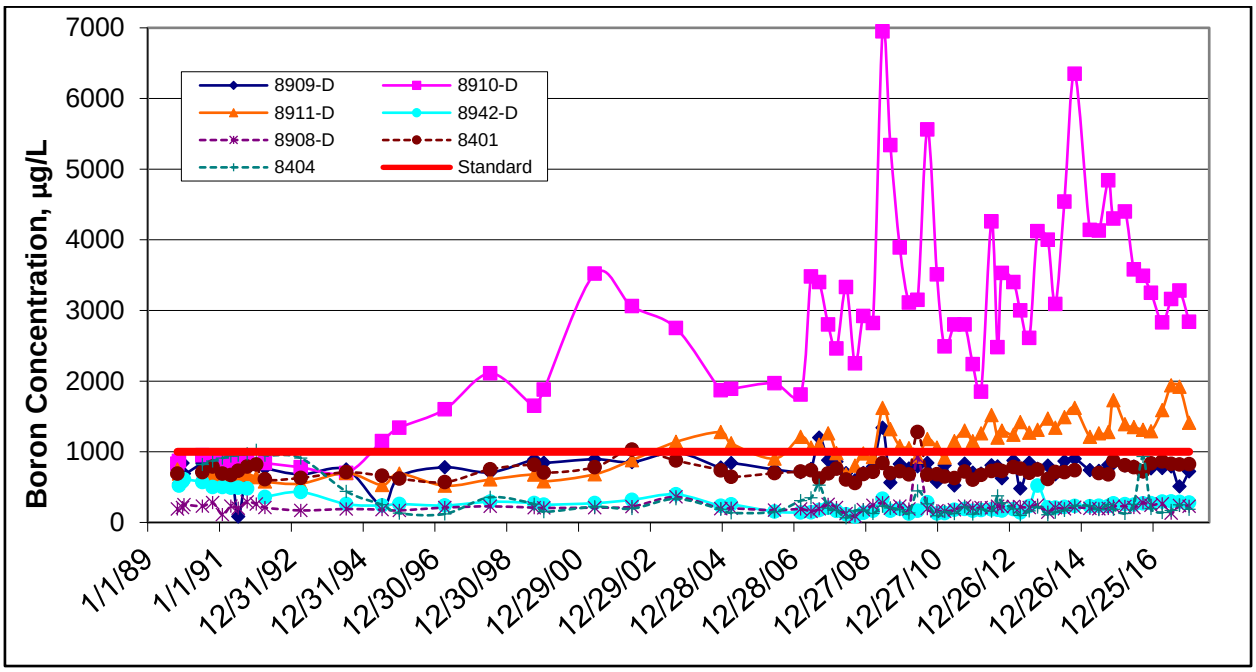
MONITORING WELL TIME-SERIES PLOTS, CONT.

BORON

GLACIAL TILL

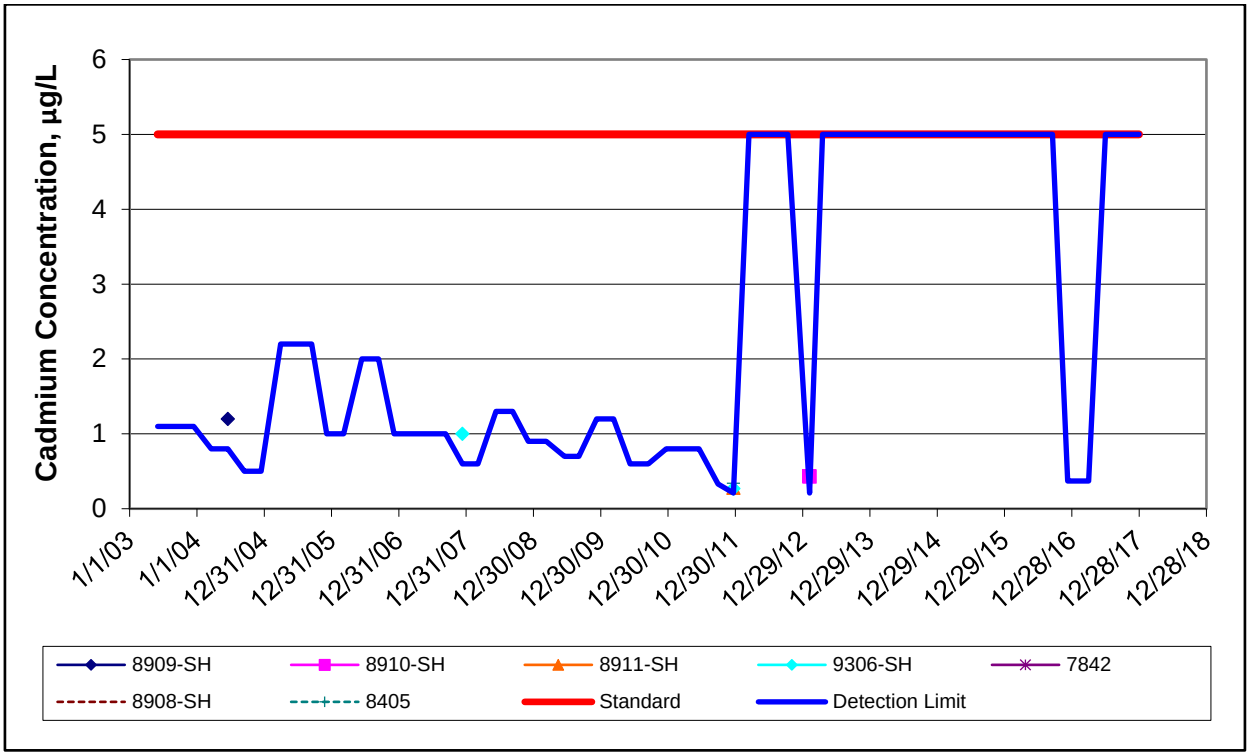


BEDROCK

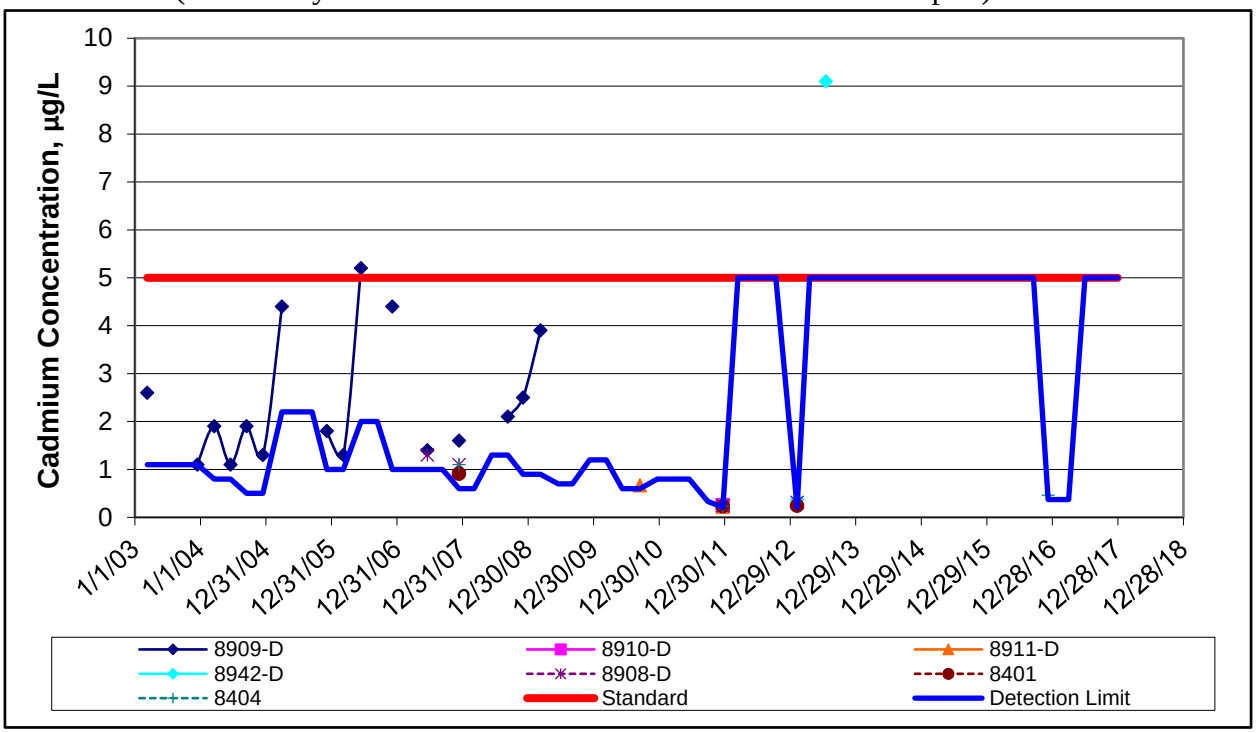


MONITORING WELL TIME-SERIES PLOTS, CONT.
CADMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



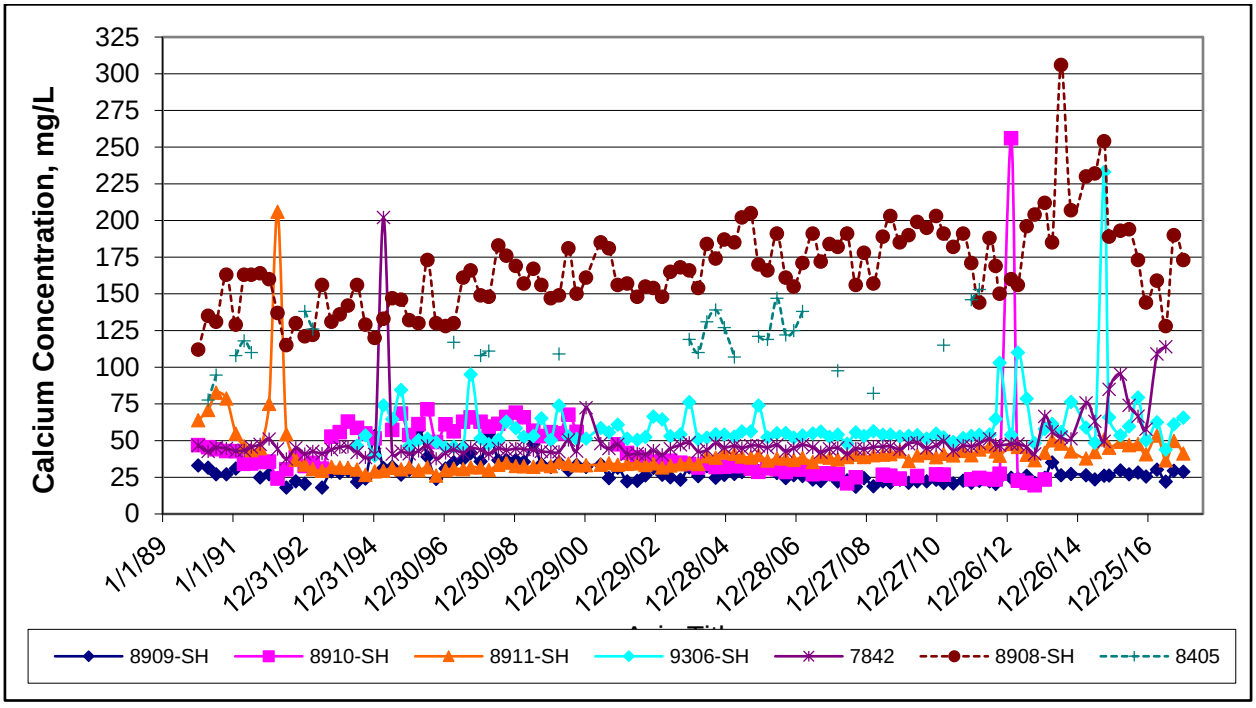
BEDROCK (Note: Only data above detection has been included in this plot)



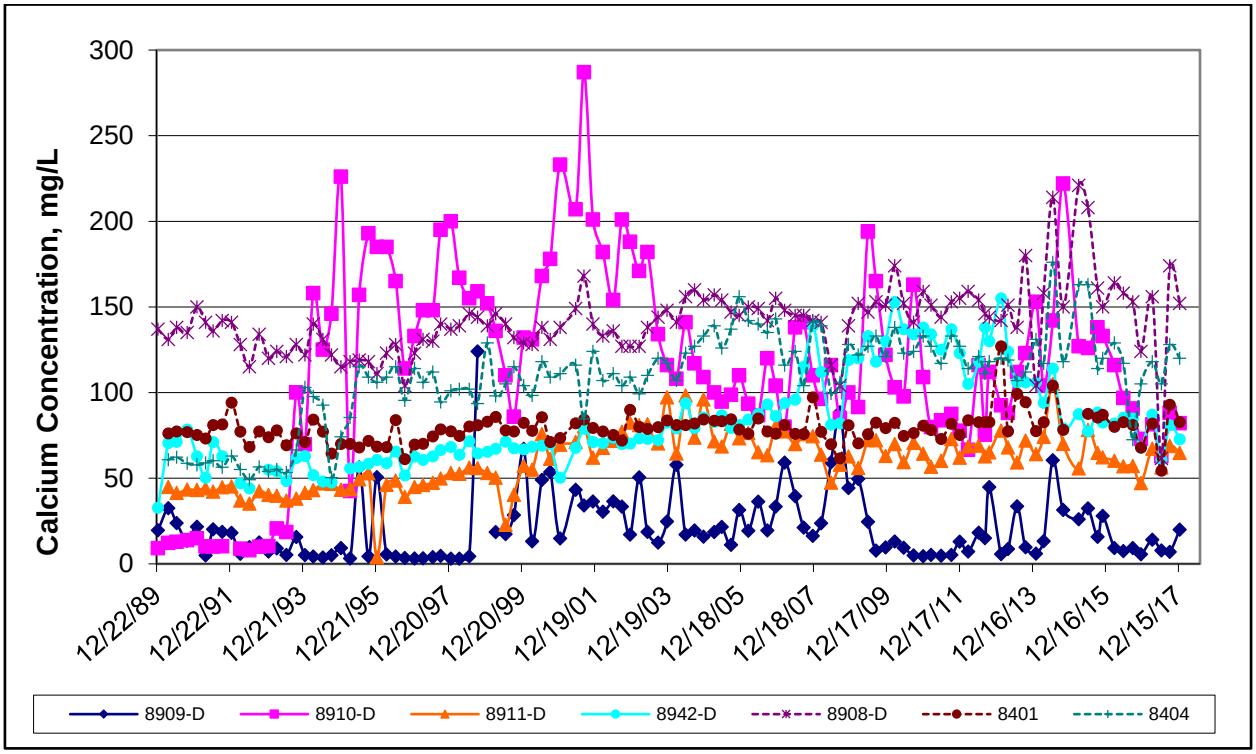
MONITORING WELL TIME-SERIES PLOTS, CONT.

