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May 31, 2019

Gregory MacLean, P.E. Regional Division of Materials Management Engineer

**AND** 

Karis Manning, P.E.
Regional Division of Water Engineer
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414

Re: Lockwood Hills LLC Consent Order Case No. R8-20140710-47 Investigation of Solids Scouring during Leachate Pond Discharge Events

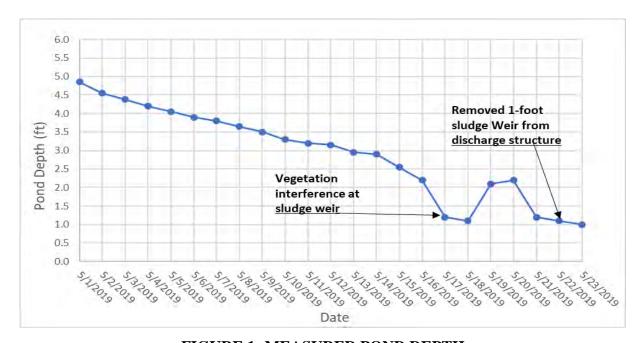
Dear Mr. MacLean and Ms. Manning:

The Leachate Pond at the Lockwood Ash Disposal Site (Landfill or Lockwood) is sampled and batch discharged to Keuka Outlet in accordance with the requirements of State Pollutant Discharge Elimination System (SPDES) Permit No. NY-0107069. Monitoring of the discharge occurs by way of a single 24-hour composite sample collected during the first 24 hours of discharge. The New York State Department of Environmental Conservation (NYSDEC or Department) raised a concern that any increase in pollutant loading during the later stages of discharge would not be detected. To address this concern, Lockwood developed a Sampling Plan to investigate the potential for solids scouring during discharge events. The Sampling Plan was carried out once in late December 2018. A letter report was submitted for that event dated January 15, 2019.

Upon review of the letter report for the first solids scouring investigation, the Department requested that the investigation be repeated in a letter dated February 28, 2019 and again in a letter dated March 12, 2019. The purpose of the repeated investigation was to assess the possibility of seasonality and to provide the NYSDEC the opportunity to observe the associated fieldwork. Lockwood agreed to repeat the investigation in a written confirmation letter dated March 18, 2019. The Sampling Plan was revised to include an end of event grab sample for the

full suite of SPDES parameters within 30 minutes of the end of discharge as was requested. The revised Sampling Plan is provided in Attachment 1. The sampling results and conclusions are summarized below.

Conditions during the 23-day discharge event were generally comparable to a typical event with two exceptions. First, this discharge event was longer than usual. Per the Lockwood SPDES permit, if the discharge exceeds 14 days in duration, a second round of sampling is required. In the past, a typical discharge event was limited to 14 days to eliminate the need for additional sampling. Second, the water level in the pond was drawn down farther than usual. As shown in Figure 1, on Day 22, the one-foot sludge weir installed on the face of the concrete discharge structure (See Sampling locations figure in Attachment 1) was removed. Neither of these exceptions would obscure detection of solid scouring, which was the objective this investigation. In fact, removal of the sludge weir will have created a more conservative condition under which to investigate the potential for scouring of solids during the latter part of the event.



**FIGURE 1: MEASURED POND DEPTH** 

Figure 1 shows the depth in the Pond fell steadily between May 1<sup>st</sup> and May 16<sup>th</sup>. On May 17<sup>th</sup> and 18<sup>th</sup> the staff gauge readings were artificially low. The staff gauge is mounted in the chute of the discharge structure downstream of the sludge weir and upstream of the 4-inch discharge pipe (See Sampling Location figure in Attachment 1). Vegetation was getting hung up on the one-

foot sludge weir and pushed over in slugs by the rising water level behind it. The chute in the area of the staff gauge would empty out between the slugs of liquid causing the artificially low depth measurements. By May 19<sup>th</sup>, most loose vegetation in the Pond had already been flushed out and vegetation interference was no longer notable.

In accordance with the Sampling Plan, grab samples were collected from the Leachate Pond concrete discharge channel at approximate 24-hour intervals. The grab samples were analyzed in the field for temperature, pH, and turbidity and in the laboratory for Total Suspended Solids (TSS). Laboratory reports are provided in Attachment 4. Additionally, observations were recorded on the completed Field Observation Forms provided in Attachment 2. Photographs of the discharge are provided in Attachment 3.

As detailed in Figure 2, the temperature of the discharge ranged between 51°F and 76°F with an average value of 66°F. The temperatures of the Pond discharge are reflective of ambient temperature over the course of the discharge event. The pH of the discharge ranged between 6.47 and 8.39 with an average value of 7.14 SU. The range of pH measured remained comfortably between the maximum and minimum effluent limits (6.0 to 9.0 SU) stipulated in Lockwood's SPDES permit throughout the entire event with no observable trending.

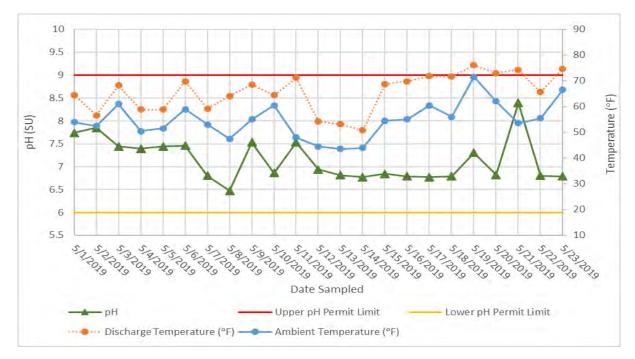


FIGURE 2: TEMPERATURE AND pH FIELD TESTING RESULTS

The results of turbidity field testing and laboratory TSS analysis are provided in Figure 3. Turbidity values ranged between 1.53 Nephelometric Turbidity Units (NTU) and 4.87 NTU with an average value of 2.50 NTU. There is no permit limitation on turbidity. TSS concentrations ranged from the minimum being less than detection (< 1 mg/L) to the maximum TSS of 28 mg/L with an average value of 4.2 mg/L.

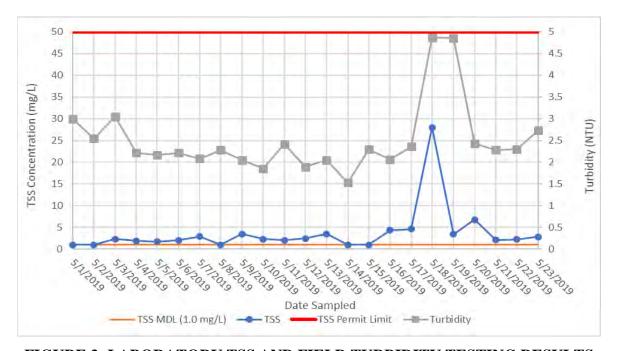


FIGURE 3: LABORATORY TSS AND FIELD TURBIDITY TESTING RESULTS

As shown in Figure 3, TSS remained less than an order of magnitude lower than the Lockwood SPDES permit compliance limit of 50 mg/L throughout the majority of the event with no observable trending. Photographs taken of the discharge grab samples and the samplers field observation notes confirm that there is no discernable difference in the water quality of the discharge between the beginning and end of the event. The notable TSS reading of 28.0 mg/L on May 18<sup>th</sup> and the corresponding elevated turbidity readings were a result of algae in the sample as noted on the field observation form. The algae is visible in the photo of the sample collected on that day.

Four full samples were collected during this discharge event. Two were 24-hour composite samples collected during the initial 24-hours of discharge and on the 14<sup>th</sup> day of discharge per the conditions of the Lockwood SPDES permit. One grab sample for the full suite of SPDES permitted parameters was collected on the last day of the discharge event as requested by the

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NYSDEC. The fourth full sample was a grab sample collect on May 20<sup>th</sup> in anticipation of termination of the discharge on that day. However, after the sample was collected, the decision was made to keep the discharge going and draw the pond level down as far as possible to allow for removal of the sludge weir. These laboratory reports also are provided in Attachment 4.

The results of the four samples that were analyzed for the full suite of SPDES permitted parameters are summarized in Table 1. Based on the results, concentrations did not materially increase between the beginning and end of the discharge event, and all measured parameters remained well below the Lockwood SPDES permit effluent limit. With the exception of selenium for all but the last day grab sample, and iron and TSS in the last day grab sample, concentrations of the parameters measured were less than an order of magnitude lower than the Lockwood SPDES permit effluent limit.

TABLE 1: FULL PARAMETER SUITE COMPARISION

| Parameter*      | Initial 24-Hour<br>Composite<br>Sample<br>(5/2/2019) | Mid-Discharge<br>24-hour<br>Composite<br>Sample<br>(5/16/2019) | 24-hour<br>Composite<br>Sample<br>(5/20/2019) | Last Day Grab<br>Sample<br>(5/23/2019) | SPDES<br>Permit<br>Limit |
|-----------------|--|--|---|--|--------------------------|
| Aluminum, mg/L  | < 0.100  | < 0.100  | < 0.100                                       | < 0.100                                | 2.4                      |
| Arsenic, mg/L   | < 0.005  | < 0.005  | < 0.005                                       | 0.007                                  | 0.1                      |
| Boron, mg/L     | 14.7   | 14.0   | 15.1  | 18.4                                   | Monitor                  |
| Cadmium, mg/L   | < 0.005  | < 0.005  | < 0.005                                       | < 0.005                                | 0.11                     |
| Copper, mg/L    | < 0.005  | < 0.005  | 0.010   | < 0.005                                | 1.0                      |
| Iron, mg/L      | 0.109  | 0.135  | 0.130   | 1.02                                   | 4.0                      |
| Manganese, mg/L | < 0.020  | 0.021  | < 0.020                                       | 0.061                                  | 3.0                      |
| Mercury, ng/L   | 0.5  | 0.6  | 0.6   | 0.5                                    | 50                       |
| pH, SU          | 8.2  | 8.3  | 8.1   | 7.9                                    | 6.0 - 9.0                |
| Selenium, mg/L  | 0.015  | 0.010  | 0.011   | < 0.005                                | 0.07                     |
| Temperature, °F | 55.4   | 71.6   | 75.2  | 68                                     | Monitor                  |
| TSS, mg/L       | < 1.0  | < 1.3  | 2.0   | 7.6                                    | 50                       |
| Zinc, mg/L      | < 0.010  | < 0.010  | < 0.010                                       | < 0.010                                | 2.0                      |

<sup>\*</sup> All metals are total recoverable.

Unlike the first solids scouring investigation performed in December, an elevated concentration

in TSS, as well as, elevated concentrations in arsenic, boron, iron, and manganese found in the

last day grab sample relative to the other three samples, does support the hypothesis that a

limited amount of scouring of settled solids may have occurred at the outlet during the final stage

of the pond discharge event. Given that the one-foot sludge weir was removed during this event

and the pond was drained to the lowest level it has seen in decades, this is not a surprising

finding.

Based on the results of this and the previous solids scouring investigation, we conclude that

under normal operations, when a minimum pond level is maintained during discharge events,

solids scouring at the discharge is not significant. Furthermore, the invert elevation of the pond

discharge structure was set one foot off the bottom elevation of the settling pond in the proposed

design. Therefore, in the future, pond discharge events will maintain a one-foot permanent pool

at all times. This will guard against solids scouring during the final stages of each discharge

event.

We trust the Department will agree that the results of this evaluation show that scouring and

increased discharge of suspended solids or possible associated parameters during the latter stages

of Leachate Pond discharge events have not occurred to any significant degree under normal

discharge conditions. Further, such scouring is not expected to occur from the proposed leachate

management system under future discharge conditions. As always, please do not hesitate to

contact me if you have any questions or concerns.

Sincerely,

DAIGLER ENGINEERING, PC

Bethany Acquisto, Ph.D.

Senior Scientist and Group Manager

cc: Dale Irwin – Lockwood Hills LLC

ec: Scott Foti – NYSDEC

Scott Sheeley – NYSDEC Dennis Harkawik – NYSDEC Yasmin Guevara – NYSDEC

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Attachment 2: Completed Field Observation Forms

Attachment 3: Observation Photographs

**Attachment 4: Laboratory Reports** 



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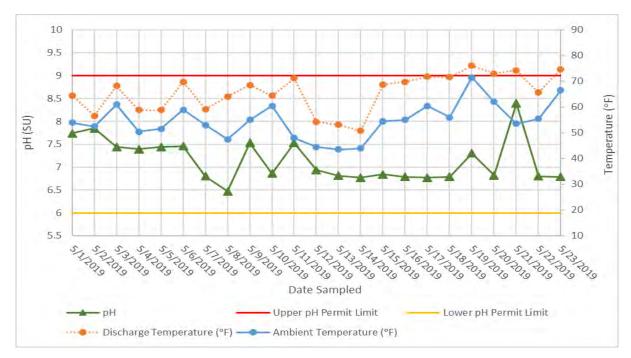


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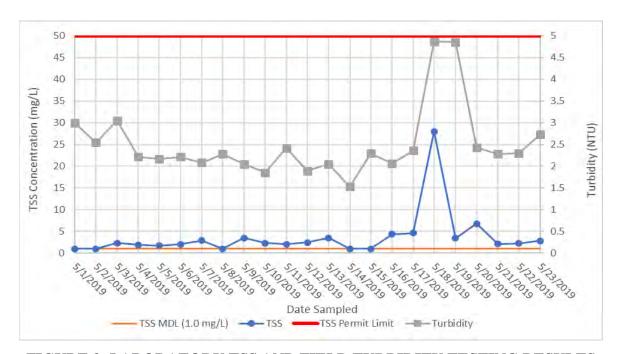


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pond was drained to the lowest level it has seen in decades, this is not a surprising finding.

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under normal operations, when a minimum pond level is maintained during discharge events,

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the pond discharge structure was set one foot off the bottom elevation of the settling pond in the

proposed design. Thus, in the future, pond discharge events will maintain a one-foot permanent

pool at all times. This will guard against solids scouring during the final stages of each discharge

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#### **ATTACHMENT 1**

## Sampling Plan – Investigation of Solids Scouring during Pond Discharge Events

#### LOCKWOOD ASH DISPOSAL SITE

#### **SAMPLING PLAN**

#### **Investigation of Solids Scouring during Pond Discharge Events**

#### **Objective**

The Leachate Pond at the Lockwood Ash Disposal Site (Landfill or Lockwood) is sampled and batch discharged to the Keuka Outlet in accordance with the requirements of the State Pollutant Discharge Elimination System (SPDES) Permit No. NY-0107069. The SPDES permit requires a 24-hour composite sample to be obtained during each batch discharge event. This sample is obtained during the first 24 hours after the release valve is opened. The New York State Department of Environmental Conservation (NYSDEC) has raised questions regarding the potential for discharge of suspended solids and their associated parameters from the Leachate Pond during the later stages of the discharge. The owners agreed to investigate the potential scouring of settled solids from the discharge to address the concerns of the NYSDEC. To conduct this investigation, typical batch discharge sampling procedures are to be augmented as described herein.

