SHUMAKER
Consulting Engineering & Land Surveying, D.P.C.

April 14, 2022 SCE No. 09357.14

Mr. Payson Long
New York State Department of Environmental Conservation
Division of Environmental Remediation
525 Broadway
Albany, NY 12233
payson.long@dec.ny.gov

Re: Review of Landfill Operations – Calendar Year 2022
Town of Conklin Landfill
Conklin, New York

Dear Mr. Long:

Shumaker Consulting Engineering and Land Surveying, D.P.C. (SCE) has been contracted by the Town of Conklin (Town) to assist, monitor, and report on the ongoing Operation and Maintenance activities at the Town of Conklin Landfill Site.

The current Site Management Plan (SMP) for the landfill, dated September 2015, was prepared by SCE. Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect engineering controls or monitoring devices. The annual inspections and corresponding report will present sufficient information to assess the following:

- Compliance with all institutional controls (ICs), including site usage.
- An evaluation of the condition and continued effectiveness of engineering controls (ECs).
- General site conditions at the time of the inspection.
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection.
- Compliance with permits and schedules included in the Operation and Maintenance Plan.
- Confirm that site records are up to date.

This Annual Report has been prepared by SCE on behalf of the Town in accordance with the SMP. The observations and data collected as part of this study are presented herein. Further, the information included herein is similar to the information provided in the Periodic Review Report (PRR) which is currently submitted on a triennial basis and is currently scheduled to be submitted this year (2022).

1.0 SITE HISTORY

Two (2) landfill areas originally existed at the "Conklin Dump Site". The areas referred to as the Upper and Lower Landfills operated during the 1960s and 1970s. The areas were studied extensively in the 1980s and were subsequently nominated to the National Priorities List (NPL). A remedial action plan was prepared for the site. The plan ultimately called for excavating the Lower Landfill and placing it on top of the Upper Landfill. The combined landfill was then capped, and a leachate collection system was installed.

Since the remedial activities at the landfill were completed in the mid-1990s, post-closure monitoring and maintenance have been conducted under the most recent SMP, which has been in effect since September 2015. To date, the SMP has received no authorized modifications.

2.0 ANNUAL INSPECTION OF LANDFILL

SCE scientists performed a visual inspection of the site on March 30, 2022. The inspectors coordinated with Mr. Nick Platt, the Department of Public Works Superintendent for the Town of Conklin.

The following items were inspected:

- Perimeter fence and access roads.
- Leachate collection system (trench manholes, pump station, storage tank, treatment building).
- Landfill cover for areas of instability, subsidence, erosion, discoloration, etc.
- Surface water drainage features for washouts, excessive sediment or debris in ditches, dislodged rip-rap, erosion, etc.
- Gas venting system to determine if the vents have been damaged or disturbed.
- Monitoring and leachate recovery wells.

Overall, the site appears to be in good condition. Mr. Platt reports that Town staff visually inspects the landfill monthly and makes repairs as needed. However, the Town does not retain a formal record of inspections and repair work performed. The Town staff mows the landfill area approximately twice a year; this mowing schedule is adequate for maintaining a short shallow-rooted vegetative cover. Nonetheless, small shrubs and trees are taking root in the surface drainage swale where mowing is difficult; these trees and shrubs should be removed. Access roads have been maintained and they are traversable. The site entrance is maintained and accessible. The security fence is in generally good condition, though trees and shrubs should be cleared from the southwest perimeter to avoid compromising the integrity of the fence. Surface drainage features appeared to be stable and in good condition. The landfill cover appeared to be in good condition.

The monitoring wells appeared to be in generally good condition except for MW-37 which is not viable due to damage and needs repair. In addition, there is a bailer stuck in MW-4

preventing use for depth to water determination and sample collection. All well casings showed evidence of some surface corrosion, but repainting is not necessary at this time.

The operation of the leachate collection system was observed and tested during this field visit. Recovery Well No. 1 and the pump station appeared to be in working order, however, Recovery Well No. 2 did not change from the initial reading, when checking the leachate collection pumps. Recovery Well No. 2 should be inspected and repaired to make sure it is properly functioning. In addition, Recovery Well No. 3 well level was low and had the light on and should also be inspected and repaired to make sure it is properly functioning.

The leachate handling system was also inspected as part of this assessment. The exterior of the building that houses the leachate handling system was in good condition. No major structural or plumbing deficiencies were noted on the interior components.

Interior components within the leachate handling building were inspected, and no deficiencies were noted. The tank level monitor is fully operational, the sump pump was inspected, and its operation was verified in working condition.

The site inspection form for March 30, 2022, site inspection is included in **Appendix A**.

