

**OBG**

PART OF RAMBOLL

2018 ANNUAL REPORT – FINAL REPORT

**Landfill Inspection Report  
Coldwater Road Landfill  
Flint, Michigan  
MID 005 356 860**

**RACER TRUST  
Detroit, Michigan**

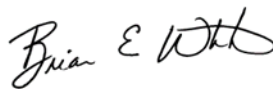
February 2019

FEBRUARY 27, 2019 | CLIENT # 15388 | PROJECT # 68545

**Landfill Inspection  
Coldwater Road Landfill  
MID 005 356 860**

**Flint, Michigan**

Prepared for: RACER Trust  
Detroit, Michigan



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BRIAN E. WHITE, PE  
SENIOR VICE PRESIDENT  
O'BRIEN & GERE ENGINEERS, INC.

February 27, 2019

**Mr. Richard Conforti, P.E.**  
Environmental Engineer  
Michigan Department of Environmental Quality  
Office of Waste Management and Radiological Protection  
P.O. Box 30473  
Lansing, Michigan 48909-7973

RE: 2018 Annual Landfill Inspection Report  
Coldwater Road Landfill, Flint, Michigan  
MID 005 356 860

FILE: 15388 /68545/rep

Dear **Mr. Conforti**

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), O'Brien & Gere Engineers, Inc., part of Ramboll (OBG) is presenting this annual Landfill Inspection Report summarizing the 2018 Quarterly Post Closure Inspections at the hazardous waste landfill for the Coldwater Road Landfill facility in Flint, Michigan.

Each quarterly inspection event consisted of the following activities:

- A visual inspection of the landfill cap and berms
- A visual inspection of the leachate accumulation above ground storage tank (AST)
- A visual inspection of the site access roads
- A visual inspection of the site perimeter fencing and gates
- An inspection of the leachate collection system
- Testing of the leachate detection alarm system
- A summary of the monthly removal of liquids from the leak detection vaults
- A visual inspection of site drainage structures.

A summary of the inspections is outlined in the following sections and copies of the quarterly inspection reports are included as [Appendix A](#). A Site Location Map ([Figure 1](#)), a Site Layout ([Figure 2](#)), and a 2018 Incident Location Map ([Figure 3](#)) are also included.

### **CAP AND BERMS**

The cap and berms were visually inspected each quarter for deep root penetration, burrowing animals, soil erosion, slope failures, and ponding water, including within the ditch and/or washouts.

The following is a summary of the issues encountered on the cap and berms during the 2018 quarterly inspections.

Several hundred woody-stemmed plants were removed from the landfill cap between March 2018 and December 2018.



Mole activity was observed during the 1<sup>st</sup> through 4<sup>th</sup> quarter inspections at Cell A, Cell B, Cell D, Cell E, and Cell F. The mole activity is noted on [Figure 3](#). It was not confirmed whether the mole mounds observed were new activity or signs of previous activity. Mole traps were set along the trails where located.

One animal burrow was identified and closed in the 4<sup>th</sup> quarter. The animal burrow was photographically documented (before and after repair), and the approximate size and configuration of the burrow was documented and included in the Quarterly Status Report.

The burrow was deemed inactive and filled in. The burrow was filled using methods approved by the Michigan Department of Environmental Quality (MDEQ), which included collecting the approximate length (6 inches), depth (2 inches), and diameter (4 inches). No signs of liner damage were observed during the inspection and repair of the animal burrow. A log of burrow activity throughout the year is maintained at the landfill. The log contains information on the date that a burrow was identified, response activities, and the date the burrow was filled and seeded. The animal burrow located during the quarterly inspection is noted on [Figure 3](#).

### **LEACHATE COLLECTION AST**

The 15,000-gallon leachate accumulation AST is located in the containment/control building. An inspection of this AST system (tank, piping, containment) is completed and documented during each site visit by OBG and during quarterly inspections in accordance with the post-closure care plan (PCCP). No evidence of leakage was observed within the AST secondary containment area or the associated piping.

### **ACCESS ROADS**

The landfill access and perimeter roads were inspected for sufficient gravel and proper drainage during the quarterly inspections.

During the 1<sup>st</sup> quarterly inspection the access road west of the wetlands had two areas of ponded water. The wet sections of road were avoided until the road was dry. Due to the per- and polyfluorinated substances (PFAS) investigation during the 3<sup>rd</sup> and 4<sup>th</sup> quarters the perimeter access roads were rutted and the grass was worn down. Gravel was added and spread to the access road south of the Remaining Materials Area (RMA) ([Figure 3](#)) to reinforce the road for truck access to the western wetland berm area. At the end of the PFAS investigation the road will be repaired.

During the 1<sup>st</sup> quarter of 2019 grass seed will be spread to reestablish a base for the perimeter road. No other problems to the access roads were observed during 2018.