#### Approach

During the next discharge event, the typical pre-discharge grab sample and the SPDES permit mandated initial 24-hour composite and grab samples of the discharge will be collected as normal. Following these typical and required samples, grab samples will be collected from the concrete discharge channel at 24-hour intervals until the discharge event has concluded. The grab samples will be analyzed in the field for temperature, pH, and turbidity and in the laboratory for total suspended solids (TSS). In addition, specific visual observations and photographs are to be made/taken as part of the daily grab sampling events. Finally, within 30 minutes of termination of the discharge event, a grab sample will be collected and analyzed for the full suite of SPDES parameters.

#### **Roles/ Responsibilities**

The following table lists the organizations and responsibilities identified for the successful completion of this sampling plan.

TABLE 1: KEY ORGANIZATIONS AND ROLES

| Organization   | Roles  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Daigler Engineering, PC (DE)   | Provide sampling plan and oversight, analyze results   |  |  |  |  |  |
| Lockwood Hills LLC (Lockwood Hills)  | Schedule, initiate, and terminate the discharge event; daily documentation and sampling related to this plan |  |  |  |  |  |
| Adirondack Environmental Services, Inc. Field Service Group (ADK Field Services) | Provide normal permit-related sampling services and the end-of-event grab sampling                           |  |  |  |  |  |
| Adirondack Environmental Services, Inc.<br>Laboratory (ADK Laboratory)           | Perform analytical analysis of samples and provide results   |  |  |  |  |  |

#### **Procedure**

This sampling plan is meant to be an add-on to the normal Leachate Pond discharge event. All normal procedures are to be carried out as usual. DE understands these procedures to be:

- 1. Lockwood Hills schedules the sampling event by requesting that ADK Field Services collects a pre-discharge sample.
- 2. ADK Field Services visits Lockwood to collect field measurements (see Table 2) and the pre-discharge grab sample using a long-handled scoop from the Leachate Pond close to the inlet side of the outlet structure. While onsite, ADK Field Services also sets up the autosampler (Teledyne ISCO GLS Sampler) on top of the Pond berm inside the fenced area and positions the intake tubing at the bottom of the concrete chute of the outlet structure just downstream of the discharge pipe.
- 3. ADK Laboratory analyzes the pre-discharge sample for all SPDES parameters (see Table2) and sends the results to Lockwood Hills.

- 4. Lockwood Hills reviews the results and assuming all parameters are below the effluent limits, opens a butterfly valve on the 4-inch discharge pipe at the base of the outlet structure to begin the discharge event.
- 5. The autosampler is equipped with a flow sensor and programmed to begin collecting aliquots every 30 minutes as soon as flow is detected. The autosampler's suction tubing is fitted with a large-holed, stainless steel strainer to prevent sticks, leaves, or other large objects from obstructing the collection of the subsamples. Approximately 24 hours after the valve is opened, ADK Field Services will return to the site to collect the 24-hour composite sample and take field measurements as well as a grab sample in compliance with the SPDES permit. Field measurements and the grab sample are taken by hand using a one-liter, HDPE narrow-neck, bottle submerged approximately four to six-inches deep within, but just upstream of, the end of the outlet structure's concrete chute.
- 6. Samples collected from the discharge itself are then analyzed by ADK Laboratory and reported to the NYSDEC in quarterly Discharge Monitoring Reports.

# This sampling plan adds the following sampling procedures onto the normal Leachate Pond discharge event:

- Lockwood Hills will perform the visual observation and photographic documentation, as
  discussed below, of the initial discharge conditions both before and after the butterfly value
  is opened.
- 8. At the start of the discharge (T = 0 hours) and at approximately 24-hour intervals ( $\pm 2$  hours) following thereafter, Lockwood Hills will continue to return to the site to:
  - a. Perform the visual observation and photographic documentation, detailed below;
  - b. Collect grab samples from the same location as described in Step 5. These grab samples will be analyzed in the field for turbidity, pH, and temperature and in the laboratory for TSS; and,
  - c. Measure the liquid level in the Pond using a staff gauge.

9. Step 8 will be repeated until Lockwood Hills determines that the discharge event should be terminated. Termination of the discharge event should be determined in the usual manner. However, Lockwood Hills must coordinate with ADK Field Services to ensure a grab sample is collected a maximum of 30 minutes prior to termination of the event. This end-of-event grab sample shall be analyzed for all SPDES-permitted parameters. Termination should be timed such that it occurs either immediately after the final Step 8.

#### Sample Analysis, Documentation, and Equipment

The analytical parameters are listed in Table 2.

**TABLE 2: ANALYTICAL PARAMETERS** 

| Analytical<br>Parameter   | SPDES<br>Permit<br>Effluent Limit | Unit   | Type of Sample to be<br>Obtained*   | Method    | Holding Time |
|---------------------------|-----------------------------------|--------|-------------------------------------|-----------|--------------|
| Aluminum                  | 2.4                               | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Arsenic                   | 0.1                               | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Boron                     | Monitor                           | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Cadmium                   | 0.11                              | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Copper                    | 1                                 | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Iron                      | 4                                 | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Manganese                 | 3                                 | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Selenium                  | 0.07                              | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Zinc                      | 2                                 | mg/L   | PDG & 24-hr Com                     | EPA 200.7 | 180 days     |
| Mercury                   | 50                                | ng/L   | PDG & Step 5 Grab                   | EPA 1631  | 90 days      |
| pН                        | 6.0-9.0                           | SU     | Step 5 and Step 8 Grabs             | Field     | -            |
| Temperature               | Monitor                           | Deg. F | Step 5 and Step 8 Grabs             | Field     | -            |
| Turbidity                 | NA                                | NTU    | Step 8 Grabs                        | Field     | -            |
| Total Suspended<br>Solids | 50                                | mg/L   | PDG & 24-hr Com and<br>Step 8 Grabs | SM 2540C  | 7 days       |

<sup>\*</sup>PDG = Pre-discharge Grab Sample; 24-hr Com = 24-hour Composite Sample

Daily site visits to collect grab samples over the duration of the discharge event will be documented by Lockwood Hills using the Field Observation Form provided in Attachment 1. The Field Observation Form will be used to document the date and time, all field measurements, photographic evidence confirmation, and visual observations as described below.

In addition to the grab sample for TSS and analytical field parameters noted in Table 2 (temperature, pH, and turbidity), measurements of the liquid level in the Leachate Pond will be made daily. The liquid level in the Pond should be measured using a portable staff gauge.

Photographs are to be taken of the inlet and outlet side of the outlet structure, both immediately up and downstream of the 4-inch discharge pipe within the concrete chute, and up and downstream of the concrete structure. The built-in rudimentary staff should also be photographed daily to compare to the recorded staff reading. Finally, a photograph of the grab sample that allows for visual observation of the discharge quality will be taken. If the typical grab sample bottles are opaque, a separate grab should be collected in a clear glass or plastic jar for photographic documentation.

Visual observations will include as a minimum:

- Weather conditions (wind, precipitation, ambient temperature, cloud cover);
- Flow conditions (smooth, turbulent, disrupted by debris, etc.);
- Discharge clarity and color;
- Any evidence of scouring;
- Odors:
- Notable site conditions;
- Any variation in sampling location/techniques; and,
- Reason for variation from the plan.

A typical chain of custody will be required for all samples being transported to the laboratory. Normal handling and preservation protocols will be followed. To carry out the sampling plan described herein, the following field equipment and materials must be made available. Field meters are to be calibrated daily.

TABLE 3: FIELD AND SAMPLING EQUIPMENT

| List of Equipment   |              |  |  |  |  |  |  |  |
|---|--------------|--|--|--|--|--|--|--|
| Sampling Bottles from Laboratory                              | Thermometer  |  |  |  |  |  |  |  |
| (additional clear glass bottles if sample bottles are opaque) |              |  |  |  |  |  |  |  |
| Composite Autosampler   | Turbidimeter |  |  |  |  |  |  |  |
| Long Handle Scoop   | pH meter     |  |  |  |  |  |  |  |
| Field Observation Forms                                       | Staff Gauge  |  |  |  |  |  |  |  |
| Chain of Custody Forms  | Camera       |  |  |  |  |  |  |  |

#### FIGURE 1: SAMPLING LOCATION

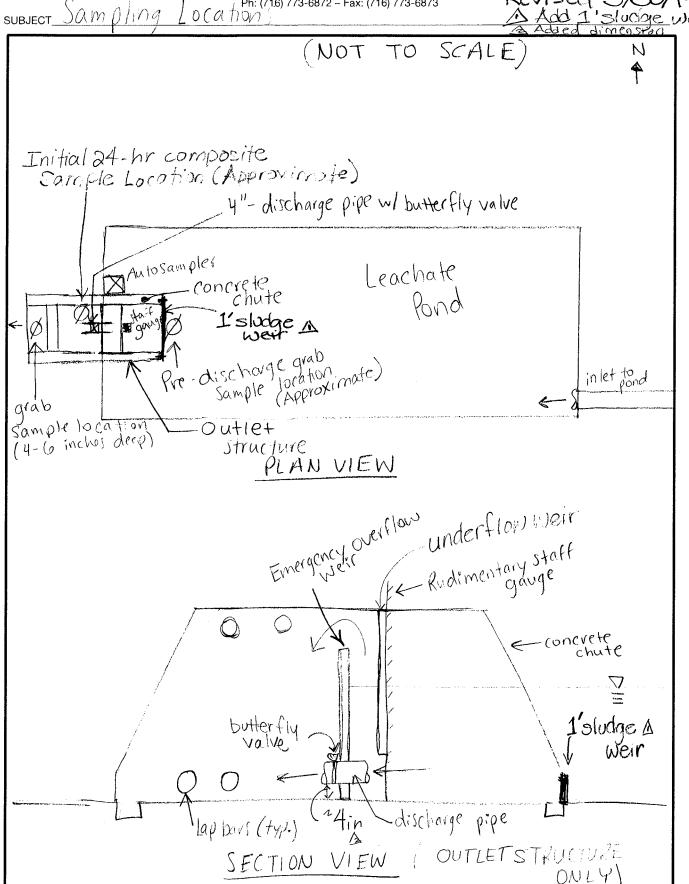
BY KMR DATE 10/30 CHKD. BY MOATE 11/01/12



JOB NO. 31-1518

SHEET NO. \_\_\_\_OF\_\_\_

2620 Grand Island Blvd. – Grand Island, NY – 14072 Ph: (7,16) 773-6872 – Fax: (716) 773-6873 Revised 5/30/19 Add 1 'sludge we'r



# ATTACHMENT 1 FIELD OBSERVATION FORM

#### FIELD OBSERVATION FORM

| SAMPLE:                  | Date:         | Time:           | Weather:   | pH:         |        | Temp:  | Turbidity:       | <b>Staff Reading:</b> |
|--------------------------|---------------|-----------------|--|-------------|--------|--|------------------|-----------------------|
| $T = \underline{ hrs}$   |               |                 |  | (SU)        |        | (Deg F)  | (NTU)            | (ft)                  |
|                          |               |                 |  |             |        |  |                  |                       |
| Photograph<br>Checklist: | □ Downstream  | discharge pip   | te structure (at the end of the concrete chute) e (within discharge structure) within discharge structure) |             | □ Perm | ream from discha<br>nanent staff gauge<br>sample |                  | or to concrete chute) |
| Visual<br>Observations:  | - Opstream di | senarge pipe (v | vitiliii discharge su decure)  |             | oraco  | sample   |                  |                       |
|                          |               | T               |  | T           |        |  |                  |                       |
| SAMPLE:<br>T = hrs       | Date:         | Time:           | Weather:   | pH:<br>(SU) |        | Temp: (Deg F)                                    | Turbidity: (NTU) | Staff Reading: (ft)   |
|                          |               |                 |  |             |        |  |                  |                       |
| Photograph<br>Checklist: | □ Downstream  | discharge pip   | te structure (at the end of the concrete chute) e (within discharge structure) within discharge structure) |             | □ Perm | ream from discha<br>nanent staff gauge<br>sample |                  | or to concrete chute) |
| Visual<br>Observations:  |               |                 |  |             |        |  |                  |                       |
|                          |               |                 |  |             |        |  |                  |                       |
| SAMPLE:<br>T = hrs       | Date:         | Time:           | Weather:   | pH:<br>(SU) |        | Temp:<br>(Deg F)                                 | Turbidity: (NTU) | Staff Reading: (ft)   |
|                          |               |                 |  |             | _      |  |                  |                       |
| Photograph<br>Checklist: | □ Downstream  | discharge pip   | re structure (at the end of the concrete chute) e (within discharge structure) within discharge structure) |             | □ Perm | ream from dischananent staff gauge<br>sample     |                  | r to concrete chute)  |
| Visual<br>Observations:  |               |                 |  |             |        |  |                  |                       |

# ATTACHMENT 2 Completed Field Observation Forms

DAY 1

#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:        | Time:         | Weather:  | pH: (SU)       | Ten<br>(Deg |          | Turbidity: (NTU)   | Discharge<br>Velocity: (fps) | Staff Reading:  |
|--------------------------|--------------|---------------|---|----------------|-------------|----------|--------------------|------------------------------|-----------------|
|                          | 5/1/19       | 9:354         | Cloudy  | 7.74           | 64          | 1,5      | 2,99               | V (1-)                       | 4.85 Ft         |
| Photograph<br>Checklist: | □ Downstream | discharge pip | ge structure (at the end of the co<br>be (within discharge structure)<br>(within discharge structure) | oncrete chute) |             | □ Pern   | nanent staff gauge | rge structure (prior to      | concrete chute) |
| Visual<br>Observations:  | Cle          | PAR           | discharge structure)  |                |             | ∐ □ Grat | b sample           |                              |                 |

| SAMPLE:<br>T = hrs       | Date:      | Time:           | Weather:  | pH: (SU)  | Ten<br>(De |        | Turbidity: (NTU)   | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|---|-----------|------------|--------|--------------------|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | arge structure (at the end of ipe (within discharge structure (within discharge structure | ture)     |            | □ Pern | nanent staff gauge | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            | go p.pe         | (within discharge structure   | <u>=)</u> |            | □ Grab | sample             |                              |                        |

| SAMPLE:<br>T = hrs       | Date: Time: Weather: pH: (SU) Temp: (Deg F) |                | 5.00  | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading<br>(ft) |                   |                         |                 |
|--------------------------|---|----------------|---|------------------|------------------------------|-----------------------|-------------------|-------------------------|-----------------|
| Photograph<br>Checklist: | □ Downstre                                  | am discharge p | arge structure (at the end of ipe (within discharge structure (within discharge structure | ture)            |                              | □ Perm                | anent staff gauge | rge structure (prior to | concrete chute) |
| Visual<br>Observations:  |   | S. P.Pe        | (within discharge structure   |                  |                              | □ Grab                | sample            |                         |                 |

