STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

DANIEL EICHINGER
ACTING DIRECTOR

April 14, 2023

VIA EMAIL

David Favero
RACER Trust
500 Woodward Avenue, Suite 2650
Detroit, Michigan 48226

Dear David Favero:

SUBJECT: Cap Inspection Report; RACER Coldwater Road Landfill; Flint, Michigan; MID 005 356 860; Waste Data System Number 393431

On November 2, 2022, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD), staff conducted a cap inspection on the Revitalizing Auto Communities Environmental Response (RACER) Trust, Coldwater Road Landfill (Landfill) in Flint, Michigan. Final construction and capping of the Landfill was substantially completed in 1994, in accordance with the approved Closure Plan as required by the Corrective Action Consent Order, WMD Order No. 64-05-92, signed October 29, 1992. The purpose of the inspection was to evaluate the facility's compliance with the October 2014, approved Postclosure Plan (PCP).

Based on the MMD inspection, the condition of the Landfill was found to be generally satisfactory. MMD noted a few items of concern and recommended corrective action(s) are summarized below:

**Overgrown Cap Vegetation:** Cap vegetation must be regularly maintained at a height that will provide sufficient protection, but will not hinder inspections of the cap.

**Small Woody Plants:** The various small woody plants indicated in Attachment 1 must be removed from the Cap. Photo-documentation of the repaired area must be provided within 30 days of receipt of this Report.

For the specific locations, photographs, and additional details of the conditions noted, please see the enclosed Cap Inspection Report (Report). RACER must provide a response to the MMD within 30 days of receipt of this letter and Report detailing the proposed or implemented corrective actions for each of the items of concern identified.

Should you have any questions regarding this review, please contact me at 517-281-7726; SanabriaN@Michigan.gov; or EGLE, MMD, P.O. Box 30241, Lansing, Michigan 48909-7741

Sincerely,

Nicole Sanabria

Nicole Sanabria, Geologist
Technical Support Unit
Hazardous Waste Section
Materials Management Division

Enclosure
cc: Clifford Yantz, Ramboll
Kevin Schneider, Ramboll
Dale Bridgford, EGLE
Gary Schwerin, EGLE
Christina Hebert, EGLE
HWS-C&E File

# Cap Inspection Report

**February 2023**

**RACER Coldwater Road Landfill**
**6220 Horton Street**
**Flint, Michigan**
**MID 005 356 860**

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**Conducted by**
**Materials Management Division**
**Michigan Department of Environment, Great Lakes, and Energy**

## Table of Contents



**Inspection Conducted By:**

Nicole Sanabria, Geologist
Jacob Runge, Environmental Engineer
Christina Hebert, Environmental Quality Analyst
John McCabe, Environmental Quality Specialist

## 1.0 Introduction

On November 2, 2022, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD), staff conducted a cap inspection on the Revitalizing Auto Communities Environmental Response (RACER) Trust Coldwater Road Landfill (Landfill) in Flint, Michigan. Final construction and capping of the Landfill was substantially completed in 1994 in accordance with the approved Closure Plan as required by the Corrective Action Consent Order, WMD Order No. 64-05-92 (CACO), signed October 29, 1992. The purpose of the inspection was to evaluate RACER's compliance with the October 2014 approved Postclosure Plan (PCP).

The Landfill contains six cells (A through F). Each of the Landfill cells has a leak detection vault and a leachate collection sump. A leachate storage/control facility was constructed to temporarily store water removed from the leak detection vaults and leachate collection sumps. This liquid is stored in a 15,000 gallon above-ground fiberglass tank contained within a concrete secondary containment unit located inside the storage/control building. With the discovery of perfluoroalkyl and polyfluoroalkyl substances (PFAS) in 2016, and the Industrial Pretreatment Program PFAS Initiative in 2018, the liquid now passes through a series of four granular activated carbon units to remove PFAS before being pumped via sanitary sewer to the Beecher Metropolitan District Publicly Owned Treatment Works under sewer user Permit No. 6-08-04-04-GML1. Due to the nature of the waste contained in the Landfill (i.e., stabilized plating waste sludge and contaminated soil), the Landfill does not have a gas collection system.