### **SITE PERIMETER FENCING AND GATES**

During the 2<sup>nd</sup> quarter and 4<sup>th</sup> quarter, one previously repaired hole along the west perimeter fence had been reopened. The hole was repaired during the site inspections [Figure 3](#).

### **LEACHATE COLLECTION SYSTEM**

The leachate collection system was inspected quarterly for visible signs of damage. System components inspected include the control panels for the sumps and the leak detection vaults, as well as the visible portions of the vault piping. No evidence of damage was observed for the aboveground components of the system. Additionally, no signs of erosion/washouts were noticed in the areas around the control panels and posts.

### **LEACHATE DETECTION ALARM SYSTEM**

The PermAlert automated leak detection alarm was tested during each quarterly inspection. The alarm was found to be operating during each of the quarterly inspections.

## VAULT LIQUID REMOVAL

The leak detection vaults were pumped out monthly during the year with the exception of the October 2018. Per the Post-Closure Care Plan, which was revised and approved on January 24, 2017, dewatering can occur on an every other month basis unless more than 300 gallons of liquid were removed from a vault during a dewatering event. If more than 300 gallons were removed from a vault, then that vault was dewatered the following month and continued to be dewatered on a monthly basis until less than 150 gallons were removed during a single dewatering event, after which dewatering for that vault reverts back to every other month. If three or more vaults had more than 300 gallons removed during a dewatering event, then the next monthly dewatering event included all the vaults. The volumes of liquid evacuated from each cell are provided in **Table 1** and were reported in the Quarterly Status Reports.

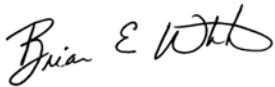
## DRAINAGE INSPECTION

The perimeter of the landfill and berm, drainage trenches at the base of the landfill, the Remaining Materials Area (RMA, **Figure 2**), and the wetland area were inspected for potential drainage problems. No drainage issues were observed during the quarterly inspections for 2018. However, due to the discovery of PFAS within the storm water piping and surface water ponds, modifications to Site drainage began on December 17, 2018 to prevent off-site storm water discharge through the storm water piping.

This summary of the quarterly inspections fulfills the annual inspection reporting requirements for 2018. If you have any questions, feel free to contact Cliff at (313) 333-0211.

Very truly yours,

**O'BRIEN & GERE ENGINEERS, INC.**



Brian E. White, PE  
Senior Vice President

Very truly yours,

**O'BRIEN & GERE ENGINEERS, INC.**



Clifford S. Yantz  
Senior Hydrogeologist

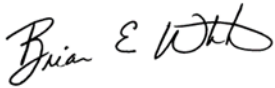
## ENCLOSURES:

Table 1 – Liquid Volumes Removed from LDS Vaults in 2018  
Figure 1 – Site Location Map  
Figure 2 – Site Layout  
Figure 3 – 2018 Incident Location Map  
Appendix A – Inspection Logs

cc: David Favero – RACER Trust  
Kevin Schneider – OBG

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

On Behalf of RACER Trust



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Brian E. White, PE  
Senior Vice President – O'Brien & Gere Engineers, Inc.

Agent for RACER Trust

Date: February 27, 2019

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cc: file

**TABLES**

**TABLE 1****RACER Trust - Coldwater Road Landfill Facility****Liquid Volumes Removed from LDS Vaults in 2018**

<i>Date</i> 2018	<i>VAULT</i> A	<i>VAULT</i> B	<i>VAULT</i> C	<i>VAULT</i> D	<i>VAULT</i> E	<i>VAULT</i> F	<i>TOTAL LDS</i> <i>GALLONS</i>
11-Jan-18	60	635	46	59	508	74	1,382
15-Feb-18	--	631	--	--	488	--	1,119
20-Mar-18	60	609	43	50	562	9	1,333
19-Apr-18	--	398	--	--	484	--	882
23-May-18	73	225	54	54	656	32	1,094
19-Jun-18	--	--	--	--	489	--	489
30-Jul-18	92	215	117	153	310	17	904
21-Aug-18	--	--	--	--	144	--	144
18-Sep-18	123	145	154	145	125	19	711
30-Oct-18	--	--	--	--	--	--	-
20-Nov-18	148	456	92	98	390	20	1,204
20-Dec-18	--	621	--	--	416	--	1,037
<b>YEAR END TOTAL</b>	<b>556</b>	<b>3,935</b>	<b>506</b>	<b>559</b>	<b>4,572</b>	<b>171</b>	<b>10,299</b>