3.0 INSTITUTIONAL/ENGINEERING CONTROL (IC/EC) PLAN COMPLIANCE REPORT

3.1 IC/EC Requirements and Compliance

Since remaining contaminated material and groundwater exist beneath the site, IC/ECs are required to protect human health and the environment. The Town implemented an environmental easement which included the IC/EC Plan in January 2013. The IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site.

3.2 Engineering Controls

This section presents the Engineering Control Systems for the facility which include the landfill cover, perimeter fence and gates, leachate collection and discharge system, gas venting system, environmental monitoring system, and surface water management system. All ECs for the site are designed to be protective of human health and the environment.

3.3 Upper Landfill Site

3.3.1 Leachate Collection and Storage System

Leachate is captured by a collection trench made of 940 linear feet (lf) of 6-inch diameter perforated PVC piping, and gravity fed to a concrete pump station. There are also three (3) leachate recovery wells located in the waste

mass area near the northeast corner of the landfill. The discharge of each recovery well is conveyed to the pump station where it is pumped into a storage tank.

The purpose of the leachate collection trenches, and recovery wells is to prevent leachate from migrating off-site through surface seeps or shallow groundwater flow. The leachate storage system consists of one (1) 30,000-gallon capacity aboveground horizontal steel storage tank protected by a 33,000-gallon capacity steel secondary containment dike.

Before any leachate can be discharged to the sanitary sewer system for treatment at the Binghamton-Johnson City Joint Sewage Treatment Plant (BJCJSTP), it is sampled for compliance with effluent limitations per the Industrial Wastewater Discharge Permit issued for the Town of Conklin Landfill by the BJCJSTP.

3.3.2 Landfill Cap and Venting System

Exposure to remaining contamination in soil/fill at the site is prevented by a multi-media cap system placed over the landfill area. The multi-media cap was constructed in conformance with 6NYCRR Part 360 Standards which includes a flexible geomembrane cap, a geotextile soil drainage layer, and a nominal two (2) feet of clean soil and topsoil. Topsoil is retained in place by a stable vegetated surface over the entire landfill site. Inspection observations determined the landfill cap is intact during the 2022 Annual Inspection. However, sparse areas of woody vegetation were identified and should be removed.

Surface water and sheet flow from the surface of the cap is removed by a surface drainage system and perimeter drainage ditches that direct runoff to a stabilized outlet at Carlin Creek. An annual inspection in April 2022 indicated that the surface drainage system is intact and working as designed.

A total of 11 vents were found to be within the landfill boundaries. During the 2022 inspection, all 11 vents on-site were found to be intact with no displacement. The two (2) vents noted along the northern perimeter in the 2021 inspection are noted to be leaning. These vents should be righted during the next maintenance effort.

3.3.3 Monitoring Well Network and Sampling Schedule

The environmental monitoring system consists of a series of groundwater monitoring wells and groundwater level observation wells on and around the perimeter of the landfill site (see Figure 2). In addition, there is one (1) surface water sample point in Carlin Creek, which flows to the north of the capped landfill site. The objectives of the Monitoring Well Network are to

evaluate the condition of groundwater at the site and its effectiveness in limiting off-site transport of site-related Contaminants of Concern (COC). Tabulated historic data shows that the monitoring well network is operating as planned with no off-site migration of COC. A sampling of the Monitoring Well Network has been switched to sampling every fifth (5^{th}) quarter as detailed in the September 2015 SMP.

3.3.4 Perimeter Fence at Upper Landfill

To minimize the potential for trespassing, vehicular, or foot traffic across the landfill cap, an 8-foot chain-link fence with gates has been installed around the entire upper landfill area. A total of three (3) 20-foot gates were constructed: two (2) on the east side adjacent to Broome Corporate Parkway and one (1) in the southwest corner of the site where an access road enters the site from an unnamed access road to the west of the site. All gates are chained and locked with padlocks to prevent entry by unauthorized personnel. The annual inspection found that the perimeter fence is intact; however, SCE recommends the ongoing removal of woody vegetation remains critical to the longevity of the fence in this largely undeveloped area.

3.3.5 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when the effectiveness of monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when the remedial processes are complete is provided in Section 6.5 of NYSDEC DER-10 (May 2010). At this time, monitoring at the site indicates that the remedial processes are moving the site closer to the achievement of remedial action objectives; therefore, no recommendations for change are being proposed at this time.