A generalized cross section of the construction of all cells is as follows (from bottom to top):

1. Natural clay underlies the Landfill, minimum 10-foot thickness with a permeability of $1 \times 10^{-6}$ centimeters per second (cm/sec) or less.
2. A layer of 60-ml high density polyethylene (HDPE) geomembrane.
3. A geonet/geotextile drainage layer.
4. A five-foot thick layer of compacted clay with a maximum hydraulic conductivity of $1 \times 10^{-7}$ cm/sec.
5. A layer of 60-ml HDPE geomembrane.
6. A geonet/geotextile drainage layer.
7. Waste (stabilized F006 sludge and contaminated soil).
8. A layer of filter geotextile.
9. A three-foot thick layer of compacted clay with a maximum hydraulic conductivity of $1 \times 10^{-7}$ cm/sec.
10. A layer of 60-mil HDPE geomembrane.
11. A geonet/geotextile drainage layer.
12. An 18-inch protective soil layer.
13. A six-inch topsoil layer with vegetation.

In addition, drainage ways are constructed around the perimeter of the Landfill to convey surface runoff and cap interflow to culverts that drain to the surrounding land. The drainage ways are lined with geotextile and filled with large stone rip-rap material.

The inspection consisted of a detailed walkover inspection of the Landfill, followed by a review of the facility's postclosure inspection records. Areas of concern and/or items of note were located on a site plan view map. MMD staff was escorted by Kevin Schneider of Ramboll. Ramboll is contracted by the facility to conduct day-to-day operation and maintenance activities at the Landfill.

**Attachment 1** is a Site Plan of the Landfill that highlights items of note and/or concern discovered during the walkover inspection. **Attachment 2** contains photographs taken during the inspection. **Attachment 3** contains the Landfill Cap Inspection Log filled out as part of the inspection. The final cover inspection results, the inspection records review, and recommendations for corrective action are provided in the following sections.

## 2.0 Final Cover Inspection Results

A detailed walkover of the bermed cover area and its surrounds was conducted by MMD and Ramboll staff. Based on the MMD inspection, the existing final cover condition of the Landfill was found to be generally satisfactory, and the cap appeared to be well maintained. However, the items of concern listed below were noted during the inspection.

1. **Overgrown Vegetation:** Vegetation on the entire cap was extremely overgrown making it difficult to assess cap integrity.
2. **Small Woody Plants:** Several small woody plants were noted at various locations across the cap. The exact location of the area is noted on **Attachment 1,** and is documented in a photograph provided in **Attachment 2.**

## 3.0 Records Review Results

MMD staff reviewed the postclosure inspection records for the Landfill (archived in the leachate control/storage facility) while onsite. In general, the review of the inspection records revealed that inspections were being conducted as required, and no significant problems were noted. Compiled copies of the monthly landfill inspection reports are submitted to the MMD quarterly.

The facility is also required to track and report both leachate and leak detection volumes removed from the Landfill and report this information in the monthly status reports required by the CACO. A summary of that information over time is presented for the leachate collection system (LCS) in **Figure 1** and the leak detection system (LDS) in **Figure 2**.

As can be seen in **Figure 1**, the volume of leachate pumped from the LCS has generally remained under 2,000 gallons monthly for the past twenty years (with the exception of several anamolous spikes). These data are as would be expected, and generally support satisfactory performance of the cap. It should be noted that, from the time period from

mid-2004 to mid-2005, accurate leachate generation volumes were unknown due to problems with the flow meter used to record the volume of leachate and leak detection liquid pumped to the accumulation tank. This problem was resolved in mid-2005. Since that time, recorded leachate volumes have increased slightly as compared to data from 2000 to 2004; however, it is unknown how much of this minor increase is due to a more accurate flow meter. Leachate flow volume monitoring will continue as required by the approved Postclosure Plan.

Due to the historical continual presence of excessive water in the LDS sumps, in August 2003 the MMD requested that the facility investigate the source of the water infiltrating into the LDS. From 2003 to 2006, the facility conducted several investigations and implemented several repairs that substantially reduced the volume of water infiltrating and being recovered from the LDS. This improvement can be seen graphically in **Figure 2**. This is especially pronounced for Vaults B and C where monthly recovered volumes have been reduced from thousands of gallons to under one hundred gallons.