**Notes**

Liquid volumes in gallons

LDS - Leak Detection System

-- Vault not dewatered

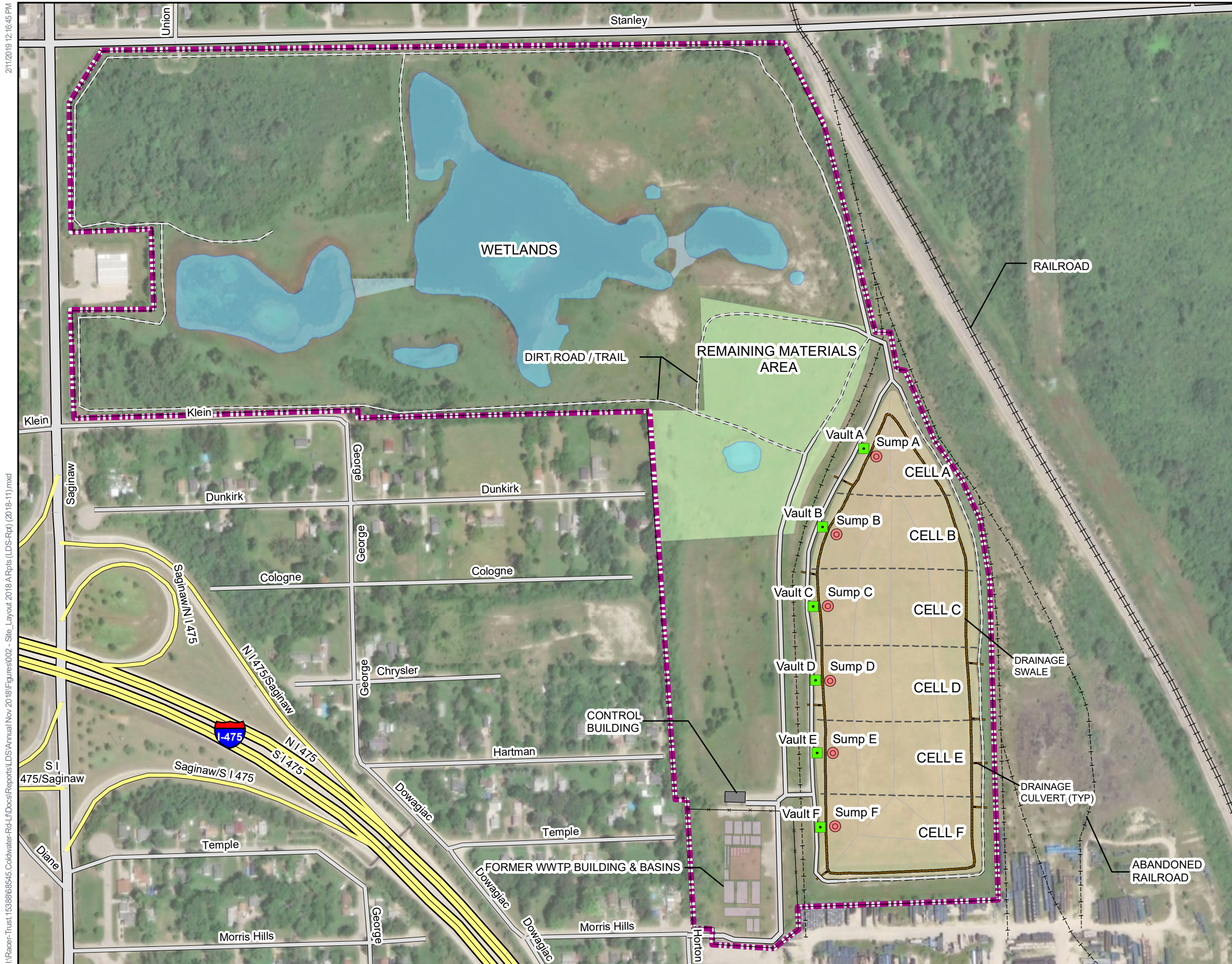
Pre the revised Post Closure Care Plan October 2014, dewatering occurred on an every other month basis unless more than 300 gallons

of liquid were removed from a vault during a dewatering event. If more than 300 gallons were removed from a vault, then that vault was dewatered the following month and continued to be dewatered on a monthly basis until less than 150 gallons were removed during a single dewatering event, after which dewatering for that vault reverted back to every other month.




If three or more vaults had more than 300 gallons removed during a dewatering event, then the next monthly dewatering event included all the vaults.

**FIGURES**





**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT
-  PROPERTY BOUNDARY

**RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN**

**SITE LAYOUT**



FILE NO. 68545  
DATE JANUARY 2019



O'BRIEN & GERE ENGINEERS, INC.

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I:\Racer-Trust\1538868545\_Coldwater-Rd-Landfills\Reports\LD\Annual Nov 2018\Figures002 - Site Layout 2018 A Rpts (LDS-Rpt) (2018-11).mxd

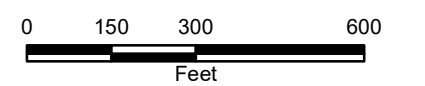


**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT
-  FENCE REPAIR
-  ANIMAL BURROW LOCATION (4th Quarter 2018)
-  MOLE ACTIVITY
-  PONDED WATER
-  ROAD REPAIR
-  PROPERTY BOUNDARY

RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**2018  
INCIDENT LOCATION  
MAP**



FILE NO. 68545  
DATE JANUARY 2019



O'BRIEN & GERE ENGINEERS, INC.