3.4 Institutional Controls (IC)

A series of ICs is required by the Record of Decision (ROD) for the Upper and Lower Landfill sites. Unlike ECs, adherence with ICs is procedural and requires ongoing compliance activities. Adherence to these ICs on the site is required by the environmental easement and implemented under the September 2015 SMP. The identified ICs are:

3.4.1 Upper Landfill Site

ICs authorized for the upper landfill site are comprised of the following:

- Restrict activities that could affect the integrity of the landfill cover, including without limitation, excavating, digging, and construction

activities that are prohibited on any portion of the Upper Landfill, unless the Town, USEPA, NYSDEC, or successor agency have given their prior written consent to any such intrusive activity.

- Prior to any earthwork on the Upper Landfill site which could impact the integrity of the composite cap, an Excavation Work Plan must be developed which is subject to the Town, NYSDEC, or successor agency, and USEPA approval before implementation. More information regarding the Excavation Work Plan and other procedures required for the Upper Landfill are included in the SMP.

- Groundwater wells for drinking water shall not be installed or used on any portion of the Upper Landfill.

- The Upper Landfill shall not be used for "Residential Use" and "Restricted Residential Use" as defined by NYSDEC Regulations 6NYCRR Part 375-1.8(g)(2)(i) and (ii). Allowable uses include "Commercial Use" and "Industrial Use" as defined in NYSDEC Regulation 6NYCRR Part 375–1.8(g)(2)(iii) and (iv).

3.4.2 Lower Landfill Site

ICs established for the Lower Landfill site include the following:

- Groundwater wells for drinking water shall not be installed or used on any portion of the Lower Landfill.

The Lower Landfill shall not be used for "Residential Use" and "Restricted Residential Use" as defined by NYSDEC Regulations 6NYCRR Part 375-1.8(g)(2)(i) and (ii). Allowable uses include "Commercial Use" and "Industrial Use" as defined in NYSDEC Regulation 6NYCRR Part 375–1.8(g)(2)(iii) and (iv).

4.0 ANNUAL STATEMENT OF INSTITUTIONAL CONTROLS

During the 2022 Site Inspection, all institutional controls at the Upper and Lower Landfill sites appear to be in place. Specifically, the following was observed:

A. The landfill cap on the Upper Landfill appears to remain in place and undisturbed.
B. No groundwater wells for drinking water have been installed on the Upper or Lower Landfill sites.
C. The Upper and Lower Landfill sites are not zoned to allow residential use or restricted-residential use.

5.0 RECOMMENDATIONS

Based on the observations of the past year of landfill operations, SCE recommends the following measures to be in place before the 2023 Annual Inspection:

A. The level sensor in Recovery Well No. 2 should undergo a maintenance check to confirm proper operation.
B. Monitoring Well 37 is inaccessible since the riser has been damaged and needs repair before it can be viable. SCE recommends a protective cage be installed around the well or the well be converted into a flush mount protective cover.
C. Monitoring Well 4 is inaccessible due to a bailer stuck in the PVC of the well.
D. As an ongoing recommendation, the Town should perform a limited amount of tree and brush removal outside of the perimeter fence, to ensure the long-term performance of the security fence.
E. Woody vegetation should be removed from the surface drainage swale to maintain the integrity of the landfill cap.
F. Two leaning or tipped over vents along the northern cap perimeter should be righted.

If you have any questions, please don't hesitate to contact this office.

Very truly yours,

SHUMAKER CONSULTING ENGINEERING
AND LAND SURVEYING, D.P.C.

Justin L. Williams
Environmental Scientist II

JLW/cmb

Enclosures

cc: Nick Platt, Town of Conklin
nplatt@townofconklin.org

Paul Speranza, P.E., SCE
psperanza@shumakerengineering.com

Appendix A
2022 Field Inspection Form

SITE INSPECTION RECORD FORM

This summary inspection checklist is to be completed during each site inspection at least once per month. Note all items which require repair or maintenance. Use the last page to annotate any additional comments, unusual events or information observed during this inspection.

Name of inspector(s): Justin Williams, Jessica Dubman

Date of Inspection: 03/30/22

Arrival Time: 9:00 am Departure Time: 12:00 pm

Weather Conditions: Overcast Temperature Mid-20s

Reason for Visit: Annual Inspection

General Inspection (Monthly)

	OK:	Comments:
Site Entrance	X	Minimal rust on locks and chains
Access Roads	X	
Overall Appearance (litter/trash)	X	Some misc. trash along roadside
Treatment Building Exterior	X	Newly painted
Building Interior		Mold, rat droppings, etc.
Heater	X	
Heat Tracing	X	New heat wrap
Exhaust Ventilation	X	
Lighting	X	All lights fully operational
Building Sump	X	New flomotion system- 17%
Bar Grating	X	Appears in good condition, no rust
Perimeter Fence and Gates	X	Remove vegetation from around the fence

Leachate Storage System Inspection (Monthly)