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#### FIELD OBSERVATION FORM

| $SAMPLE:$ $T = \_hrs$    | Date:        | Time:         | Weather:  | pH: (SU) | Temp: (Deg F)   |        | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |
|--------------------------|--------------|---------------|---|----------|---|--------|------------------|------------------------------|---------------------|--|
|                          | 5/2/19       | 1:14pm        | Cloudy drizzle  | 7.85     |   |        | 2.54             |                              |                     |  |
| Photograph<br>Checklist: | □ Downstream | discharge pip | ge structure (at the end of the core (within discharge structure) within discharge structure) |          | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |        |                  |                              |                     |  |
| Visual<br>Observations:  |              | C             | 1eAR  |          |   | 2 Orac | sample           |                              |                     |  |

| SAMPLE: $T = hrs$        | Date:      | Time:           | Weather:   | pH: (SU) | Temp:<br>(Deg F | 5.6                         | oidity:<br>U) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|------------|-----------------|--|----------|-----------------|-----------------------------|---------------|------------------------------|---------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of<br>the (within discharge struc-<br>(within discharge structure) | ture)    |                 | Upstream from Permanent sta |               | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |            |                 | <u> </u>   | •        |                 | orao sample                 |               |                              |                     |

| $SAMPLE: \\ T = \underline{ hrs }$ |            |                 |  | Ten<br>(De | 1 | Turbidity: (NTU) | Discharge<br>Velocity: (fps)                         | Staff Reading:<br>(ft) |                 |
|------------------------------------|------------|-----------------|--|------------|---|------------------|--|------------------------|-----------------|
| Photograph<br>Checklist:           | □ Downstre | am discharge pi | rge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture)      |   | □ Pern           | tream from dischar<br>nanent staff gauge<br>o sample | ge structure (prior to | concrete chute) |
| Visual<br>Observations:            |            |                 | <u> </u>   |            |   | T Grac           | у запре  |                        |                 |

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#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:        | Time:         | Weather:  | pH: (SU) Temp:<br>(Deg F) |      | Turbidity: (NTU)                             | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|--------------|---------------|---|---------------------------|------|--|------------------------------|---------------------|
|                          | 5/3/19       | PA            | Rty cloudy  | 7,44                      | 201  | c 3.05                                       | J. ()                        | 4.38                |
| Photograph<br>Checklist: | □ Downstream | discharge pip | ge structure (at the end of the of the way (within discharge structure) within discharge structure) | concrete chute)           | □ Pe | pstream from dischar<br>ermanent staff gauge | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |              |               | whable  |                           |      | rab sample                                   |                              |                     |

| SAMPLE:<br>T = hrs       | Date:      | Time:           | Weather:  | pH: (SU) | Ten<br>(De | -        | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|------------|-----------------|---|----------|------------|----------|---------------------|------------------------------|---------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure  | ture)    |            | □ Perm   | nanent staff gauge  | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |            | 3 1 1           | ( see all a see | .,       |            | I d Grad | sample              |                              |                     |

| $SAMPLE:$ $T = \underline{ hrs }$ | ph: (SU) Temp: |                 |  | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |                    |                         |                 |
|-----------------------------------|----------------|-----------------|--|---------------------|------------------------------|------------------------|--------------------|-------------------------|-----------------|
| Photograph<br>Checklist:          | □ Downstre     | am discharge pi | rge structure (at the end of ipe (within discharge structure (within discharge structure | ture)               |                              | □ Pern                 | nanent staff gauge | rge structure (prior to | concrete chute) |
| Visual<br>Observations:           |                | 5 17            | (ge bir ucture   |                     |                              |                        | sample             |                         |                 |

# DAY 4

#### FIELD OBSERVATION FORM

58.82F

| SAMPLE: T = hrs          | Date:        | Time:  | Weather:    | pH: (SU) | Temp:<br>(Deg F) |        | Turbidity: (NTU) | Discharge<br>Velocity: (fps)  | Staff Reading: (ft) |  |  |  |  |
|--------------------------|--------------|--|-------------|----------|------------------|--------|------------------|---|---------------------|--|--|--|--|
|                          | 5/4/19       | 1320   | Cloudy      | 7.39     | 12               | 1.9°   | 2.21             |   | 4,2,f+              |  |  |  |  |
| Photograph<br>Checklist: | □ Downstream | □ Downstream from discharge structure (at the end of the concrete chute) □ Downstream discharge pipe (within discharge structure) □ Upstream discharge pipe (within discharge structure) |             |          |                  |        |                  | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |                     |  |  |  |  |
| Visual<br>Observations:  | Clex         | 1R   | go oudeuxe) |          |                  | 1 Grav | sample           |   |                     |  |  |  |  |

| SAMPLE:<br>T = hrs       | Date:      |                 |   |       |  | mp:<br>eg F) | Turbidity:<br>(NTU)                                  | The second secon | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|---|-------|--|--------------|--|--|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of<br>pe (within discharge structure<br>(within discharge structure | ture) |  | □ Pern       | tream from dischar<br>nanent staff gauge<br>o sample | rge structure (prior to  | concrete chute)        |
| Visual<br>Observations:  |            |                 | <u> </u>  |       |  | T d Grac     | sample   |  |                        |

| SAMPLE:<br>T = hrs       |            |                 | Ten<br>(De  |       | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft)                               |                         |                 |
|--------------------------|------------|-----------------|---|-------|---------------------|------------------------------|--|-------------------------|-----------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of<br>ipe (within discharge struct<br>(within discharge structure | ture) |                     | □ Pern                       | tream from dischar<br>nanent staff gauge<br>o sample | rge structure (prior to | concrete chute) |
| Visual<br>Observations:  |            | 3 7 7           | A   |       |                     | T ll Grac                    | o sample   |                         |                 |

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#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:                      | Time:          | Weather:  | pH: (SU) | Tem<br>(Deg   | • | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |
|--------------------------|----------------------------|----------------|---|----------|---|---|------------------|------------------------------|---------------------|--|
|                          | 5/5/19 2:30 pm Cloudy 7.44 |                |   |          |   |   | F 2.17           |                              | 3.05 ft             |  |
| Photograph<br>Checklist: | □ Downstream               | n discharge pi | ge structure (at the end of the co<br>be (within discharge structure)<br>(within discharge structure) |          | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |   |                  |                              |                     |  |
| Visual<br>Observations:  |                            |                |   |          |   |   |                  |                              |                     |  |

| SAMPLE: $T =hrs$         | Date:      | Time:          | Weather:  | pH: (SU) | Ten<br>(Deg |        | Turbidity:<br>(NTU)                                  | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|---|----------|-------------|--------|--|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of<br>ipe (within discharge struc-<br>(within discharge structur | ture)    |             | □ Pern | tream from dischar<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                |   |          |             | 1      | o dample   |                              |                        |

| $SAMPLE: T = \underline{ hrs }$ | Date: Time: Weather: pH: (SU) |                 |  |       | Ten<br>(De |        | Turbidity:<br>(NTU)                                  | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|---------------------------------|-------------------------------|-----------------|--|-------|------------|--------|--|------------------------------|------------------------|
| Photograph<br>Checklist:        | □ Downstre                    | am discharge pi | rge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture) |            | □ Pern | tream from dischar<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:         |                               |                 |  |       |            | 1 374  | , sample   |                              |                        |



#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        | Date:        | Time:  | Weather: | pH: (SU) | Temp:<br>(Deg F) |   | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |  |
|--------------------------|--------------|--|----------|----------|------------------|---|---------------------|------------------------------|---------------------|--|--|
|                          | 5/6/19       | 2127pm   | SUNNY    | 7.46     | 6                | 9,8   | 2.21                |                              | 3.9 ft              |  |  |
| Photograph<br>Checklist: | □ Downstream | Downstream from discharge structure (at the end of the concrete chute) Downstream discharge pipe (within discharge structure) Upstream discharge pipe (within discharge structure) |          |          |                  | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |                     |                              |                     |  |  |
| Visual<br>Observations:  | Cle          |  |          |          |                  |   |                     |                              |                     |  |  |
|                          |              |  |          |          |                  |   |                     |                              |                     |  |  |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:   | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|--|----------|------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of<br>tipe (within discharge structure)<br>(within discharge structure) | cture)   |            | □ Pern | tream from discha<br>manent staff gauge<br>b sample | <br>rge structure (prior to  | concrete chute)        |
| Visual<br>Observations:  |            |                |  |          |            |        |   |                              |                        |

| $SAMPLE:$ $T = \_$ hrs   | Date:      | Time:          | Weather:  | pH: (SU) | Ten<br>(Deg | * C    | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|---|----------|-------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of<br>tipe (within discharge struc-<br>(within discharge structure | ture)    |             | □ Pern | tream from discha<br>nanent staff gauge<br>b sample | ge structure (prior to       | concrete chute)        |
| Visual<br>Observations:  |            |                |   |          |             |        |   |                              |                        |

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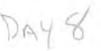
#### FIELD OBSERVATION FORM

PAGE OF

| SAMPLE:<br>T = hrs                    | Date:                      | Time:        | Weather:  | pH: (SU) To   |      | Turbidity:<br>(NTU)                            | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|---------------------------------------|----------------------------|--------------|---|---------------|------|--|------------------------------|---------------------|
|                                       | 5/7/19                     | 213          | 3m RAIN   | 6,00          | 59.1 | 2.08   |                              | 3,89                |
| Photograph                            | □ Downstream               | from discha  | rge structure (at the end of the co                           | ncrete chute) |      | Jpstream from dischar<br>Permanent staff gauge |                              | concrete chute)     |
| Checklist:                            | ☐ Downstream ☐ Upstream di | scharge pipe | ipe (within discharge structure) (within discharge structure) |               |      | Grab sample                                    |                              |                     |
| Checklist:<br>Visual<br>Observations: | □ Downstream □ Upstream di | scharge pipe | (within discharge structure)                                  | R             |      |  | -                            |                     |

| $SAMPLE:$ $T = \underline{} hrs$ | Date:      | Time:           | Weather:  | pH: (SU) | Tem<br>(Deg |        | Turbidity:<br>(NTU)                              | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|----------------------------------|------------|-----------------|---|----------|-------------|--------|--|------------------------------|------------------------|
| Photograph<br>Checklist:         | □ Downstre | eam discharge p | arge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture)    |             | □ Perm | ream from discha<br>nanent staff gauge<br>sample | I<br>rge structure (prior to | concrete chute)        |
| Visual<br>Observations:          |            |                 |   |          |             |        |  |                              |                        |

| SAMPLE: $T =hrs$         | Date:      | Time:           | Weather:  | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|---|----------|------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | eam discharge p | arge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture)    |            | □ Perr | tream from discha<br>manent staff gauge<br>b sample | L<br>rge structure (prior to | concrete chute)        |
| Visual<br>Observations:  |            |                 |   |          |            |        |   |                              |                        |



#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        | Date:        | Time:          | Weather:   | pH: (SU) | Temp:<br>(Deg F)   | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading<br>(ft) |
|--------------------------|--------------|----------------|--|----------|--|---------------------|------------------------------|-----------------------|
| 1 ms                     | 6/4/19       | 2:52=          | m SUNNY  | 6,47     | 64.0   | 4 2,28              |                              | 3.65ft                |
| Photograph<br>Checklist: | □ Downstream | m discharge pi | rge structure (at the end of the con<br>ipe (within discharge structure)<br>(within discharge structure) | o F      | Jpstream from discha<br>Permanent staff gauge<br>Grab sample |                     | o concrete chute)            |                       |
| Visual<br>Observations:  |              | c /e           | AR   |          |  |                     |                              |                       |

| SAMPLE:<br>T =hrs        | Date:      | Time:           | Weather:  | pH: (SU) | Tem<br>(Deg |        | Turbidity:<br>(NTU)                                  | Discharge<br>Velocity: (fps) | Staff Reading<br>(ft) |
|--------------------------|------------|-----------------|---|----------|-------------|--------|--|------------------------------|-----------------------|
| Photograph<br>Checklist: | □ Downstre | eam discharge p | arge structure (at the end only only of the end of the | cture)   |             | □ Peri | stream from discha<br>manent staff gauge<br>b sample | rge structure (prior to      | concrete chute)       |
| Visual<br>Observations:  |            |                 |   |          |             |        |  |                              |                       |

| SAMPLE:<br>T = _ hrs     | Date:     | Time:           | Weather:   | pH: (SU) | Tem<br>(Deg |       | Turbidity:<br>(NTU)                                   | Discharge<br>Velocity: (fps) | Staff Reading<br>(ft) |
|--------------------------|-----------|-----------------|--|----------|-------------|-------|---|------------------------------|-----------------------|
| Photograph<br>Checklist: | n Downstr | eam discharge p | arge structure (at the end of ipe (within discharge structure) | ture)    |             | □ Pen | stream from discha<br>manent staff gauge<br>lb sample | rge structure (prior to      | concrete chute)       |
| Visual<br>Observations:  |           |                 |  |          |             |       |   |                              |                       |

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#### FIELD OBSERVATION FORM

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| □ Downstrea | ım from discha                       | AST 2:30PM  | 7.53  | 1000  |   | Discharge<br>Velocity: (fps)  | Staff Reading:<br>(ft)   |
|-------------|--------------------------------------|---|---|---|---|---|--|
| □ Downstrea |                                      |   | ,   | 68.5  | 10 2.05   |   | 3.5 4  |
|             |                                      | rge structure (at the end of the pe (within discharge structure) (within discharge structure) |   | □ U<br>□ P  |   | urge structure (prior to  | concrete chute)  |
|             |                                      |   |   |   |   |   |  |
| Date:       | Time:                                | Weather:  | pH: (SU)  | Temp:<br>(Deg F)  | Turbidity:<br>(NTU)   | Discharge<br>Velocity: (fps)  | Staff Reading (ft)   |
| □ Downstrea | m discharge pi                       | pe (within discharge structur   |   | □ P   | ermanent staff gauge  |   | concrete chute)  |
|             |                                      |   |   |   |   |   |  |
| Date:       | Time:                                | Weather:  | pH: (SU)  | Temp:   | Turbidity:  | Discharge   | Staff Reading:   |
| 1 1         | □ Downstrea □ Downstrea □ Upstream o | Date: Time:  □ Downstream from dischar □ Downstream discharge pipe (                          | □ Downstream from discharge structure (at the end of th □ Downstream discharge pipe (within discharge structur □ Upstream discharge pipe (within discharge structure) | Date: Time: Weather: pH: (SU)  Downstream from discharge structure (at the end of the concrete chute)  Downstream discharge pipe (within discharge structure)  Upstream discharge pipe (within discharge structure) | Date: Time: Weather: pH: (SU) Temp: (Deg F)  Downstream from discharge structure (at the end of the concrete chute) Downstream discharge pipe (within discharge structure) Upstream discharge pipe (within discharge structure) G | Date: Time: Weather: pH: (SU) Temp: Turbidity: (Deg F) (NTU)  Downstream from discharge structure (at the end of the concrete chute) Upstream discharge pipe (within discharge structure) Permanent staff gauge Grab sample  Date: Time: Weather: pH: (SU) Temp: Turbidity: | Date: Time: Weather: pH: (SU) Temp: (Deg F) Turbidity: Discharge Velocity: (fps)  Downstream from discharge structure (at the end of the concrete chute) Downstream discharge pipe (within discharge structure) Upstream discharge pipe (within discharge structure) Grab sample  Date: Time: Weather: pH: (SU) Temp: Turbidity: Discharge |

| $T = _hrs$               | Date:  | Time: Weather: pH: (SU) Temp (Deg ) |  |       | Velocity: (fps)  | (ft) |  |  |  |
|--------------------------|--------|-------------------------------------|--|-------|--|------|--|--|--|
| Photograph<br>Checklist: |        |                                     |  | ture) | concrete chute)  □ Upstream from discharge structure (prior to concern permanent staff gauge □ Grab sample |      |  |  |  |
| Visual<br>Observations:  | 'isual |                                     |  |       |  |      |  |  |  |