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**APPENDIX A**  
**Inspection Logs**

**Quarterly Post Closure Inspection Log Sheet**  
**Coldwater Road Landfill Site – Operations and Maintenance**  
**Flint, Michigan**  
**Project No. 68545**

Inspector's Name/Title Kevin Schneider Scientist

Inspector's Signature/Date/Time *[Signature]* 3/20/18 - 3/21/18

**Cap and Berm**

Inspect the landfill cap and berms for burrowing animals, soil erosion, slope failures, ponding, washouts, and liner damage/exposure. Indicate the presence or absence of each item. Note identified issues on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	Liner damage or exposure?	If yes to any, describe issue, location, and actions taken	Date Corrected
Cell A	Mole activity cell A1	No	No	No	No	No		
Cell B	No	No	No	No	No	No		
Cell C	No	No	No	No	No	No		
Cell D	Mole activity cell D1	No	No	No	No	No		
Cell E	Mole activity cell E1	No	No	No	No	No		
Cell F	Mole activity F4	No	No	No	No	No		
Berms	No	No	No	No	No	No		

**Woody Plant Removal Activities**

Summarize monthly activities:

Removed a number of woody plants during inspection

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**Leachate Tank Storage**

Inspect for evidence of leakage, and presence of drums, sandbags, shovels at each leachate tank storage location.

**Tank**

- Cracks or holes observed in tank? No  Yes \_\_\_
- Liquid dripping or running from tank? No  Yes \_\_\_
- Staining observed on the tank surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

**Piping**

- Is piping sagging, cracked or punctured? No  Yes \_\_\_
- Liquid dripping or running from piping? No  Yes \_\_\_
- Is the tank discharge valve open? No  Yes \_\_\_
- Staining observed on the piping surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

**Emergency Response**

- Are drums present in accumulation building? No \_\_\_ Yes
- Are sandbags present in accumulation building? No \_\_\_ Yes
- Are shovels present in accumulation building? No \_\_\_ Yes

If no to any, describe issue, location, and actions taken	Date Corrected

**Vegetation**

Inspect landfill cap and berm for areas with sparse vegetation, deep-rooted plants and proper height around equipment and access roads. Describe any identified issues and note on an attached drawing. If no issues are found, indicate "none" in the appropriate box.

Cell	Areas with sparse vegetation present?	Deep-rooted plants present?	Do areas around building and equipment need to be mowed?	Do access roads need to be mowed?	If yes, describe issue, and actions taken	Date Corrected
A	No	No	No	No		
B	No	No	↓	↓		
C	No	No				
D	No	No				
E	No	No				
F	No	No				
Berms	No	No				

**Access Roads**

Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe issue, and actions taken	Date Corrected
Roads located approx. west of landfill	Yes	Yes		
Roads located approx. east of landfill	Yes	Yes		
Roads located approx. north of wetlands	Yes	Yes		
Roads located approx. south of wetlands	Yes	Yes		
Roads located approx. west of wetlands	Yes	two wet areas by dollar general seasonal		
Roads located approx. east of wetlands	Yes	Yes		

**Site Perimeter Fence**

Inspect all perimeter fencing and gates for damage or unauthorized entry, and proper warning signs. Note identified issues on an attached drawing.

Area	Any damage present?	Signs of unauthorized entry?	Broken or damaged locks on gates?	"Trespassing Prohibited" and "Private Property" Signs Missing?	If yes to any, describe issue, and actions taken	Date Corrected
Fences along north property line	No	No	No	No		
Fences along south property line	No	No	No	No		
Fences along west property line	No	No	No	No		
Fences along east property line	No	No	No	No		

**Leachate Collection System**

Conduct the alarm test, cable test and battery test on a yearly basis as outlined in Section 4 of the post Closure Care Plan. Inspect the system panel boxes for visible signs of damage.

**Alarm Test**

1. Disconnect the sensor cable.
2. Reconnect the sensor cable. Alarm will reset.

**Cable Test**

1. Wet a short length of cable to activate the alarm by wetting a section of the cable stored in the containment vault.
2. Dry the cable after the test.

Alarm Test		Cable Test	
Did the system show a fault in the cable?	Was the alarm activated?	Was the alarm activated?	Any damage noted to system panel boxes?
			No

**Battery Test**

1. Turn the power off.
2. Remove the processor card.
3. Remove the battery jumper.
4. Is the voltage across the terminals is < 3.6 VDC?
5. If yes, replace the battery.