## 4.0 Recommendations for Corrective Action

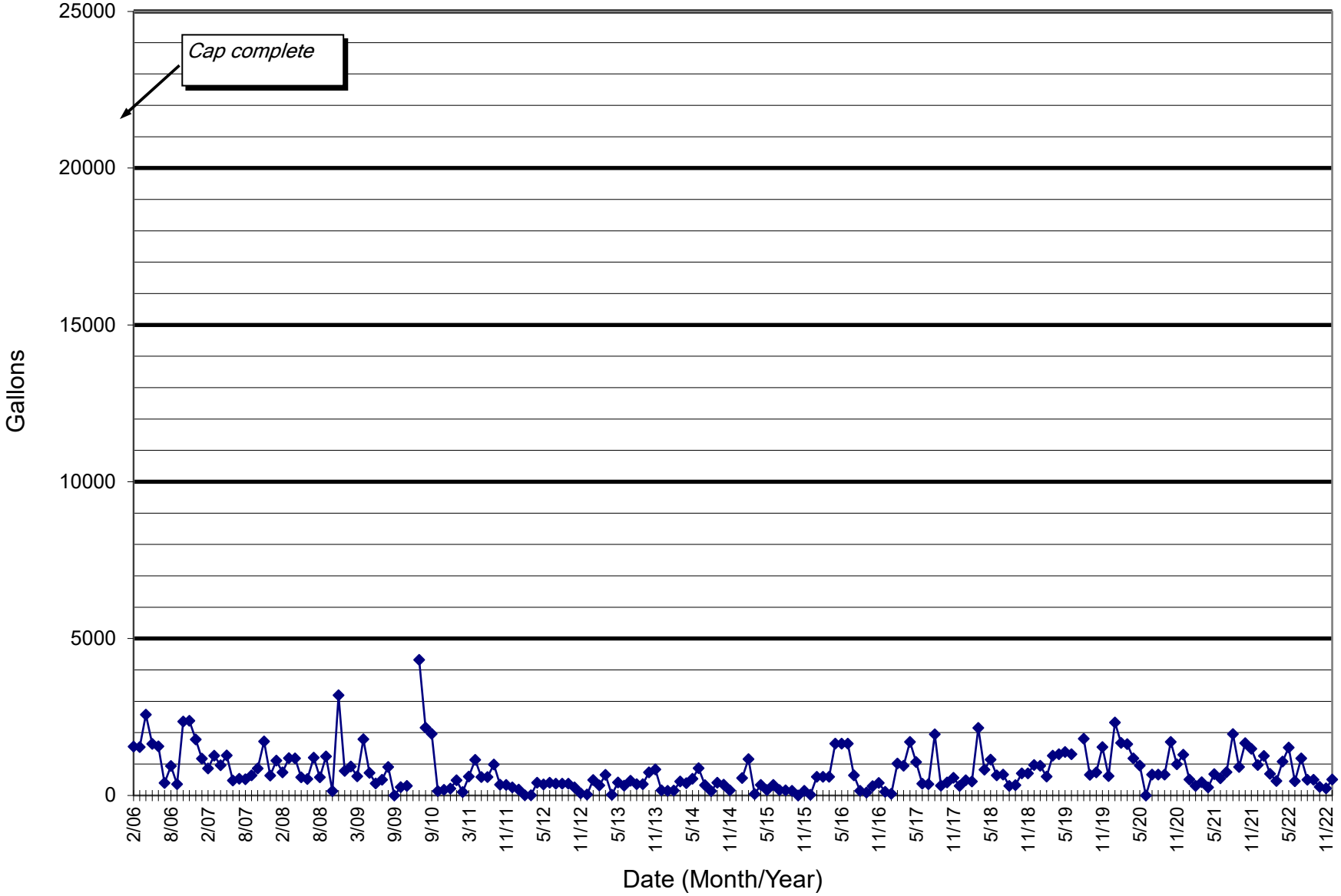
As a result of the above listed items of concern, the MMD recommends the corrective actions be implemented as detailed below.

1. **Overgrown Cap Vegetation:** Cap vegetation must be regularly maintained at a height that will provide sufficient protection, but will not hinder inspections of the cap.
2. **Small Woody Plants:** The various small woody plants indicated in **Attachment 1** must be removed from the cap. Photo-documentation of the repaired area must be provided within 30 days of receipt of this report.