	OK:	Comments:
Storage Tank and Pipe Venting	X	
Secondary Containment Dike	X	
Rain Skirt	X	
Level Control System	X	
Treatment Building Sump Pump	X	
Transfer Pump	X	
Exterior/Interior Paint	X	Mold, new exterior paint, tank could use to be painted

Leachate Collection System Inspection (Monthly)

	OK:	Comments:
Pump Station (Structure)	X	
Leachate Collection Trench Manholes	X	
Leachate Collection Trench Piping	X	
Pump Station Pump	X	
Recovery Wells		
Well Pumps	X	
Well Casing	X	
Monitoring Wells (casings)	X	MW-37 knocked over, minor rust on others
Recovery Well Metering Pit		
Flow Meters	X	
Meter Control Panel	X	
Meter Pit (Structure)	X	
Pump Control Panel	X	All fine, no lock

Inspection Data Measurements

Leachate Depth: 21.87 in

Leachate Volume: 2785.0 gal or 16% full

Leachate Collection System Operational Check (Monthly)

Open the control panel near the entrance gate and check to see if any low level lights are on. For each Pump Record the well/sump level (feet). Then switch the pump control from auto to hand. Observe the level decreasing. If it does not decrease then the pump or control panel may not be functioning properly. Turn switch back to auto and record the new level (or the same level if no change occurred). Additionally Record the Pump Run time (hour).

	OK	Initial Level	Final Level	Run Time
Recovery Well No. 1	X	7.86	6.79	287.29
Recovery Well No. 2	X	11.06	11.06	132.0
Recovery Well No. 3	X	6.92	4.44	25.00
Pump Station	X	6.73	6.68	12,076.32

Landfill Cover Inspection (Monthly)

	OK:	Comments:
Final Cover	X	
Landfill Slope	X	
Gas Vents	X	
Vegetative Cover		Should be cut back, remove vegetation from fence
Drainage Down Chute	X	
Perimeter Drainage	X	

Well Level Measurements (Quarterly)

	Top of Casing Elev. (ft)	- Depth to Water (ft)	=	Water Level Elev. (ft)
MW-1	946.69	- 26.70	=	919.99
MW-2	925.73	- 18.35	=	907.38
MW-3	892.40	- 4.50	=	887.9
MW-4	897.18	- Bailer stuck in PVC frozen, unable to read/no cap	=	
MW-12	901.08	- 12.31	=	888.77
MW-37	908.71	- Inaccessible- damaged, unable to collect reading	=	
MW-38S	890.13	- 5.39	=	884.74
MW-38D	888.34	- 4.82	=	883.52
LW-14	926.24	- 31.50	=	894.74

Notes/Explanations:
(Please indicate additional information on those items which require attention indicated above)

Nick and Colin from Town of Conklin met on-site 0900.
Secondary containment repainted and upgraded line and level indicator.
Trash near MW 1 and 37
MW37 inaccessible - bent over
MW4 - bailer stuck in PVC well

Appendix B
Ground Water Contour Map

LEGEND:

900 — GROUNDWATER CONTOUR LINE

885.12 — GROUNDWATER ELEVATION MEASURED AT MONITORING WELL

919.99 MONT. WELL 1

MONT. WELL 36

MONT. WELL #37

MONT. WELL #38D

MONT. WELL #39S

MONT. WELL #12

MONT. WELL #3

MONT. WELL #4

MONT. WELL DC-3

MONT. WELL DC-4

MONT. WELL DC-2S

MONT. WELL DC-2D

RECOVERY WELL RW-1

RECOVERY WELL RW-2

RECOVERY WELL RW-3

MONT. WELL #12 RW-14

APPROX. LOCATION RECOVERY WELL RW-1

CONC. PAD WITH VAULT

FLOW METER CABINET

GAS VENT

MH-10347

MH-10434

MH-10501

MH-10521

MH-10520

MH-10428

SMH-0605

#NYSEG 27 NYT 26

#NYSEG 27 NYT 25

#NYSEG 33973 25 NYT 25

#NYSEG 27 NYT 27

RAILROAD SPIKE IN UTL. POLE #NYSEG/27 NYT/27 EL=895.96

BM-1 "X" ON NORTHELY BONNET BOLT OF HYD. EL=891.17'

BM-2

SMH. PLACED PER 1996 RECORD PLANS

6.5' CHAIN LINK FENCE

GATE

WOODS

8" PIPE PLACED PER 1996 RECORD PLANS

12" PIPE PLACED PER 1996 RECORD PLANS

6" SICPP

8" PVC

8" SWP

12" PIPE

24" CMP

18" CMP

8" CMP

LEACHATE COLLECTION TRENCH PER 1996 RECORD PLANS

LEACHATE COLLECTION TRENCH PER 1996 RECORD PLANS

GAS STORAGE TANK

VAULT ACCESS COVER

1 STRY. WOOD FRAME TREATMENT BLDG.

PUMP CONTROL PANEL

ELECTRIC METER

DITCH

GRAVEL SHOULDER

EDGE OF PAVEMENT

BROOME CORPORATE PARKWAY

INV. 894.80'

INV. 893.75'

INV. 884.63'

INV. 884.77'

INV. 882.44'

887.90

887.77

884.74

883.52

INACC.