CALCIUM

GLACIAL TILL

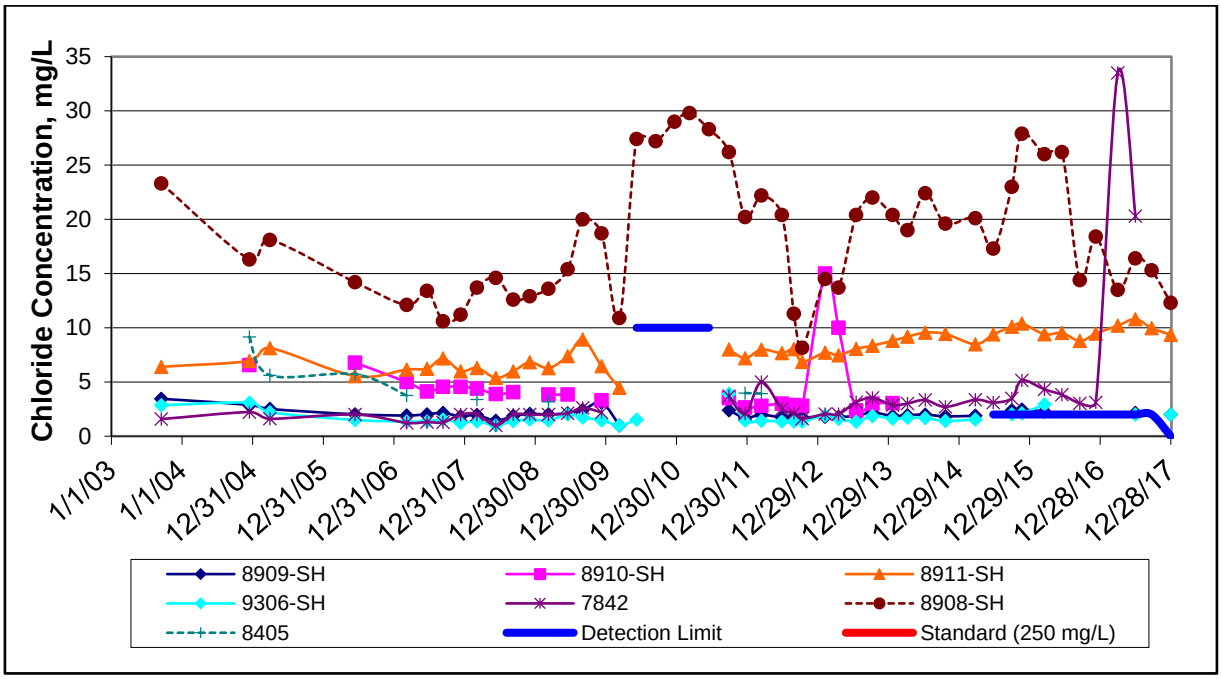


BEDROCK

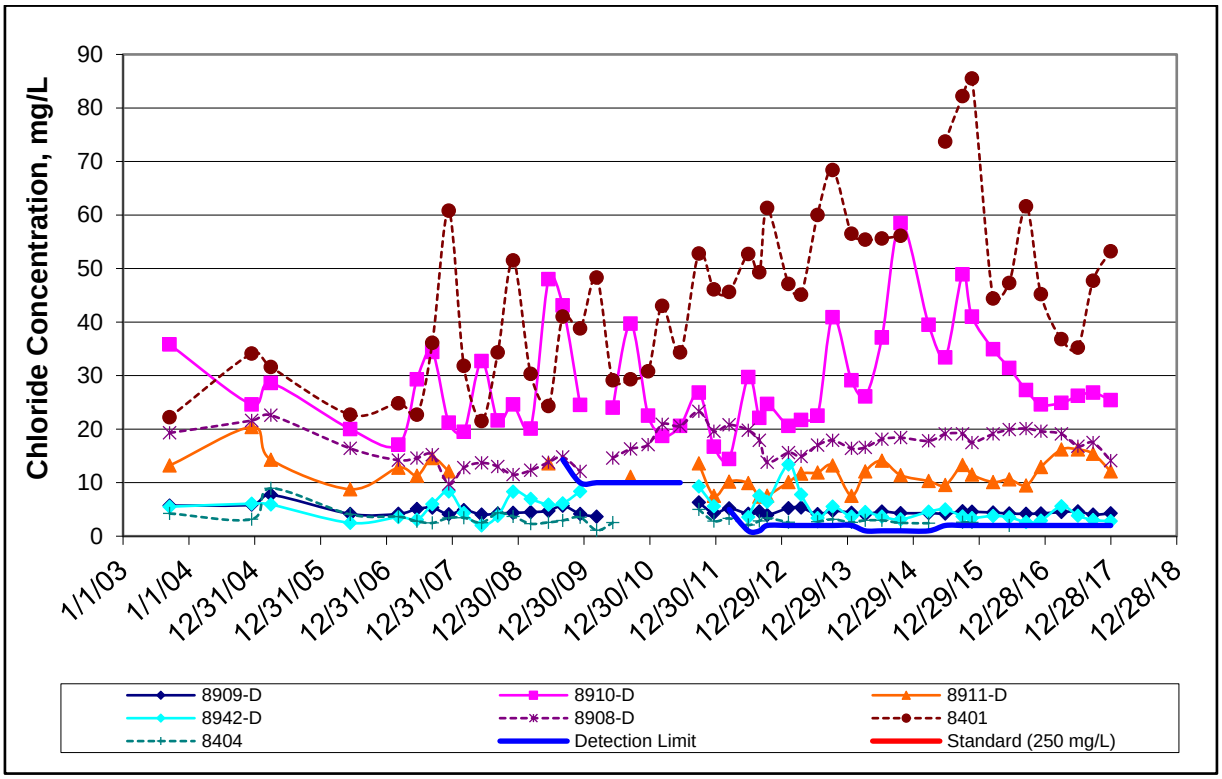


MONITORING WELL TIME-SERIES PLOTS, CONT.
CHLORIDE

GLACIAL TILL

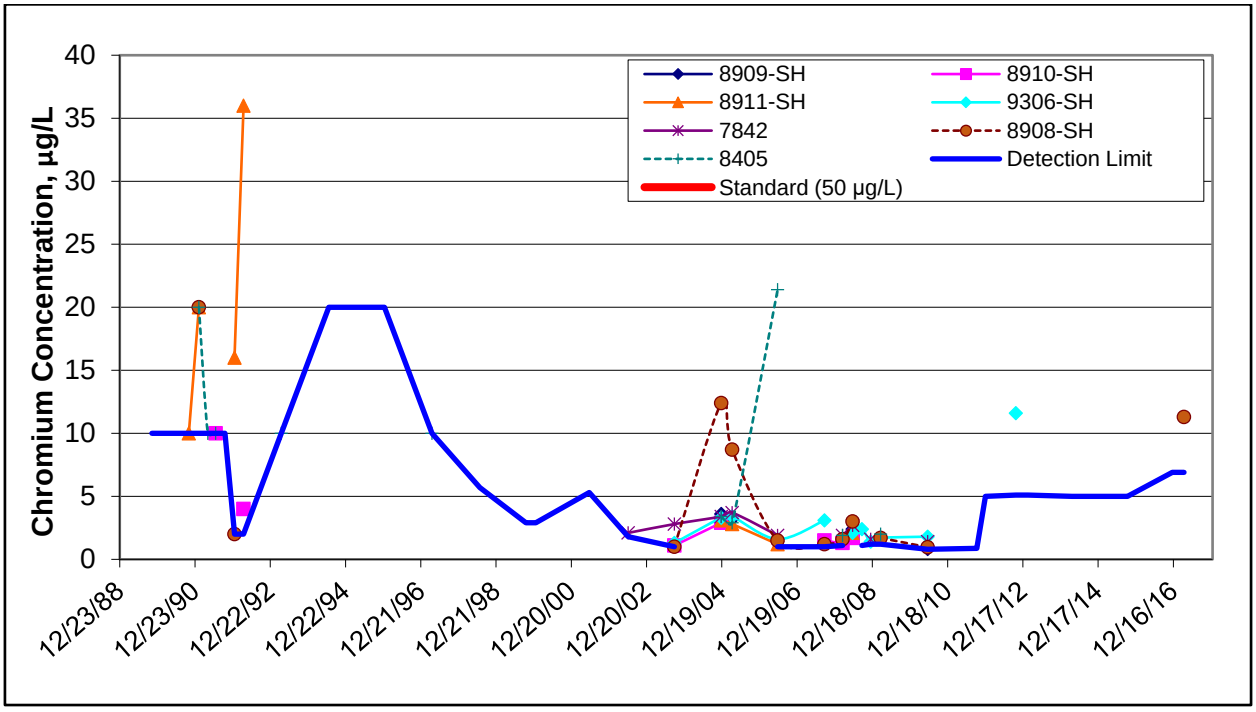


BEDROCK

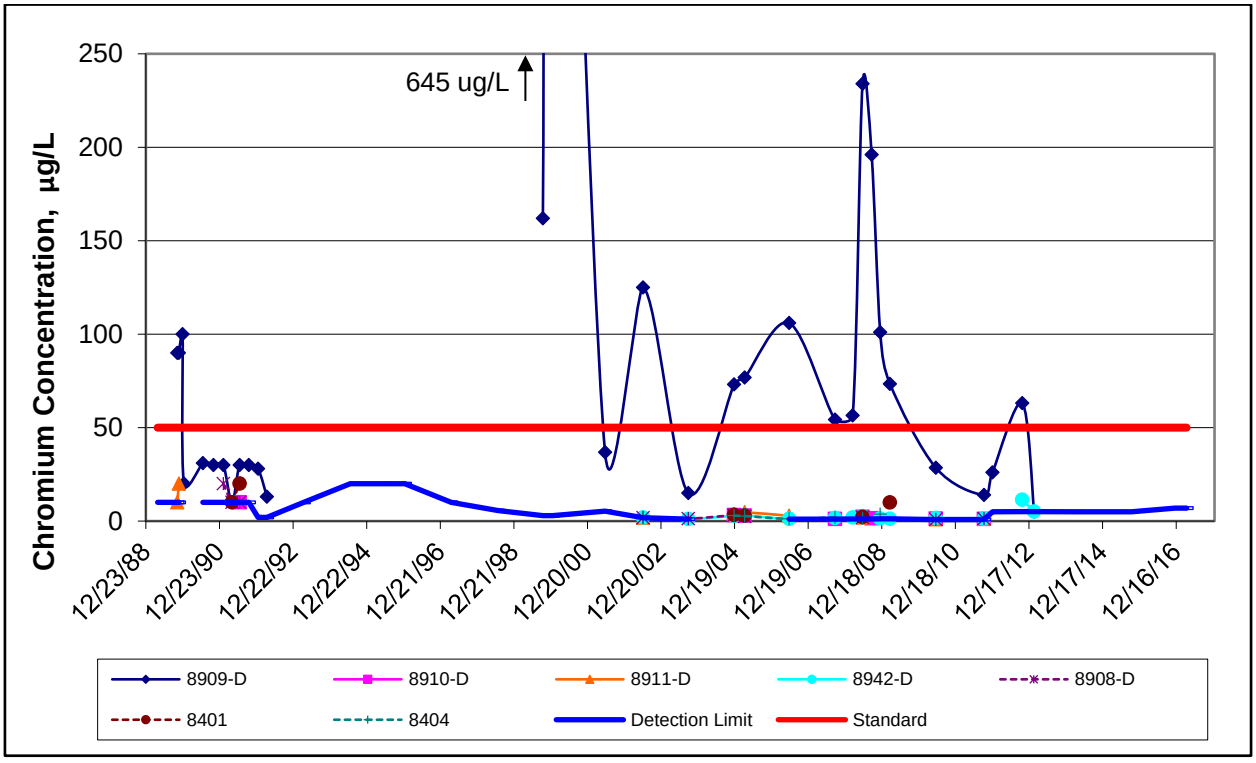


MONITORING WELL TIME-SERIES PLOTS, CONT.
CHROMIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)

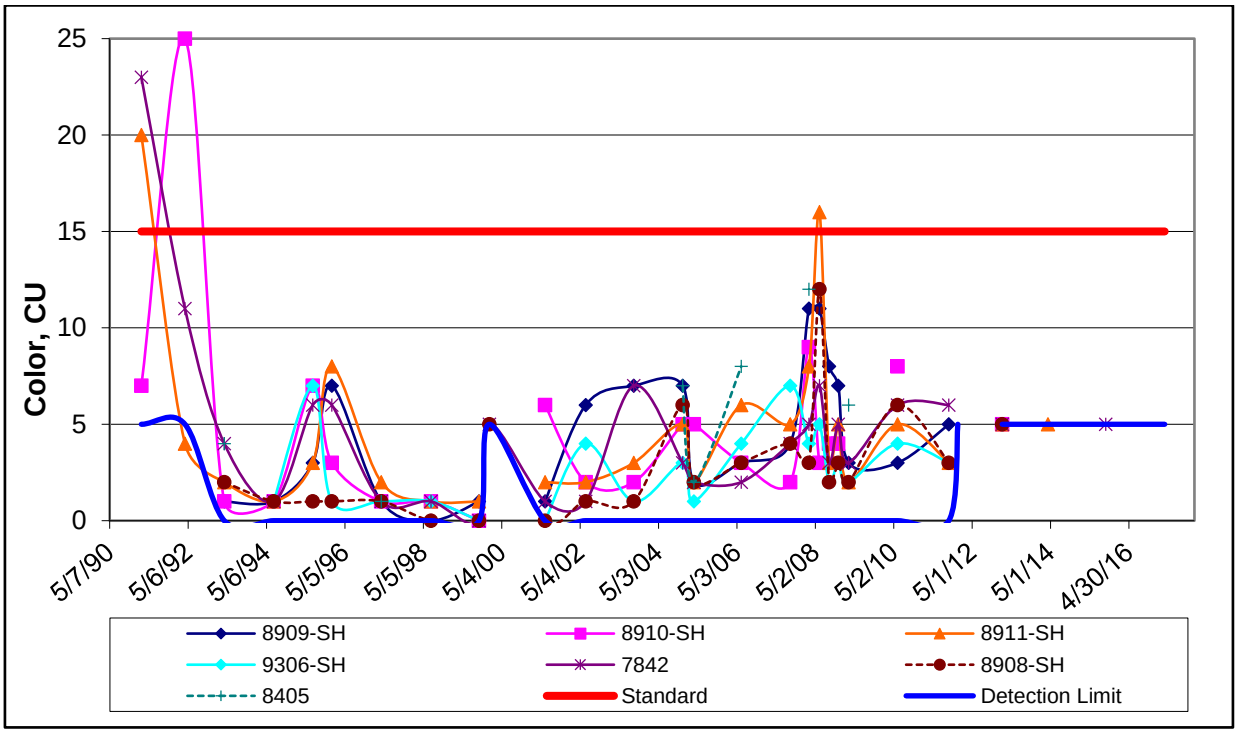


BEDROCK (Note: Only data above detection has been included in this plot)

