ANNUAL INPSECTION REPORT

BARRETT LANDFILL

21001 W Coffee Road, New Berlin, Wisconsin 53146| December 2019

Prepared For:
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Table of Contents

Figures:

APPENDICES

1 SITE INFORMATION

The Barrett Landfill is located in the western portion of the City of New Berlin, in Waukesha County, Wisconsin. Figure 1 shows the location of the landfill and locations of the private wells. Figure 2 shows topography of the Site. The site can be accessed from two separate locations, one on Coffee Road and one on Swartz Road and has the following WDNR associated identification numbers:

Site Address: 21001 Coffee Road, New Berlin Wisconsin 53151
Main Entrance Address: 3601 S. Swartz Road, New Berlin, Wisconsin 53151
FID (Facility Identification Number): 268134130
BRRTS Number: 09-68-534609
Solid Waste License Number: 1940

1.1 SITE BACKGROUND

The 39-acre property was a gravel mining pit that was filled with waste once mining operations ceased. When operational, the landfill accepted a variety of wastes including industrial, construction and demolition, ash, foundry sand, asbestos, vehicle shredding fluff and tannery hides. Some waste was open burned.

A leachate collection system was installed in a portion of the landfill. The extent of this system was not documented nor was it constructed over an engineered liner, but likely over less permeable soils. Leachate from the system collects in a sump/lift station and is pumped to a collection tank near the main entrance on S. Swartz Road.

1.2 SITE ACCESS

The site is secured with a perimeter chain link fence, with gate access to Coffee Road on the north and to Swartz Road on the east. The gate should be locked when leaving the site. Use the main entrance on Swartz Road whenever possible. When arriving at the Site, pull into the main entrance drive, making sure vehicle is fully off the road or safely on the side of the road. Use a designated Site key to unlock the lock that is on the chain on the gate. The gate should be closed if the entrance is not visible from working area to help prohibit trespassers. When leaving the Site, wrap the chain through both ends of the entrance gates and connect the lock through both sides of the chain. Check to make sure lock has been secured prior to leaving the Site.

2 ANNUAL SITE INSPECTION

The 2019 Annual Site Inspection was conducted from November 4 to 19, 2019 by Ashley Wagner and Jenny Skweres. The landfill cover, gas vents, monitoring wells, gas probes, security fence and gates, and the access roads were all inspected. The leachate system had been decommissioned for the remainder of the year, so no inspection of its components took place.

2.1 LANDFILL COVER

The landfill cover was inspected by field staff on November 5, 2019 for any erosion, burrow holes, slumping, woody vegetation, areas lacking vegetation, and ponding/pooling of liquid (water or leachate). Areas that require future monitoring and/or repairs can be found on Figure 2.

Erosion is occurring in a few areas on the cover: near the northwest retention basin (photo 1), on the northern hill face (photo 2), and to the north and south of the newly repaired erosion area (hill face near GV-126) (photos 3-4).

Repairs made (2019) to the erosion channel on the hill face going towards the pond is documented on photo 39.

There were seven (7) animal burrow holes identified during the site inspection; a few examples can be found in photos 5-7. The burrow holes are located in the northwest along the site access road (photo 5), and on the east, southwest (photo 6) and south (photo 7) hill face. All burrow holes were marked with a marking flag so repairs could be made in the future with proper materials.

Potential slumping appears to be occurring at the south end of the landfill (photos 8-10). This should be monitored in the future to note any changes. Additional soil may be needed to help stabilize the slopes from further slumping.

Woody vegetation was noted in the north near LHW-94-1, in the northwest near GV-4, in the south near GV-142, in the center near GV-124, and in the southeast near LHW-94-6. The woody vegetation in these areas were cut down during mowing activities, but these locations should be monitored in the future for any regrowth.

Areas lacking vegetation were noted in the southeast and southwest. These areas were not completely bare and should be monitored in the spring to ensure vegetation has begun to regrow. If vegetation does not appear to be coming back in these areas, grass seed will need to be applied.

No areas were identified with ponding/pooling of liquid on the cover. The drainage channels around the landfill were clear of debris (photos 13-15). On the western side of the property, the drainage channel had potential woody vegetation growing (cut down during mowing activities, photo 14), this should be monitored in the future to ensure it does not grow back.