#### FIELD OBSERVATION FORM

PAGE OF

| SAMPLE:<br>T = hrs       | Date:   | Part (a b)    |          | Tem<br>(Deg        | -           | Turbidity: (NTU) | Discharge<br>Velocity: (fps)             | Staff Reading: (ft)                     |                    |
|--------------------------|---|---------------|----------|--------------------|-------------|------------------|--|---|--------------------|
|                          | 5/10/19   | 11:11 0       | m RAIN   | 6.86               | 6           | 4.4              | 1.85                                     |   | 3.3                |
| Photograph<br>Checklist: | □ Downstream from discharge structure (at the end of the concrete chute) □ Downstream discharge pipe (within discharge structure) □ Upstream discharge pipe (within discharge structure) □ Upstream discharge pipe (within discharge structure) □ Grab sample |               |          |                    |             |                  |  |   | concrete chute)    |
| Visual<br>Observations:  |   |               | CLEAR    |                    |             |                  |  |   |                    |
|                          |   |               | -10.     |                    |             |                  |  |   |                    |
| SAMPLE:<br>T =hrs        | Date:   | Time:         | Weather: | pH: (SU)           | Tem<br>(Deg | •                | Turbidity:<br>(NTU)                      | Discharge<br>Velocity: (fps)            | Staff Reading (ft) |
|                          | □ Downstrean  | n from discha |          | ne concrete chute) | 100         | □ Upstr          | (NTU) earn from discharanent staff gauge | Velocity: (fps)  ge structure (prior to | (ft)               |

| SAMPLE:<br>T = hrs       | Date:      | Time:  | Weather: | pH: (SU) | Temp:<br>(Deg F) |   | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |  |  |
|--------------------------|------------|--|----------|----------|------------------|---|---------------------|------------------------------|------------------------|--|--|
| Photograph<br>Checklist: | □ Downstre | wnstream from discharge structure (at the end of the concrete chute) wnstream discharge pipe (within discharge structure) stream discharge pipe (within discharge structure) |          |          |                  | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |                     |                              |                        |  |  |
| Visual<br>Observations:  |            |  |          |          |                  |   |                     |                              |                        |  |  |



#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs                 | Date:      | te: Time: Weather: pH: (SU) Temp: (Deg F) |  |                      | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading:                    |                         |       |
|------------------------------------|------------|---|--|----------------------|------------------|------------------------------|-----------------------------------|-------------------------|-------|
| Photograph<br>Checklist:<br>Visual | Downstream | n discharge pip                           | ge structure (at the end of the content (within discharge structure) within discharge structure) | 7.53 concrete chute) | 71,              | 14°                          | eam from discharanent staff gauge | rge structure (prior to | 3,25+ |
| Observations:                      | Cle        | AR  |  |                      |                  |                              |                                   |                         |       |

| SAMPLE: $T = hrs$        | Date:    | Time: Weather: pH: (SU) Temp (Deg I |                              |  | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading (ft)                            |                 |  |
|--------------------------|----------|-------------------------------------|------------------------------|--|------------------|------------------------------|---|-----------------|--|
| Photograph<br>Checklist: | Downstre | am discharge pi                     | he concrete chute)           |  | Perm             | ianent staff gauge           | discharge structure (prior to concrete chute) | concrete chute) |  |
| Visual<br>Observations:  |          | alsonarge pipe                      | (within discharge structure) |  |                  | Grab                         | sample  |                 |  |

| T = hrs                  | Date:      | Time:  | Weather:                     | pH: (SU) | Ten<br>(De |        | Turbidity: (NTU)   | Discharge<br>Velocity: (fps) | Staff Reading (ft) |
|--------------------------|------------|--|------------------------------|----------|------------|--------|--------------------|------------------------------|--------------------|
| Photograph<br>Checklist: | - Downstre | ☐ Downstream from discharge structure (at the end of the con☐ Downstream discharge pipe (within discharge structure)☐ Upstream discharge pipe (within discharge structure) |                              |          |            | □ Perm | nanent staff gauge | rge structure (prior to      | concrete chute)    |
| Visual<br>Observations:  |            | disentinge pipe  | (within discharge structure) |          |            | □ Grab | sample             |                              |                    |

DAY 12

#### FIELD OBSERVATION FORM

| SAMPLE: $T =hrs$         |              |                | Weather:   | pH: (SU)     | Tem<br>(Deg   | •    | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |
|--------------------------|--------------|----------------|--|--------------|---|------|------------------|------------------------------|---------------------|--|
|                          | 5/12/9       | 3:16pm         | RAIN   | 6,94         | 54  | .320 | 1.69             |                              | 3.15 \$+            |  |
| Photograph<br>Checklist: | □ Downstream | discharge pipe | e structure (at the end of the cond<br>e (within discharge structure)<br>within discharge structure) | crete chute) | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |      |                  |                              |                     |  |
| Visual<br>Observations:  | Cle          | AR             |  |              |   |      |                  |                              |                     |  |

| $SAMPLE:$ $T = \_$ hrs   | Date:      | Time:          | Weather:   | pH: (SU) |  | Temp: Turbidity: Discharge Velocity: (fps)  Upstream from discharge structure (prior to concrete chute) Permanent staff gauge Grab sample |  |  |  |  |
|--------------------------|------------|----------------|--|----------|--|---|--|--|--|--|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of ipe (within discharge struct (within discharge structure | ure)     |  |   |  |  |  |  |
| Visual<br>Observations:  | al         |                |  |          |  |   |  |  |  |  |

| $SAMPLE:$ $T = \underline{} hrs$ | Date: | Time: | Weather: | pH: (SU) | Ten<br>(De   | * | Turbidity:<br>(NTU) | Discharge Staff Readin Velocity: (fps) (ft) |  |
|----------------------------------|-------|-------|----------|----------|--|---|---------------------|---|--|
| Photograph<br>Checklist:         |       |       | ture)    |          | ☐ Upstream from discharge structure (prior to concrete ☐ Permanent staff gauge ☐ Grab sample |   |                     |   |  |
| Visual<br>Observations:          |       |       |          |          |  |   |                     |   |  |

|     | 12 |
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| DAY | 10 |
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#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        | Date:                     | Time:       | Weather:   | pH: (SU) | Temp:<br>(Deg F) |        | Turbidity: (NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|---------------------------|-------------|--|----------|------------------|--------|--|------------------------------|---------------------|
|                          | 5/13/9 2:31pm RAIN 6,81 5 |             |  |          |                  |        | 2.05   |                              | 295                 |
| Photograph<br>Checklist: | □ Downstream              | discharge p | rge structure (at the end of the control of the con | ire)     |                  | □ Perm | ream from discha<br>nanent staff gauge<br>sample | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |                           | AR          |  |          |                  |        |  |                              |                     |

| SAMPLE: $T =hrs$         | Date:      | Time:          | Weather:   | pH: (SU) | Ter<br>(De | np:<br>g F) | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) |                 |  |  |
|--------------------------|------------|----------------|--|----------|------------|-------------|---|------------------------------|-----------------|--|--|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end o<br>ipe (within discharge struc-<br>(within discharge structur | cture)   |            | □ Pern      | tream from discha<br>nanent staff gauge<br>b sample | ge structure (prior to       | concrete chute) |  |  |
| Visual<br>Observations:  |            |                |  |          |            |             |   |                              |                 |  |  |

| SAMPLE:<br>T = hrs       | Date:      | Time:           | Weather:   | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|--|----------|------------|--------|--|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | eam discharge p | arge structure (at the end o<br>ipe (within discharge struc-<br>(within discharge structur | cture)   |            | □ Perm | ream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                 |  |          |            |        |  |                              |                        |

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#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        |              |              | pH: (SU)   | Tem<br>(Deg     | (F)         | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft)          |                    |
|--------------------------|--------------|--------------|--|-----------------|-------------|---------------------|------------------------------|------------------------------|--------------------|
|                          | 5)14(19      | 3:15         | Cloudy   | 6.77            | 50          | 720                 | 1.53                         |                              | 2,94               |
| Photograph<br>Checklist: | Downstream   | discharge pi | rge structure (at the end of the ope (within discharge structure) (within discharge structure) |                 |             |                     | anent staff gauge            | rge structure (prior to      | concrete chute)    |
| Visual<br>Observations:  | Cle          |              |  |                 |             |                     |                              |                              |                    |
| SAMPLE:<br>T = _ hrs     | Date:        | Time:        | Weather:   | pH: (SU)        | Tem<br>(Deg | •                   | Turbidity:<br>(NTU)          | Discharge<br>Velocity: (fps) | Staff Reading (ft) |
| Photograph<br>Checklist: | □ Downstream | discharge pi | rge structure (at the end of the ope (within discharge structure) (within discharge structure) |                 |             |                     | anent staff gauge            | ge structure (prior to       | concrete chute)    |
| Visual<br>Observations:  |              |              |  |                 |             |                     |                              |                              |                    |
| C 11 VDV E               | n.           | m:           | Wd.  | H. (CID)        | Tem         |                     | Turbidity:                   | Discharge                    | Staff Reading      |
| SAMPLE:<br>T = hrs       | Date:        | Time:        | Weather:   | pH: (SU)        | (Deg        | •                   | (NTU)                        | Velocity: (fps)              | (ft)               |
| Photograph<br>Checklist: | □ Downstream | discharge pi | ge structure (at the end of the ope (within discharge structure) (within discharge structure)  | concrete chute) |             |                     | anent staff gauge            | ge structure (prior to       | concrete chute)    |
| Visual Observations:     |              |              |  |                 |             |                     |                              |                              |                    |

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#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:                | Time:       | Weather:  | pH: (SU)    | Temp:<br>(Deg F)  |      | Turbidity: (NTU) | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |
|--------------------------|----------------------|-------------|---|-------------|---|------|------------------|------------------------------|---------------------|--|
|                          | 5/15/19 BARTY Cloudy |             | 6.84  | 68.72       |   | 2.29 |                  | 2.55 St                      |                     |  |
| Photograph<br>Checklist: | □ Downstream         | discharge p | rge structure (at the end of the conc<br>ipe (within discharge structure)<br>(within discharge structure) | rete chute) | ☐ Upstream from discharge structure (prior to concrete chut ☐ Permanent staff gauge ☐ Grab sample |      |                  |                              |                     |  |
| Visual<br>Observations:  | Cle                  | AR          |   |             |   |      |                  |                              |                     |  |

| $SAMPLE:$ $T = \underline{ hrs }$  | Date: | Time:                        | Weather: | pH: (SU) |  | Temp: Turbidity: Discharge Staff Re (NTU) Velocity: (fps) (ft) |  |  |  |  |  |
|--|-------|------------------------------|----------|----------|--|--|--|--|--|--|--|
| Photograph Checklist:  Downstream from discharge structure (at the end of the control of the con |       | ipe (within discharge struct | icture)  |          | ☐ Upstream from discharge structure (prior to concrete chu ☐ Permanent staff gauge ☐ Grab sample |  |  |  |  |  |  |
| Visual<br>Observations:  |       |                              |          |          |  |  |  |  |  |  |  |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:   | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|--|----------|------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of<br>ipe (within discharge struc-<br>(within discharge structure | ture)    |            | □ Pern | tream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                |  |          |            |        |   |                              |                        |

DAY 16

#### FIELD OBSERVATION FORM

| $SAMPLE:$ $T = \underline{ hrs}$ | Date:        | Time:        | 1077  | pH: (SU)        | Temp:<br>(Deg F) | Turbidity: (NTU)   | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|----------------------------------|--------------|--------------|---|-----------------|------------------|--------------------|------------------------------|------------------------|
|                                  | 5/16/19      | 2:30         | pm HA Sun   | 6.79            | 69.80            | 2.06               |                              | 2.25+                  |
| Photograph<br>Checklist:         | □ Downstream | discharge pi | rge structure (at the end of the<br>pe (within discharge structure)<br>(within discharge structure) | concrete chute) | □ Pern           | nanent staff gauge | I<br>rge structure (prior to | concrete chute)        |
| Visual<br>Observations:          |              | AR           | (********* associating structure)   |                 | □ Grat           | sample             |                              |                        |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:  | pH: (SU) | mp:<br>eg F) | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|---|----------|--------------|---------------------|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of ipe (within discharge structure (within discharge structure | ture)    | □ Pern       | nanent staff gauge  | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                | <u> </u>  |          | _   Li Grat  | o sample            |                              |                        |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:  | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|---|----------|------------|--------|---------------------|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of ipe (within discharge structure (within discharge structure | rure)    |            | □ Pern | nanent staff gauge  | rge structure (prior to      | concrete chute)        |
| Visual Observations:     |            | 8- 7-7-        | (   | )        |            | ☐ Grat | sample              |                              |                        |

DAY 17

#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:      | Time:         | Weather:   | pH: (SU)     | Temp:<br>(Deg F) |        | Turbidity:<br>(NTU)                              | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|---------------|--|--------------|------------------|--------|--|------------------------------|------------------------|
|                          | 5/17/19    | 3:00          | pm PARTLY Cloudy   | 6.77         |                  |        | 2.36   |                              | 1,257                  |
| Photograph<br>Checklist: | Downstream | n discharge p | rge structure (at the end of the concipe (within discharge structure) (within discharge structure) | crete chute) |                  | □ Perm | ream from dischar<br>anent staff gauge<br>sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  | it so      | uports        | life CleAR   |              |                  |        |  |                              |                        |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:   | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|--|----------|------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of ipe (within discharge struct (within discharge structure | rure)    |            | □ Pern | tream from discha<br>nanent staff gauge<br>b sample | ge structure (prior to       | concrete chute)        |
| Visual<br>Observations:  |            |                |  |          |            |        |   |                              |                        |

| SAMPLE:<br>T = hrs         | Date: | Time:          | Weather: | pH: (SU)   | Ten<br>(De |  | Turbidity:<br>(NTU)  |  | Staff Reading:<br>(ft) |  |  |
|----------------------------|-------|----------------|----------|--|------------|--|--|--|------------------------|--|--|
| Checklist: Downstream disc |       | am discharge p |          | structure (at the end of the concrete chute) (within discharge structure) ithin discharge structure) |            |  | ☐ Upstream from discharge structure (prior to concrete chute ☐ Permanent staff gauge ☐ Grab sample |  |                        |  |  |
| Visual<br>Observations:    |       |                |          |  |            |  |  |  |                        |  |  |