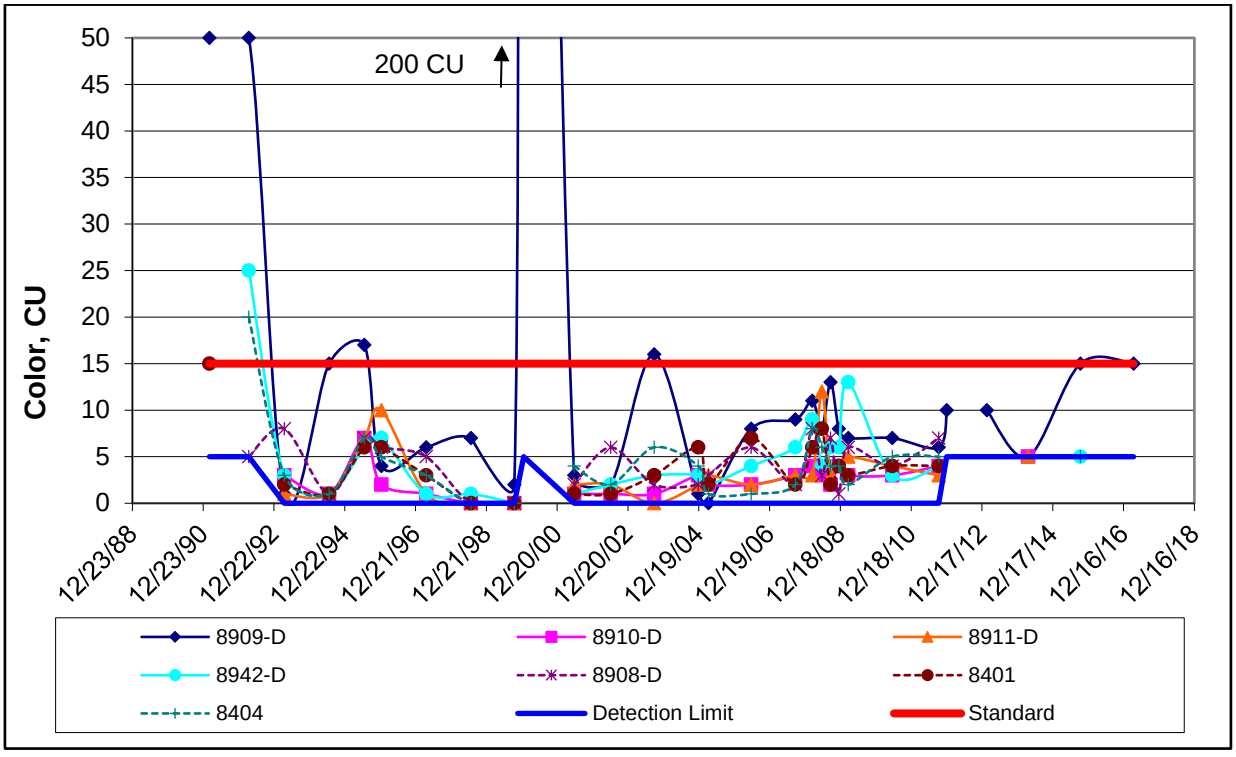


MONITORING WELL TIME-SERIES PLOTS, CONT.
COLOR

GLACIAL TILL

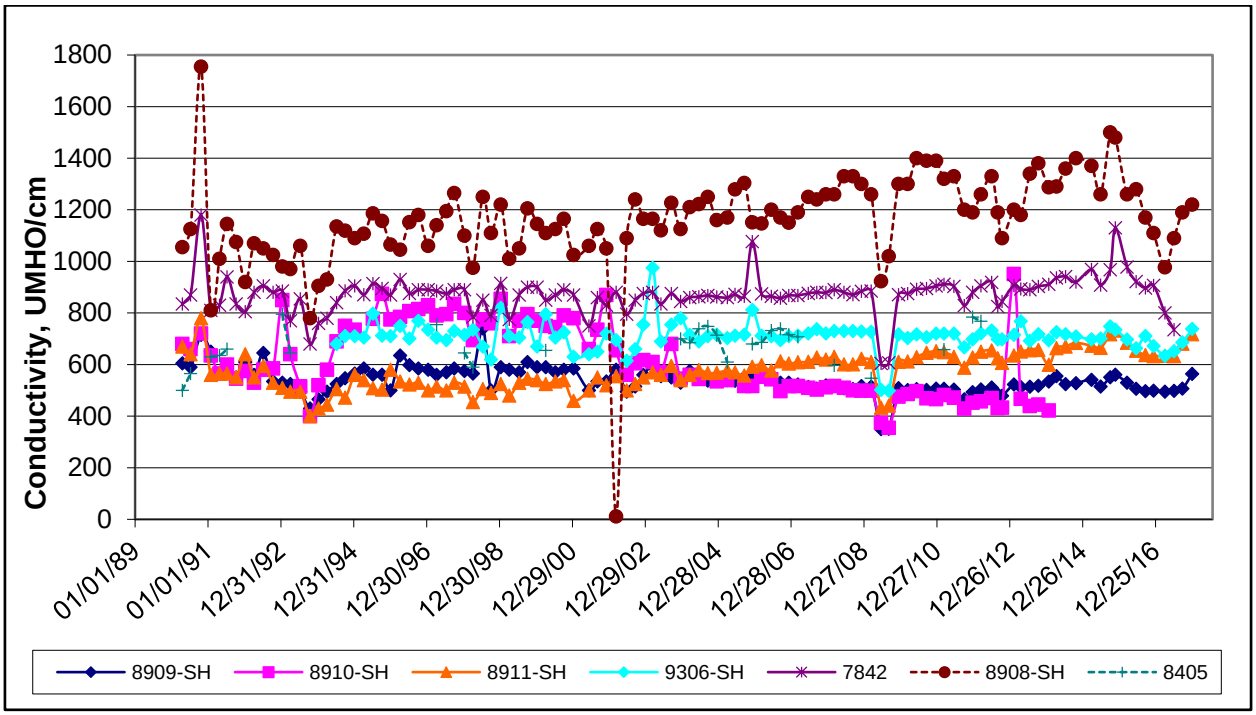


BEDROCK

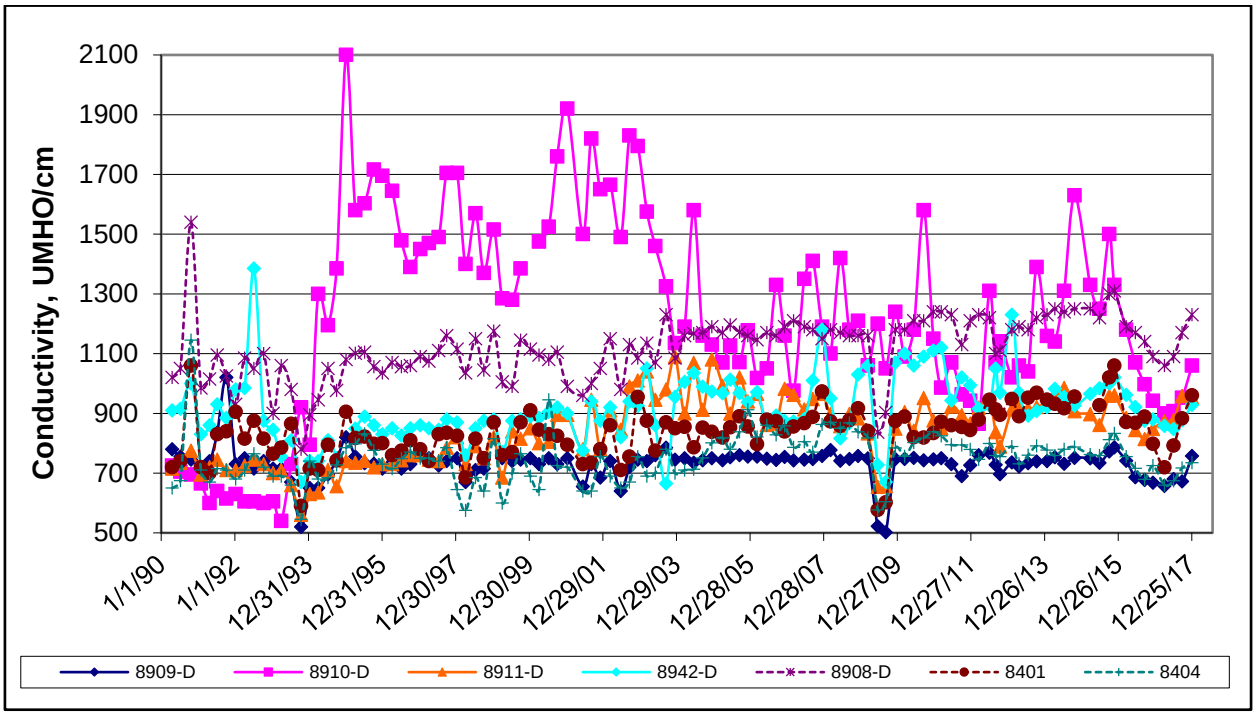


MONITORING WELL TIME-SERIES PLOTS, CONT.
CONDUCTIVITY

GLACIAL TILL

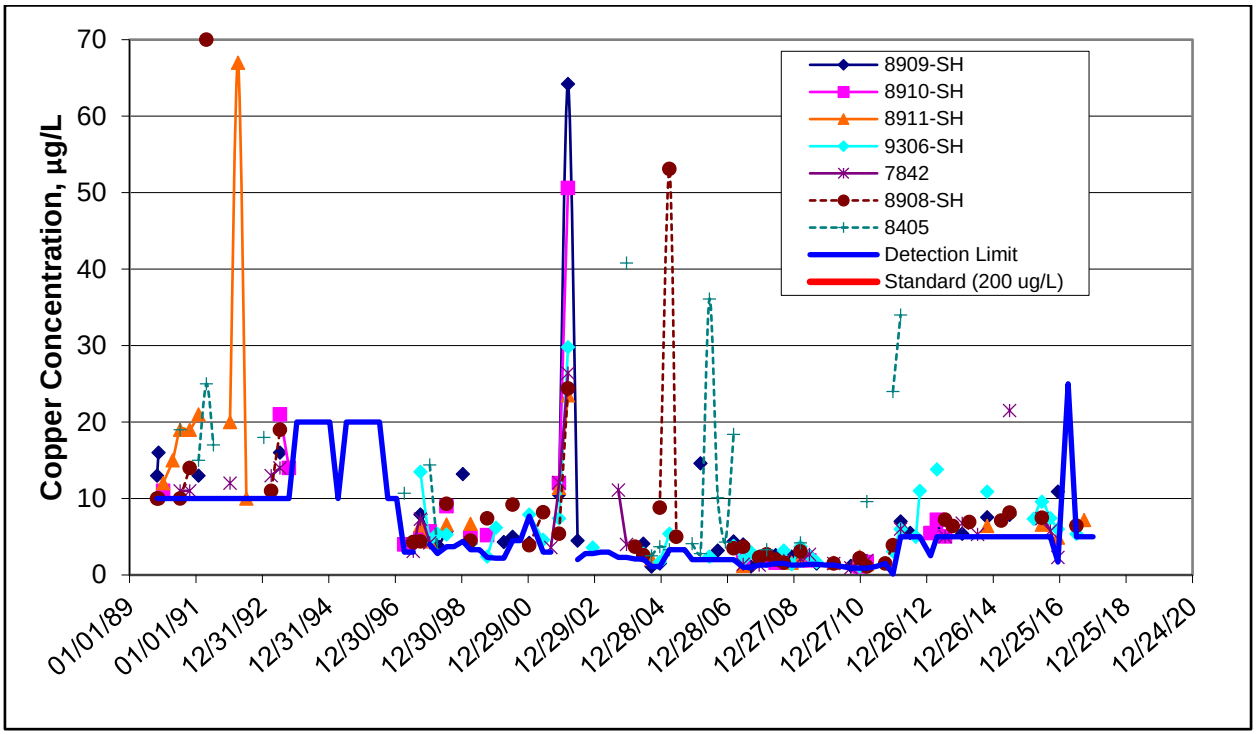


BEDROCK

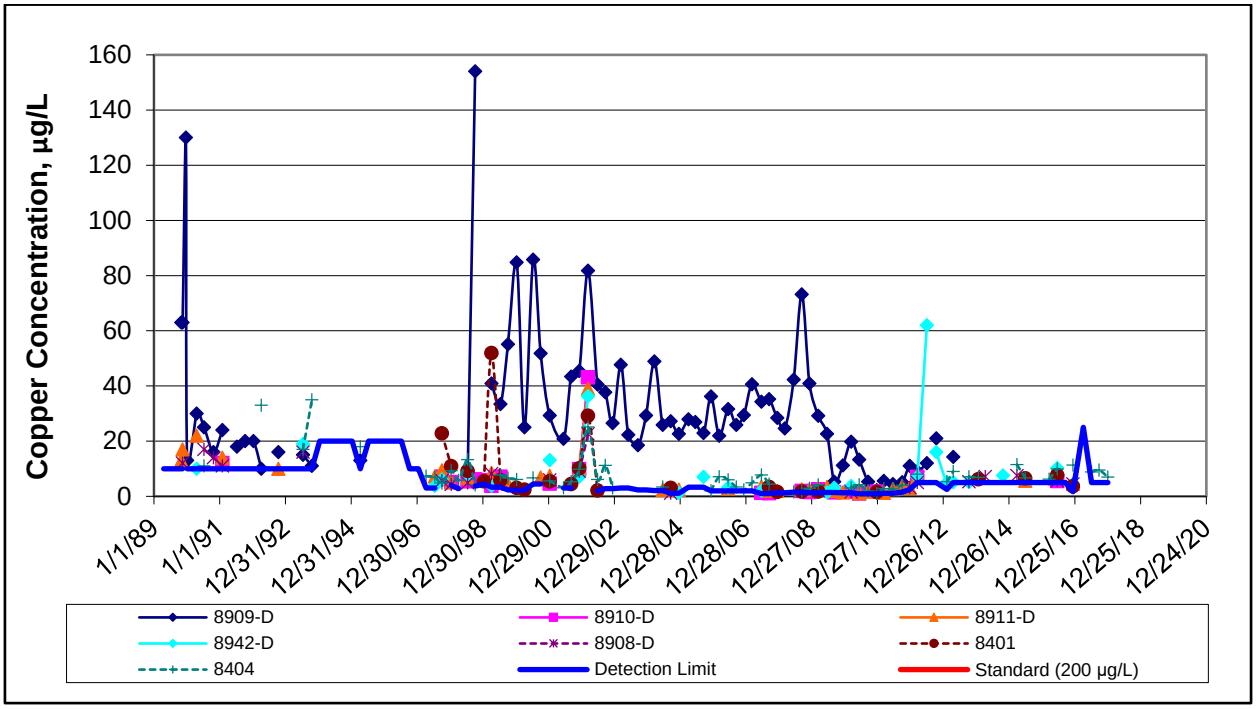


MONITORING WELL TIME-SERIES PLOTS, CONT.
COPPER

GLACIAL TILL (Note: Only data above detection has been included in this plot)

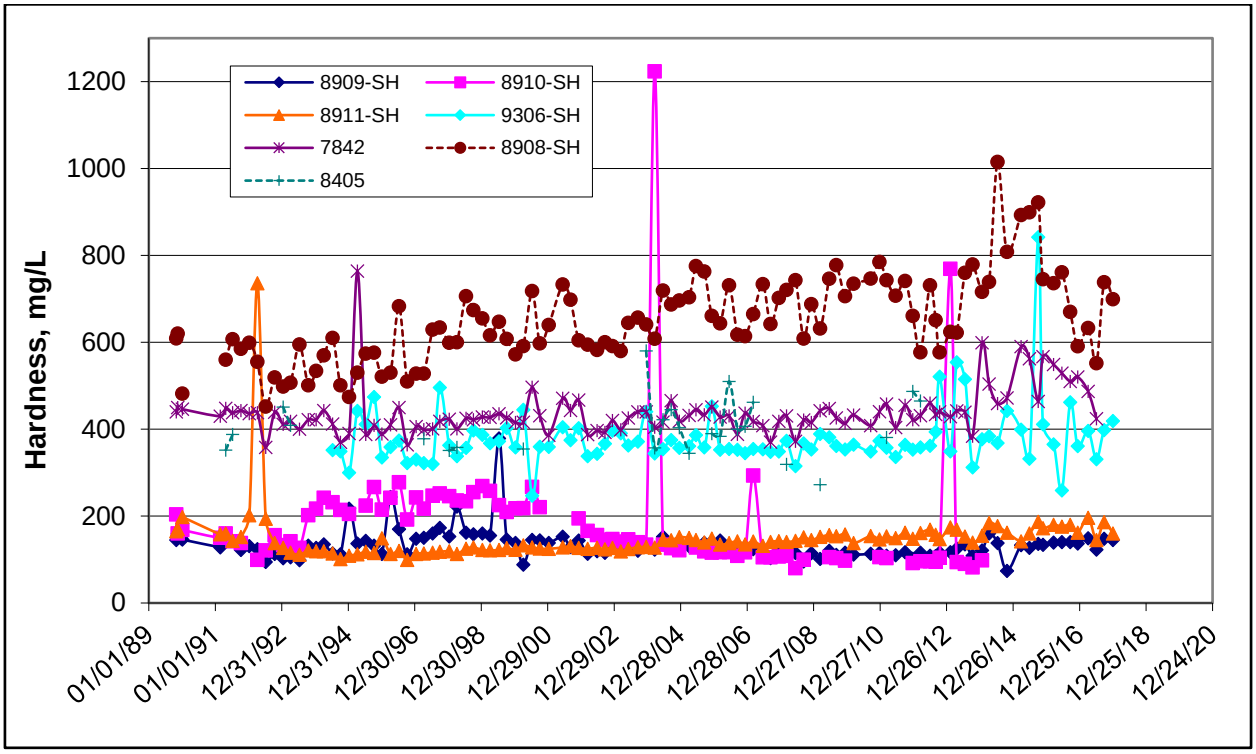


BEDROCK (Note: Only data above detection has been included in this plot)

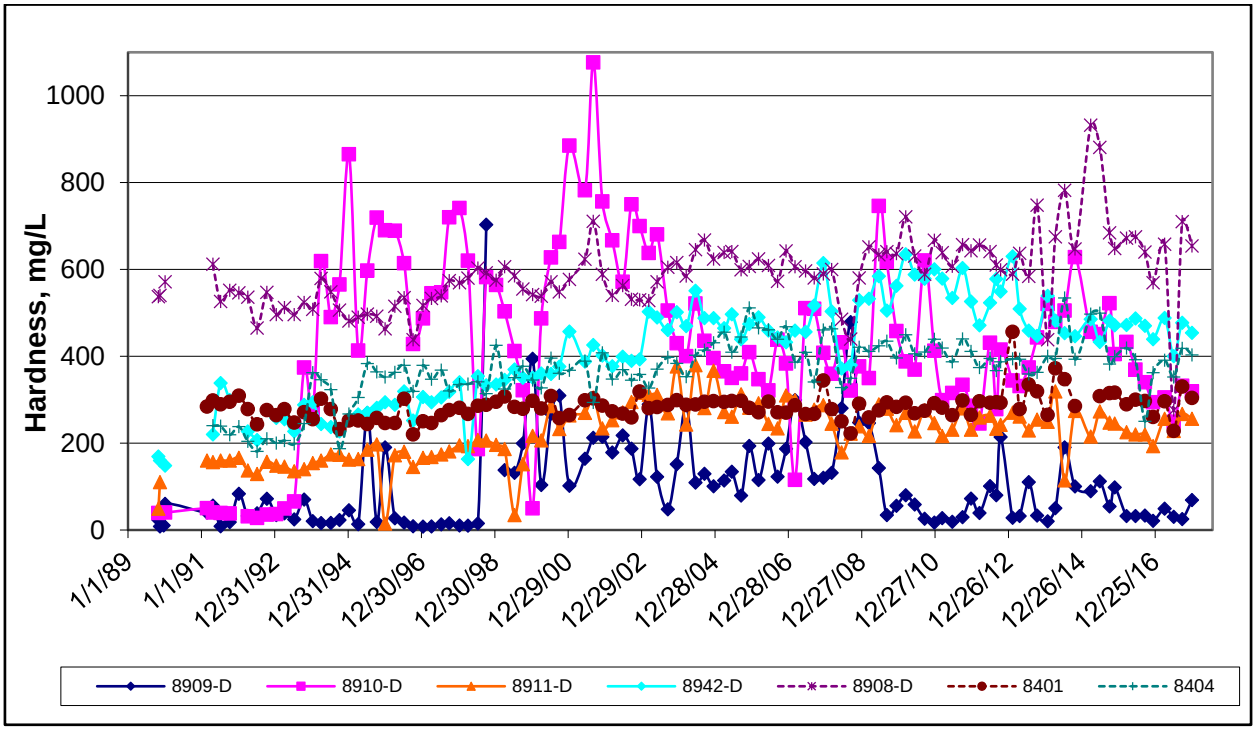


MONITORING WELL TIME-SERIES PLOTS, CONT.
HARDNESS

GLACIAL TILL



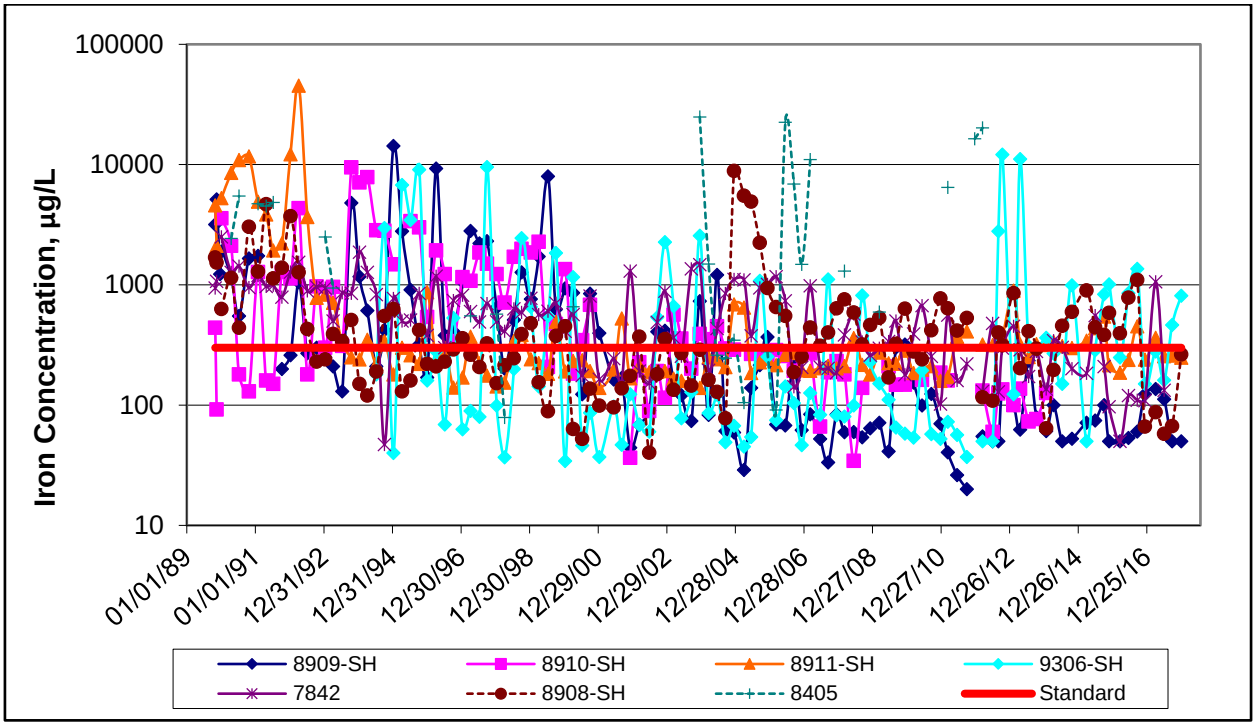
BEDROCK



MONITORING WELL TIME-SERIES PLOTS, CONT.