The hill face going towards the northeast pond was not mowed completely (photos 36-38). Due to the height and density of the vegetation in this area, the cover and cover features were not inspected. Mowing should be scheduled in 2020 when the slope is dry enough for safe mowing to occur.

2.2 GAS VENTS

All gas vents were inspected during on November 5, 2019, during the landfill cover inspection. The condition of the gas vent ID, hose clamp, screen, boot liner, and tilt direction were recorded on the inspection form, which can be found in Appendix B.

All gas vents were renumbered in 2018. These numbers could be darkened using a paint pen, so the IDs are more visible/distinguishable.

The hose clamp on GV-2 should be moved and the boot potentially taped so there is a better seal between the PVC and the liner (photo 19).

The screen on GV-1 is bent away from the PVC (photo 21). The screen is clear so gas can leave the vent, however this should be monitored in the future so to ensure that no animal or insect nests block the vent.

Repairs were made to the holes/tears in the boot liners that were identified during the previous site inspection. The holes/tears were repaired using a heavy-duty waterproof plumbing seal tape. These repairs appear to be functioning as intended.

A small hole/tear is noted at the base of GV-125 (photo 26). The hole should be repaired using a heavy-duty waterproof plumbing seal tape, similar to what was used previously to repair holes/tears in other gas vent boot liners. The repairs made on GV-137 could use a follow-up repair so that the tape is adhered to the boot liner. An example of this type of tape can be found in Appendix C.

Woody vegetation was noted next to GV-124. The woody vegetation should be cut down and it should be monitored so that regrowth does not occur.

Several gas vents are tilted in various directions. Their tilt direction was noted on the inspection form, and should be monitored for further tilting, which could indicate slumping or further settlement of the landfill cap.

2.3 MONITORING WELLS

All monitoring wells and leachate head wells were inspected during the Fall 2019 monitoring event. The condition of the protective casing, the locks, the polyvinyl chloride (PVC) casing, were recorded on the inspection form, which can be found in Appendix B.

The ground around monitoring well B-94-14A is a small hill and is eroding at the base (photo 40). When a subcontractor makes repairs to the cap, additional soil should be placed at the base of the well to prevent further erosion.

Branches and similar landscaping debris had been disposed of around and on top of monitoring wells B-96-18A and B-96-19B (photo 41). During the sampling event, the brush was cleared away from the monitoring wells, so they were accessible. This area should be monitored in the future for disposal and/or dumping.

Monitoring wells B-94-19A and B-15A did not have well caps/plugs present. A standard J-plug would not work in wells B-15A, as there is not enough room between the top of the well casing and the protective casing cover. A flat, PVC flexible cap should be purchased and installed at this well. An example of this cap can be found in Appendix C.

The ID on the protective casing of multiple monitoring wells are fading. Examples of the ID condition can be seen on photos 42-44. A paint pen should be used to darken the label, so the ID is more visible/distinguishable.

New protective casing has been installed at B-19 (photo 45).

Leachate head wells LHW-94-1 and LHW-94-3 appear to have been hit during mowing operations (photos 29 and 30, respectively). The wells are tilted, to the point where there is open space at the base of the wells. Additional cap material or bentonite should be placed at the base of the wells to prevent infiltration or ponding of water in this area. The cover cannot be removed from LHW-94-3 because the well has

sunken into the landfill cover. This well should be dug out and either repaired to be brought above grade, or it should be properly abandoned.

2.4 GAS PROBES

All gas probes were inspected on November 4, 2019 during the Fall 2019 monitoring event. The condition of the protective casing, the lock, the polyvinyl chloride (PVC) casing, the presence of a cap, and ID were recorded on the inspection form, which can be found in Appendix B.

During monitoring, the probe caps from gas probes GP-3D and GP-8S were dropped inside the protective casing and were not able to be retrieved. These caps will need to be replaced.

Due to a small diameter protective casing, gas probes GP-6S, GP-6M and GP-6D's caps are hard to remove (not adequate space for hands, photo 46). A plug style cap should be considered. An example of this plug can be found in Appendix C.

The ID on the protective casing of GP-8 is fading (photo 47). A paint pen should be used to darken the label, so the ID is more visible/distinguishable.