## DAY 18

#### FIELD OBSERVATION FORM

| SAMPLE: $T =hrs$         | Date:        | Time:          | Weather:   | pH: (SU)       | Temp:<br>(Deg F) |          | Turbidity: (NTU)                                  | Discharge<br>Velocity: (fps)            | Staff Reading: (ft) |
|--------------------------|--------------|----------------|--|----------------|------------------|----------|---|---|---------------------|
|                          | 5/18/19      | 5:33p          | " PARTLY cloudy  | 71.            | 6                | 4.87     |   | 10/4                                    |                     |
| Photograph<br>Checklist: | □ Downstream | n discharge pi | ge structure (at the end of the cope (within discharge structure) (within discharge structure) | oncrete chute) |                  | □ Perm   | ream from dischar<br>nanent staff gauge<br>sample | rge structure (prior to concrete chute) |                     |
| Visual<br>Observations:  |              |                | ut someala   | 2. Pr          |                  | 1 3 3140 | - Surripio  |   |                     |

| <i>SAMPLE: T</i> = <i>hrs</i> | Date:      | Time:           | Weather:   | pH: (SU) | Tem<br>(Deg | -      | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |  |
|-------------------------------|------------|-----------------|--|----------|-------------|--------|---|------------------------------|------------------------|--|
| Photograph<br>Checklist:      | □ Downstre | am discharge pi | rge structure (at the end of<br>the (within discharge struc-<br>(within discharge structure) | ture)    |             | □ Pern | tream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |  |
| Visual<br>Observations:       |            |                 | <u> </u>   | 52       |             | - Orac | Sumple  |                              |                        |  |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:  | pH: (SU) | Temp<br>(Deg | L. Syn. 10 | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|---|----------|--------------|------------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | arge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture)    |              | □ Pern     | tream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                |   |          |              |            |   |                              |                        |

## 19

#### FIELD OBSERVATION FORM

| $SAMPLE:$ $T = \_hrs$    | Date:        | Time:         | Weather:   | pH: (SU) | Temp:<br>(Deg F) |        | Turbidity:<br>(NTU)                                  | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|--------------|---------------|--|----------|------------------|--------|--|------------------------------|------------------------|
|                          | 5/19/A       | 5:15 pm       | BAIN   | 7,30     |                  |        | 4.86   |                              | 2) 7                   |
| Photograph<br>Checklist: | □ Downstream | discharge pip | e structure (at the end of the<br>e (within discharge structure<br>vithin discharge structure) |          |                  | □ Perr | tream from discha-<br>manent staff gauge<br>b sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  | c\           | eAR           |  |          |                  |        |  |                              |                        |

| SAMPLE:<br>T = hrs       | Date:      | Time:          | Weather:   | pH: (SU) | Tem<br>(Deg | •      | Turbidity:<br>(NTU)                                  | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|----------------|--|----------|-------------|--------|--|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge p | rge structure (at the end of<br>ipe (within discharge struc<br>(within discharge structure | ture)    |             | □ Perr | stream from discha<br>manent staff gauge<br>b sample | ge structure (prior to       | concrete chute)        |
| Visual<br>Observations:  |            |                |  |          |             |        |  |                              |                        |

| SAMPLE:<br>T = hrs       | Date:      | Time:            | Weather:  | pH: (SU) | Tem<br>(Deg |        | Staff Reading:<br>(ft)                              |                         |                 |
|--------------------------|------------|------------------|---|----------|-------------|--------|---|-------------------------|-----------------|
| Photograph<br>Checklist: | □ Downstre | eam discharge pi | rge structure (at the end of ipe (within discharge struct (within discharge structure | ture)    |             | □ Pern | tream from discha<br>nanent staff gauge<br>b sample | rge structure (prior to | concrete chute) |
| Visual<br>Observations:  |            |                  |   |          |             |        |   |                         |                 |

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#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        | Date:        | Time:         | Weather:  | pH: (SU) | 100                    | emp: Turbidity eg F) (NTU) |                         | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|--------------|---------------|---|----------|------------------------|----------------------------|-------------------------|------------------------------|---------------------|
|                          | 5/20/19      | 0815          | SUNNY   | 6.82     | 73                     | 0.040                      | 2,43                    |                              | 2,25+               |
| Photograph<br>Checklist: | □ Downstream | discharge pip | ge structure (at the end of the cone (within discharge structure) within discharge structure) |          | □ Upstr □ Perma □ Grab | anent staff gauge          | rge structure (prior to | concrete chute)              |                     |
| Visual Observations:     |              |               | ,   |          |                        | 1 2 3 4 4                  | ouri, pro               |                              |                     |

| SAMPLE:<br>T = hrs       | Date: Time: Weather: |  | Weather: | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)   | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |  |  |  |
|--------------------------|----------------------|--|----------|----------|------------|--------|---|------------------------------|------------------------|--|--|--|
| Photograph<br>Checklist: | □ Downstre           | Downstream from discharge structure (at the end of the concrete chute) Downstream discharge pipe (within discharge structure) Upstream discharge pipe (within discharge structure) |          |          |            |        | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |                              |                        |  |  |  |
| Visual<br>Observations:  |                      | <u> </u>   | <u> </u> | ,        |            | D Grac | sample  |                              |                        |  |  |  |

| SAMPLE:<br>T=_hrs        | Date:      | Time: Weather: pH: (SU) Temp: (Deg F) |  | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft)                               |                         |                 |
|--------------------------|------------|---------------------------------------|--|---------------------|------------------------------|--|-------------------------|-----------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi                       | rge structure (at the end of<br>ipe (within discharge struc-<br>(within discharge structur | cture)              | □ Pern                       | tream from dischar<br>nanent staff gauge<br>o sample | rge structure (prior to | concrete chute) |
| Visual<br>Observations:  |            | 011                                   | <u> </u>   | -                   | T O O T O                    | o sample   |                         |                 |

DAY 21

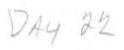
#### FIELD OBSERVATION FORM

PAGE\_OF\_

| SAMPLE:<br>T = hrs       | Date: 5/21/19 | Time:           |   |      | Temp:<br>(Deg F) | Turbidity: (NTU)                               | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|---------------|-----------------|---|------|------------------|--|------------------------------|---------------------|
|                          |               | 3:000           | Swmya   | 8.39 | 74,30            | 2.28   |                              | 1.2 Ft              |
| Photograph<br>Checklist: | □ Downstream  | n discharge pip | ge structure (at the end of the<br>be (within discharge structure)<br>within discharge structure) |      | □ Perm           | eam from discha<br>anent staff gauge<br>sample | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |               |                 |   |      |                  |  |                              |                     |
|                          |               |                 |   |      |                  |  |                              |                     |

| $SAMPLE:$ $T = \underline{} hrs$ |            |                | Weather:  | pH: (SU) | Ten<br>(De |        |   |                         | Staff Reading: (ft) |
|----------------------------------|------------|----------------|---|----------|------------|--------|---|-------------------------|---------------------|
| Photograph<br>Checklist:         | □ Downstre | am discharge p | arge structure (at the end of<br>ipe (within discharge struc-<br>(within discharge structur | eture)   |            | □ Pern | tream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to | concrete chute)     |
| Visual<br>Observations:          |            |                |   |          |            |        |   |                         |                     |

| SAMPLE: $T =hrs$         | Date:      | Time:           | Weather:   | pH: (SU) | Ten<br>(De |        | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|--|----------|------------|--------|---|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | eam discharge p | urge structure (at the end of ipe (within discharge struct (within discharge structure | ure)     |            | □ Pern | tream from discha<br>nanent staff gauge<br>o sample | rge structure (prior to      | concrete chute)        |
| Visual<br>Observations:  |            |                 |  |          |            |        |   |                              |                        |



#### FIELD OBSERVATION FORM

| SAMPLE: $T = hrs$        | Date:  | : Time: Weather: pH: |              | pH: (SU) | Temp:<br>(Deg F |   |      | v: Discharge<br>Velocity: (fps) | Staff Reading: (ft) |  |
|--------------------------|--|----------------------|--------------|----------|-----------------|---|------|---------------------------------|---------------------|--|
|                          | 5/22/19  | 9:00 An              | PARTLY SUNNY | 6.80     | 65.6            | 66  | 2.30 |                                 | 1,15+               |  |
| Photograph<br>Checklist: | Downstream from discharge structure (at the end of the concrete chute)  Downstream discharge pipe (within discharge structure)  Upstream discharge pipe (within discharge structure) |                      |              |          |                 | ☐ Upstream from discharge structure (prior to concrete chute)☐ Permanent staff gauge☐ Grab sample |      |                                 |                     |  |
| Visual<br>Observations:  |  | JR.                  |              |          |                 |   |      |                                 |                     |  |

| SAMPLE:<br>T = hrs       | Date:      | Time:           | Weather:   |       |  | The state of the s | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |
|--------------------------|------------|-----------------|--|-------|--|--|------------------------------|------------------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of pe (within discharge structure) | ture) |  | Upstream from discha<br>Permanent staff gauge<br>Grab sample   |                              | concrete chute)        |
| Visual<br>Observations:  |            |                 |  |       |  | orac sample  |                              |                        |

| SAMPLE: T =hrs           | Date:      | Time:           | Weather:  | pH: (SU) | Tem<br>(Deg | 7 <b>5</b> 15 | Staff Reading:<br>(ft) |   |                 |
|--------------------------|------------|-----------------|---|----------|-------------|---------------|------------------------|---|-----------------|
| Photograph<br>Checklist: | □ Downstre | am discharge pi | rge structure (at the end of<br>ipe (within discharge struct<br>(within discharge structure | ture)    |             | □ Pern        | nanent staff gauge     | - | concrete chute) |
| Visual<br>Observations:  |            |                 |   |          |             |               | - Sample               |   |                 |

DAY 23

#### FIELD OBSERVATION FORM

| SAMPLE:<br>T = hrs       | Date:        | Time:        | Weather:  | pH: (SU)       | Temp:<br>(Deg F) | Turbidity:<br>(NTU)                                 | Discharge<br>Velocity: (fps) | Staff Reading: (ft) |
|--------------------------|--------------|--------------|---|----------------|------------------|---|------------------------------|---------------------|
|                          | 5/23/19      | 1111pm       | cloudy  | 6,79           | 74.66            |   |                              | 14+                 |
| Photograph<br>Checklist: | □ Downstream | from dischar | ge structure (at the end of the core (within discharge structure) within discharge structure) | oncrete chute) | □ Pen            | tream from discha<br>manent staff gauge<br>b sample | rge structure (prior to      | concrete chute)     |
| Visual<br>Observations:  |              |              |   |                |                  |   |                              |                     |
|                          |              |              |   | TI (CID        | T                | Turbidity:  | Discharge                    | Staff Reading       |
| SAMPLE: $T = hrs$        | Date:        | Time:        | Weather:  | pH: (SU)       | Temp:<br>(Deg F) | (NTU)   | Velocity: (fps)              | (ft)                |
|                          |              |              |   |                |                  |   |                              |                     |

| SAMPLE:<br>T = _ hrs     | Date:  | Time: | Weather: | pH: (SU) | Temp:<br>(Deg F) |   | Turbidity:<br>(NTU) | Discharge<br>Velocity: (fps) | Staff Reading:<br>(ft) |  |
|--------------------------|--|-------|----------|----------|------------------|---|---------------------|------------------------------|------------------------|--|
| Photograph<br>Checklist: | □ Downstream from discharge structure (at the end of the concrete chute) □ Downstream discharge pipe (within discharge structure) □ Upstream discharge pipe (within discharge structure) |       |          |          |                  | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |                     |                              |                        |  |
| Visual<br>Observations:  |  |       |          |          |                  |   |                     |                              |                        |  |

| SAMPLE:<br>T = _ hrs     | Date:  | Time: | Weather: | pH: (SU) | U) Temp:<br>(Deg F)   |  | Turbidity:<br>(NTU) |  | Staff Reading:<br>(ft) |
|--------------------------|--|-------|----------|----------|---|--|---------------------|--|------------------------|
| Photograph<br>Checklist: | □ Downstream from discharge structure (at the end of the concrete chute) □ Downstream discharge pipe (within discharge structure) □ Upstream discharge pipe (within discharge structure) |       |          |          | ☐ Upstream from discharge structure (prior to concrete chute) ☐ Permanent staff gauge ☐ Grab sample |  |                     |  |                        |
| Visual<br>Observations:  |  |       |          |          |   |  |                     |  |                        |

# ATTACHMENT 3 Observation Photographs



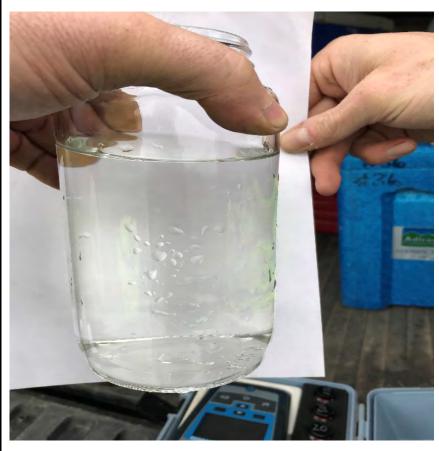


Photo 1 - Staff Reading on Day 1 (5/1/2019)

Photo 2 - Discharge on Day 1 (5/1/2019)

Page

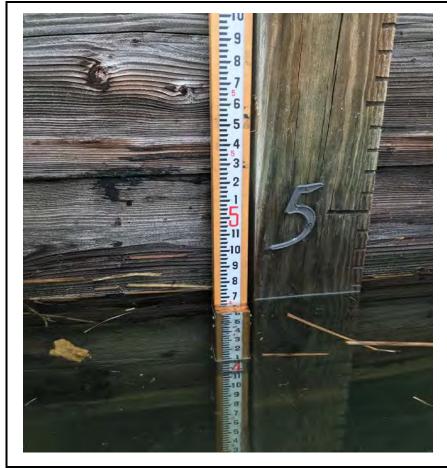




Photo 3 - Staff Reading on Day 2 (5/2/2019)

Photo 4 - Discharge on Day 2 (5/2/2019)

Page



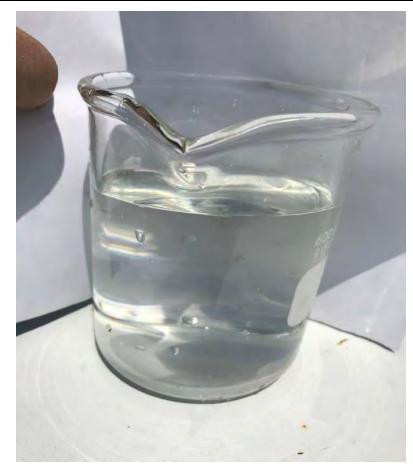


Photo 5 - Staff Reading on Day 3 (5/3/2019)

Photo 6 - Discharge on Day 3 (5/3/2019)

Page





Photo 7 - Staff Reading on Day 4 (5/1/2019)

Photo 8- Discharge on Day 4 (5/4/2019)

Page

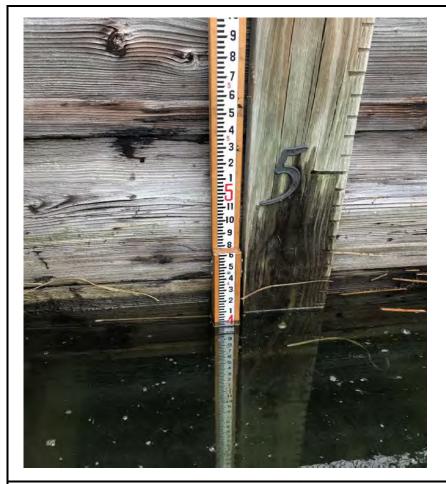




Photo 9 - Staff Reading on Day 5 (5/5/2019)

