2013 ANNUAL REPORT – FINAL REPORT

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

> RACER Trust Detroit, Michigan

> > February 2014



15388 50137

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

> Prepared for RACER Trust Detroit, Michigan

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SCOTT L. CORMIER, P.E. VICE PRESIDENT O'BRIEN & GERE ENGINEERS, INC.



February 26, 2014

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: 2013 Annual Landfill Inspection Report Coldwater Road Landfill Flint, Michigan FILE: 15388/50137/rep

Dear Mr. Conforti:

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), O'Brien & Gere Engineers, Inc. (O'Brien & Gere) is presenting this annual Landfill Inspection Report summarizing the 2013 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 Attachment A. A Site Location Map (Figure 1), a Site Layout (Figure 2), and a 2013 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 in the ditch and/or washouts. No slope failures or ponding of water was observed during the 2013 quarterly inspections. The following is a summary of the issues encountered on the cap and berms during the 2013 quarterly inspections.

During the 1st quarter inspection two areas of erosion were observed where the drains to move water away from Cell D had been installed. Shortly after the inspection the areas were backfilled with soil or gravel, within the access road, to their original grade and seeded as appropriate.

Several hundred woody-stemmed plants were removed by the root from the landfill cap between March 2013 and December 2013.

Twenty-one animal burrows were identified and closed throughout the year. Animal burrows were photographically documented (before and after repair), and the approximate size and configuration of the burrows were documented and included in the Quarterly Status Reports.

Traps were set at the opening of each animal burrow that appeared to be active. After several days without animal activity, the burrows were filled using methods approved by the Michigan Department of Environmental Quality (MDEQ). Animal burrows located during the quarterly inspections are noted on Figure 3. 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.

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 O'Brien & Gere and during quarterly inspections in accordance with the post-closure care plan (PCP). 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 2nd quarter inspection, shallow ruts in the road and ponded water were observed along the north and northwest perimeter road (Figure 3). The wet sections of road were avoided until the road was dry. The shallow ruts do not affect access and will continue to be monitored and repaired when necessary. No other problems to the access roads were observed during 2013.

SITE PERIMETER FENCING AND GATES

Damage to the site perimeter fence was noted at a number of locations during the quarterly inspections. During the 1st quarter inspection, one previously repaired hole was reopened along the west perimeter fence. During the 3rd quarter inspection, two previously repaired holes were reopened along the west perimeter fence.

The holes in the perimeter fence were repaired either during the inspections or shortly thereafter.

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. During the 1^{st} quarter the alarm was down for repair and not functioning, but was found to be operating during the 2^{nd} quarter, 3^{rd} quarter, and 4^{th} quarter inspections.

During the 2012 PermAlert cable replacement, water had entered the interstitial space of the force main. To aid in the drying of the interstitial space of the force main, the PermAlert manufacturer recommended installing a desiccate air dryer to the air compressor to help reduce the amount of moisture in the air used to dry the interstitial space. The desiccate air dryer was installed on March 7, 2013. To lower the temperature of the air before entering the desiccate air dryer and improve the performance of the desiccate air dryer, a heat exchanger was installed on July 18, 2013. The air dryer and heat exchanger were installed to help improve the systems function for future use.

VAULT LIQUID REMOVAL

The leak detection vaults were pumped out monthly during the year. The volumes of liquid evacuated from each cell are provided in Table 1 and were reported in the Quarterly Status Reports.

Mr. Richard Conforti February 26, 2014 Page 3

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 2013.

This summary of the quarterly inspections fulfills the annual inspection reporting requirements for 2013. If you have any questions, feel free to contact either of us at (248) 477-5701.

Very truly yours, O'BRIEN & GERE ENGINEERS, INC.

Scott L. Cormier, P.E. Vice President

Very truly yours, O'BRIEN & GERE ENGINEERS, INC.

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Clifford S. Yantz, P.G. Scientist-3

ENCLOSURES:

Table 1 – Liquid Volumes Removed in 2013 Figure 1 – Site Location Map Figure 2 – Site Layout Figure 3 – Incident Location Map Attachment A – Inspection Logs

cc: David Favero – RACER Trust Kevin Schneider – O'Brien & Gere

Mr. Richard Conforti February 26, 2014 Page 4

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

Scott L. Cormier, P.E. Vice President – O'Brien & Gere Engineers, Inc.