INACC.

SITE PLAN

SCALE: 1" = 40'-0"

40' 0 40'

BEFORE COMMENCING WORK CONTACT
* DIG SAFELY NEW YORK*
1-800-962-7962
PROVIDE 72 HOURS NOTICE

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ARCHITECT/ENGINEER TO ALTER THIS DRAWING IN ANY WAY. ALTERATIONS MUST HAVE THE SEAL AFFIXED ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE.

ISSUE DATE
-/--/--

DRAWING NO.
FIGURE #1

Drawn By: NCP
Checked By: JID
Project Mgr: JID
Date: 03/31/2022
Project No: 09357

DRAWING TITLE
MARCH 2022
GROUNDWATER
POTENTIOMETRIC
MAP

REVISIONS

No	Date	By	Description

CONKLIN LANDFILL
FOLLOW-UP REPORT

1271 CONKLIN ROAD CONKLIN, NEW YORK

SHUMAKER
Consulting Engineering & Land Surveying, P.C.
143 Court Street, Binghamton, New York 13901
Telephone (607) 798-8081/ Fax (607) 798-8186

Appendix C
Photographs

APPENDIX C – PHOTOGRAPHS

Project Name & Job Number: 2022 Conklin Landfill Annual Inspection 09357.13
Project Address(es): 215 Broome Corporate Pkwy, Conklin, NY 13748

Photo Number: 1
Photo Date: 03/30/2022
Photo Location: Inside Treatment Building
Direction Facing: East
Photo Description: Tank Volume in Gallons

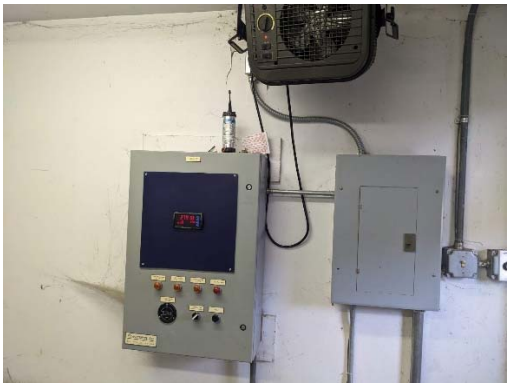

Photo Number: 2
Photo Date: 03/30/2022
Photo Location: Between treatment building and leachate tank
Direction Facing: North
Photo Description: New pipe between treatment tank and leachate tank

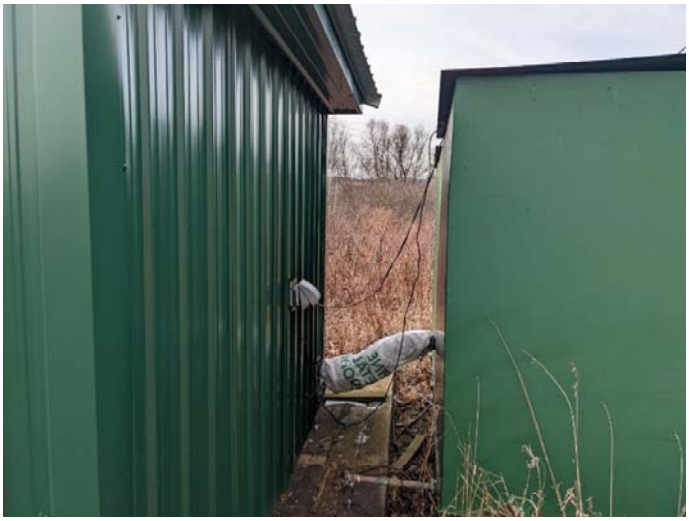

Photo Number: 3
Photo Date: 03/30/2022
Photo Location: Leachate Tank
Direction Facing: North
Photo Description: west side of Leachate tank