IRON

GLACIAL TILL



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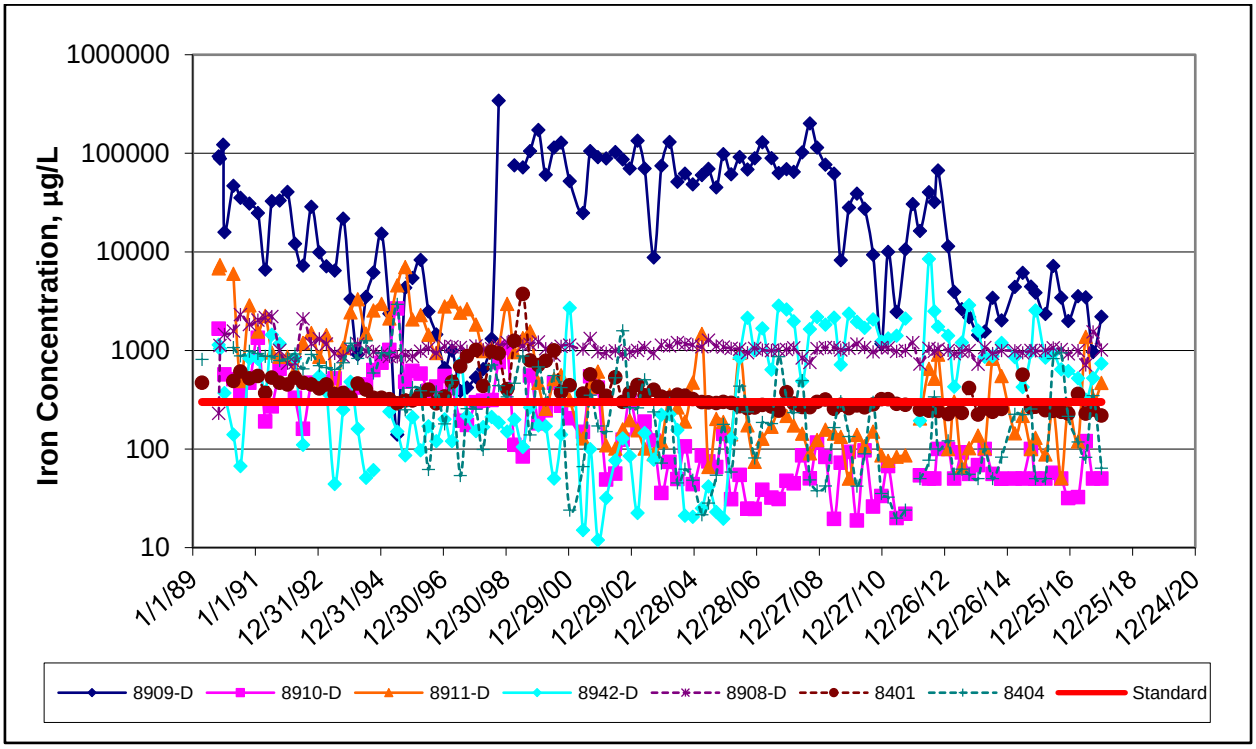
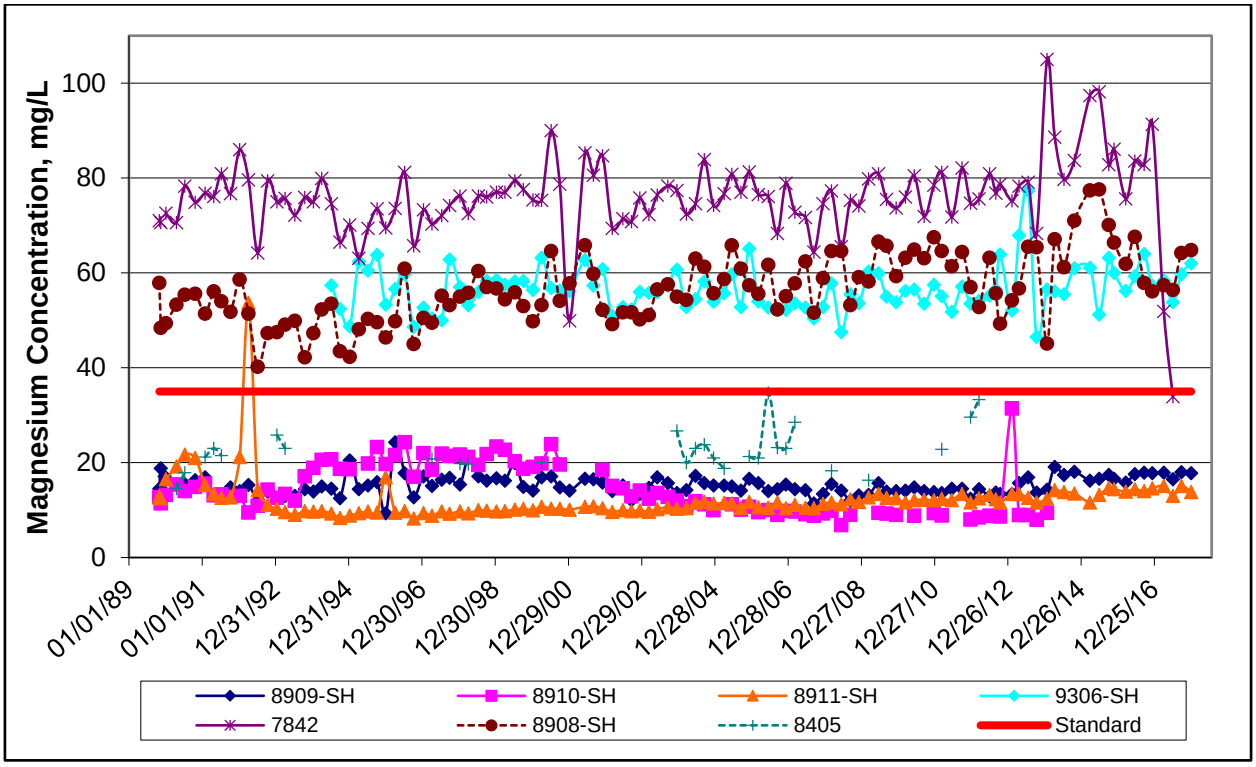


MONITORING WELL TIME-SERIES PLOTS, CONT.

MAGNESIUM

GLACIAL TILL



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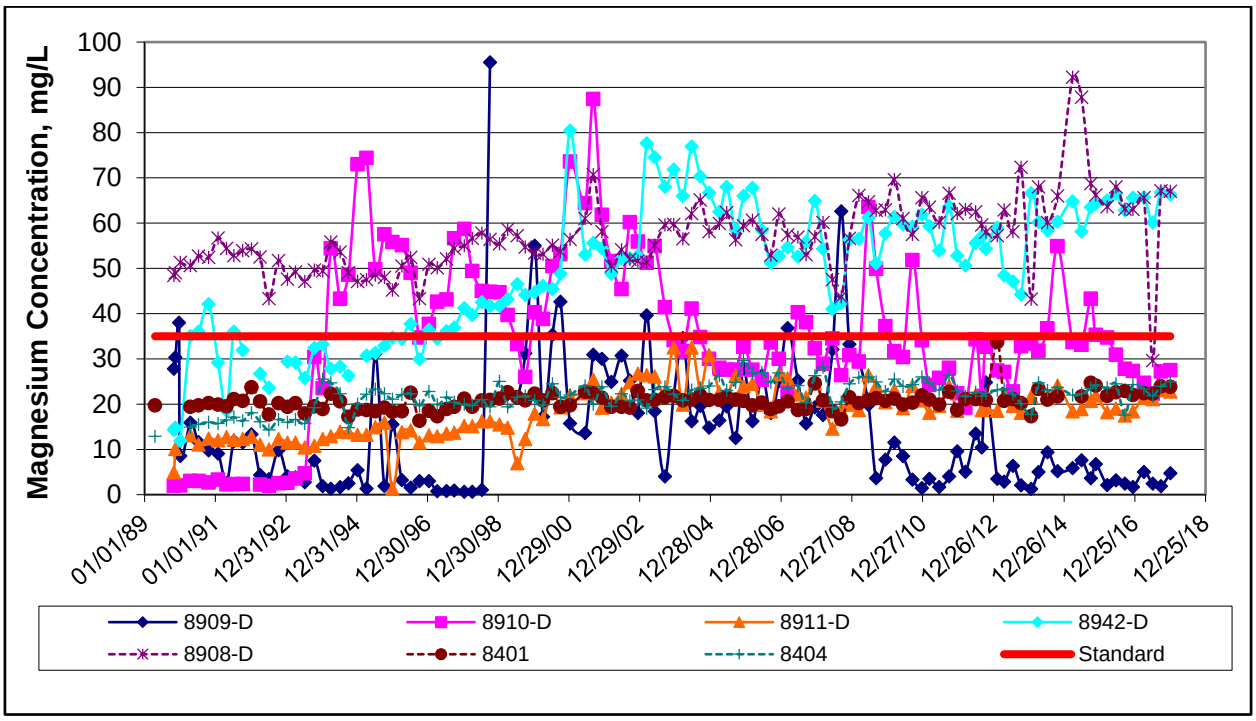
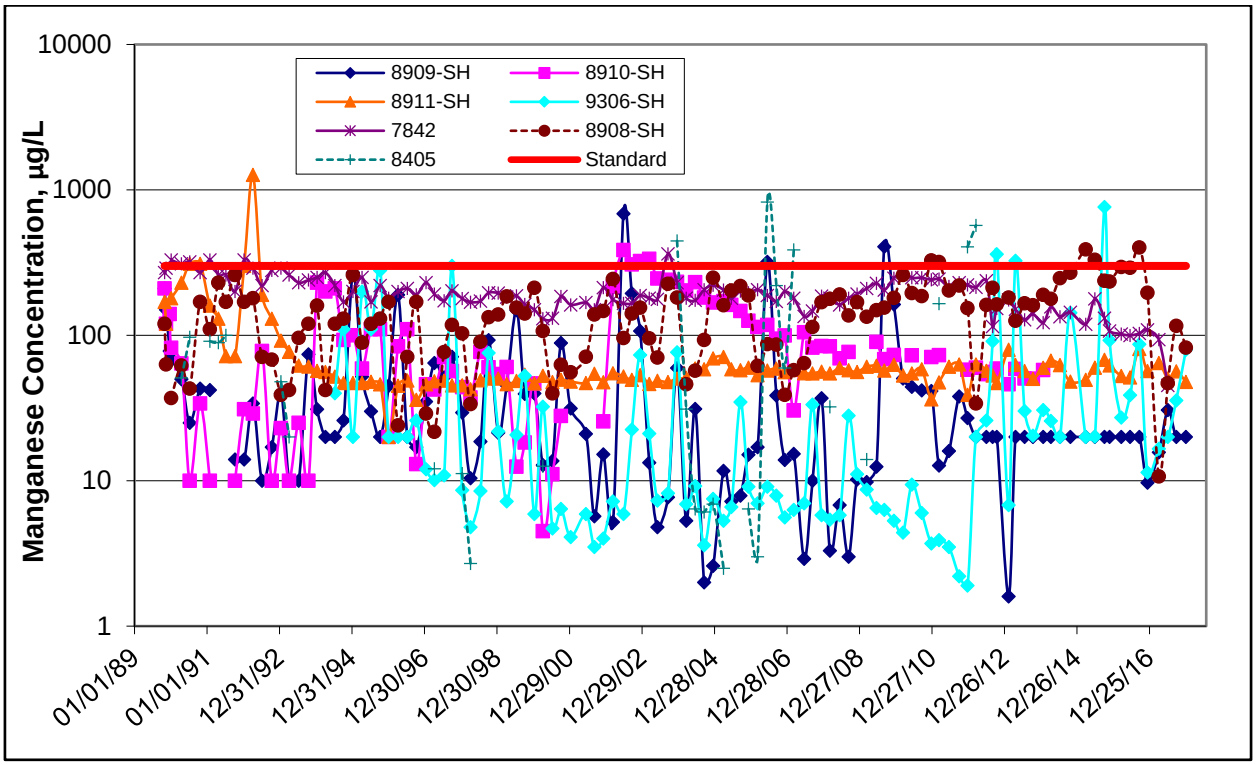


MONITORING WELL TIME-SERIES PLOTS, CONT.
MANGANESE

GLACIAL TILL



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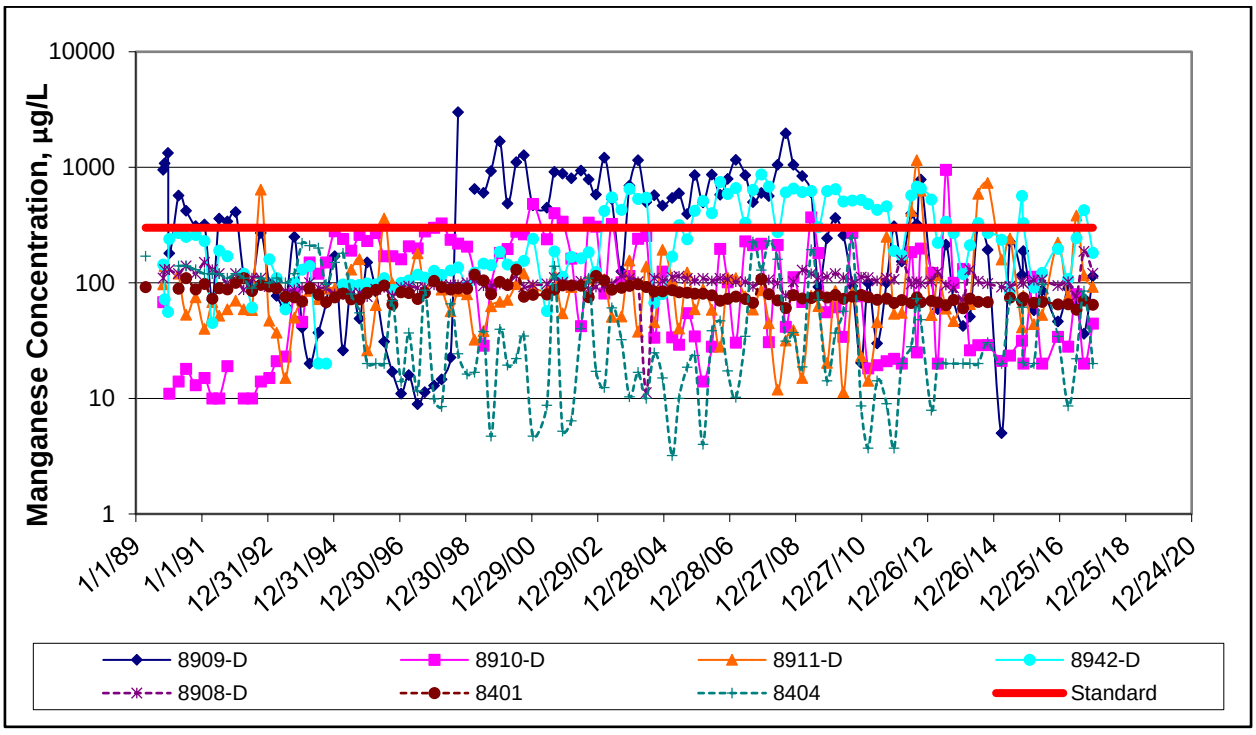
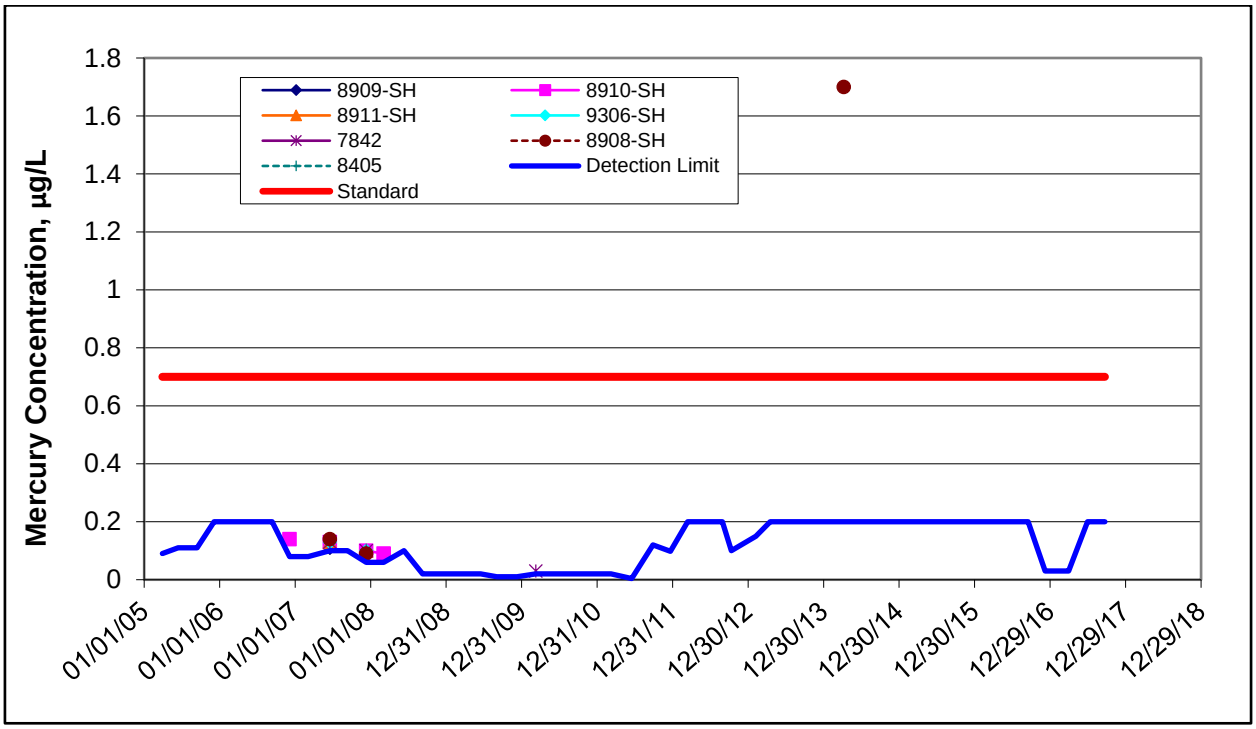