3 OTHER FEATURES

The security fence and gates, and the access roads were inspected during the Fall 2019 monitoring events. All appeared to be in good condition. The access road northeast of the northwest retention pond is a rutted from vehicle and mowing traffic (photo 48). This area should be monitored in the future and avoided if the ground is wet to prevent further rutting. The area east of the northwest retention pond is rutted from mowing activities (photo 49) and should be repaired.

Much of the leachate system was not inspected since it had been decommissioned for the year, however, it was observed that the connection from the above ground piping to the leachate storage tank (photo 50) should be shortened to prevent it from breaking.

4 CONCLUSION

Based off the 2019 Annual Site inspection the following items are in need of repair:

- Erosion channels near the northwest retention basin, on the northern hill face, and to the north and south of the newly repaired erosion area (hill face near GV-126);
- Repairs to mowing ruts east of the northwest retention pond;
- Seven (7) animal burrows;
- Mowing of the hill face going towards the northeast pond;
- Repairs made to the ground at the base of B-94-14A, LHW-94-1, and LHW-94-3;
- Abandon or repair LHW-94-3;
- Addition of the proper well caps/plugs in 2 monitoring wells (B-15A and B-94-19A) and 5 gas probes (GP-3D, GP-6S, GP-6M, GP-6D, and GP-8S);

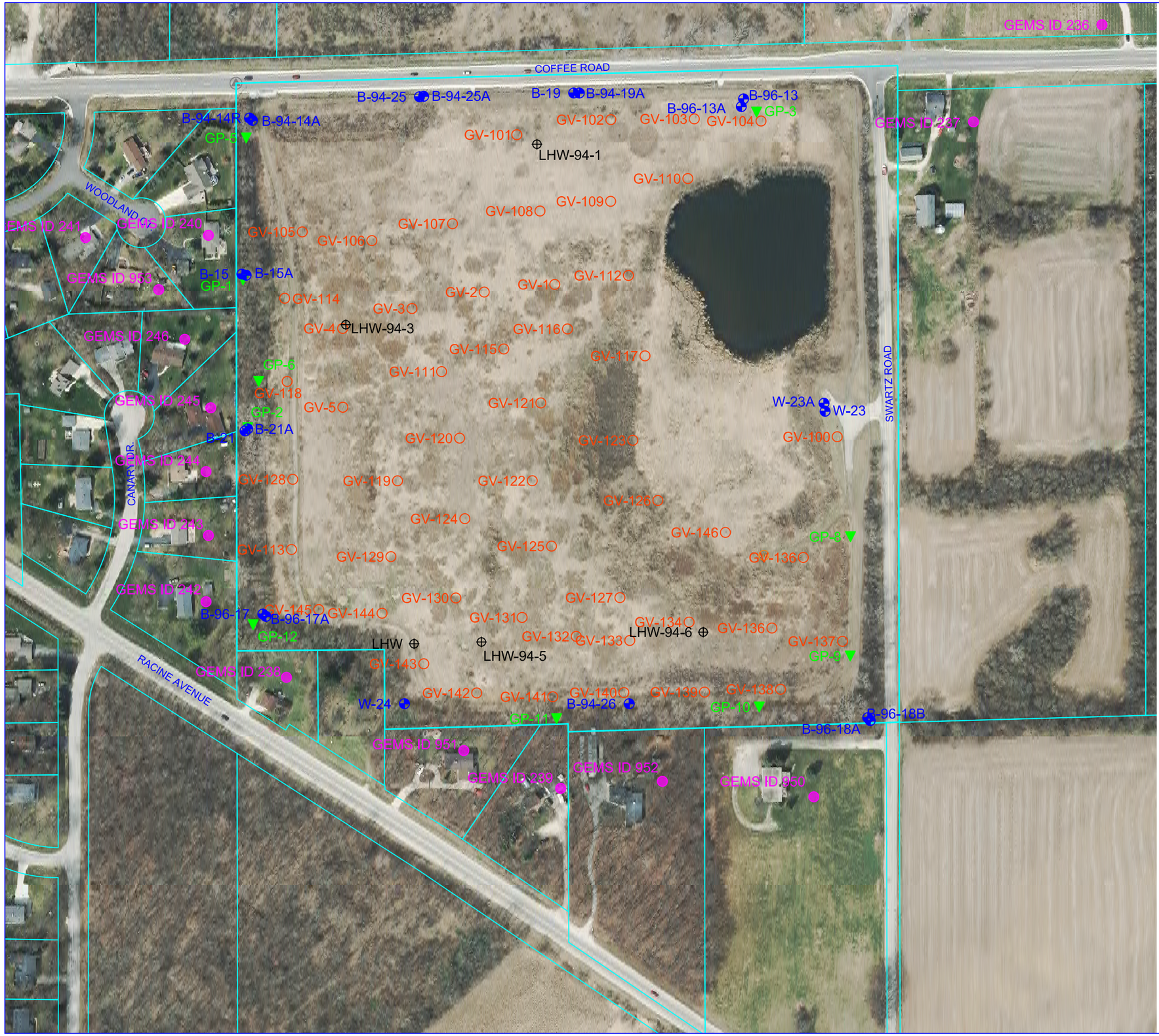
- Darken the IDs on multiple monitoring wells, gas probes and gas vents;
- Repair the hole/tear in the boot liner of GV-125 and make follow up repairs to the boot liner of GV-137;
- Adjust the hose clamp on GV-2 and add heavy-duty sealing tape if necessary; and
- Shortening the height of the connection to the leachate storage tank.