Photo 10 - Discharge on Day 5 (5/5/2019)

Page





Photo 11 - Staff Reading on Day 6 (5/6/2019)

Photo 12 - Discharge on Day 6 (5/6/2019)

Page





Photo 13 - Staff Reading on Day 7 (5/7/2019)

Photo 14 - Discharge on Day 7 (5/7/2019)

Page



600 mL

Photo 15- Staff Reading on Day 8 (5/8/2019)

Photo 16 - Discharge on Day 8 (5/8/2019)

Page





Photo 17 - Staff Reading on Day 9 (5/9/2019)

Photo 18 - Discharge on Day 9 (5/9/2019)

Page





Photo 19 - Staff Reading on Day 10 (5/10/2019)

Photo 20 Discharge on Day 10 (5/10/2019)

Page





Photo 21 - Staff Reading on Day 11 (5/11/2019)

Photo 22 - Discharge on Day 11 (5/11/2019)

Page





Photo 23 - Staff Reading on Day 12 (5/12/2019)

Photo 24- Discharge on Day 12 (5/12/2019)

Page



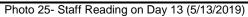




Photo 26- Discharge on Day 13 (5/13/2019)

Page

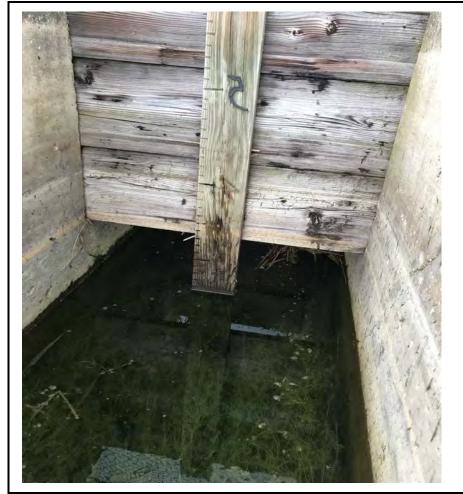




Photo 27 - Staff Reading on Day 14 (5/14/2019)

Photo 28 - Discharge on Day 14 (5/14/2019)

Page



300

Photo 29 - Staff Reading on Day 15 (5/15/2019)

Photo 30- Discharge on Day 15 (5/15/2019)

Page



Photo 31 - Staff Reading on Day 16 (5/16/2019)

Photo 32 - Discharge on Day 16 (5/16/2019)

Page





Photo 33 - Staff Reading on Day 17 (5/17/2019)

Photo 34 - Discharge on Day 17 (5/17/2019)

Page





Photo 35 - Staff Reading on Day 18 (5/18/2019)

Photo 36 - Discharge on Day 18 (5/18/2019)

Page





Photo 37 - Staff Reading on Day 19 (5/19/2019)

Photo 38 - Discharge on Day 1 9 (5/19/2019)

Page





Photo 39 - Staff Reading on Day 20 (5/20/2019)

Photo 40 - Discharge on Day 20 (5/20/2019)

Page

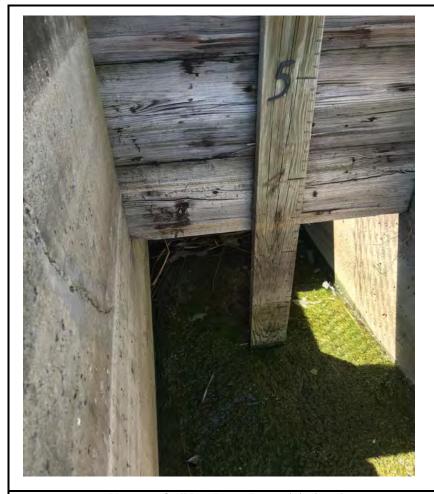


Photo 41 - Staff Reading on Day 21 (5/21/2019)

Photo 42 - Discharge on Day 21 (5/21/2019)

Page

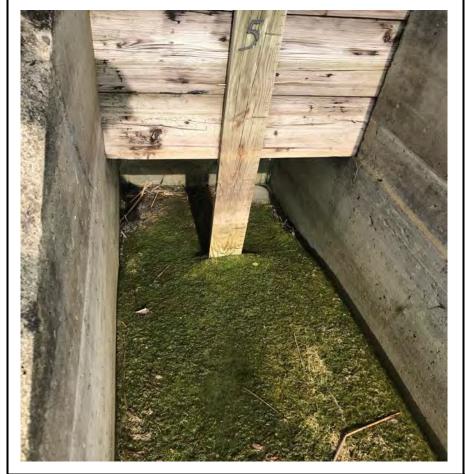


Photo 43 - Staff Reading on Day 22 (5/22/2019)

Photo 44 - Discharge on Day 22 (5/22/2019)

Page



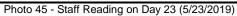
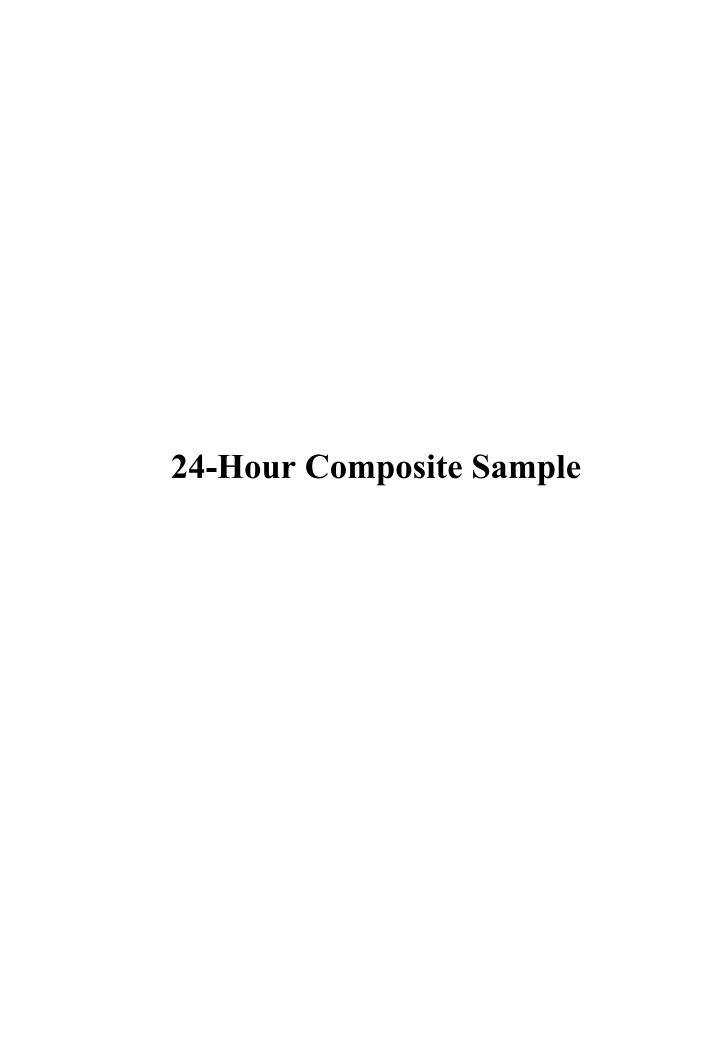




Photo 46- Discharge on Day 23 (5/23/2019)

Page

# ATTACHMENT 4 Laboratory Reports





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

Work Order No: 190502056

ELAP#: 10709

May 09, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

Outfall 001

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 2 samples on 5/2/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Tara Daniels

**Laboratory Director** 

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 09-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190502056

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

### **Definitions - RL: Reporting Limit DF: Dilution factor**

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

CLIENT: Lockwood Hills LLC LabWork Order: 190502056

**Date:** 09-May-19

Project: Lockwood Pond Discharge PO#:

Outfall 001

**Lab SampleID:** 190502056-001 **Collection Date:** 5/2/2019

Client Sample ID: Outfall 001 Matrix: GROUNDWATER

| Client Sample ID: Outfall 001                        |          |       | Matrix: GROUNDWATER |    |                     |  |  |  |  |
|--|----------|-------|---------------------|----|---------------------|--|--|--|--|
| Analyses   | Result   | RL Qu | al Units            | DF | Date Analyzed       |  |  |  |  |
| CP METALS - EPA 200.7 REV 4.4                        |          |       |                     |    | Analyst: <b>SM</b>  |  |  |  |  |
| ( Prep: - 5/3  | 3/2019 ) |       |                     |    |                     |  |  |  |  |
| Aluminum   | ND       | 0.100 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Arsenic  | ND       | 0.005 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Boron  | 14.7     | 0.050 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Cadmium  | ND       | 0.005 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Copper   | ND       | 0.005 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Iron   | 0.109    | 0.050 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Manganese  | ND       | 0.020 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Selenium   | 0.015    | 0.005 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| Zinc   | ND       | 0.010 | mg/L                | 1  | 5/8/2019 7:10:56 PM |  |  |  |  |
| OTAL SUSPENDED SOLIDS - SM<br>( Prep: Gen Prep - 5/6 |          |       |                     |    | Analyst: <b>JW</b>  |  |  |  |  |
| TSS (Residue, Non-Filterable)                        | ND       | 1.0   | mg/L                | 1  | 5/6/2019            |  |  |  |  |

**Lab SampleID:** 190502056-002 **Collection Date:** 5/2/2019

Client Sample ID: Outfall 001 Matrix: GROUNDWATER

Analyses Result RL Qual Units DF Date Analyzed

|                  | . AND TEMP ARE NOT ELAP CERTIFIABLE   |  |
|------------------|---------------------------------------|--|
| FIELD-POLKED GLZ | . AND I FIND ARE NOT FLAP CERTIFIANTE |  |

pH (E150.1) **8.2** S.U. 5/2/2019 Temperature (E170.1) **13** deg C 5/2/2019

LOW LEVEL MERCURY - EPA 1631E Analyst: WB

( Prep: 1631E - 5/2/2019 )

Mercury **0.5** 0.5 ng/L 1 5/3/2019

Analyst: FLD



314 North Pearl Street Albany, New York 12207

518-434-4546 Fax: 518-434-0891

# CHAIN OF CUSTODY RECORD

AES Work Order#:

190502056

### EXPERIENCE IS THE SOLUTION

|  | A full service analytical research laboratory offering solutions to environmental concerns |             |              |  |                           |          |                          |             |            |                            |
|--|--|-------------|--------------|--|---------------------------|----------|--------------------------|-------------|------------|----------------------------|
| Client Nar   |  | Address:    |              |  |                           |          |                          |             |            |                            |
| Lockw  | ood Hills LLC  |             |              |  |                           |          |                          |             |            |                            |
| Send Repo  | ort to:  | Project Nam | e (Location  | ı):  |                           | Samplers | rs Name:                 |             |            |                            |
| Dale In  |  |             |              |  |                           | j        | V/I                      | A           |            |                            |
| Client Pho   |  | Lockwood    | d Pond 00    | )1 D   | ischarge                  |          |                          | 4           | - Hm       | V5.4                       |
|  |  | PO #:       |              |  |                           |          |                          | Samplers    | Signature: |                            |
| Client Fax   | r No:  |             |              |  |                           |          |                          |             |            |                            |
| AES  |  | Date        | Time         | 1  | Sample                    | e Type   | .                        | # of        |            | Amalyzaia                  |
| Sample   | Client Sample ID:  | Sampled     | A≔am<br>P≔pm |  | Matrix                    | C        | $\underline{\mathbf{G}}$ | Cont's      |            | Analysis                   |
| ID   | Outfall 001  |             | 1            | Α  |                           |          |                          |             | TSS. T     | Total Metals (Al, As, B,   |
|  | Outian ooi   | 5/1-2/19    | 0928         | Р  | $\mathbf{G}\mathbf{W}$    | C        |                          | 2           | 1          | Cu, Fe, Mn, Se, Zn)        |
| 00   |  |             |              | <u> </u>   |                           |          |                          |             | Cu,        | Cu, 10, 1111, 50, 211)     |
|  |  |             |              | A<br>P   |                           |          |                          |             |            |                            |
| $\nabla \mathcal{I}$                                     | Outfall 001  | -lala       | 10.10        | A  | GW                        |          | G                        | 1           |            | LL Hg                      |
| ンス   | Outian ooi   | 5/2/19      | 1010         | P  | 011                       |          |                          |             |            |                            |
|  |  |             |              | A  |                           |          |                          |             |            | Field pH, Temp             |
|  |  |             |              | P  |                           | <b> </b> |                          |             |            |                            |
|  |  |             |              | P  |                           |          |                          |             |            |                            |
|  |  |             |              | A  |                           |          |                          |             |            |                            |
|  |  |             |              | P  |                           |          |                          |             |            |                            |
|  |  |             |              | A<br>P   |                           |          |                          |             |            |                            |
|  |  |             |              | A  |                           | †        |                          |             |            |                            |
|  |  |             |              | P  |                           | <u> </u> |                          |             |            |                            |
|  |  |             |              | A  |                           |          |                          |             |            |                            |
|  |  |             |              | P  |                           | $\vdash$ |                          |             |            |                            |
|  |  |             |              | P  | -                         |          |                          |             |            |                            |
|  |  |             |              | A  |                           |          |                          |             |            |                            |
|  |  |             |              | P  |                           |          | ļ                        | ļ           |            |                            |
|  |  |             |              | A<br>P   | 1                         |          |                          |             |            |                            |
| Chinman  | t Arrived Via:   |             | J            |  | ecial Instru              | ctions   | /Rem                     | arks:       | 1          |                            |
|  | A 3  | ,1          |              |  |                           |          |                          |             |            |                            |
| FedEx  | UPS Client AES O   | ther:       |              | Outfall 001 pH 82 s.u. Temp 13 C   |                           |          |                          |             |            |                            |
| Turnar   | ound Time Requested:   |             |              | 1  |                           |          |                          |             |            |                            |
| ( Nort   |  |             |              |  |                           |          |                          |             |            |                            |
| 0 1,011  |  |             |              |  |                           |          |                          |             |            |                            |
| Relinqui   | shed by: (Signature)   | Receive     | d by (Sign:  | ature)   |                           | è        |                          |             | Date       | Time                       |
| //   |  | -           | /\/ _        | and the same of th | 651                       | _        |                          |             | 5/2/19     | 1432                       |
| Relingui   | Refinquished by (Signature) Received by: (Signature)                                       |             |              |  |                           |          |                          | Date        | Time       |                            |
| remiquisited by (signature)                              |  |             |              |  | per                       |          |                          |             |            |                            |
| Relinguished by: (Signature) Received for Laboratory by: |  |             |              |  |                           |          |                          |             | Date       | Time                       |
| Relinquished by: (Signature) Received for Labora         |  |             |              |  | у <sub>.</sub> пу.<br>1—2 |          |                          |             | d/ 3/14    | 2.51Pn                     |
| · myself   |  |             | 4            | 10   |                           |          |                          | · · · · · · | 1011       | eived Within Holding Times |
| 2 <sub>mand</sub> dist                                   | Sample Temperature   | 0           | · ]          | Propo  | erly Preser               | ved      |                          |             | Rec        | eivea Within Holding Times |
|  | Ambient Chilled Chilling Process begun   |             |              |  | $_{\rm N}$                |          |                          |             |            | YN                         |
|  | 4. 7.  |             |              | <u></u>  | E-Care                    |          |                          |             | 37.        |                            |
| No   | otes:  | Note        | s:           |  |                           |          |                          |             | Notes:     |                            |
|  |  |             |              |  |                           |          |                          |             |            |                            |