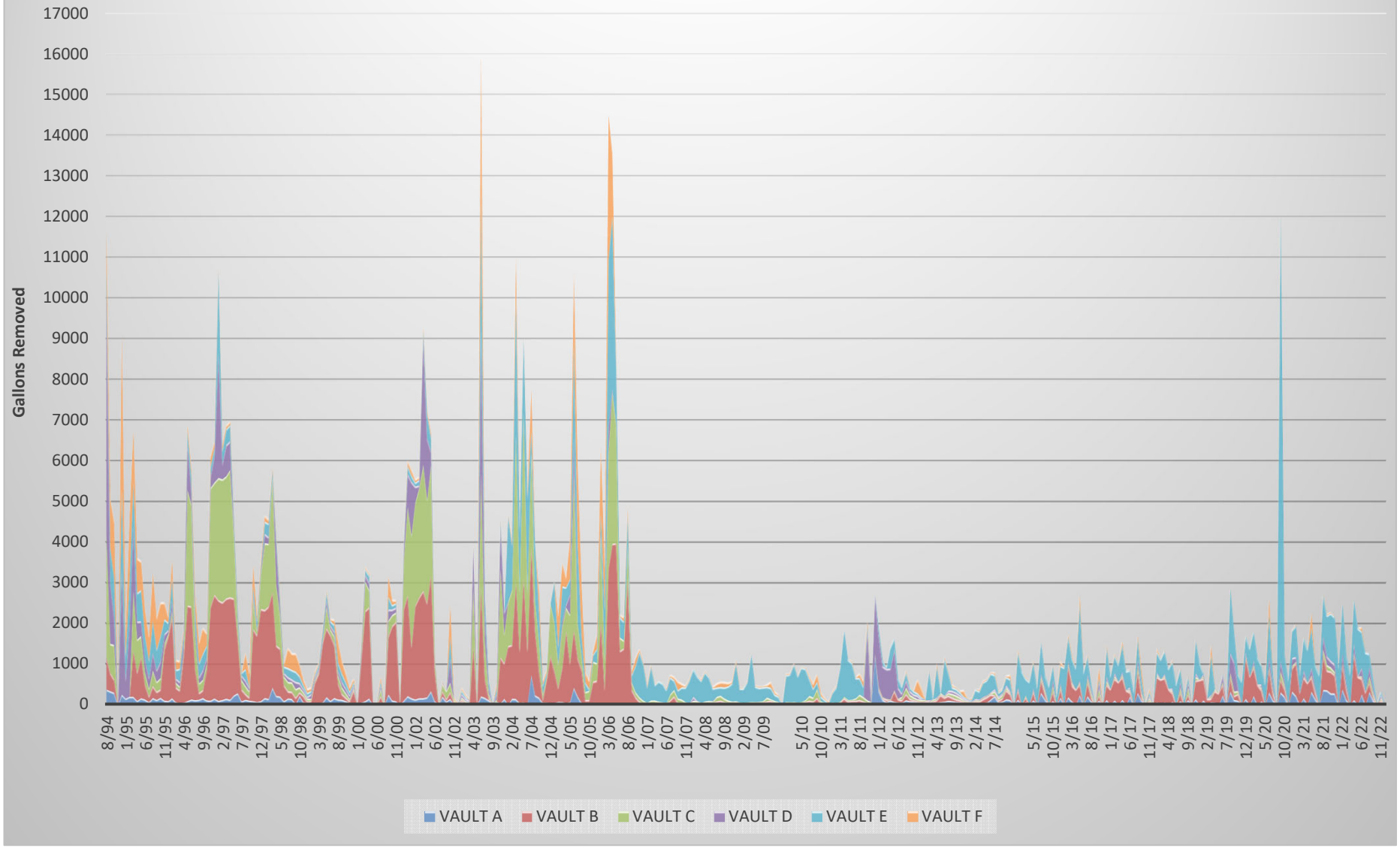
RACER must provide a response detailing the proposed or implemented corrective actions for each of the items of concern identified in this report to the MMD within 30 days from receipt of the report.