MONITORING WELL TIME-SERIES PLOTS, CONT.
MERCURY

GLACIAL TILL (Note: Only data above detection has been included in this plot)



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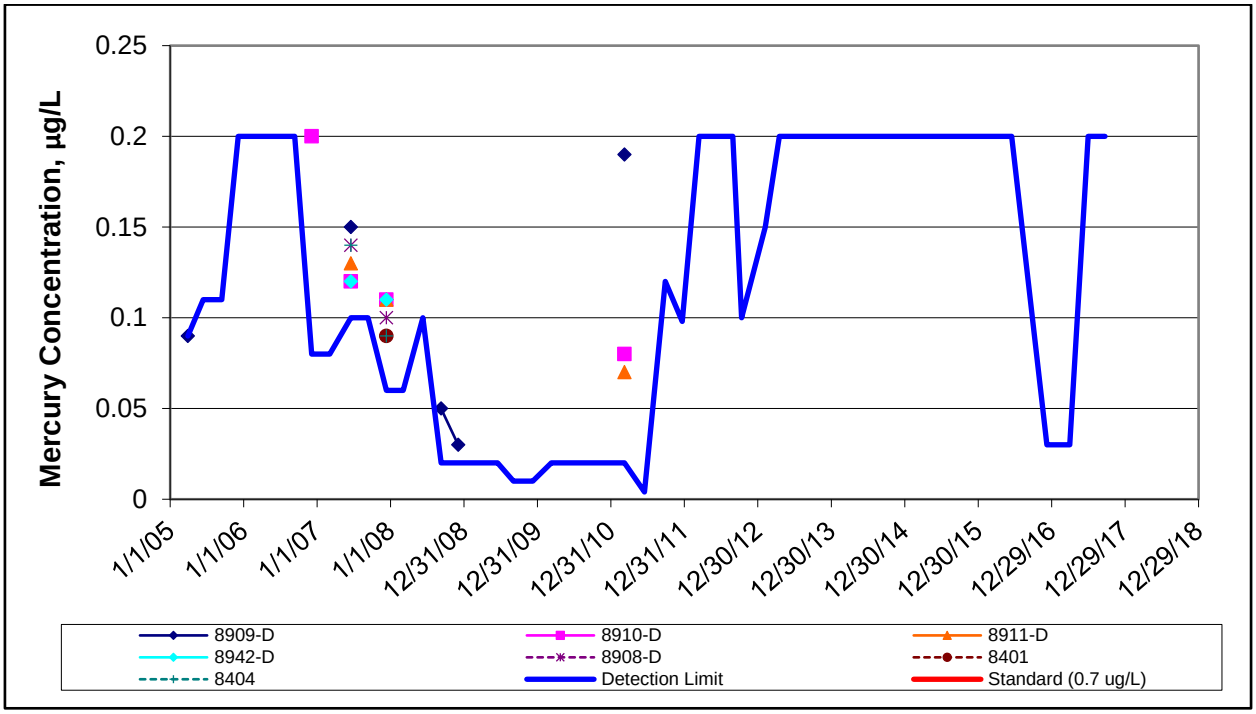
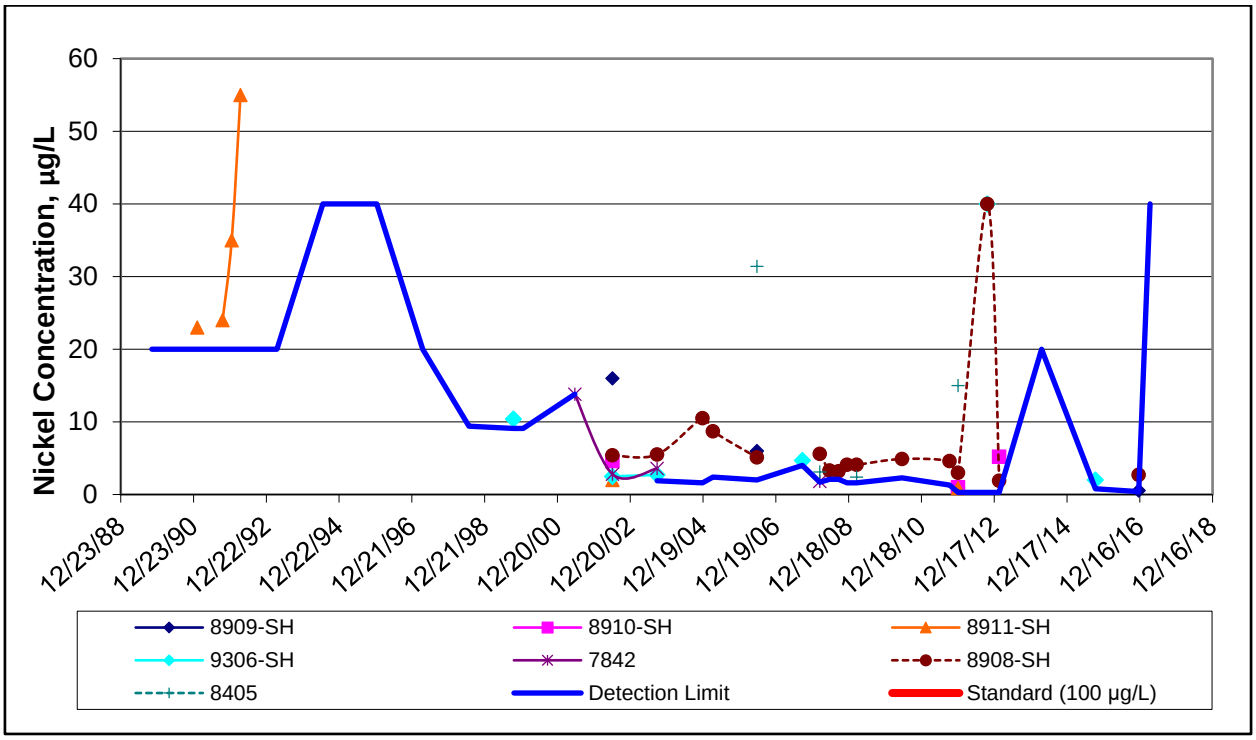


MONITORING WELL TIME-SERIES PLOTS, CONT.
NICKEL

GLACIAL TILL (Note: Only data above detection has been included in this plot)



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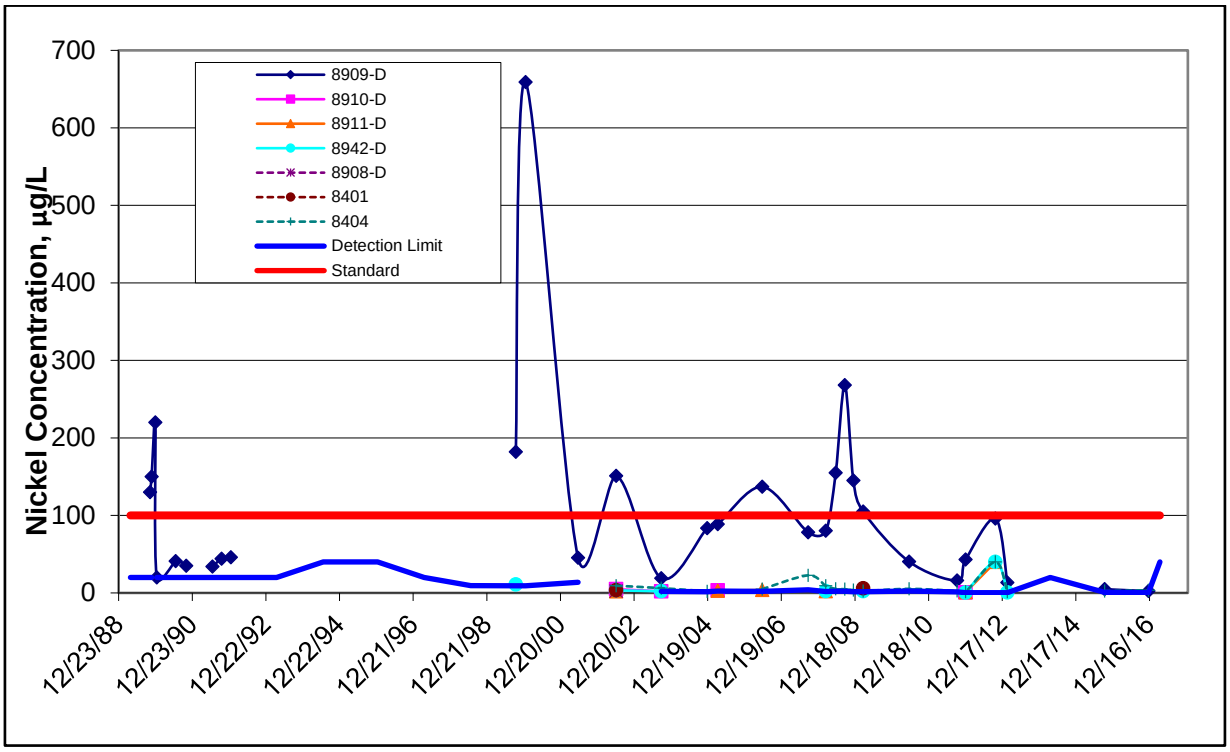
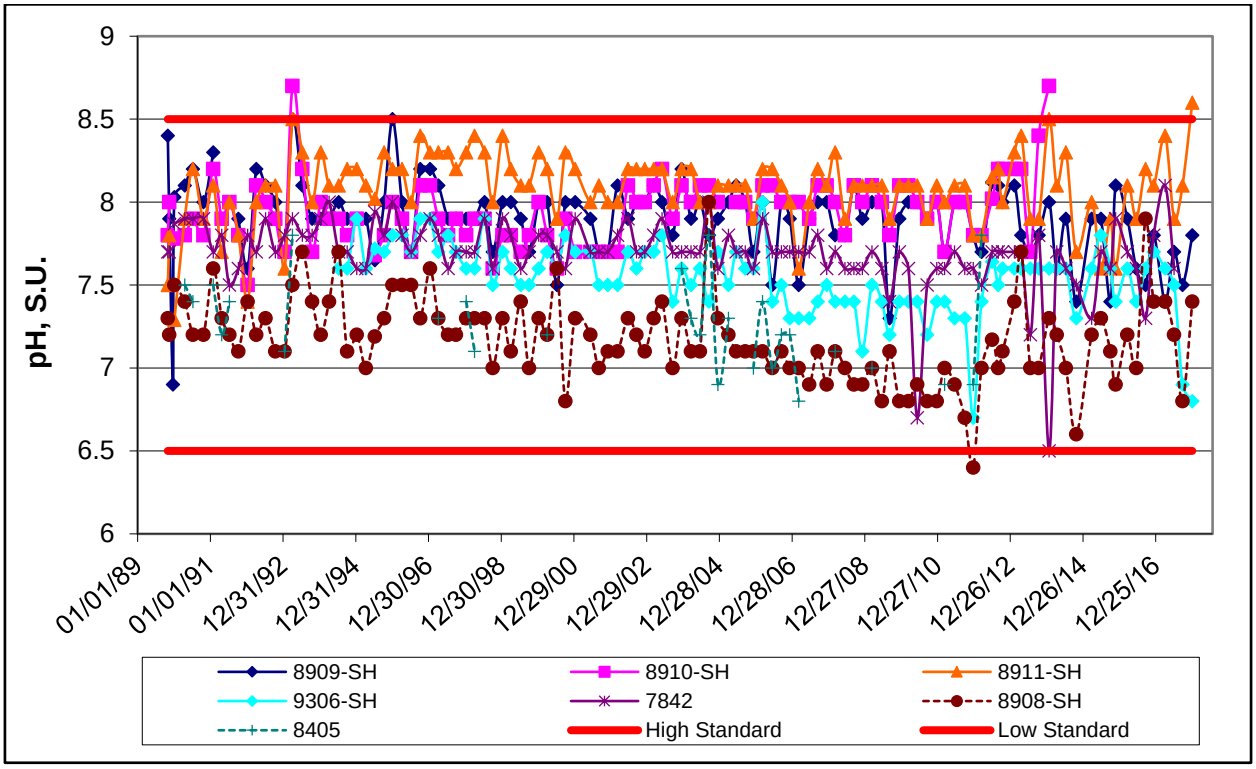


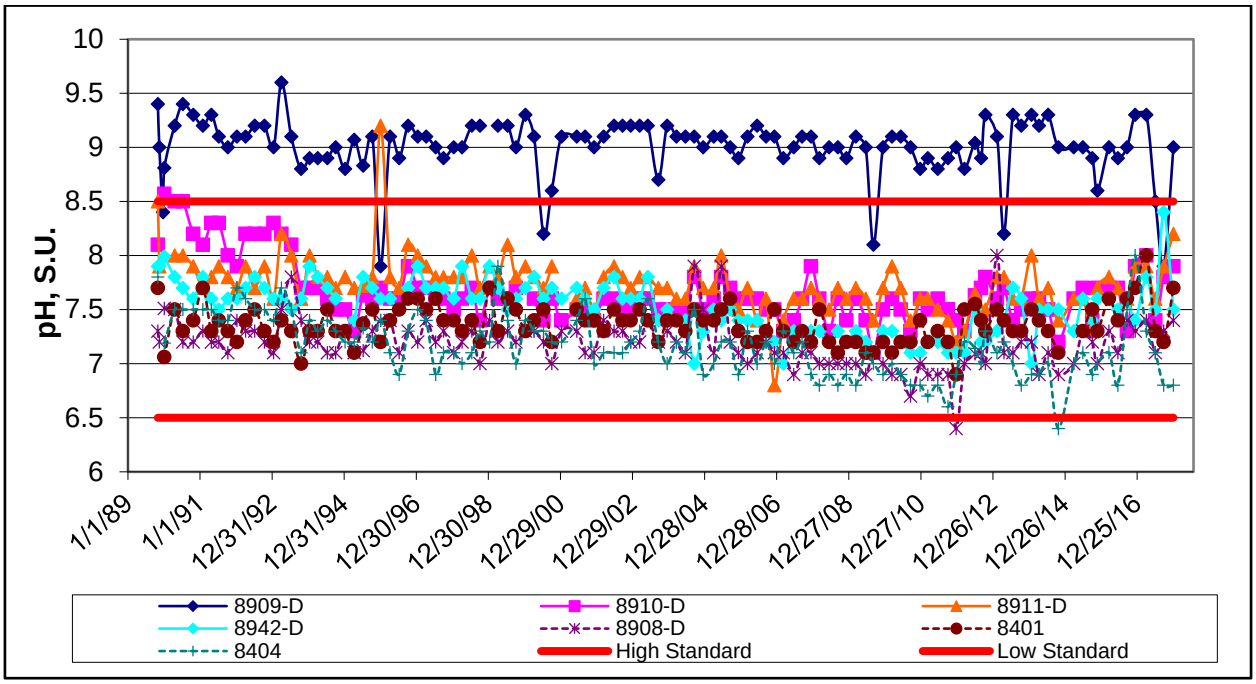
MONITORING WELL TIME-SERIES PLOTS, CONT.