Agent for RACER Trust

February 26, 2014

Date

cc: file

TABLES





Table 1Coldwater Road Landfill FacilityLiquid Volumes Removed from LDS Vaults in 2013

Date 2013	Vault A	Vault B	Vault C	Vault D	Vault E	Vault F	TOTAL LDS GALLONS
24-Jan-13	59	33	28	78	20	22	240
12-Mar-13	-	67	-	-	-	-	67
20-Mar-13	59	35	40	52	703	19	908
18-Apr-13	50	73	25	40	470	64	722
30-Apr-13	-	-	-	-	290	-	290
20-May-13	71	180	41	-	-	-	292
19-Jun-13	79	109	23	16	656	40	923
28-Jun-13	-	-	-	-	240	-	240
18-Jul-13	105	130	58	69	232	18	612
31-Jul-13	-	-	-	-	106	-	106
14-Δυσ-13	96	91	86	83	82	56	494
IT Aug 15	50	51	50	05	02	50	+5+
12-Sep-13	77	68	88	81	88	18	420
17-Oct-13	69	51	59	69	72	24	344
13-Nov-13	46	41	32	49	36	153	357
13-Dec-13	31	23	25	41	24	9	153
YEAR END TOTAL	742	901	505	578	3,019	423	6,168

Notes:

Liquid volumes in gallons. LDS - Leak Detection System

FIGURES



FIGURE 1





RACER TRUST COLDWATER ROAD LANDFILL FACILITY FLINT, MICHIGAN

SITE LOCATION MAP

n

N

DECEMBER 2013 15388/50137/001 Miles

0.8







MAP USES DATA FROM THE MICHIGAN CENTER FOR GEOGRAPHIC INFORMATION

FIGURE 3



LEGEND

- LEACHATE 0 COLLECTION SUMP ACCESS PORT FOR • LEAK DETECTION VAULT MONITORING WELL -LOCATION \times FENCE REPAIR
- DRAIN EXCAVATION REPAIR
- ANIMAL BURROW LOCATION \otimes 2ND QUARTER
- ANIMAL BURROW LOCATION 3RD QUARTER \otimes
- ANIMAL BURROW LOCATION 4TH QUARTER \otimes

RACER TRUST COLDWATER ROAD LANDFILL FACILITY FLINT, MICHIGAN

2013 **INCIDENT LOCATION** MAP



JANUARY 2013 15388/50137-003





ATTACHMENT A Inspection Logs



Quarterly Post Closure Inspection Log Sheet

Coldwater Road Landfill Site - Operations and Maintenance

Flint, Michigan

Project No. 50137

Inspector's Name/Title	Kevin	Schr	neider	Scient	15t	
Inspector's Signature/Date/Time	74	2	SIL	3/20	/13	(3:00

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	
Cell A	No	No	Ņŷ	No	ю	Na		
Cell B	Ņo	Nð	No	No	NO	در		
Cell C	NJ	NO	No	No	N ^o	Ŋa		
Ċell D	NJ	Yeg	NV	NØ	Yes	NÐ	The grea where the drains were asstalled has settled and will need to be	filled in
Cell E	No	Ņo	No	NO	NO	Ņэ		
Cell F	NU	No	No	סק	No	64l		
Berms	NO	рð	NO	NƏ	No	No		

Woody Plant Removal Activities

Summarize monthly activities:

woody plants were located throughout plants will be remained once the ground were located number of the woody landfil CAP. The MAG mured

.

Leachate Tank Storage

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

Tank

Cracks or holes observed in tank?	No <u>×</u>	Yes
Liquid dripping or running from tank?	No_X	Yes
Staining observed on the tank surface?	No_X	Yes
Piping		
Is piping sagging, cracked or punctured?	No <u>×</u>	Yes
Liquid dripping or running from piping?	No <u>×</u>	Yes
Is the tank discharge valve closed and locked?	No Kin	Yes_X
Staining observed on the piping surface?	No <u>X</u>	Yes
Emergency Response		
Are drums present in accumulation building?	No <u>X</u>	Yes
Are sandbags present in accumulation building?	No_X	Yes
Are shovels present in accumulation building?	No	Yes <u>X</u>