While the following items are not currently in need of repair, they are to be monitored in the future to ensure the condition is not worsening:

- Potential slumping of the southern slope;
- Woody vegetation around site (near gas vents, on cap, in drainage channels);
- Areas with sparse vegetation;
- Disposal and/or dumping near the B-96-18 well nest;
- Screen clearance at GV-1;
- Tipping direction/angles of gas vents; and
- Road condition northeast of the northwest retention basin.

A cost proposal for the repair items will be generated for the WDNR's approval. Bids from subcontractors will be required to provide accurate costs to repair the erosion channels, the mowing ruts, the ground around B-94-14A, LHW-94-1, and LHW-94-3, repairs or abandonment of LHW-94-3, and to shorten the height of the connection to the leachate storage tank. Attempts will be made to get bids from three subcontractors for each repair item. The bids will be shared with the WDNR and the lowest bidder that is the most responsive will be selected for the work.

FIGURES



LEGEND

GP-3▼	GAS PROBE
PRIVATE WELL●	PRIVATE WELL
LHW-2⊕	LEACHATE HEAD WELL
MW-1◓	MONITORING WELL
GV-136○	GAS VENT

kapur
7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BARRETT LANDFILL PROJECT

LOCATION:
NEW BERLIN, WISCONSIN

CLIENT:

NORTH ARROW:

SCALE: 1" = 200'
0 100 200

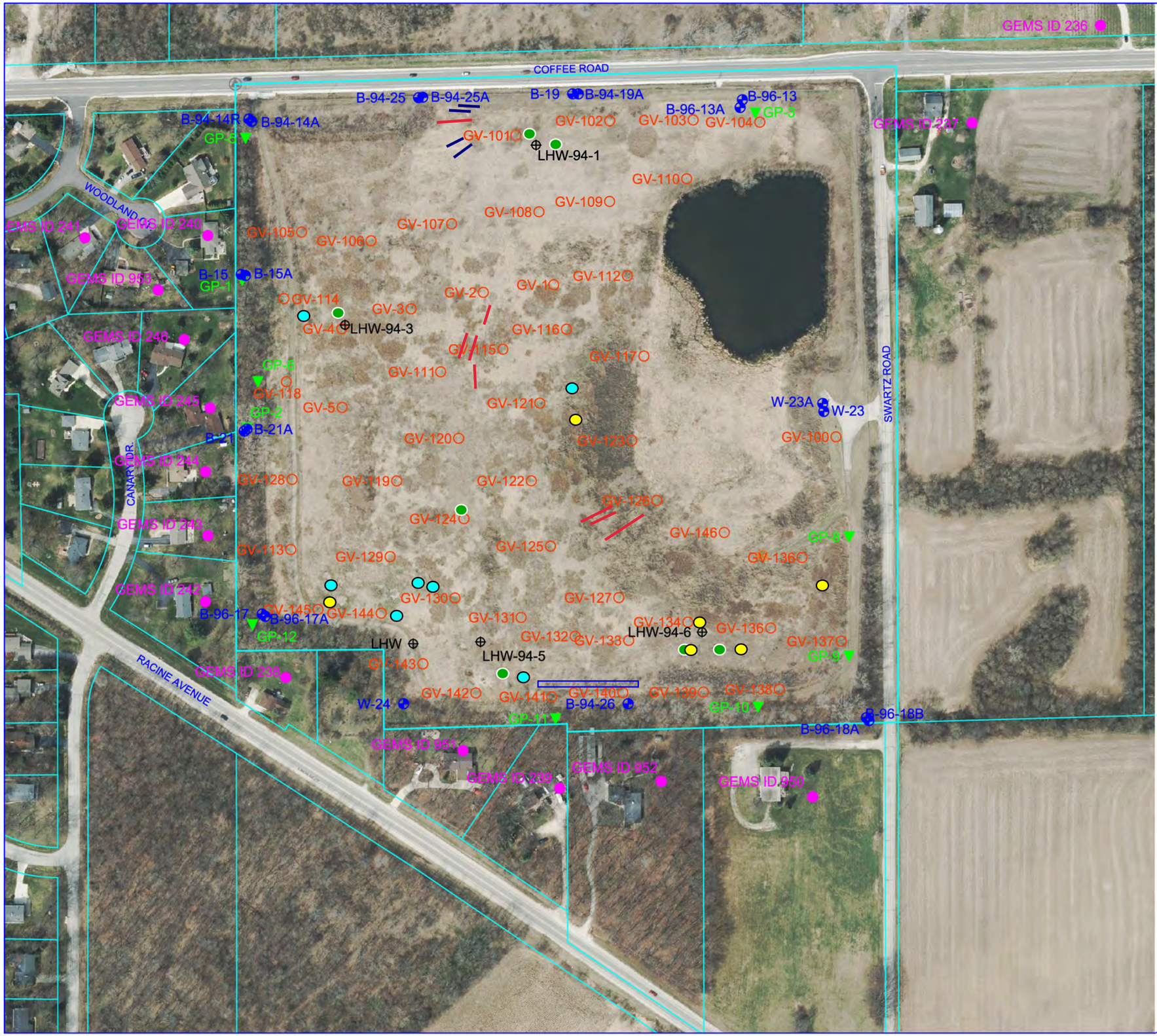
SEAL:
all in

SHEET:
SITE LAYOUT

DESIGNED BY:	XXX
DRAWN BY:	XXX
CHECKED BY:	XXX
APPROVED BY:	XXX
DATE:	12/09/2019

PROJECT NO. 190007.01
FIGURE: 1

FILENAME: S:_Environ\200039-Barret Landfill Operation and Maintenance\Figures\SITE LAYOUT.dwg



LEGEND

- GP-3 ▼ GAS PROBE
- PRIVATE WELL ● PRIVATE WELL
- LHW-2 ⊕ LEACHATE HEAD WELL
- MW-1 ◓ MONITORING WELL
- GV-136 ○ GAS VENT
- WOODY VEGETATION
- ANIMAL BURROW
- BARE/SPARSE
- EROSION
- RUTTING
- POTENTIAL SLUMPING

FILENAME: S:_Environ\200039-Barret Landfill Operation and Maintenance\Figures\SITE LAYOUT.dwg

kapur
7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
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PROJECT:
BARRETT LANDFILL PROJECT

LOCATION:
NEW BERLIN, WISCONSIN

CLIENT:

NORTH ARROW:

SCALE: 1" = 200'
0 100 200

SEAL:

all in

SHEET:
NOTABLE FEATURES

DESIGNED BY:	XXX
DRAWN BY:	XXX
CHECKED BY:	XXX
APPROVED BY:	XXX
DATE:	12/09/2019

PROJECT NO. 190007.01

FIGURE:
2

APPENDIX A

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photo #	Date
1	11/5/19

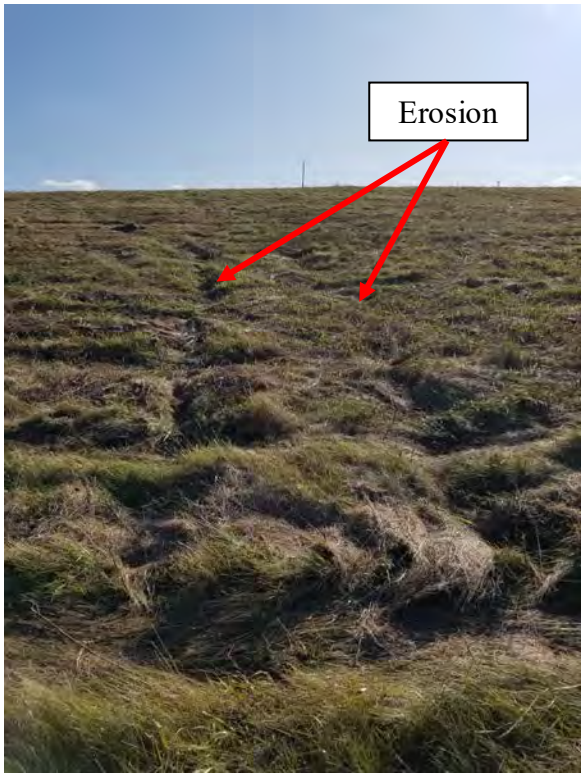
Description

Subject Property: Erosion near NW retention basin (facing W).

Photo #	Date
2	11/5/19

Description

Subject Property: Erosion on northern hill face going towards Coffee Road (facing S).



PHOTOGRAPHIC LOG

Photo #	Date
3	11/5/19

Description

Subject Property: Erosion on hill face going towards the pond (facing S).

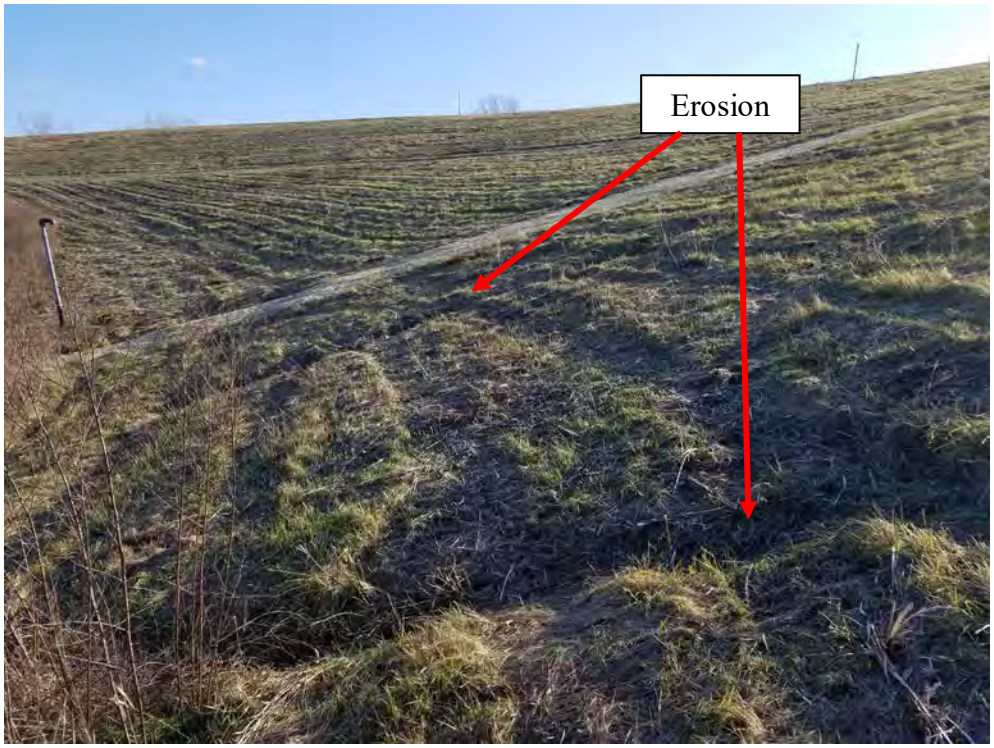
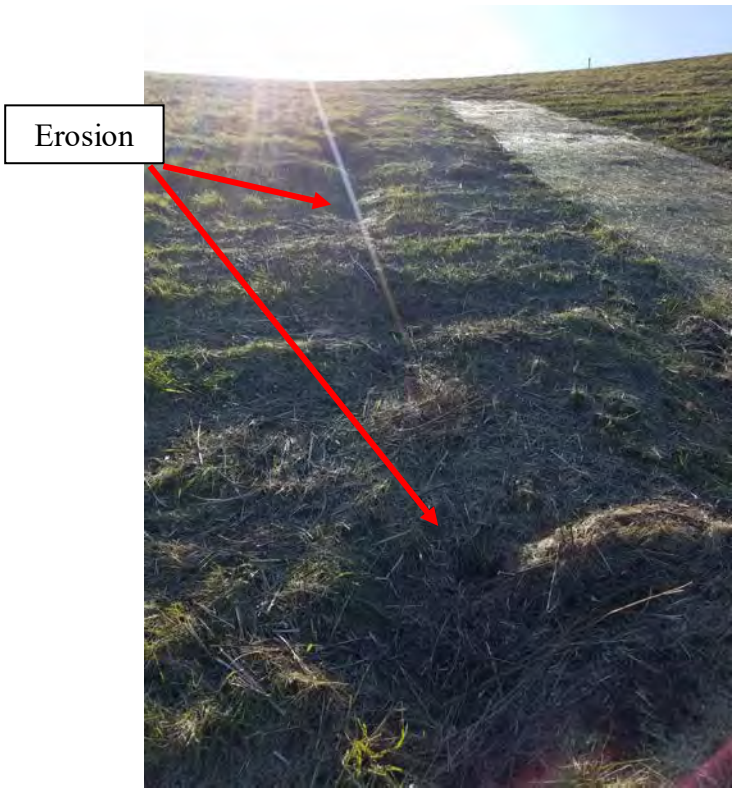