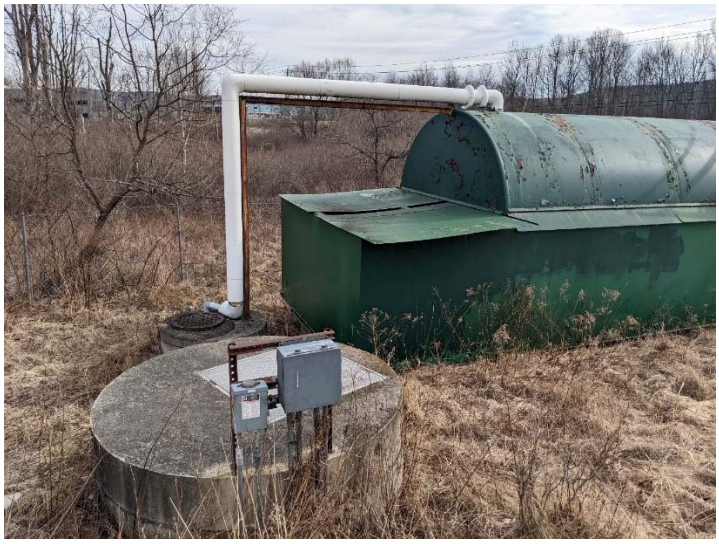

Photo Number: 4
Photo Date: 03/30/2022
Photo Location: Leachate tank
Direction Facing: East
Photo Description: North side of leachate tank, minor rust.

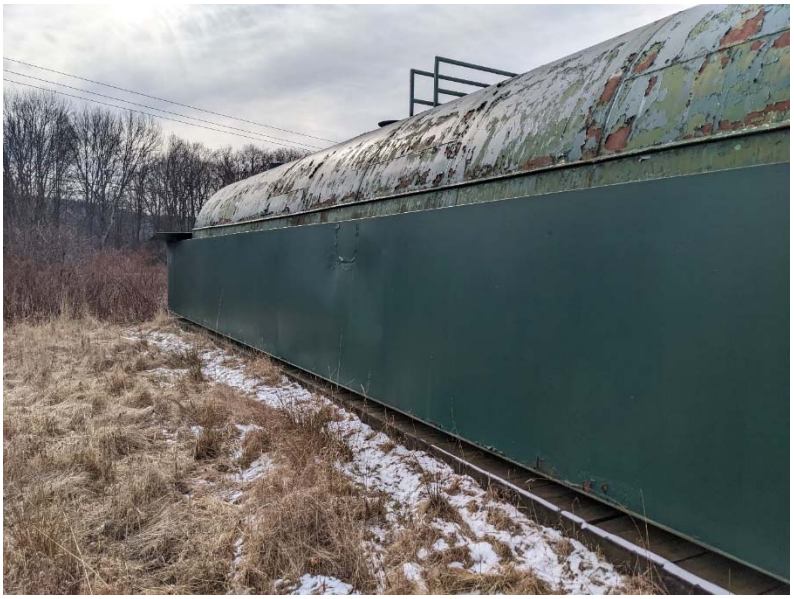

Photo Number: 5
Photo Date: 03/30/2022
Photo Location: Monitoring well 4
Direction Facing: North
Photo Description: Bailer frozen stuck in MW - 4

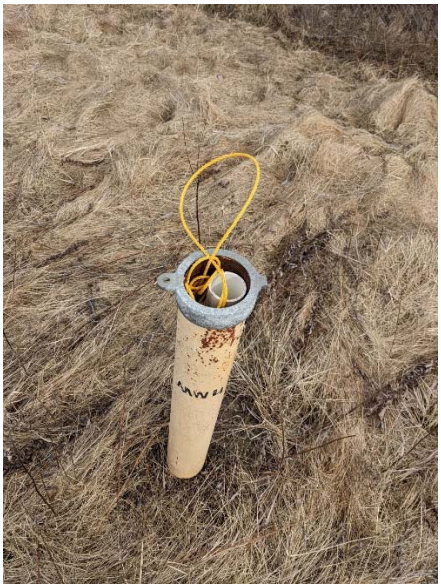

Photo Number: 6
Photo Date: 03/30/2022
Photo Location: North end of property
Direction Facing: West
Photo Description: Brush needs to be cut back