<u>Vegetation</u> Inspect landfill cap and berm for areas with sparse vegetation, deep-rooted plants and proper height around equipment and indicate "none" in 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?	Areas around building and equipment mowed?	Access roads mowed and in good condition?	
A	Nö	Located sparsely throughout	NO	Not moved but in good condition	
В	No				
С	No				
D	Anens were put in Spring were put in has sparse very				
Е	No				
F	No				
Berms	ŊO				

1

<u>Access Roads</u> Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe
Roads located approx. west of landfill	Yes	Yes	
Roads located approx. east of landfill	Ye s	405	
Roads located approx. north of wetlands	405	Ye 5	
Roads located approx. south of wetlands	Ye5	Yes	
Roads located approx. west of wetlands	Yes	little ponded water area NW catch basin	
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?	"Tresspassing Prohibited" and "Private Property" Signs Posted?
Fences along north property line	N°.	μυ	۲Ŋ	Yes
Fences along south property line	NU	د در	No	445
Fences along west property line	the in fuce at previous relait tocution	Na	Nø	Ye S
Fences along east property line	N ŷ	Nэ	No	4e S

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.

PaimAlert system down for repor

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?

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.

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
RMA	NO	Ņд	N)	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	Location (note on	Description	Corrective Actions
	blockage observed?	figure)		
Perimeter of landfill and berm	Nυ	N٥		
Drainage trenches at base of landfill	N 3	N o		
RMA	NU			
Wetlands area	N o			
Culverts around landfill	No			
Western drainage swale	N٥			
North landfill catch basin	٧٥			



Quarterly Post Closure Inspection Log Sheet

Coldwater Road Landfill Site - Operations and Maintenance

Flint, Michigan

Project No. 50137

Inspector's Name/Title	Kevin S	schneider	Scientist	
Inspector's Signature/Date/Time	74	- sile	6/20/13	

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
Cell A	No	No	No	No	No	No	
Cell B	405	No	No	No	N٥	No	burrow west side inline w/ sump / set trip
Cell C	No	ŅΟ	No	No	No	No	
Cell D	No	No	yo	No	No	No	prior to inspection low areas where armins were enstalled where filled in and seeded
Cell E	No	No	No	No	No	No	
Cell F	yes	NO	No	N٥	No	NO	l burrow Southside near petitious burrow Set trap
Berms	NO	No	No	NO	NO	NO	

Woody Plant Remoyal Activities

Summarize monthly activities: amoved A number Plants were dutin of اردن تها locate the Plants Ø your yes. A UNST number woody of landfill LAP On TOP

Leachate Tank Storage

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

<u>Tank</u>

Cracks or holes observed in tank?	No <u>×</u>	Yes
Liquid dripping or running from tank?	No_ ×	Yes
Staining observed on the tank surface?	No <u>×</u>	Yes
Piping		
Is piping sagging, cracked or punctured?	No <u>X</u>	Yes
Liquid dripping or running from piping?	No <u>×</u>	Yes
Is the tank discharge valve closed and locked?	No	Yes_X
Staining observed on the piping surface?	No_ <u>×</u>	Yes
Emergency Response		
Are drums present in accumulation building?	No <u>X</u>	Yes
Are sandbags present in accumulation building?	No_X ~	Yes Spill Kit
Are shovels present in accumulation building?	No	Yes <u>×</u>

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?	Areas around building and equipment mowed?	Access roads mowed and in good condition?
А	NONE	NONE	Yes	Yes
В	NONE	NONE		
С	NONE	None		
D	Areas where installed draws were installed has sparse veg	None		
Е	Nomé	NONE		
F	NONE	IN CLUSTERS ON top of cap < 5"		
Berms	NONE	NONE in clust	s V	V

<u>Access Roads</u> Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe
Roads located approx. west of landfill	Yes	405	
Roads located approx. east of landfill	Yes	Yes	
Roads located approx. north of wetlands	No	Road wet w/ (uts NW section	
Roads located approx. south of wetlands	No	Road wet w/ pots near RMA area	
Roads located approx. west of wetlands	Yes	Wet near NW citch bain	
Roads located approx. east of wetlands	Ye 5	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?	"Tresspassing Prohibited" and "Private Property" Signs Posted?
Fences along north property line	Nυ	No	No	Yes
Fences along south property line	NO	No	No	445
Fences along west property line	N O	No	No	Yi S
Fences along east property line	N O	No	N۵	Yis

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.