pH

GLACIAL TILL

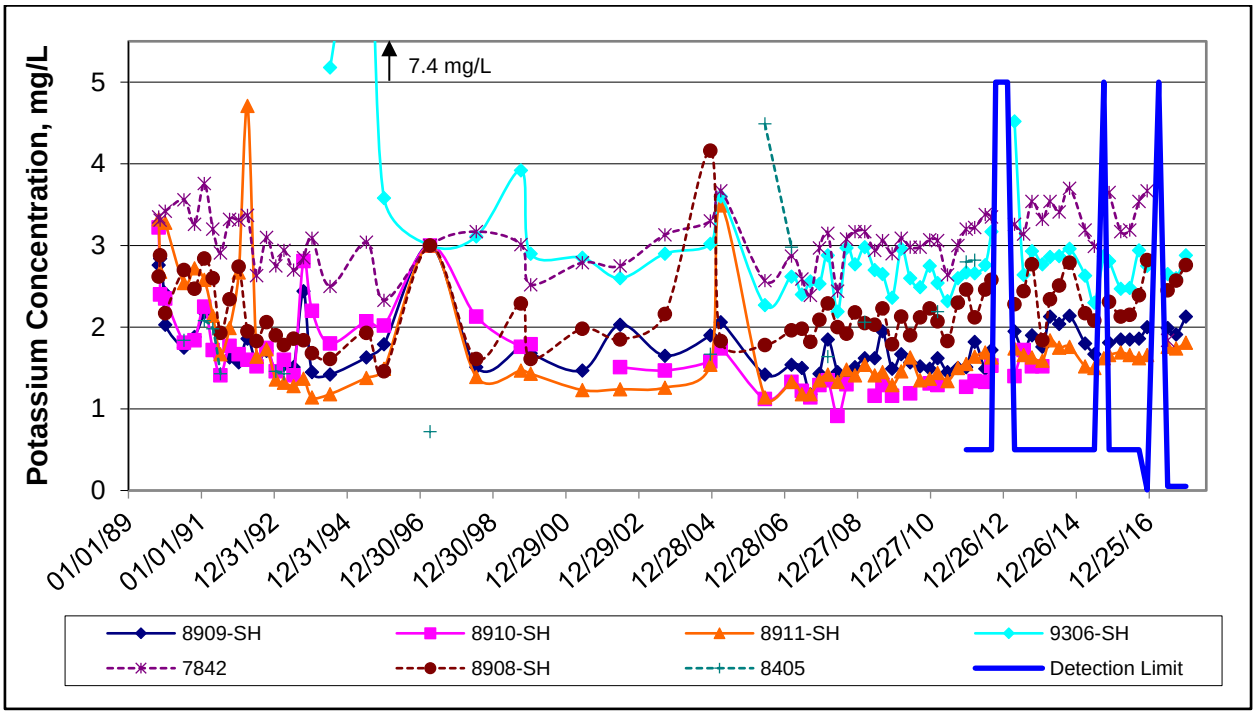


BEDROCK

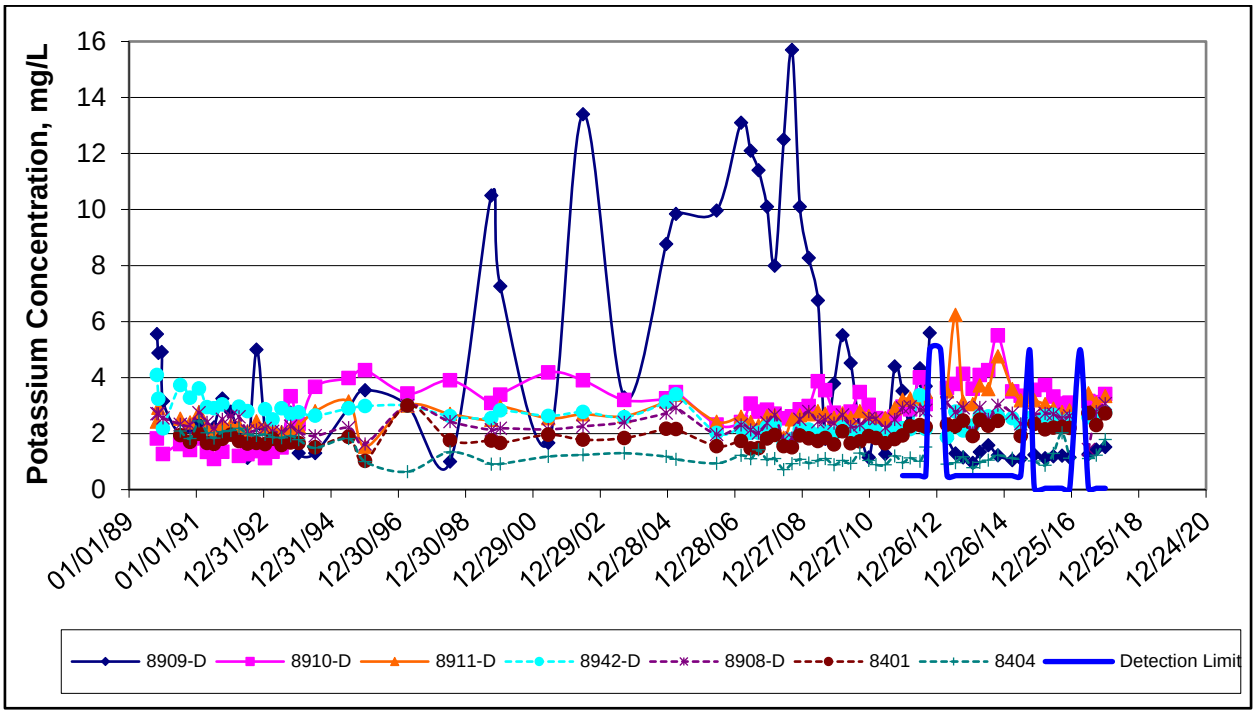


MONITORING WELL TIME-SERIES PLOTS, CONT.
POTASSIUM

GLACIAL TILL

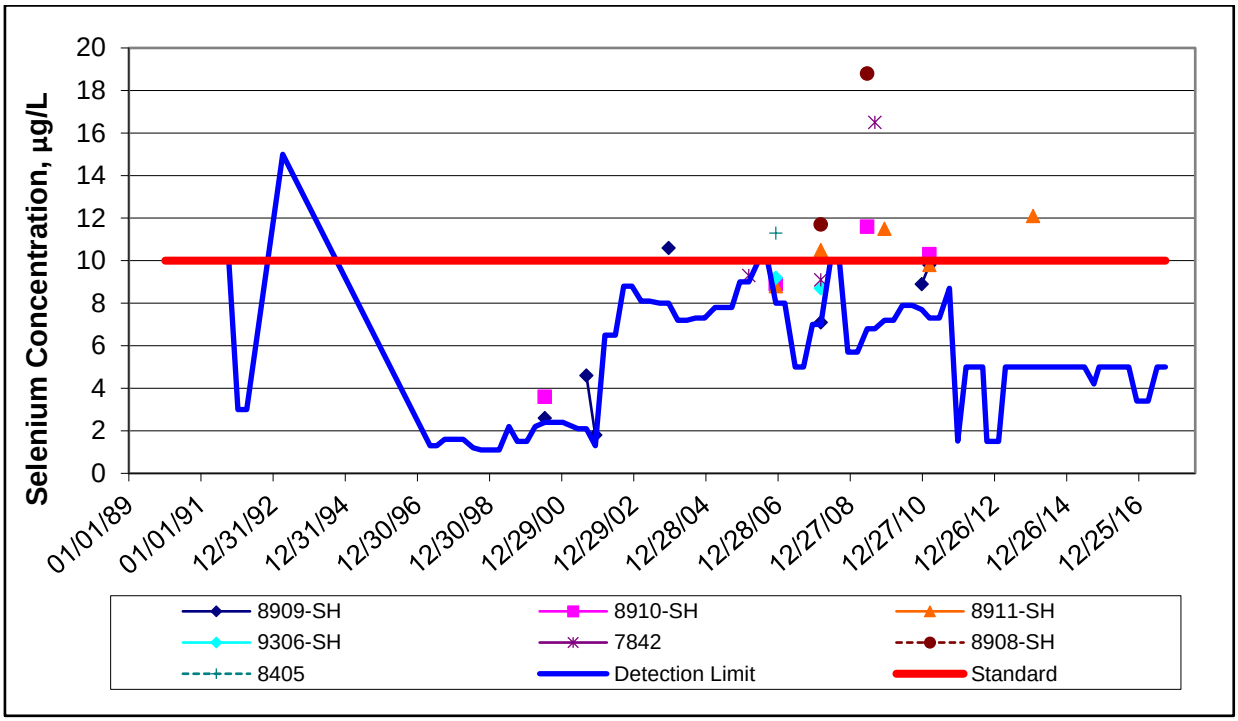


BEDROCK



MONITORING WELL TIME-SERIES PLOTS, CONT.
SELENIUM

GLACIAL TILL (Note: Only data above detection has been included in this plot)



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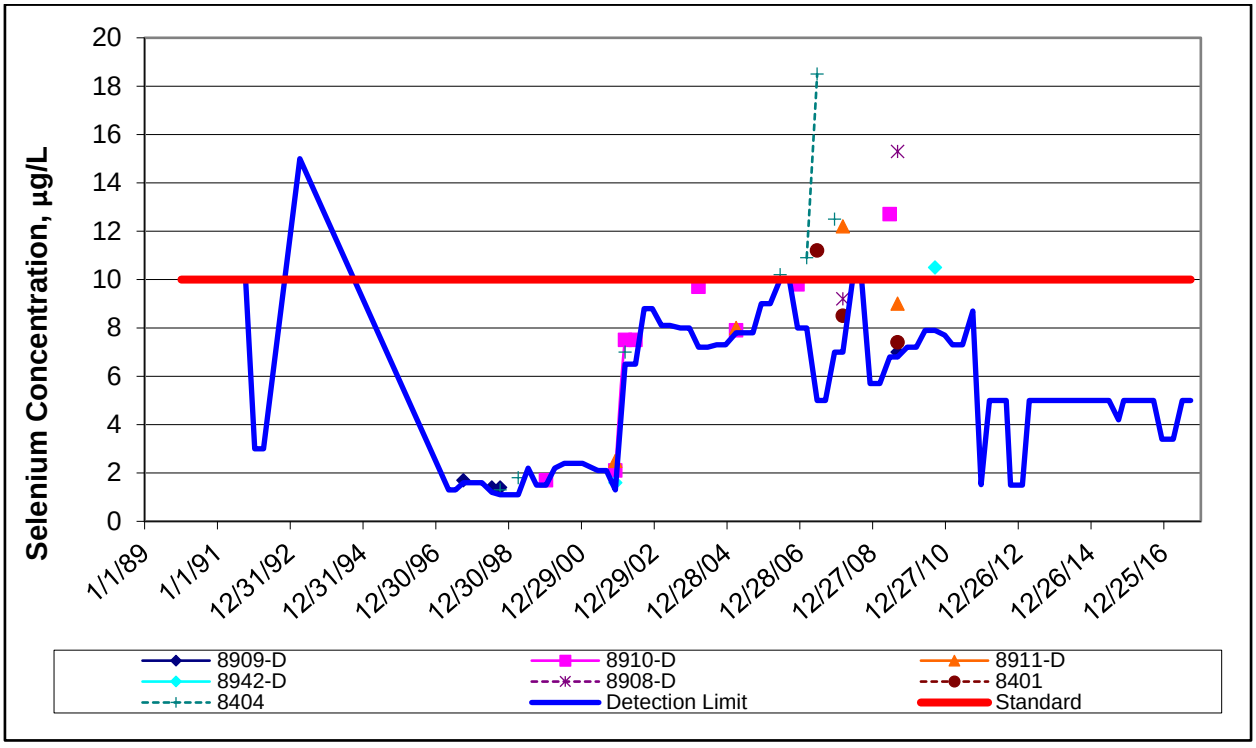
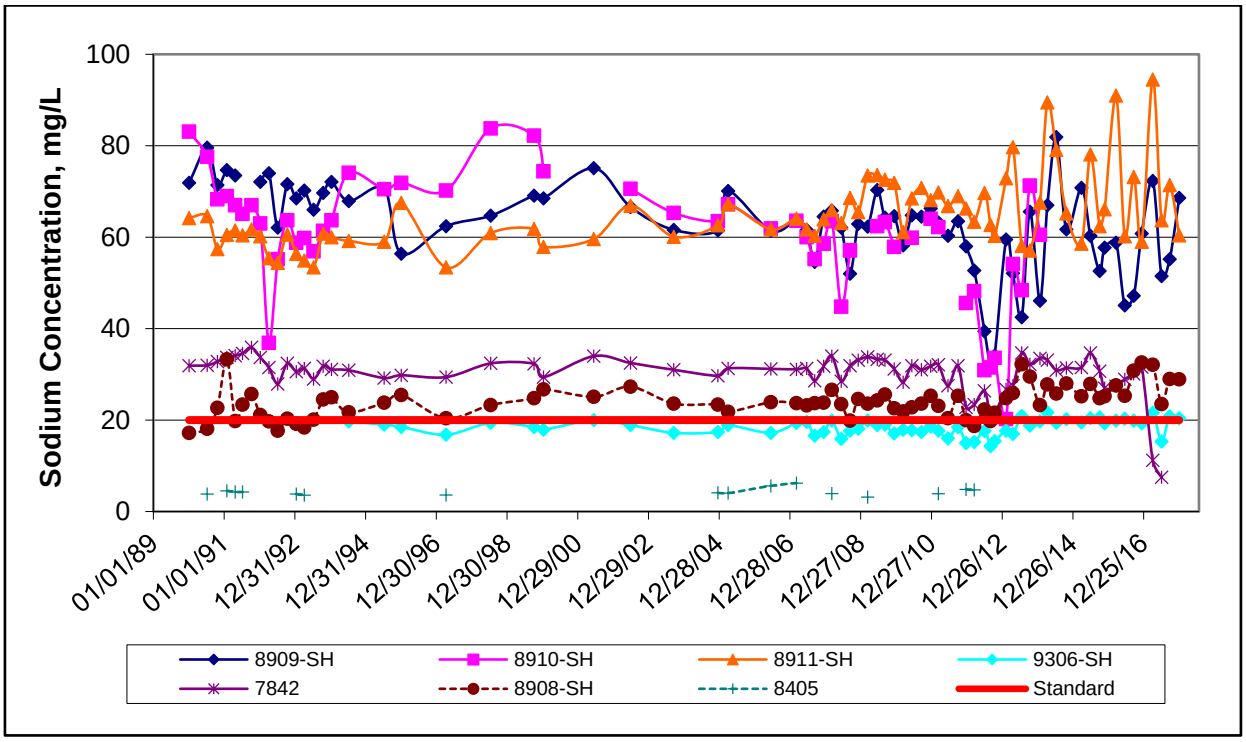


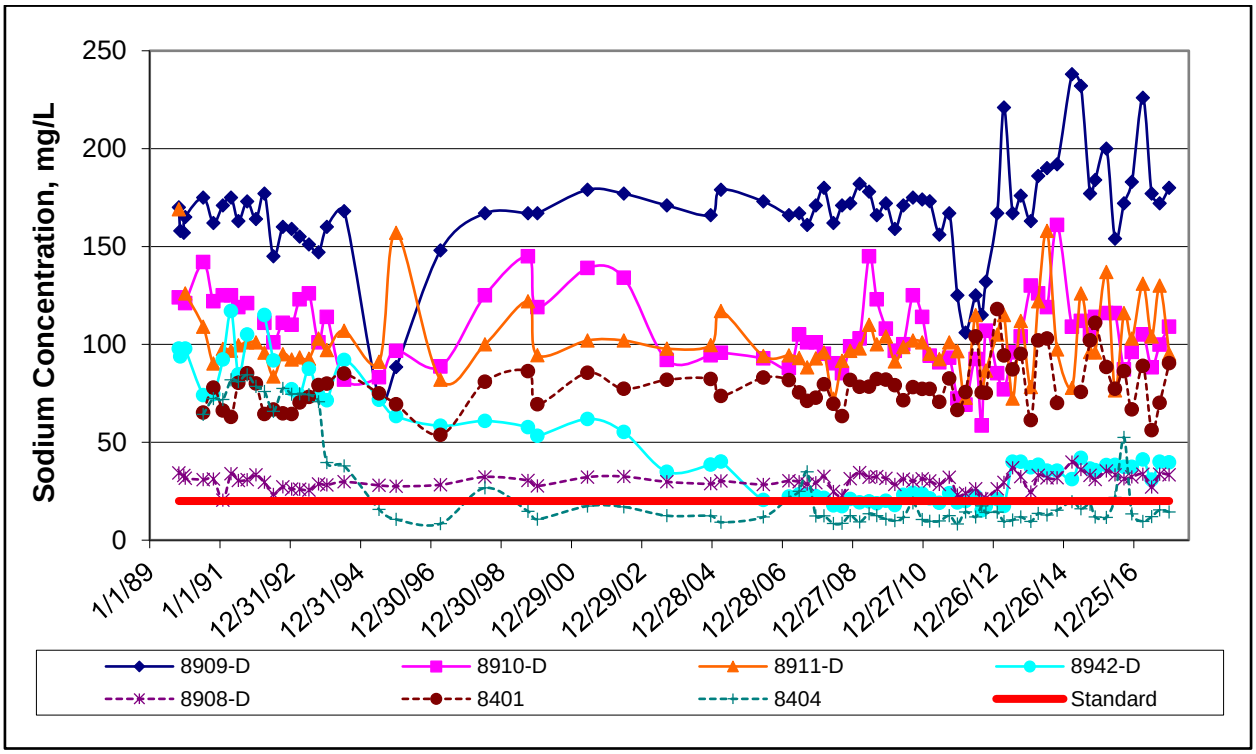
MONITORING WELL TIME-SERIES PLOTS, CONT.