Describe any issues and actions taken	Date Corrected

**Remaining Materials Area**

Inspect the soil cover for deep root penetration, burrowing animals, soil erosion, ponding of water and slope failures. Note problems on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	If yes to any, describe issue, location, and actions taken	Date Corrected
RMA	No	No	No	No	No		

**Drainage Inspections**

Inspect the perimeter of the landfill and berm, drainage trenches at the base of the landfill, RMA and wetlands area for potential drainage problems. Check culverts around landfill, western drainage swale and north landfill catch basin for blockage.

Area Inspected	Drainage problem or blockage observed?	Location (note on figure)	Description	Corrective Actions	Date Corrected
Perimeter of landfill and berm	No				
Drainage trenches at base of landfill	No				
RMA	No				
Wetlands area	No				
Culverts around landfill	No		water ponded by cell B dam no water visible around cell E drains		
Western drainage swale	No				
North landfill catch basin	No				

1st Qtr 2018

FOR PROJECT NO. 13086-4785-008-REPORTS INSPECTION SECURITY REPORT 08/18/12



PLOT DATE: 2/6/2012 8:04



FIGURE 2

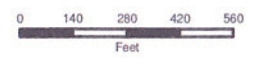


**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT

RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**SITE LAYOUT**



FEBRUARY 2012  
15388/47850-008



**Quarterly Post Closure Inspection Log Sheet**  
**Coldwater Road Landfill Site – Operations and Maintenance**  
**Flint, Michigan**  
**Project No. 68545**

Inspector's Name/Title Kevin Schneider Scientist

Inspector's Signature/Date/Time KLL 6/18/18 - 6/19/18

**Cap and Berm**

Inspect the landfill cap and berms for burrowing animals, soil erosion, slope failures, ponding, washouts, and liner damage/exposure. Indicate the presence or absence of each item. Note identified issues on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	Liner damage or exposure?	If yes to any, describe issue, location, and actions taken	Date Corrected
Cell A	No	No	No	No	No	No		
Cell B	Mole activity cell B1	No	No	No	No	No	can't determine if old or active	
Cell C	No	No	No	No	No	No		
Cell D	Mole activity cell D1	No	No	No	No	No	can't determine if old or active	
Cell E	Mole activity cell E1	No	No	No	No	No	can't determine if old or active	
Cell F	Mole activity cell F1	No	No	No	No	No	can't determine if old or active	
Berms	No	No	No	No	No	No		

**Woody Plant Removal Activities**

Summarize monthly activities:

Removed a number of woody plants during  
inspection and throughout quarter  
no animal burrows observed

**Leachate Tank Storage**

Inspect for evidence of leakage, and presence of drums, sandbags, shovels at each leachate tank storage location.

*water on containment floor from city water*

Tank

- Cracks or holes observed in tank? No  Yes \_\_\_
- Liquid dripping or running from tank? No  Yes \_\_\_
- Staining observed on the tank surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

Piping

- Is piping sagging, cracked or punctured? No  Yes \_\_\_
- Liquid dripping or running from piping? No  Yes \_\_\_
- Is the tank discharge valve open? No  Yes \_\_\_
- Staining observed on the piping surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

Emergency Response

- Are drums present in accumulation building? No \_\_\_ Yes
- Are sandbags present in accumulation building? No \_\_\_ Yes
- Are shovels present in accumulation building? No \_\_\_ Yes

If no to any, describe issue, location, and actions taken	Date Corrected

Vegetation

Inspect landfill cap and berm for areas with sparse vegetation, deep-rooted plants and proper height around equipment and access roads. Describe any identified issues and note on an attached drawing. If no issues are found, indicate "none" in the appropriate box.

Cell	Areas with sparse vegetation present?	Deep-rooted plants present?	Do areas around building and equipment need to be mowed?	Do access roads need to be mowed?	If yes, describe issue, and actions taken	Date Corrected
A	No	No	No	Yes	grass around building and some plants mowed	
B	No	No				
C	No	No				
D	No	No				
E	No	No				
F	No	No				
Berms	No	No				

**Leachate Collection System**

Conduct the alarm test, cable test and battery test on a yearly basis as outlined in Section 4 of the post Closure Care Plan. Inspect the system panel boxes for visible signs of damage.

Alarm Test

1. Disconnect the sensor cable.
2. Reconnect the sensor cable. Alarm will reset.

Cable Test

1. Wet a short length of cable to activate the alarm by wetting a section of the cable stored in the containment vault.
2. Dry the cable after the test.

Alarm Test		Cable Test	
Did the system show a fault in the cable?	Was the alarm activated?	Was the alarm activated?	Any damage noted to system panel boxes?
			No

Battery Test

1. Turn the power off.
2. Remove the processor card.
3. Remove the battery jumper.
4. Is the voltage across the terminals is < 3.6 VDC?
5. If yes, replace the battery.