	System	Functioning - cable	drying @ III'
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.

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
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
Perimeter of landfill and berm	No			
Drainage trenches at base of landfill	NO			
RMA	No			
Wetlands area	No			
Culverts around landfill	NO/ Sime vegetation			
Western drainage swale	No			
North landfill catch basin	N 0			

6/20/13 2nd Qrt 2013 wet w/ rots FIGURE 2 STANLEY ROAD N DIRT ROAD / TRAIL RAILROAD 0 LEGEND WETLANDS B-2D + LEACHATE COLLECTION SUMP 0 Wet ACCESS PORT FOR LEAK DETECTION VAULT ٠ w MONITORING WELL wet w/ nots ABANDONED WELL 0 clusters plants B-19AR , B-19A KLEIN STREET Animal Burrow / RACER TRUST COLDWATER ROAD LANDFILL FACILITY B-20D TM set FLINT, MICHIGAN deer Carcass ~ LANDFILL ~ B-24p \$ B-18A DRAINAGE SWALE filled in 10w meas SITE LAYOUT Seeded 4 B-21D DRAINAGE CULVERT (TYP) B-7 R H H H CONTROL BUILDING B-9 + ++ ABANDONED B-27D 150 300 450 600 RAILROAD B-28 B-22D B-23D - B-14 X te 475 Annal Burrow Trap Set B-29 B-30 OBRIEN 5 GERE FENCE MORRIS HILLS JULY 2012 15388/48630/002 MAP USES DATA FROM THE MICHIGAN CENTER FOR GEOGRAPHIC INFORMATION - CONCRETE / GRAVEL ROAD clusters of woody plants es"

Quarterly Post Closure Inspection Log Sheet

Coldwater Road Landfill Site - Operations and Maintenance Flint, Michigan Project No. 50137

Inspector's Name/Title	Kevin Schneide	er Scientist	
Inspector's Signature/Date/Time	1- 5.1	9/4/13-	9/13/13

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
Cell A	Yes	N0	NO	N0	No	No	
Cell B	Yes	No	No	No	N٥	N٥	
Cell C	Yes	No	No	No	No	No	
Cell D	N٥	No	No	No	Nº	N٥	
Cell E	No	No	No	No	No	N٥	
Cell F	No	N٥	No	No	No	No	
Berms	No	No	No	N ð	NO	N٥	
Woody Pla	nt Removal	Activities	<u> </u>	<u>.</u>	<u>]</u>	<u>k. – –</u>	· · · · · · · · · · · · · · · · · · ·

Summarize monthly activities:	<u>A</u>	Number	of	woody	Plants	were	removed	during	The	quarter	

.

Leachate Tank Storage

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

Cracks or holes observed in tank?	No_X	Yes
Liquid dripping or running from tank?	No \times	Yes
Staining observed on the tank surface?	No <u>X</u>	Yes
Piping		
Is piping sagging, cracked or punctured?	No_X	Yes
Liquid dripping or running from piping?	No $\underline{\times}$	Yes
Is the tank discharge valve closed and locked?	No <u>X</u>	Yes
Staining observed on the piping surface?	No <u>X</u>	Yes
Emergency Response		
Are drums present in accumulation building?	No <u>X</u>	Yes
Are sandbags present in accumulation building?	No_ <u>×</u> *	Yes Spill KIT
Are shovels present in accumulation building?	No	Yes <u>X</u>

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?	Areas around building and equipment mowed?	Access roads mowed and in good condition?
A	NINE .	Areas of Woody Blants	No	Not Moved Grass High in Areas
В	NoNE	Areas of Wood 1 Plants	{	
С	NoNE	Areas of woods plants		
D	None	NONE		
E	NUNE	NONE		
F	NONE	NoNe		
Berms	None	NoNe		

<u>Access Roads</u> Inspect for sufficient gravel and proper drainage. Note identified issues on an attached drawing.