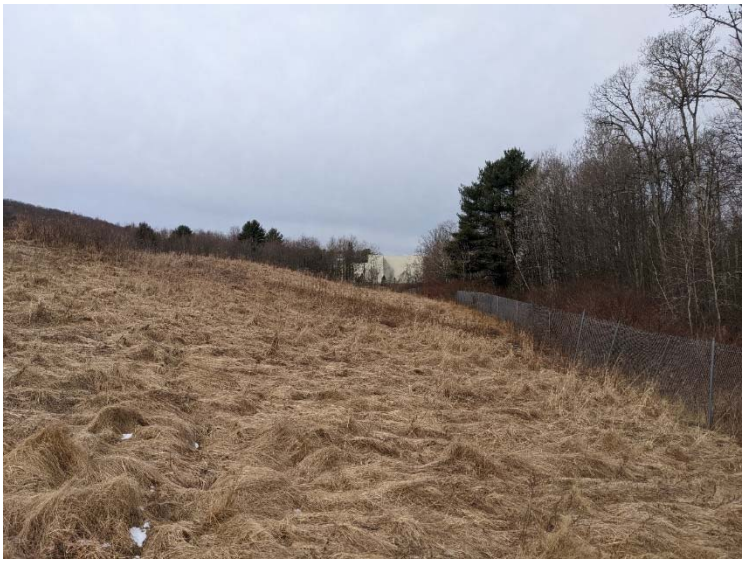

Photo Number: 7
Photo Date: 03/30/2022
Photo Location: Inside Leachate tank
Direction Facing: North
Photo Description: Looking down inside leachate tank, slight odor, tank low and slightly frozen

Photo Number: 8
Photo Date: 03/30/2022
Photo Location: Inside Treatment Building
Direction Facing: West
Photo Description: Mold on walls and rat/mouse droppings in treatment building

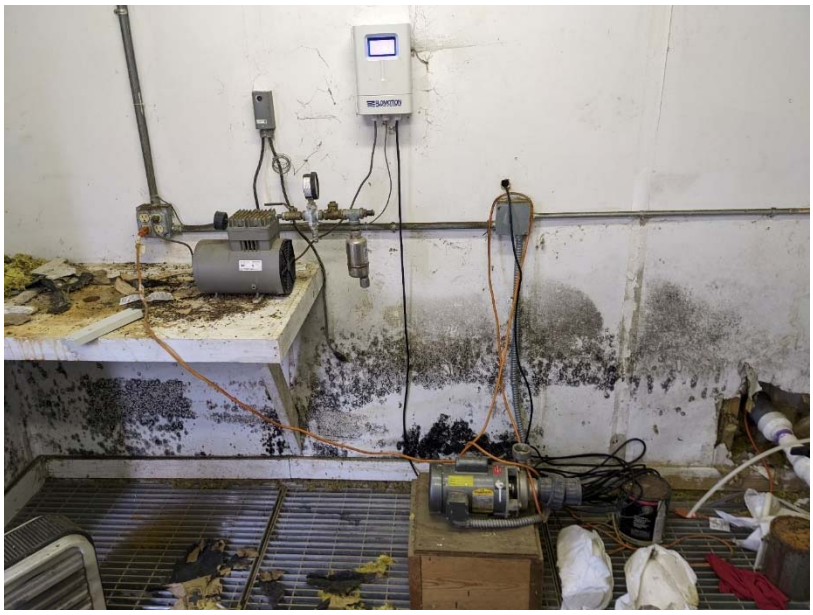

Photo Number: 9
Photo Date: 03/30/2022
Photo Location: Inside Control Panel
Direction Facing: South
Photo Description: Pump levels pictured, and Recovery Well No. 3 has light on

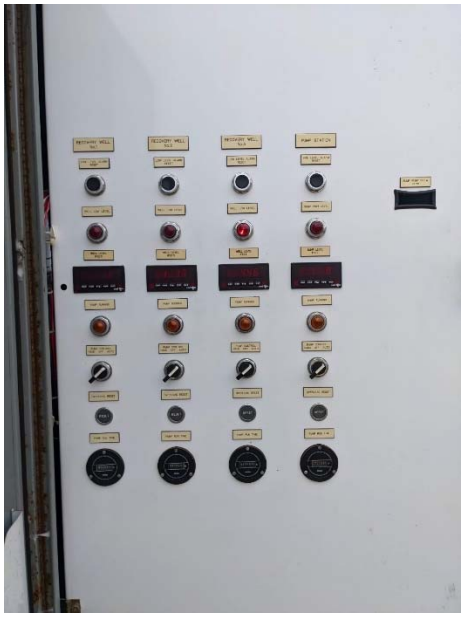

Photo Number: 10
Photo Date: 03/30/2022
Photo Location: Entrance road on west side of property near MW-1
Direction Facing: East
Photo Description: Entrance looks ok.