# FIGURES

**FIGURE 1 - RACER LANDFILL, COLDWATER ROAD**
**LEACHATE REMOVED**



# FIGURE 2 - RACER Coldwater Road Landfill
# Leak Detection System Water Removal



# ATTACHMENT 1

# SITE PLAN

# Coldwater Road Landfill
# 2023 Cap Inspection

EGLE
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

# ATTACHMENT 2

# PHOTOGRAPHS

Inspection Issue 1: Small Woody Plants

1

Inspection Issue 2: Small Woody Plant

2

Inspection Issue 3: Small Woody Plants

3

Inspection Issue 4: Small Woody Plants

4

Inspection Issue 5: Overgrown Vegetation, Possible Woody Plants

5

Inspection Issue 6: Small Woody Plants

6

Inspection Issue 7: Small Woody Plant

7

# ATTACHMENT 3

# LANDFILL CAP INSPECTION LOG

# LANDFILL CAP INSPECTION LOG

Date: November 2, 2022 Inspector(s): Sanabria, McCabe, Runge, Hebert Facility: Coldwater Rd. Landfill
Last Inspection Date: Weather: Sunny, 40° F

**A. Final Cover Inspection**

| Item No. | Item Description | Condition/Comment/Problem | Location |
|---|---|---|---|
| A.1 | Review of Cap Inspection Plan<br>Date of Plan: **Date** | | |
| A.2 | General Condition of Cap? | Good | |
| A.3 | Presence of Surface Erosion, Erosion Rifts, and/or Surface Cracks? | No | |
| A.4 | Presence of Settlement and/or Ponding? | No | |
| A.5 | Presence of Areas of Slope Instability and/or Failure? | No | |
| A.6 | Presence of Areas Where Original Grade has been Disrupted? | No | |
| A.7 | Presence of Exposed Liner? | No | |
| A.8 | Presence of Areas With Inadequate Topsoil (< 6")? | No | |
| A.9 | Presence of Leachate Seepage on Side Slopes? | No | |
| A-10 | Presence of Saturated Soil at the Base of the Slope? | No | |
| A-11 | Presence of Damage to Risers/Pipes Extending Through the Cap? | No | |
| A-12 | Presence of Stressed and/or Damaged Vegetation? | No | |
| A-13 | Presence of Undesirable Plant Species (Deep Roots)? | Yes | See map |
| A-14 | Presence of Areas of Sparse Vegetative Growth? | No | |
| A-15 | Presence of Burrowing Animals? | No | |
| A-16 | Presence of Damage and/or Impact to Spillways or Berms? | No | |

# LANDFILL CAP INSPECTION LOG

Date: March 16, 2020 Inspector(s): Sanabria, McCabe, Runge Facility: Coldwater Rd. Landfill
Last Inspection Date: _____ Weather: _____

**B. Gas Collection System Inspection** NA

| Item No. | Item Description | Condition/Comment/Problem | Location |
|---|---|---|---|
| B.1 | Presence of Odors and/or Gas Emissions Through the Cap? | | |
| B.2 | General Condition of Gas Vents? | | |
| B.3 | Date of Last Gas Collection System Monitoring Event? | | |

**C. Leachate Collection/Leak Detection System Inspection**

| Item No. | Item Description | Condition/Comment/Problem | Location |
|---|---|---|---|
| C.1 | Presence of Significant Increase in Leachate Collection Volumes? | No | |
| C.2 | Presence of Liquid in Leak Detection System? | Yes | See Report |

**D. Security Inspection**

| Item No. | Item Description | Condition/Comment/Problem | Location |
|---|---|---|---|
| D.1 | Define Security System Described in Post-Closure Permit. | Fenced / locked | |
| D.2 | Security System as Defined in Post-Closure Permit in Working Order? | Yes | |

# LANDFILL CAP INSPECTION LOG

Date: March 16, 2020 Inspector(s): Sanabria, McCabe, Runge Facility: Coldwater Rd. Landfill
Last Inspection Date:_____ Weather:_____

**E. Records Inspection**

| Item No. | Item Description | Condition/Comment/Problem | Location |
|---|---|---|---|
| E.1 | Final Cover Inspections being conducted at the frequency and level of specificity required? | Yes | |
| E.2 | Maintenance and Corrective Actions Implemented as required? | Yes | |
| E.3 | Is Data Regarding the Volume of Leachate and Leak Detection Liquids Removed (Current and Historical) Available (If So, Obtain Data)? | Yes | See Report |
| E.4 | Is Survey Benchmark Present? Last Survey Date? | Yes | Q2 2017 |