SODIUM

GLACIAL TILL

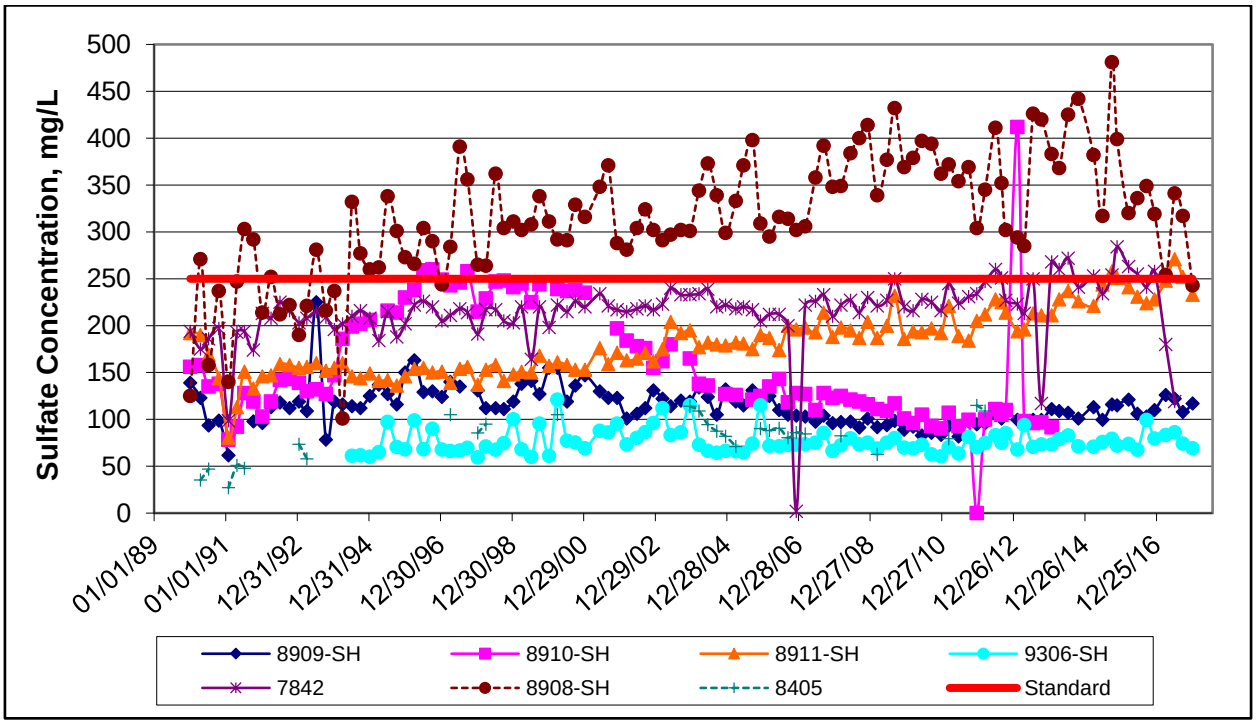


BEDROCK



MONITORING WELL TIME-SERIES PLOTS, CONT.
SULFATE

GLACIAL TILL



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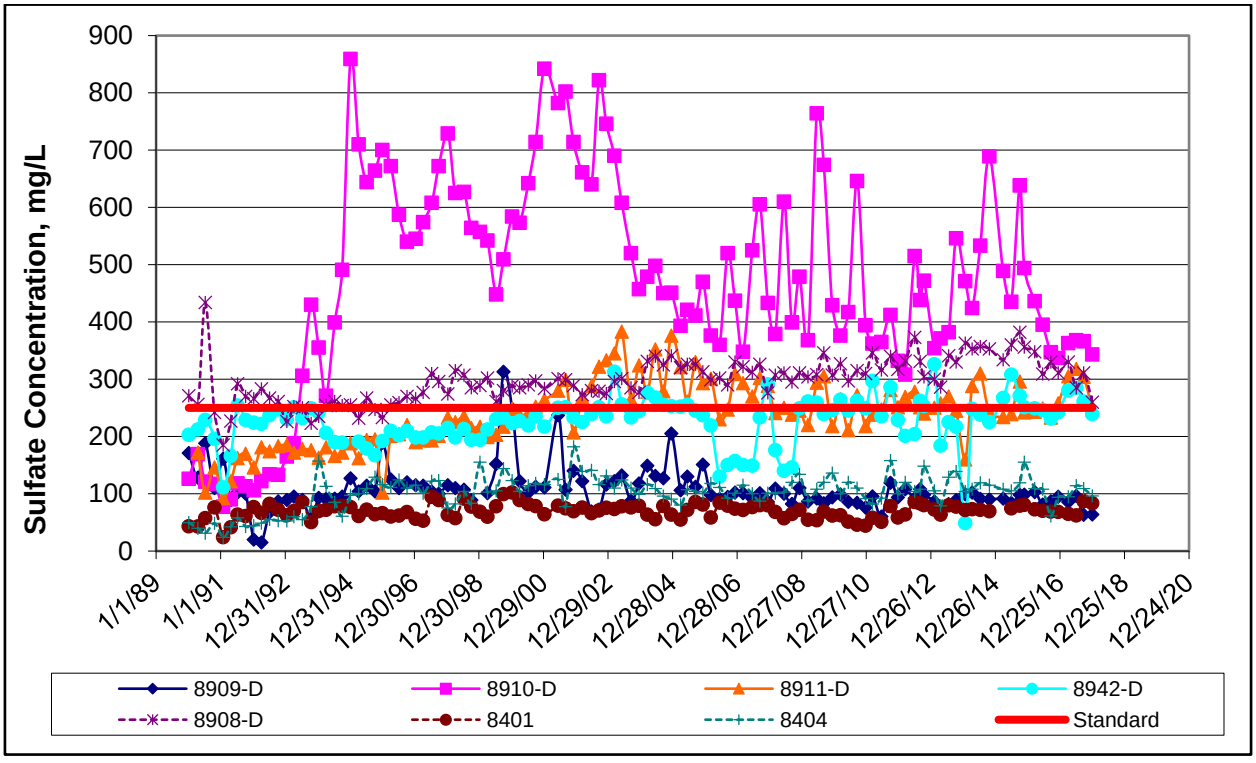
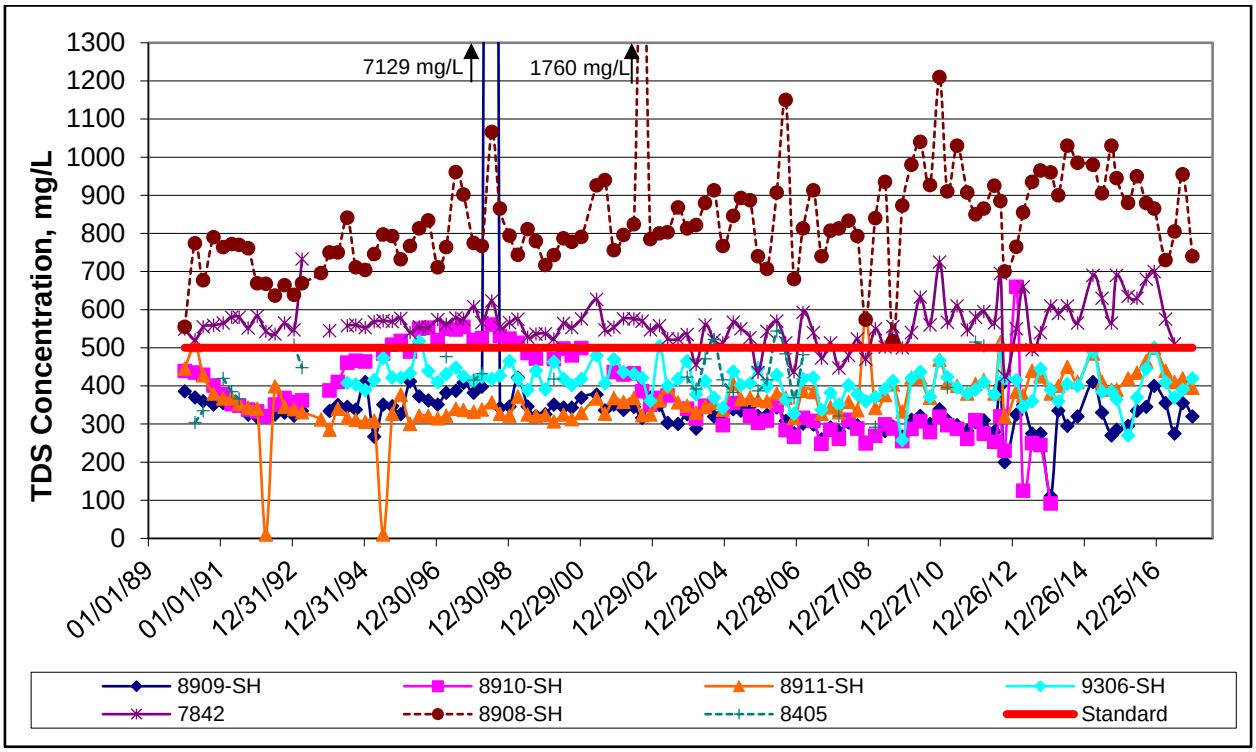


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL DISSOLVED SOLIDS

GLACIAL TILL



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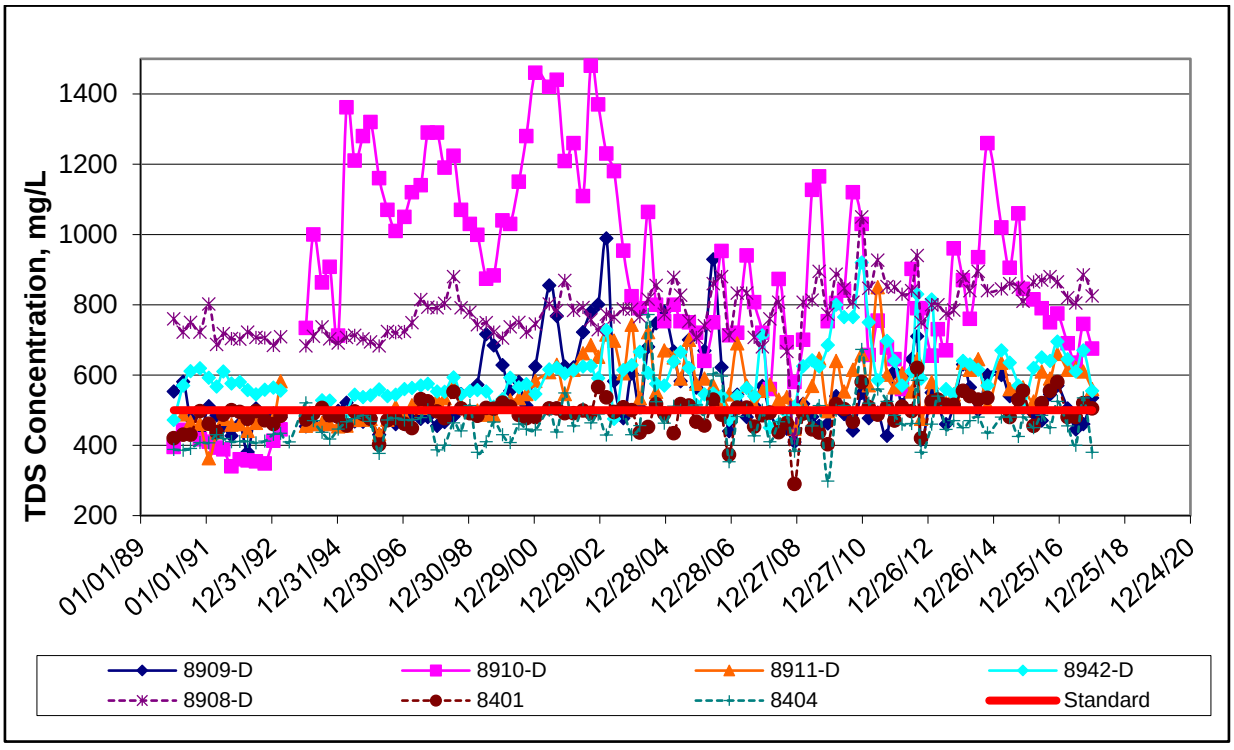
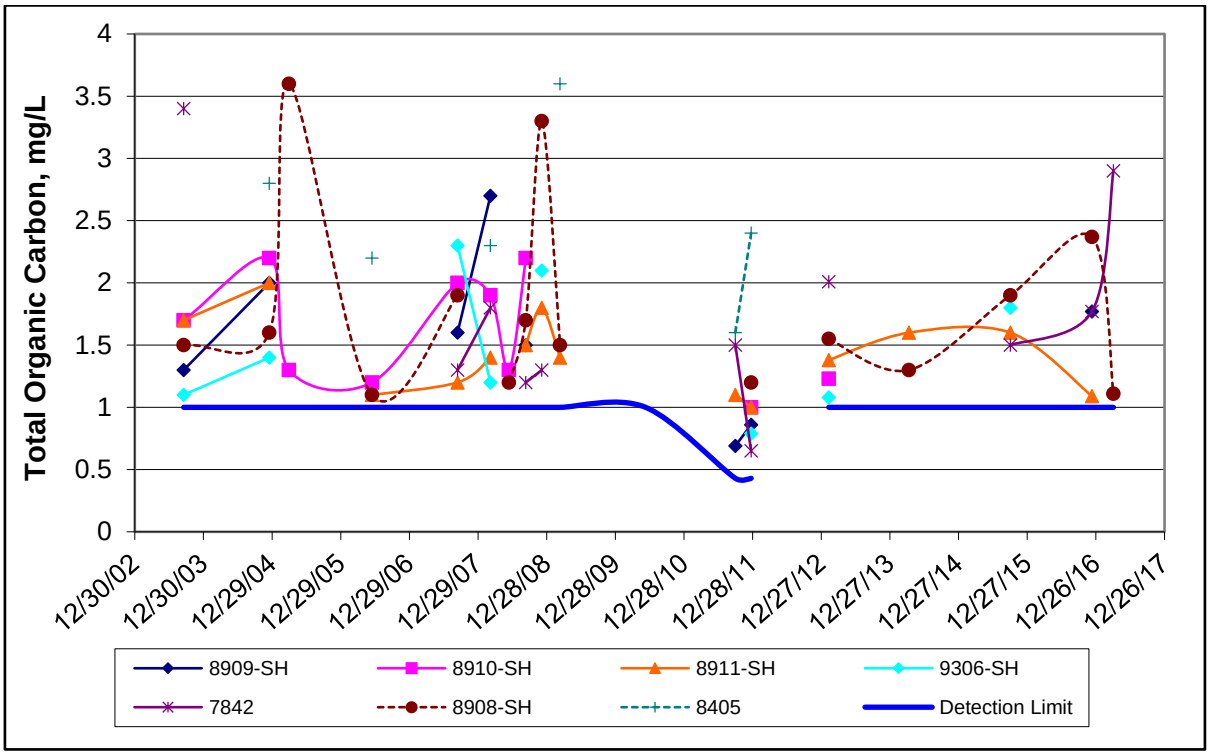
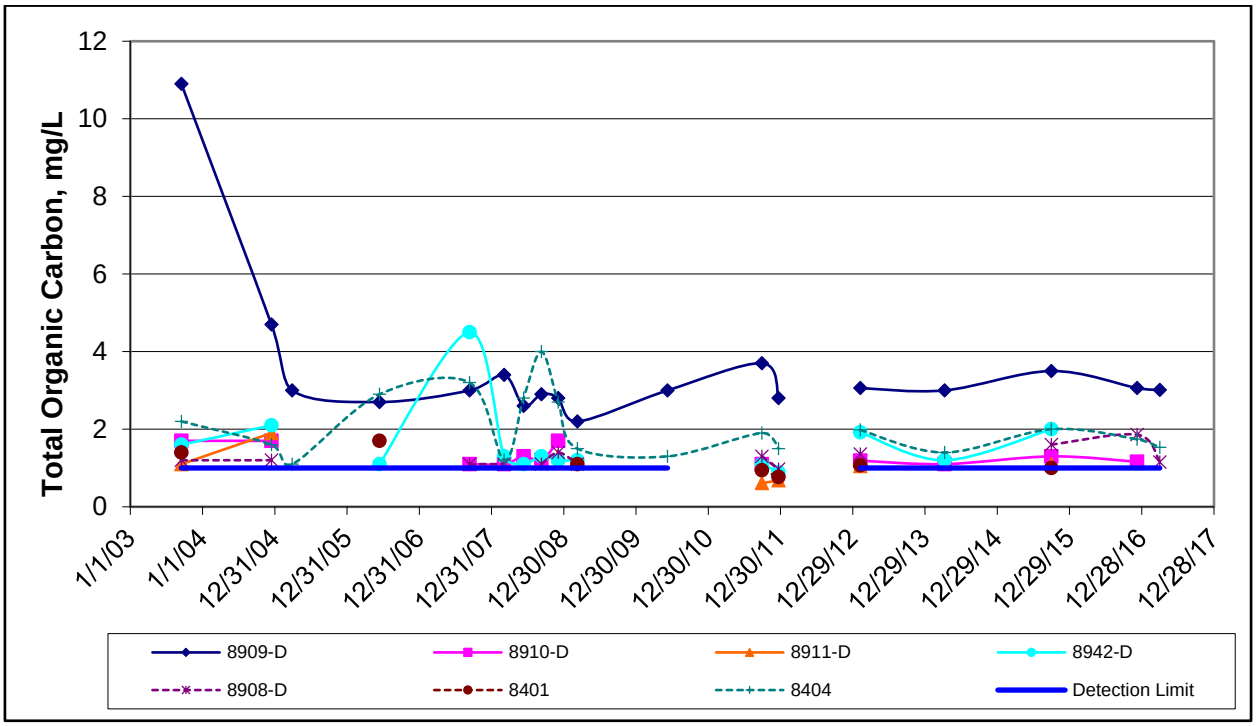


MONITORING WELL TIME-SERIES PLOTS, CONT.
TOTAL ORGANIC CARBON

GLACIAL TILL (Note: Only data above detection has been included in this plot)

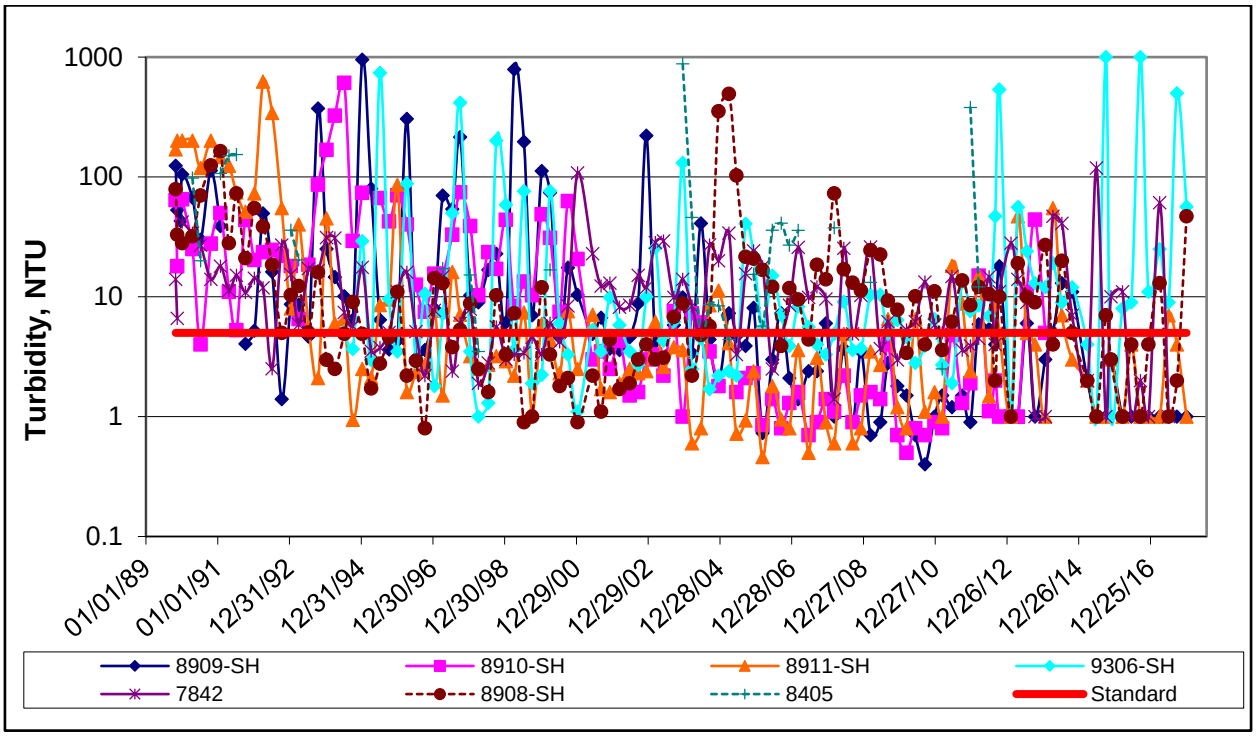


BEDROCK (Note: Only data above detection has been included in this plot)