Describe any issues and actions taken	Date Corrected

**Remaining Materials Area**

Inspect the soil cover for deep root penetration, burrowing animals, soil erosion, ponding of water and slope failures. Note problems on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	If yes to any, describe issue, location, and actions taken	Date Corrected
RMA	No	No	No	No	No		

**Access Roads**

Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe issue, and actions taken	Date Corrected
Roads located approx. west of landfill	Yes	Yes		
Roads located approx. east of landfill	Yes	Yes		
Roads located approx. north of wetlands	Yes	Yes		
Roads located approx. south of wetlands	Yes	Yes		
Roads located approx. west of wetlands	Yes	Yes		
Roads located approx. east of wetlands	Yes	Yes		

**Site Perimeter Fence**

Inspect all perimeter fencing and gates for damage or unauthorized entry, and proper warning signs. Note identified issues on an attached drawing.

Area	Any damage present?	Signs of unauthorized entry?	Broken or damaged locks on gates?	"Trespassing Prohibited" and "Private Property" Signs Missing?	If yes to any, describe issue, and actions taken	Date Corrected
Fences along north property line	No	No	No	No		
Fences along south property line	No	No	No	No		
Fences along west property line	Yes	No	No	No	closed opening along west fence	6/13/18
Fences along east property line	No	No	No	No		

**Drainage Inspections**

Inspect the perimeter of the landfill and berm, drainage trenches at the base of the landfill, RMA and wetlands area for potential drainage problems. Check culverts around landfill, western drainage swale and north landfill catch basin for blockage.

Area Inspected	Drainage problem or blockage observed?	Location (note on figure)	Description	Corrective Actions	Date Corrected
Perimeter of landfill and berm	No				
Drainage trenches at base of landfill	No				
RMA	No				
Wetlands area	No				
Culverts around landfill	No				
Western drainage swale	No				
North landfill catch basin	No				

2nd QRT 2018

1078 PROJECTS MAIL: 15388-47850.DOCX: REPORTS: INSPECTION SECURITY: REPORT 008.MXD



PLOT DATE: 2/6/2012 8:46



FIGURE 2



**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT

RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**SITE LAYOUT**



FEBRUARY 2012  
15388/47850-008



MAP USES DATA FROM THE MICHIGAN CENTER FOR GEOGRAPHIC INFORMATION

**Quarterly Post Closure Inspection Log Sheet**  
**Coldwater Road Landfill Site – Operations and Maintenance**  
**Flint, Michigan**  
**Project No. 68545**

Inspector's Name/Title Kevin Schander Scientist

Inspector's Signature/Date/Time 9/26/18

**Cap and Berm**

Inspect the landfill cap and berms for burrowing animals, soil erosion, slope failures, ponding, washouts, and liner damage/exposure. Indicate the presence or absence of each item. Note identified issues on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	Liner damage or exposure?	If yes to any, describe issue, location, and actions taken	Date Corrected
Cell A	No	No	No	No	No	No		
Cell B	Mole activity cell B1	No	No	No	No	No	old activity?	
Cell C	No	No	No	No	No	No		
Cell D	Mole activity cell D1	No	No	No	No	No	old activity?	
Cell E	Mole activity cell E1	No	No	No	No	No	old activity?	
Cell F	Mole activity cell F1	No	No	No	No	No	old activity	
Berms	No	No	No	No	No	No		

**Woody Plant Removal Activities**

Summarize monthly activities:

Removed a number of woody plants during inspection

**Leachate Tank Storage**

Inspect for evidence of leakage, and presence of drums, sandbags, shovels at each leachate tank storage location.

*Water/stains on containment floor from city water*

Tank

- Cracks or holes observed in tank? No  Yes \_\_\_
- Liquid dripping or running from tank? No  Yes \_\_\_
- Staining observed on the tank surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

Piping

- Is piping sagging, cracked or punctured? No  Yes \_\_\_
- Liquid dripping or running from piping? No  Yes \_\_\_
- Is the tank discharge valve open? No  Yes \_\_\_
- Staining observed on the piping surface? No  Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

Emergency Response

- Are drums present in accumulation building? No \_\_\_ Yes
- Are sandbags present in accumulation building? No \_\_\_ Yes
- Are shovels present in accumulation building? No \_\_\_ Yes

If no to any, describe issue, location, and actions taken	Date Corrected

Vegetation

Inspect landfill cap and berm for areas with sparse vegetation, deep-rooted plants and proper height around equipment and access roads. Describe any identified issues and note on an attached drawing. If no issues are found, indicate "none" in the appropriate box.

Cell	Areas with sparse vegetation present?	Deep-rooted plants present?	Do areas around building and equipment need to be mowed?	Do access roads need to be mowed?	If yes, describe issue, and actions taken	Date Corrected
A	No	No	Yes	Yes	plowed around building Sept	
B	No	No				
C	No	No				
D	No	No				
E	No	No				
F	No	No				
Berms	No	No				

**Leachate Collection System**

Conduct the alarm test, cable test and battery test on a yearly basis as outlined in Section 4 of the post Closure Care Plan. Inspect the system panel boxes for visible signs of damage.