Photo #	Date
4	11/5/19

Description

Subject Property: Erosion on hill face going towards the pond (facing SW).



PHOTOGRAPHIC LOG

Photo #	Date
5	11/5/19

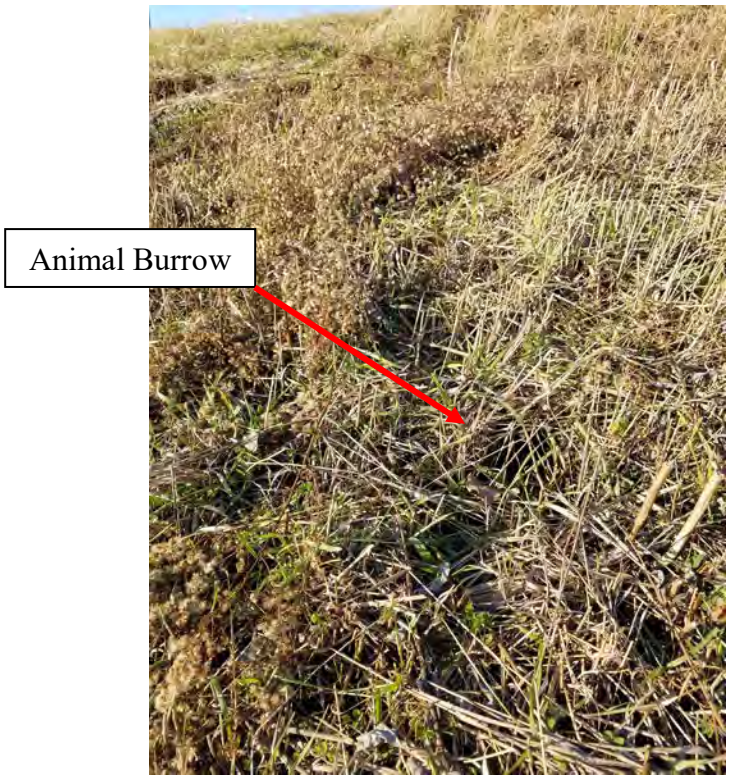
Description

Animal burrow along site road, towards the NW portion of the site.

Photo #	Date
6	11/5/19

Description

Animal burrow on southwest corner (SE of GV-129 and SW of GV-130).



PHOTOGRAPHIC LOG

Photo #	Date
7	11/5/19

Description

Animal burrow on southern hill slope (N of GV-141).

Photo #	Date
8	11/5/19

Description

Subject Property: Possible slumping of the southern hill face, near GV-140 (facing E).

PHOTOGRAPHIC LOG

Photo #	Date
9	11/5/19

Description

Subject Property: Possible slumping of the southern hill face near GV-141 (facing SE).

Photo #	Date
10	11/5/19

Description

Subject Property: Possible slumping of the southern hill face (facing W).

PHOTOGRAPHIC LOG

Photo #	Date
11	11/5/19

Description

Remains of possible woody vegetation near LHW-94-1. Needs to be monitored in 2020.