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

Work Order No: 190517074

ELAP#: 10709

May 29, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 2 samples on 5/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 29-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190517074

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

### Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank
S: LCS Spike recovery is below acceptable limits
X: Exceeds maximum contamination limit
S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

( Prep: 1631E - 5/20/2019

Mercury

)

0.6

CLIENT: Lockwood Hills LLC LabWork Order: 190517074

**Date:** 29-May-19

Project: Lockwood Pond Discharge
PO#:

| Lab SampleID:        | 190517074-001                         |             |           | Collection | <b>Date:</b> 5/16/20 | 019                  |
|----------------------|---------------------------------------|-------------|-----------|------------|----------------------|----------------------|
| Client Sample ID:    | Outfall 001                           |             |           | N          | <b>Iatrix:</b> WAST  | EWATER               |
| Analyses             |                                       | Result      | RL        | Qual Units | DF                   | Date Analyzed        |
| ICP METALS - EPA 2   | 200.7 REV 4.4                         |             |           |            |                      | Analyst: SN          |
|                      | ( Prep: - 5/20/20                     | 019 )       |           |            |                      |                      |
| Aluminum             |                                       | ND          | 0.100     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Arsenic              |                                       | ND          | 0.005     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Boron                |                                       | 14.0        | 0.050     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Cadmium              |                                       | ND          | 0.005     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Copper               |                                       | ND          | 0.005     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Iron                 |                                       | 0.135       | 0.050     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Manganese            |                                       | 0.021       | 0.020     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Selenium             |                                       | 0.010       | 0.005     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| Zinc                 |                                       | ND          | 0.010     | mg/L       | 1                    | 5/28/2019 3:20:04 PM |
| TOTAL SUSPENDED      | SOLIDS - SM 254<br>Gen Prep - 5/22/20 |             |           |            |                      | Analyst: <b>JV</b>   |
| TSS (Residue, Non-Fi | •                                     | )19 )<br>ND | 1.3       | mg/L       | 1                    | 5/22/2019            |
| Lab SampleID:        | 190517074-002                         |             |           | Collection | <b>Date:</b> 5/16/20 | 019                  |
| -                    | Outfall 001                           |             |           | N          | <b>Iatrix:</b> WAST  | EWATER               |
| Analyses             |                                       | Result      | RL        | Qual Units | DF                   | Date Analyzed        |
| FIELD-PH, RES CL2,   | AND TEMP ARE N                        | IOT ELAP CE | RTIFIABLE | Ē          |                      | Analyst: <b>FL</b>   |
| ~II (E450.4)         |                                       | 8.3         |           | S.U.       |                      | 5/16/2019            |
| pH (E150.1)          |                                       |             |           |            |                      |                      |
| Temperature (E170.1  | )                                     | 22          |           | deg C      |                      | 5/16/2019            |

0.5 N

ng/L

5/21/2019



314 North Pearl Street Albany, New York 12207 518-434-4546 \* Fax: 518-434-0891

### CHAIN OF CUSTODY RECORD

AES Work Order#:

190517074

### EXPERIENCE IS THE SOLUTION

|                       | A full service analytical research laboratory offering solutions to environmental concerns  |                      |                      |                       |  |          |  |                               |  |  |  |
|-----------------------|---|----------------------|----------------------|-----------------------|--|----------|--|-------------------------------|--|--|--|
| Client Name: Address: |   |                      |                      |                       |  |          |  |                               |  |  |  |
| 1 ock                 | word Atta (CC   |                      |                      |                       |  |          |  |                               |  |  |  |
| Send Rep              |   | Project Nam          | e (Location)         | : ^                   |  | Samplers | Name:  |                               |  |  |  |
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|                       |   | PO #:                |                      |                       |  | 0        | Samplers   | Signature:                    |  |  |  |
| Client Fax            | x No:   |                      | 72                   |                       |  |          |  |                               |  |  |  |
| AES<br>Sample<br>ID   | Client Sample ID:   | Date<br>Sampled      | Time<br>A=am<br>P=pm | Sample Typ            |  | <u>G</u> | # of<br>Cont's   | Analysis                      |  |  |  |
| 001                   | Osple OOI   | 5/15-1419            | 1910                 | A P WW                | X  |          | 7  | TOP Metals (Al, CQ, C,        |  |  |  |
|                       | /   |                      |                      | A P                   |  |          | :  | Fe, Za, Mr, Hs, Se, B         |  |  |  |
|                       |   |                      |                      | P                     |  |          |  | ,                             |  |  |  |
|                       |   |                      |                      | A<br>P                |  |          |  | TSS                           |  |  |  |
|                       |   |                      |                      | A<br>P                |  |          |  |                               |  |  |  |
| 001                   | , and the same of |                      | 1420                 | A   .                 |  | X        | 3  | Llfa                          |  |  |  |
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|                       |   |                      |                      | P A                   |  |          |  | Frelix Prameter (pH, Temp)    |  |  |  |
|                       |   |                      |                      | P                     |  |          |  |                               |  |  |  |
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| 1                     | 15 1/1/19 1148 Am   |                      |                      |                       |  |          |  |                               |  |  |  |
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| Relinquis             | shed by: (Signature)  | Received             | l for Labora         | tory by:              |  |          |  | Date Time                     |  |  |  |
|                       | 71 X - G - 111117   |                      | 1                    | 2                     |  |          | 51,  | 12/19 4522P2                  |  |  |  |
|                       | Sample Temperature  |                      | PF                   | operly Prese          | rved   |          |  | Received Within Holding Times |  |  |  |
|                       | Ambient Chilled Chilling Process begun  |                      | /                    | YN                    |  |          | VALUE OF THE PARTY | (Y) N                         |  |  |  |
|                       |   |                      | (_                   |                       |  |          | -  |                               |  |  |  |
| No                    | res: 6°C  | Notes                | :                    |                       |  |          |  | Notes:                        |  |  |  |
| _                     |   |                      |                      |                       |  |          |  |                               |  |  |  |



# End of Event Grab Sample (full suite of SPDES permitted parameters)



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

Work Order No: 190522007

ELAP#: 10709

May 30, 2019

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

TEL: (315) 536-2359

RE: Lockwood End Of Discharge Pond

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 1 sample on 5/21/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 30-May-19

**Project:** Lockwood End Of Discharge Pond

**Lab Order:** 190522007

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

### Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

TSS (Residue, Non-Filterable)

CLIENT: Lockwood Hills LLC LabWork Order: 190522007

**Date:** 30-May-19

Project: Lockwood End Of Discharge Pond
PO#:

Lab SampleID: 190522007-001 Collection Date: 5/20/2019 **Matrix:** WASTEWATER Client Sample ID: Outfall 001 Result **RL Qual Units** DF Analyses **Date Analyzed** FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD pH (E150.1) S.U. 5/20/2019 8.1 Temperature (E170.1) deg C 5/20/2019 24 **LOW LEVEL MERCURY - EPA 1631E** Analyst: WB ( Prep: 1631E - 5/23/2019 ) Mercury 0.6 0.5 ng/L 1 5/24/2019 ICP METALS - EPA 200.7 REV 4.4 Analyst: SM ( Prep: - 5/22/2019 ) Aluminum ND 0.100 mg/L 1 5/29/2019 4:38:16 PM Arsenic ND 0.005 mg/L 1 5/29/2019 4:38:16 PM Boron 15.1 0.050 mg/L 1 5/29/2019 4:38:16 PM Cadmium ND 0.005 5/29/2019 4:38:16 PM mg/L 1 5/29/2019 4:38:16 PM Copper 0.010 0.005 mg/L 1 Iron 0.130 0.050 mg/L 1 5/29/2019 4:38:16 PM 0.020 5/29/2019 4:38:16 PM Manganese ND mg/L 1 Selenium 0.011 0.005 mg/L 1 5/29/2019 4:38:16 PM Zinc 0.010 5/29/2019 4:38:16 PM ND mg/L 1 **TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/23/2019 )

2.0

mg/L

2.0

5/23/2019



314 North Pearl Street Albany, New York 12207 518-434-4546 \* Fax: 518-434-0891 CHAIN OF CUSTODY RECORD

AES Work Order#:

[9052200]

vertox.

EXPERIENCE IS THE SOLUTION

|               | A full service analytic  | al researc   | h labora                       | itor            | y onem       | ng s    | oru                             | nons to        | environmental concerns   |  |
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| SendRepo      | ort to:  | Project Nam  | e (Location                    | ): [            | Lockwi       | od,     | Samplers 1                      | Name:          |  |  |
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| Relinquis     | hed by: (Signature)  | Receive  | d for Labor                    | rator           | y by:        |         |                                 |                | Date Time  |  |
| TIN           |  | 4  | 0                              | 2               |              | Nane,   |                                 |                | 12/1/9 5:13/2  |  |
|               | Sample Temperature Ambient Chilled   | 0  | P                              | 'горе           | rly Preserv  | ved     |                                 |                | Received Within Holding Times  |  |
|               | Chilling Process begun   |  |                                |                 | Y) N         |         |                                 |                | И  |  |
| No            | tes: 4°C   | Note:  | S:                             |                 |              |         |                                 |                | Notes:   |  |
| _             |  |  |                                |                 |              |         |                                 |                |  |  |
|               |  |  |                                |                 |              |         |                                 |                |  |  |



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

Work Order No: 190523071

ELAP#: 10709

May 29, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond 001 End Of Discharge-2

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 1 sample on 5/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 29-May-19

**Project:** Lockwood Pond 001 End Of Discharge-2

**Lab Order:** 190523071

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

### Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

TSS (Residue, Non-Filterable)

CLIENT: Lockwood Hills LLC LabWork Order: 190523071

**Date:** 29-May-19

Project: Lockwood Pond 001 End Of Discharge-2
PO#:

Lab SampleID: 190523071-001 Collection Date: 5/23/2019 **Matrix:** WASTEWATER Client Sample ID: Outfall 001 Result **RL Qual Units** DF Analyses **Date Analyzed** FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE Analyst: FLD pH (E150.1) S.U. 5/23/2019 7.9 Temperature (E170.1) deg C 5/23/2019 20 **LOW LEVEL MERCURY - EPA 1631E** Analyst: WB ( Prep: 1631E - 5/24/2019 ) Mercury 0.5 0.5 ng/L 1 5/28/2019 ICP METALS - EPA 200.7 REV 4.4 Analyst: KH ( Prep: - 5/24/2019 ) Aluminum ND 0.100 mg/L 1 5/29/2019 3:05:00 PM Arsenic 0.007 0.005 mg/L 1 5/29/2019 3:05:00 PM Boron 5/29/2019 3:05:00 PM 18.4 0.050 mg/L 1 Cadmium ND 0.005 5/29/2019 3:05:00 PM mg/L 1 5/29/2019 3:05:00 PM Copper ND 0.005 mg/L 1 Iron 1.02 0.050 mg/L 1 5/29/2019 3:05:00 PM 0.020 5/29/2019 3:05:00 PM Manganese 0.061 mg/L 1 Selenium ND 0.005 mg/L 1 5/29/2019 3:05:00 PM Zinc 0.010 5/29/2019 3:05:00 PM ND mg/L 1 **TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/28/2019 )

1.3

mg/L

7.6

5/28/2019



314 North Pearl Street Albany, New York 12207

518-434-4546 Fax: 518-434-0891

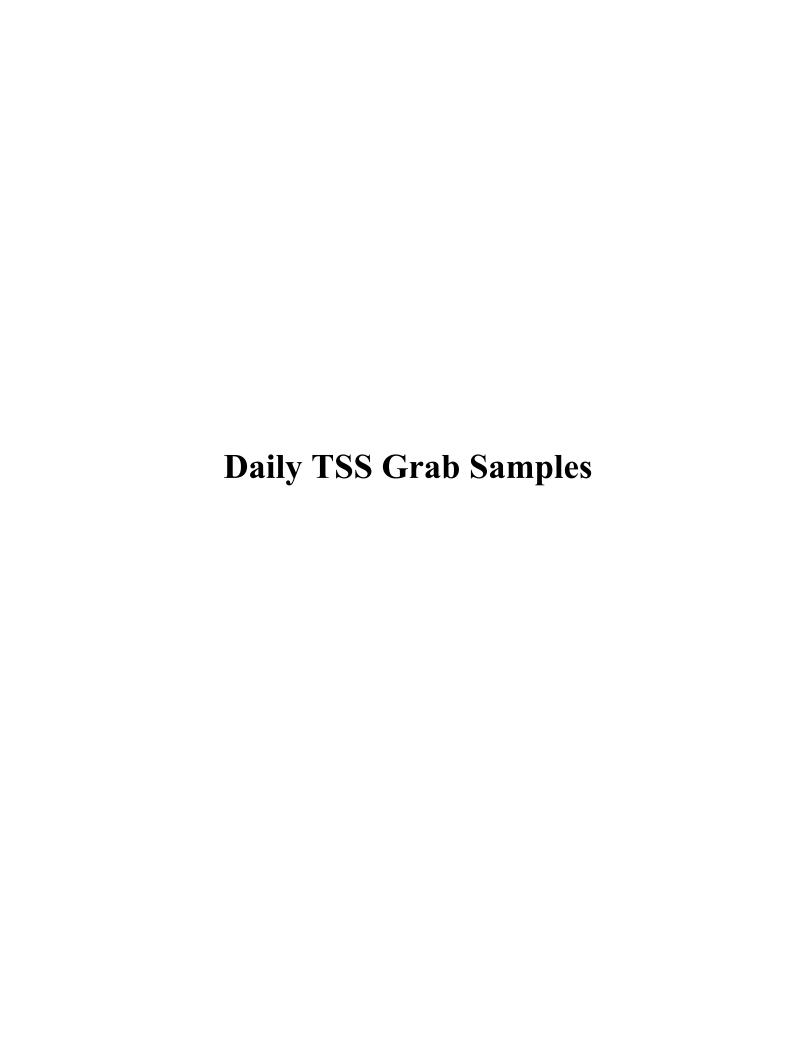
### CHAIN OF CUSTODY RECORD

AES Work Order#:

19052307

### EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns Address: Client Name: Project Name (Location): Lockwood Rond OO! Samplers Name; Client Phone No: Samplers Signati Client Fax No: Time **AES** # of Date Sample Type Client Sample ID: A=am Analysis Sample Sampled Cont's P=pm Matrix C G ID WW A Р Α Р Α P A P Α Р Α Р Α P A Р Α P Α Р Α Special Instructions/Remarks: Shipment Arrived Via: Janp= 20.0°C Client (AES FedEx UPS Other: Turnaround Time Requested: **Normal** ☐ 3 Day ☐ 1 Day ☐ 5 Day ☐ 2 Day Received by (Signature) Date Relinquished by Signature) Date Received by: (Signature) Relinguished by: (Signature) Time Date Received for Laboratory by: Relinquished by: (Signature) Received Within Holding Times Sample Temperature Ambient Chilled Properly Preserved Chilling Process begun Notes: Notes:





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

Work Order No: 190502054

ELAP#: 10709

May 09, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 1 sample on 5/2/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Tara Daniels

**Laboratory Director** 

Tax Donal

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 09-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190502054

Sample containers were supplied by Adirondack Environmental Services.