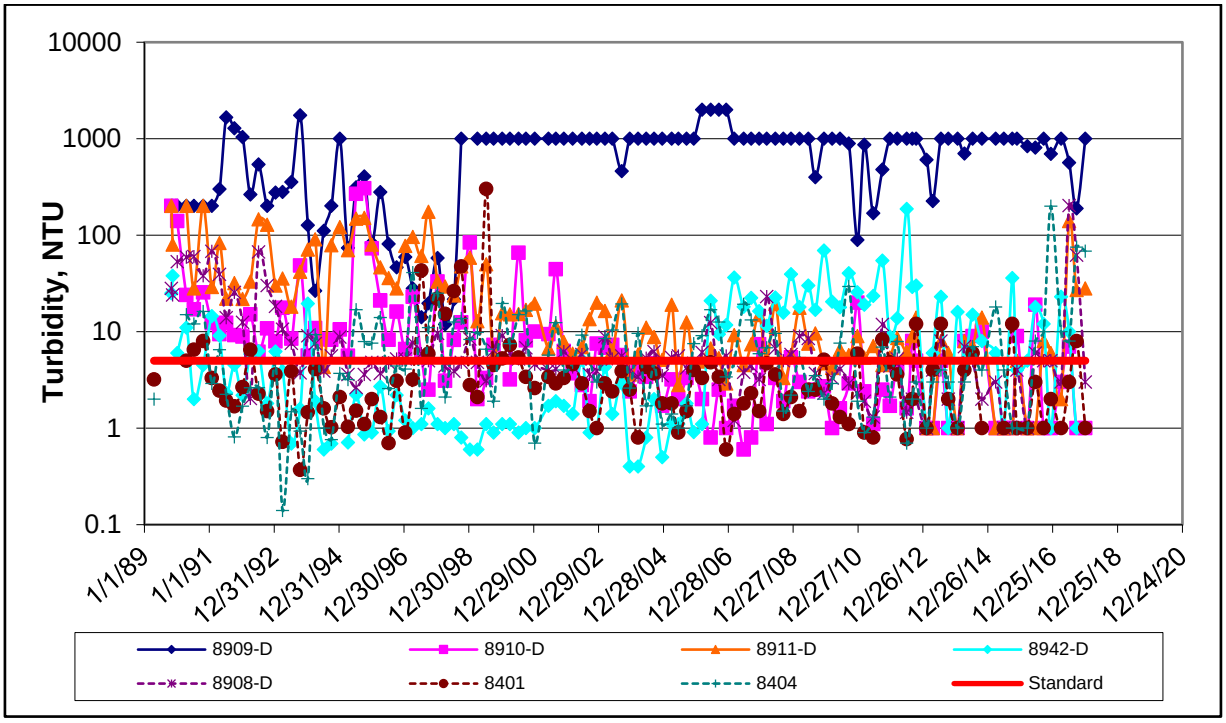


MONITORING WELL TIME-SERIES PLOTS, CONT.
TURBIDITY

GLACIAL TILL



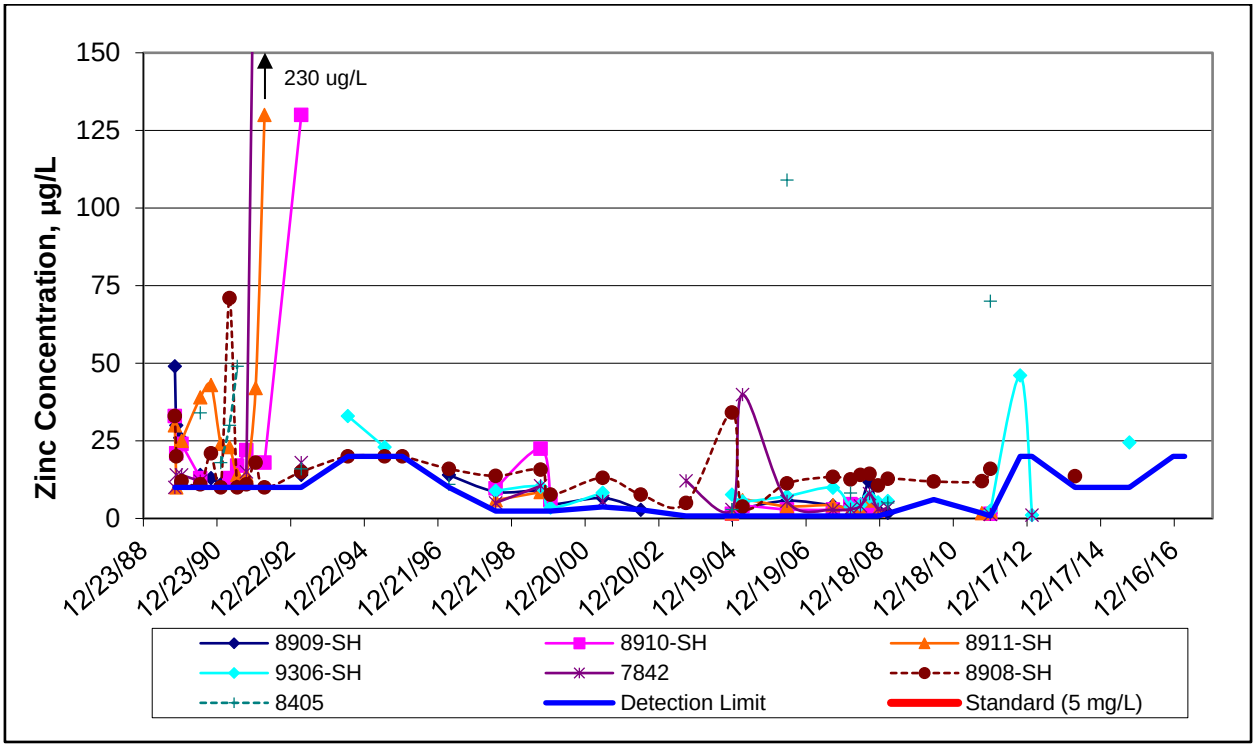
BEDROCK



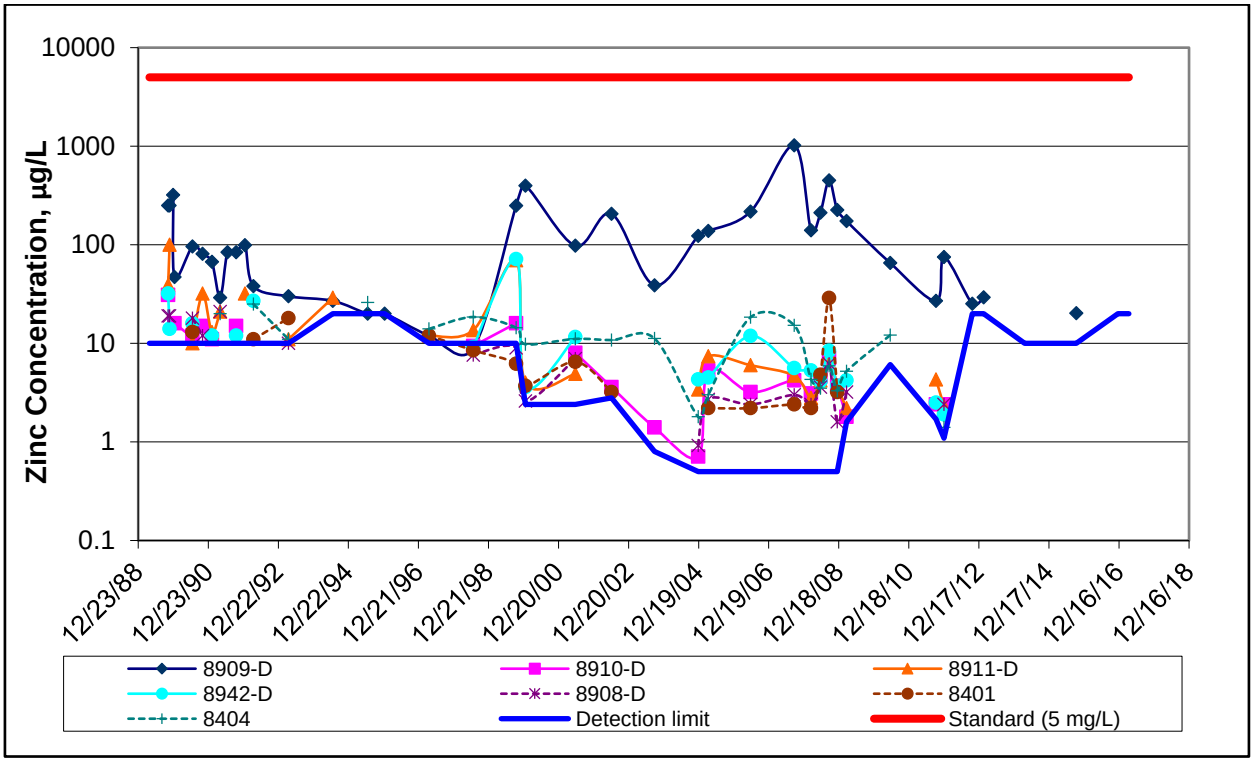
MONITORING WELL TIME-SERIES PLOTS, CONT.

ZINC

GLACIAL TILL

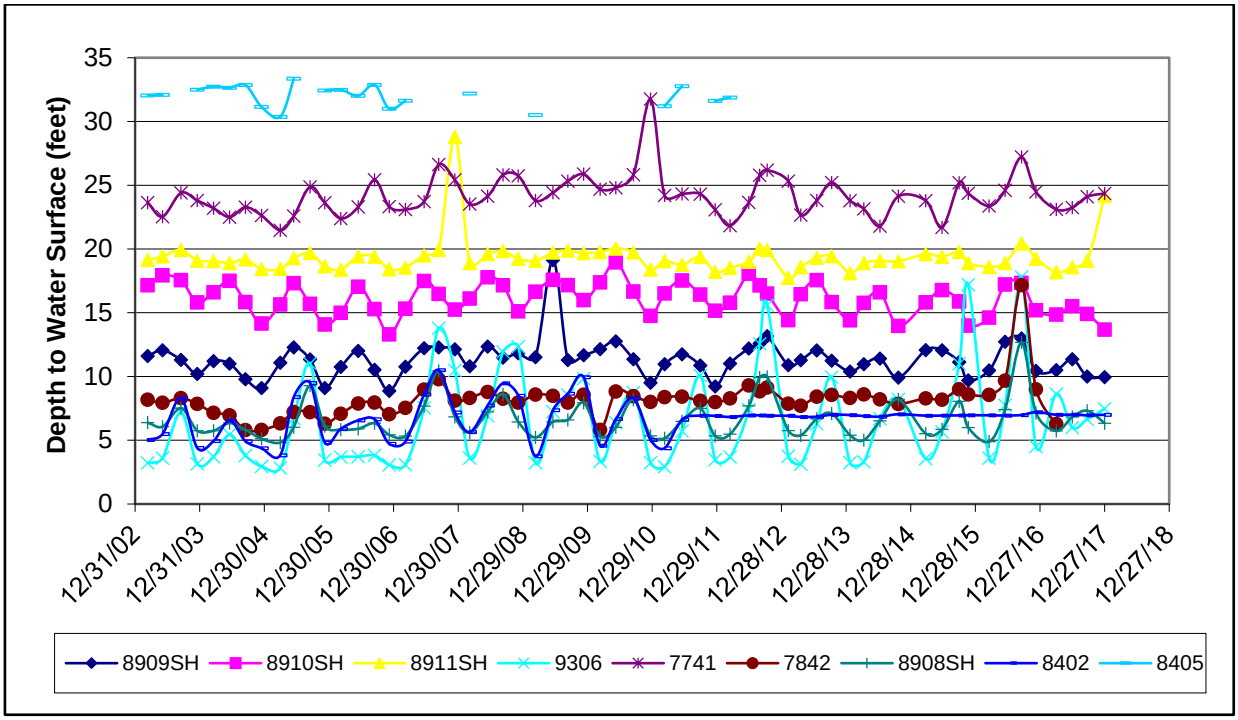


BEDROCK

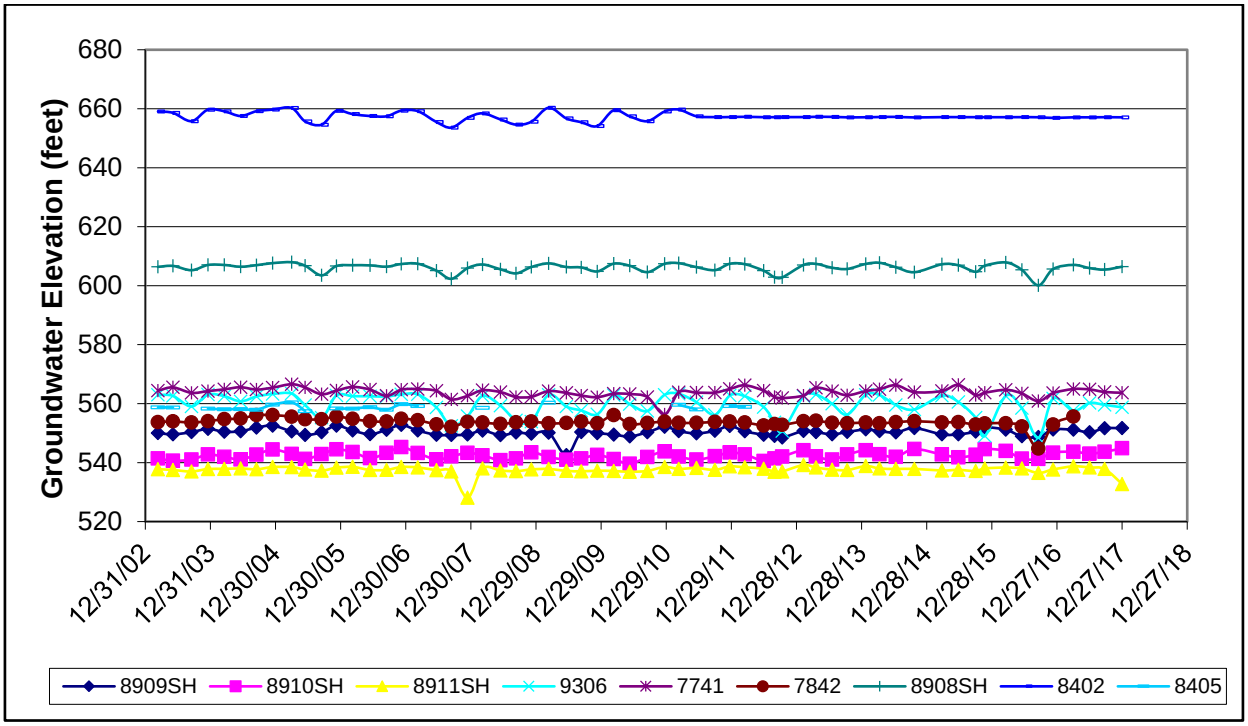


STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS
GLACIAL TILL

DEPTH TO WATER SURFACE

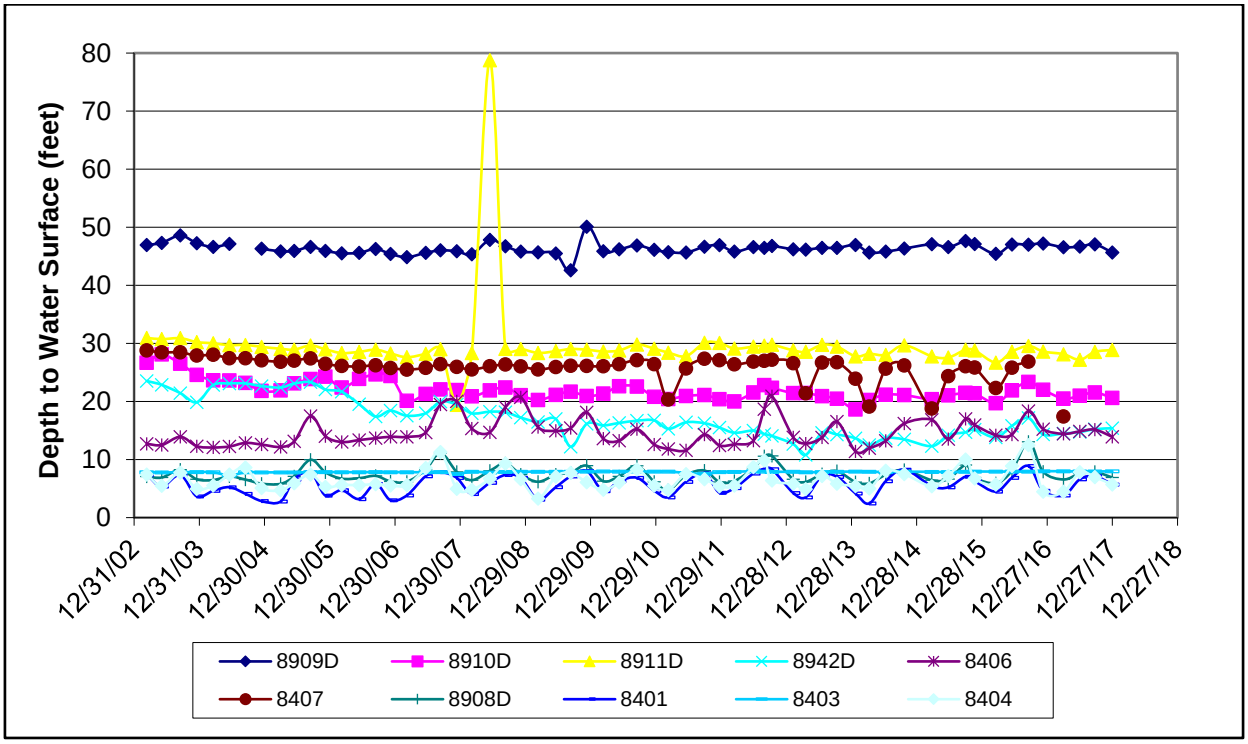


GROUNDWATER ELEVATION



STATIC GROUNDWATER LEVEL TIME-SERIES PLOTS
BEDROCK

DEPTH TO WATER SURFACE



GROUNDWATER ELEVATION