Alarm Test

1. Disconnect the sensor cable.
2. Reconnect the sensor cable. Alarm will reset.

Cable Test

1. Wet a short length of cable to activate the alarm by wetting a section of the cable stored in the containment vault.
2. Dry the cable after the test.

Alarm Test		Cable Test	Any damage noted to system panel boxes?
Did the system show a fault in the cable?	Was the alarm activated?	Was the alarm activated?	
			No

Battery Test

1. Turn the power off.
2. Remove the processor card.
3. Remove the battery jumper.
4. Is the voltage across the terminals is < 3.6 VDC?
5. If yes, replace the battery.

Describe any issues and actions taken	Date Corrected

**Remaining Materials Area**

Inspect the soil cover for deep root penetration, burrowing animals, soil erosion, ponding of water and slope failures. Note problems on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	If yes to any, describe issue, location, and actions taken	Date Corrected
RMA	No	No	No	No slight roots	No		

and ponded water on path to nest

**Access Roads**

Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe issue, and actions taken	Date Corrected
Roads located approx. west of landfill	yes	yes		
Roads located approx. east of landfill	yes	yes		
Roads located approx. north of wetlands	yes N/A on northeast road due to wet/drill	rig activity	yes	
Roads located approx. south of wetlands	yes	yes		
Roads located approx. west of wetlands	yes	yes		
Roads located approx. east of wetlands	yes	yes		

**Site Perimeter Fence**

Inspect all perimeter fencing and gates for damage or unauthorized entry, and proper warning signs. Note identified issues on an attached drawing.

Area	Any damage present?	Signs of unauthorized entry?	Broken or damaged locks on gates?	"Trespassing Prohibited" and "Private Property" Signs Missing?	If yes to any, describe issue, and actions taken	Date Corrected
Fences along north property line	No	No	No			
Fences along south property line	No	No	No			
Fences along west property line	No	No	No			
Fences along east property line	No	No	No			

**Drainage Inspections**

Inspect the perimeter of the landfill and berm, drainage trenches at the base of the landfill, RMA and wetlands area for potential drainage problems. Check culverts around landfill, western drainage swale and north landfill catch basin for blockage.

Area Inspected	Drainage problem or blockage observed?	Location (note on figure)	Description	Corrective Actions	Date Corrected
Perimeter of landfill and berm	No				
Drainage trenches at base of landfill	No				
RMA	No				
Wetlands area	No				
Culverts around landfill	No				
Western drainage swale	No				
North landfill catch basin	No				

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PLOT DATE: 2/6/2012 10:48



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Wet Area

FIGURE 2



**LEGEND**

-  LEACHATE COLLECTION SUMP
-  ACCESS PORT FOR LEAK DETECTION VAULT

RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**SITE LAYOUT**



FEBRUARY 2012  
15388/47850-008



**Quarterly Post Closure Inspection Log Sheet**  
 Coldwater Road Landfill Site – Operations and Maintenance  
 Flint, Michigan  
 Project No. 68545

Inspector's Name/Title Kenn Schneider Scientist - II

Inspector's Signature/Date/Time [Signature] 12/20/18 1300

**Cap and Berm**

Inspect the landfill cap and berms for burrowing animals, soil erosion, slope failures, ponding, washouts, and liner damage/exposure. Indicate the presence or absence of each item. Note identified issues on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	Liner damage or exposure?	If yes to any, describe issue, location, and actions taken	Date Corrected
Cell A	No	No	No	No	No	No		
Cell B	Small animal Burrow B1, B2 Mole mound	No	No	No	No	No	filled in Burrow	12/20/18
Cell C	No	No	No	No	No	No		
Cell D	Cell D1 Mole mound	No	No	No	No	No		
Cell E	Cell E4 Mole mound	No	No	No	No	No		
Cell F	Cell F3 Mole mound	No	No	No	No	No		
Berms								

**Woody Plant Removal Activities**

Summarize monthly activities:

Landfill cap was inspected for woody plants during quarterly inspections. A few woody plants were removed, small cedar tree

**Leachate Tank Storage**

Inspect for evidence of leakage, and presence of drums, sandbags, shovels at each leachate tank storage location.