### Definitions - RL: Reporting Limit DF: Dilution factor

Oualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

Adirondack Environmental Services, Inc

Date: 09-May-19

CLIENT: Lockwood Hills LLC LabWork Order: 190502054

Project: Lockwood Pond Discharge
PO#:

TSS Study

**Lab SampleID:** 190502054-001 **Collection Date:** 5/1/2019

)

Client Sample ID: Lockwood 1 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/6/2019

TSS (Residue, Non-Filterable) **ND** 1.0 mg/L 1 5/6/2019

Analyst: JW



314 North Pearl Street Albany, New York 12207

518-434-4546 Fax: 518-434-0891

### CHAIN OF CUSTODY RECORD

AES Work Order#:

190502054

### EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns Client Name: Address: Cochwood Send Report to: Project Name (Location): Samplers Name: Greenidge Soft Lockwood TSS Study Client Phone No: Samplers Signature Client Fax No: Time AES Date # of Sample Type Sample Client Sample ID: A≔am Analysis Sampled Cont's Matrix C G P=pm JD Α P Α Α P Α P Α Р Α P A Р Α P Α Α P Shipment Arrived Via: Special Instructions/Remarks: FedEx UPS Client (AES) Other: Turnaround Time Requested: ☐ 3 Day Normal ☐ 1 Day ☐ 2 Day ☐ 5 Day Relinquished by: (Signature) Received by: (Signature) Relinquished by: (Signature Received by: (Signature) Relinquished by: (Signature) Received for Laboratory by: Sample Temperature Properly Preserved Ambient (hilled Chilling Process begun



Work Order No: 190506043

ELAP#: 10709

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

May 13, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 2 samples on 5/6/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Tara Daniels

**Laboratory Director** 

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 13-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190506043

Sample containers were supplied by Adirondack Environmental Services.

### **Definitions - RL: Reporting Limit DF: Dilution factor**

Oualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

CLIENT: Lockwood Hills LLC LabWork Order: 190506043

**Date:** 13-May-19

Analyst: JW

Analyst: JW

Project: Lockwood Pond Discharge
PO#:

TSS Study

**Lab SampleID:** 190506043-001 **Collection Date:** 5/2/2019

Client Sample ID: Lockwood 2 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011 ( Prep: Gen Prep - 5/8/2019 )

TSS (Residue, Non-Filterable) **1.0** 1.0 mg/L 1 5/8/2019

**Lab SampleID:** 190506043-002 **Collection Date:** 5/3/2019

Client Sample ID: Lockwood 3 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/9/2019 )

TSS (Residue, Non-Filterable) **2.3** 1.0 mg/L 1 5/9/2019



314 North Pearl Street Albany, New York 12207

518-434-4546 Fax: 518-434-0891

### CHAIN OF CUSTODY RECORD

AES Work Order#:

190506043

### EXPERIENCE IS THE SOLUTION

|   | A full service analytic | cal researc  | h laborator  | y offeri   | ng sc       | luti                     | ions to   | environmental concerns        |  |  |
|---|-------------------------|--|--|--|-------------|--------------------------|---|-------------------------------|--|--|
| Client Na   | nt Name: Address:       |  |  |  |             |                          |   |                               |  |  |
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| Send Rep  | ort to:                 | Project Nam  | ne (Location):   |  |             | Samplers 1               | Name: AA  |                               |  |  |
| Dale  |                         | 1, 1   | DO 0-  | 126 01   | n           | · /                      | C C M   |                               |  |  |
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314 North Pearl Street ♦ Albany, New York 12207 (800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

Work Order No: 190510002

ELAP#: 10709

May 16, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

**TSS** 

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 5 samples on 5/9/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Tara Daniels

**Laboratory Director** 

Jana Doniel

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 16-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190510002

Sample containers were supplied by Adirondack Environmental Services.

### **Definitions - RL: Reporting Limit DF: Dilution factor**

Oualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

( Prep: Gen Prep - 5/14/2019

TSS (Residue, Non-Filterable)

)

ND

1.3

mg/L

Date: 16-May-19 **CLIENT:** Lockwood Hills LLC LabWork Order: 190510002 Lockwood Pond Discharge Project: PO#: **TSS** Lab SampleID: 190510002-001 Collection Date: 5/4/2019 Client Sample ID: Lockwood 4 Matrix: WASTEWATER **RL Qual Units** Analyses Result DF **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/10/2019 TSS (Residue, Non-Filterable) 1.9 1.0 mg/L 5/10/2019 Lab SampleID: 190510002-002 Collection Date: 5/5/2019 Matrix: WASTEWATER Client Sample ID: Lockwood 5 Result **RL Qual Units** DF **Analyses Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/10/2019 ) TSS (Residue, Non-Filterable) 1.7 1.0 mg/L 5/10/2019 Lab SampleID: 190510002-003 Collection Date: 5/6/2019 Matrix: WASTEWATER Client Sample ID: Lockwood 6 **RL Qual Units** Result DF Analyses **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/10/2019 ) TSS (Residue, Non-Filterable) 2.0 mg/L 5/10/2019 1.0 Collection Date: 5/7/2019 Lab SampleID: 190510002-004 Client Sample ID: Lockwood 7 Matrix: WASTEWATER Analyses Result **RL Qual Units** DF **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/10/2019 ) TSS (Residue, Non-Filterable) 2.9 1.0 mg/L 5/10/2019 Collection Date: 5/9/2019 5/8/2019 190510002-005 Lab SampleID: Client Sample ID: Lockwood 8 Matrix: WASTEWATER Result **RL Qual Units** DF Analyses **Date Analyzed** TOTAL SUSPENDED SOLIDS - SM 2540D-2011 Analyst: JW

5/14/2019



314 North Pearl Street Albany, New York 12207 518-434-4546 Fax: 518-434-0891 CHAIN OF CUSTODY RECORD

AES Work Order#:
1905/0002

EXPERIENCE IS THE SOLUTION

| A full service analytica           | al researc                     | h laboratoi  | y offeri             | ng solu  | tions to e   | nvironmental concerns  |
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314 North Pearl Street ♦ Albany, New York 12207 (800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

Work Order No: 190515027

ELAP#: 10709

May 20, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 5 samples on 5/15/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

### **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 20-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190515027

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

### Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

**CLIENT:** Lockwood Hills LLC LabWork Order: 190515027 **Project:** Lockwood Pond Discharge PO#: TSS Study Lab SampleID: 190515027-001 Collection Date: 5/9/2019 Client Sample ID: Lockwood 9 **Matrix:** WASTEWATER Result **RL Qual Units Analyses** DF **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/16/2019 ) TSS (Residue, Non-Filterable) 1.3 5/16/2019 3.5 mg/L Lab SampleID: Collection Date: 5/10/2019 190515027-002 **Matrix:** WASTEWATER Client Sample ID: Lockwood 10 Result **RL Qual Units** DF **Analyses Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/16/2019 ) TSS (Residue, Non-Filterable) 2.3 1.3 mg/L 5/16/2019 Lab SampleID: 190515027-003 Collection Date: 5/11/2019 Client Sample ID: Lockwood 11 **Matrix:** WASTEWATER **Analyses** Result **RL Qual Units** DF **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/16/2019 ) TSS (Residue, Non-Filterable) 2.0 5/16/2019 2.0 mg/L 1 Lab SampleID: 190515027-004 Collection Date: 5/12/2019 Client Sample ID: Lockwood 12 **Matrix:** WASTEWATER **RL Qual Units Analyses** Result DF **Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/16/2019 ) TSS (Residue, Non-Filterable) 2.4 2.0 5/16/2019 mg/L 190515027-005 Lab SampleID: Collection Date: 5/13/2019 Client Sample ID: Lockwood 13 **Matrix:** WASTEWATER Result **RL Qual Units** DF **Analyses Date Analyzed TOTAL SUSPENDED SOLIDS - SM 2540D-2011** Analyst: JW ( Prep: Gen Prep - 5/16/2019 ) 5/16/2019 TSS (Residue, Non-Filterable) 3.5 1.8 mg/L

**Date:** 20-May-19

| Adirondack  |   |                | *************************************** | CHAIN OF CL STODY RECORD |  |  |
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## **Experience** is the solution

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

Work Order No: 190517073

ELAP#: 10709

May 24, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 3 samples on 5/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

## **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 24-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190517073

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

#### Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits F: Above quantitation range-Estimated

N+: Matrix Spike is above acceptable limits E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

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

CLIENT: Lockwood Hills LLC LabWork Order: 190517073

**Date:** 24-May-19

Analyst: JW

Analyst: JW

Analyst: JW

Project: Lockwood Pond Discharge PO#:

TSS Study

**Lab SampleID:** 190517073-001 **Collection Date:** 5/14/2019

Client Sample ID: Lockwood 14 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/20/2019

TSS (Residue, Non-Filterable) **ND** 1.0 mg/L 1 5/20/2019

**Lab SampleID:** 190517073-002 **Collection Date:** 5/15/2019

)

Client Sample ID: Lockwood 15 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/21/2019

TSS (Residue, Non-Filterable) **ND** 1.3 mg/L 1 5/21/2019

**Lab SampleID:** 190517073-003 **Collection Date:** 5/16/2019

)

)

Client Sample ID: Lockwood 16 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/22/2019

TSS (Residue, Non-Filterable) **4.3** 1.3 mg/L 1 5/22/2019

Page 3 of 3



314 North Pearl Street Albany, New York 12207 518-434-4546 \* Fax: 518-434-0891 CHAIN OF CUSTODY RECORD

AES Work Order#: 1905/7073

### EXPERIENCE IS THE SOLUTION

| A full service analytical research laboratory offering solutions to environmental concerns |                        |  |                |                |  |                   |                                |  |  |  |  |
|--|------------------------|--|----------------|----------------|--|-------------------|--------------------------------|--|--|--|--|
| Client Name: Address:  |                        |  |                |                |  |                   |                                |  |  |  |  |
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| ID   |                        | Sampled  | P=pm           | Matrix         | $ \underline{C} \underline{G}$   | Cont's            |                                |  |  |  |  |
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|  | Sample Temperature     |  | Pr             | operly Presei  | ved  |                   | Received Within Holding Times  |  |  |  |  |
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|  | Chilling Process begun |  | .(             | Y) N           |  |                   |                                |  |  |  |  |
| Ne   | otes:                  | _ Note:  | S:             |                |  |                   | Notes:                         |  |  |  |  |
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|  |                        |  |                |                |  | J.                |                                |  |  |  |  |



## **Experience** is the solution

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

Work Order No: 190522006

ELAP#: 10709

May 28, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 4 samples on 5/21/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

## **CASE NARRATIVE**

CLIENT: Lockwood Hills LLC Date: 28-May-19

**Project:** Lockwood Pond Discharge

**Lab Order:** 190522006

Sample containers were supplied by Adirondack Environmental Services.

#### **Definitions - RL: Reporting Limit DF: Dilution factor**

Oualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

 $N: Matrix \ Spike \ below \ acceptable \ limits \\ T: Tentatively \ Identified \ Compound-Estimated$ 

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

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

CLIENT: Lockwood Hills LLC LabWork Order: 190522006

**Date:** 28-May-19

Analyst: JW

Analyst: JW

Analyst: JW

Analyst: JW

Project: Lockwood Pond Discharge
PO#:

TSS Study

**Lab SampleID:** 190522006-001 **Collection Date:** 5/17/2019

Client Sample ID: Lockwood 17 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011 ( Prep: Gen Prep - 5/22/2019 )

TSS (Residue, Non-Filterable) **4.6** 2.0 mg/L 1 5/22/2019

**Lab SampleID:** 190522006-002 **Collection Date:** 5/18/2019

Client Sample ID: Lockwood 18 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/22/2019 )

TSS (Residue, Non-Filterable) **28.0** 2.0 mg/L 1 5/22/2019

**Lab SampleID:** 190522006-003 **Collection Date:** 5/19/2019

Client Sample ID: Lockwood 19 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/22/2019 )

TSS (Residue, Non-Filterable) **3.4** 2.0 mg/L 1 5/22/2019

**Lab SampleID:** 190522006-004 **Collection Date:** 5/20/2019

Client Sample ID: Lockwood 20 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

**TOTAL SUSPENDED SOLIDS - SM 2540D-2011** 

( Prep: Gen Prep - 5/23/2019 )

TSS (Residue, Non-Filterable) **6.8** 2.0 mg/L 1 5/23/2019

Page 3 of 3



314 North Pearl Street Albany, New York 12207

518-434-4546 Fax: 518-434-0891

# CHAIN OF CUSTODY RECORD

AES Work Order#: 1905 22006

### EXPERIENCE IS THE SOLUTION

| A full service analytical research laboratory offering solutions to environmental concerns  |   |   |  |                         |   |                                   |  |  |  |  |
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## **Experience** is the solution

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

Work Order No: 190523072

ELAP#: 10709

May 29, 2019

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

TEL: (315) 536-2359

RE: Lockwood Pond Discharge

TSS Study

Dear Dale Irwin:

Adirondack Environmental Services, Inc received 3 samples on 5/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

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

Sincerely,

Monica Higdon

Laboratory Manager

## **CASE NARRATIVE**

**CLIENT:** Lockwood Hills LLC **Date:** 29-May-19

**Project:** Lockwood Pond Discharge

Lab Order: 190523072

Sample containers were supplied by Adirondack Environmental Services.

#### **Definitions - RL: Reporting Limit DF: Dilution factor**

Oualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

> J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits X: Exceeds maximum contamination limit

S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated N+: Matrix Spike is above acceptable limits E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

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

CLIENT: Lockwood Hills LLC LabWork Order: 190523072

**Date:** 29-May-19

Analyst: JW

Analyst: JW

Analyst: JW

Project: Lockwood Pond Discharge
PO#:

TSS Study

**Lab SampleID:** 190523072-001 **Collection Date:** 5/21/2019

Client Sample ID: Lockwood 21 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011 ( Prep: Gen Prep - 5/24/2019 )

TSS (Residue, Non-Filterable) **2.1** 1.3 mg/L 1 5/24/2019

**Lab SampleID:** 190523072-002 **Collection Date:** 5/22/2019

Client Sample ID: Lockwood 22 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/24/2019 )

TSS (Residue, Non-Filterable) **2.2** 2.0 mg/L 1 5/24/2019

**Lab SampleID:** 190523072-003 **Collection Date:** 5/23/2019

Client Sample ID: Lockwood 23 Matrix: WASTEWATER

Analyses Result RL Qual Units DF Date Analyzed

TOTAL SUSPENDED SOLIDS - SM 2540D-2011

( Prep: Gen Prep - 5/28/2019 )

TSS (Residue, Non-Filterable) **2.8** 1.3 mg/L 1 5/28/2019



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# CHAIN OF CUSTODY RECORD

AES Work Order#:

190523072

# EXPERIENCE IS THE SOLUTION

|                           | A full service analytic  | al researc                              | h laborato  | гу опеп  | ng son   | itions to  | environmental concerns        |  |  |  |  |
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