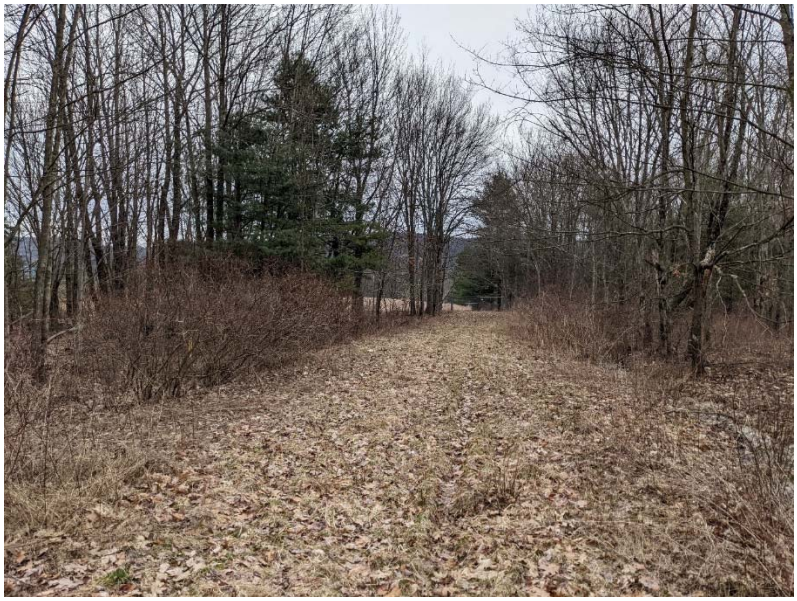

Photo Number: 11
Photo Date: 03/30/2022
Photo Location: Roadside on west side of property
Direction Facing: South
Photo Description: Trash and trucks along roadway near MW-1

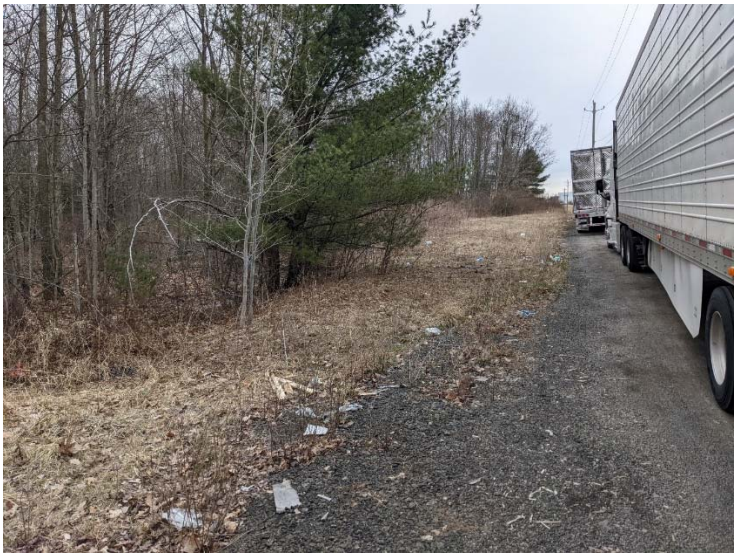

Photo Number: 12
Photo Date: 03/30/2022
Photo Location: West Fence of Property
Direction Facing: South
Photo Description: Leaf litter along fence, looks ok.

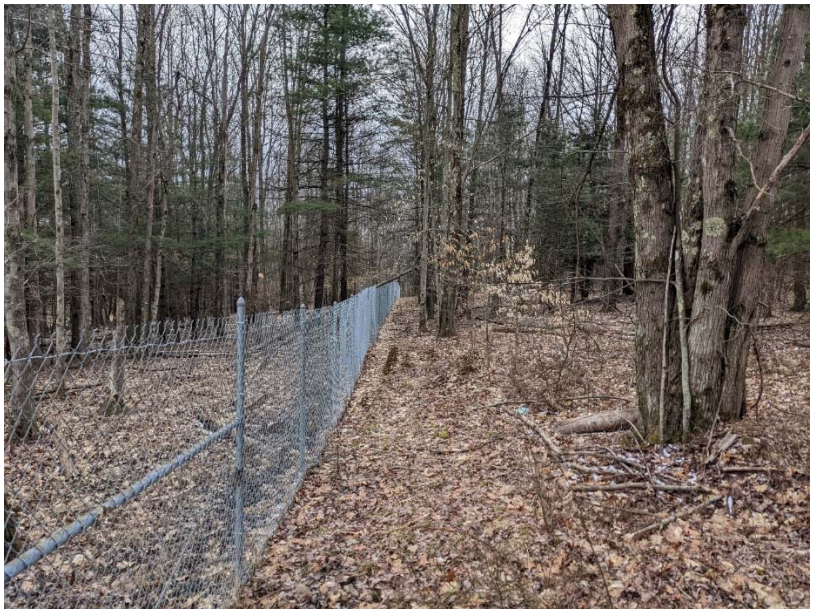

Photo Number: 13
Photo Date: 03/30/2022
Photo Location: Monitoring Well - 37
Direction Facing: West
Photo Description: MW-37 hit by plow/car