Tank

- Cracks or holes observed in tank? No X Yes \_\_\_
- Liquid dripping or running from tank? No X Yes \_\_\_
- Staining observed on the tank surface? No X Yes \_\_\_

*water stains on containment floor due to dripping city water. Think Ball valve leaks and*

If yes to any, describe issue, location, and actions taken	Date Corrected

Piping

- Is piping sagging, cracked or punctured? No X Yes \_\_\_
- Liquid dripping or running from piping? No X Yes \_\_\_
- Is the tank discharge valve open? No X Yes \_\_\_
- Staining observed on the piping surface? No X Yes \_\_\_

If yes to any, describe issue, location, and actions taken	Date Corrected

Emergency Response

- Are drums present in accumulation building? No \_\_\_ Yes X
- Are sandbags present in accumulation building? No \_\_\_ Yes X
- Are shovels present in accumulation building? No \_\_\_ Yes X

If no to any, describe issue, location, and actions taken	Date Corrected

Vegetation

Inspect landfill cap and berm for areas with sparse vegetation, deep-rooted plants and proper height around equipment and access roads. Describe any identified issues and note on an attached drawing. If no issues are found, indicate "none" in the appropriate box.

Cell	Areas with sparse vegetation present?	Deep-rooted plants present?	Do areas around building and equipment need to be mowed?	Do access roads need to be mowed?	If yes, describe issue, and actions taken	Date Corrected
A	NO	NO	NO <i>grass was been mowed due to investigations onsite</i>	NO	Plan to mow again next spring or summer	
B	B3 <i>small area with a few bare spots</i>	NO			will seed if need in the spring	
C	NO	NO				
D	NO	NO				
E	NO	NO				
F	NO	NO				
Berms	NO	NO				

*water drips from pressure relief, which freezes during winter,*

**Access Roads**

Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe issue, and actions taken	Date Corrected
Roads located approx. west of landfill	Ruts and damage due to site activity			
Roads located approx. east of landfill	Yes	Yes		
Roads located approx. north of wetlands	Ruts and damage due to site activity			
Roads located approx. south of wetlands	" "			
Roads located approx. west of wetlands	" "			
Roads located approx. east of wetlands	" "			

**Site Perimeter Fence**

Inspect all perimeter fencing and gates for damage or unauthorized entry, and proper warning signs. Note identified issues on an attached drawing.

Area	Any damage present?	Signs of unauthorized entry?	Broken or damaged locks on gates?	"Trespassing Prohibited" and "Private Property" Signs Missing?	If yes to any, describe issue, and actions taken	Date Corrected
Fences along north property line	No	No	No	No		
Fences along south property line	No	No	No	No		
Fences along west property line	Fixed hole about 1/2 mile previously open	No	No	No		10/20/18
Fences along east property line	No	No	No	No		

**Leachate Collection System**

Conduct the alarm test, cable test and battery test on a yearly basis as outlined in Section 4 of the post Closure Care Plan. Inspect the system panel boxes for visible signs of damage.

Alarm Test

1. Disconnect the sensor cable.
2. Reconnect the sensor cable. Alarm will reset.

Cable Test

1. Wet a short length of cable to activate the alarm by wetting a section of the cable stored in the containment vault.
2. Dry the cable after the test.

Alarm Test		Cable Test	
Did the system show a fault in the cable?	Was the alarm activated?	Was the alarm activated?	Any damage noted to system panel boxes?
			No

Battery Test

1. Turn the power off.
2. Remove the processor card.
3. Remove the battery jumper.
4. Is the voltage across the terminals is < 3.6 VDC?
5. If yes, replace the battery.

Describe any issues and actions taken	Date Corrected

**Remaining Materials Area**

Inspect the soil cover for deep root penetration, burrowing animals, soil erosion, ponding of water and slope failures. Note problems on an attached drawing.

Area of Inspection	Animal Burrows?	Soil Erosion	Slope Failures?	Ponding?	Washouts?	If yes to any, describe issue, location, and actions taken	Date Corrected
RMA	No	NO	No	NO	NO	added gravel to path to nest road to support vehicles accessing beam additions	

**Drainage Inspections**

Inspect the perimeter of the landfill and berm, drainage trenches at the base of the landfill, RMA and wetlands area for potential drainage problems. Check culverts around landfill, western drainage swale and north landfill catch basin for blockage.

Area Inspected	Drainage problem or blockage observed?	Location (note on figure)	Description	Corrective Actions	Date Corrected
Perimeter of landfill and berm	No				
Drainage trenches at base of landfill	No				
RMA	No				
Wetlands area	Berm constructed to keep onsite				
Culverts around landfill	No				
Western drainage swale	No				
North landfill catch basin	No				

12/20/18 QRT 4

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PLOT DATE: 2/6/2012 8:55



FIGURE 2



**LEGEND**

- LEACHATE COLLECTION SUMP
- ACCESS PORT FOR LEAK DETECTION VAULT

RACER TRUST  
COLDWATER ROAD  
LANDFILL FACILITY  
FLINT, MICHIGAN

**SITE LAYOUT**



FEBRUARY 2012  
15388/47850-008



MAP USES DATA FROM THE MICHIGAN CENTER FOR GEOGRAPHIC INFORMATION