Area	Sufficient gravel present?	Proper drainage present?	If no, describe
Roads located approx. west of landfill	Yes	Yes	
Roads located approx. east of landfill	Yes	Yes	
Roads located approx. north of wetlands	Yes	Yes	Ruts in NW Section
Roads located approx. south of wetlands	415	Yes	Minor Ruts in i
Roads located approx. west of wetlands	Yes	Yes	
Roads located approx. east of wetlands	les	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?	"Tresspassing Prohibited" and "Private Property" Signs Posted?
Fences along north property line	N٥	NO	уо	
Fences along south property line	No	No	No	
Fences along west property line	2 openings in fince @ provides openings	N٥	No	
Fences along east property line	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.

		system for	unctioning	- cable	orging a	p 14'
Alarm	Test	Cabl	e Test			
Did the system show a fault in the cable?	Was the alarm activated?	Was th activ	ne alarm vated?	Any dama system pa	ge noted to nel boxes?	-
				·	No]

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Battery Test

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- 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.

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
RMA	No	No	N٥	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	Location (note on	Description	Corrective Actions
	blockage observed?	ingure)		
Perimeter of				
landfill and berm	/V 6			
Drainage trenches				
at base of landfill	N٥			
RMA	L			
	No			
Wetlands area	·····			· · · · · · · · · · · · · · · · · · ·
	No			
Culverts around				
landfill	Na			
	1.0	- <u> </u>		
Western drainage	۸.			
swale	Vo			
North landfill				
catch basin	No			
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
	1			

318 Q17 2013



Quarterly Post Closure Inspection Log Sheet

Coldwater Road Landfill Site – Operations and Maintenance Flint, Michigan Project No. 50137

Inspector's Name/Title	Kevin Schneider	Scientist	
Inspector's Signature/Date/Time	2 SEC	10/17/13	

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	yes 2	No	N٥	Nυ	No	No	entry a exit @ Bl entry a exit @ B'3 set thes / Enpred annual @ Bl location	12/13/13
Cell C	NO	ND	NO	бd	NU	No		
Cell D	No	NG	No	Ņо	No	No		
Cell E	No	No	Ņо	No	وم	No		
Cell F	Ye S	No	Νυ	No	Чs	No	entry + exit (c) lip cap set mode	12/13/13
Berms	No	N٥	Νο	No	No	No		

Woody Plant Removal Activities

Summarize monthly a	ctivities:					1			, .
А	AVMBES	of	woody	Plants	were	penoned	deling	the	quarter
							1		

Leachate Tank Storage

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

<u>Tank</u>

Cracks or holes observed in tank?	No_X	Yes
Liquid dripping or running from tank?	No <u>×</u>	Yes
Staining observed on the tank surface?	No_X	Yes
Piping		
Is piping sagging, cracked or punctured?	No <u>X</u>	Yes
Liquid dripping or running from piping?	No <u>×</u>	Yes
Is the tank discharge valve closed and locked?	No	Yes <u> X</u>
Staining observed on the piping surface?	No <u>X</u>	Yes
Emergency Response		
Are drums present in accumulation building?	No <u>X</u>	Yes
Are sandbags present in accumulation building?	<u>No_X</u>	Yes Spill Kit prist
Are shovels present in accumulation building?	No	$Y_{es} \times$

<u>Vegetation</u>

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?	Areas around building and equipment mowed? NO	Access roads mowed and in good condition?	If yes, describe issue, and actions taken Will Mow Agen in	Date Corrected
	10070	100700			skens	
В						
С						
D						
Е						
F						
Berms	0	V	Q			

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		×= 5		
Roads located approx. north of wetlands		Some lits	ives not effect access	
Roads located approx. south of wetlands		some nts	dors not effect access	
Roads located approx. west of wetlands		Xe 's		
Roads located approx. east of wetlands	\checkmark	ye >		

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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?	"Tresspassing Prohibited" and "Private Property" Signs Posted?	If yes to any, describe issue, and actions taken	Date Corrected
Fences along north property line	N o	No	N٥	Yes		
Fences along south property line	NO	No	No	Ye5		
Fences along west property line	N9	Nυ	N 6	ΨS		
Fences along east property line	No	No	Ŋэ	γες		

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.

<u>Alarm Test</u>

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

<u>Cable Test</u>

- 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.

		System	1 functioning
Alarn	1 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?
Ýes	tes		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.

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	N،	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	Description	Corrective Actions	Data Corrected
Perimeter of landfill and berm	No	ingure)	Description	contentive Actions	Date corrected
Drainage trenches at base of landfill	No				
RMA					
	No				
Wetlands area	N٥				
Culverts around landfill	No				
Western drainage swale	No				
North landfill catch basin	No				

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