Photo #	Date
12	11/5/19

Description

Subject property: Remains of possible woody vegetation near GV-4 (facing W).

PHOTOGRAPHIC LOG

Photo #	Date
13	11/5/19

Description

Subject Property: Drainage channel free of debris (facing NE).

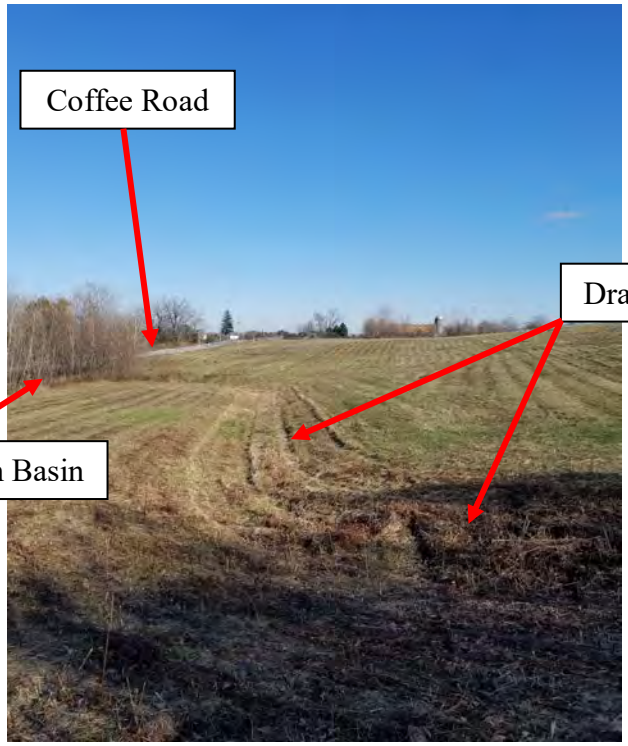


Photo #	Date
14	11/5/19

Description

Subject Property: Potential woody vegetation growing in drainage channel on western side of property. Monitor in 2020 (facing S).

PHOTOGRAPHIC LOG

Photo #	Date
15	11/5/19

Description

Subject Property: Drainage channel free of debris (facing S).

Photo #	Date
16	11/5/19

Description

Subject Property: GV-104 tilting west northwest (facing N).

PHOTOGRAPHIC LOG

Photo #	Date
17	11/5/19

Description

Subject Property: GV-110 tilting south (facing SW).

Photo #	Date
18	11/5/19

Description

Subject Property: GV-3 tilting north (facing SW).

PHOTOGRAPHIC LOG

Photo #	Date
19	11/5/19

Description

Subject Property:
GV-2 needs new hose clamp or better seal above the boot.
(facing NW).

Photo #	Date
18	11/5/19

Description

Subject Property:
GV-115 tilting north
(facing W).

PHOTOGRAPHIC LOG

Photo #	Date
19	11/5/19

Description

Subject Property: GV-108 tilting north (facing E).

Photo #	Date
20	11/5/19

Description

Subject Property: GV-1 tilting northeast (facing E).

PHOTOGRAPHIC LOG

Photo #	Date
21	11/5/19

Description
Subject Property: GV-1 tilting northeast, screen partially off (both screws still intact) (facing E).

Photo #	Date
22	11/5/19

Description
Subject Property: GV-5 tilting west (facing N).

PHOTOGRAPHIC LOG

Photo #	Date
23	11/5/19

Description

Subject Property: GV-114 tilting west (facing S).

Photo #	Date
24	11/5/19

Description

Subject Property: GV-113 tilting west (facing W).

PHOTOGRAPHIC LOG

Photo #	Date
25	11/5/19

Description

Subject Property: GV-145 hose clamp and boot in tact (continue to monitor) (facing NW).

Photo #	Date
26	11/5/19

Description

Subject Property: Small tear in boot of GV-125 repair needed (facing N).

PHOTOGRAPHIC LOG

Photo #	Date
27	11/5/19

Description

Subject Property: Possible slumping of the southern hill face, near GV-140 (facing E).

Photo #	Date
28	11/5/19

Description

Subject Property: GV-140 tilting south (facing W).

PHOTOGRAPHIC LOG

Photo #	Date
29	11/5/19

Description

Subject Property: LHW-94-1 tipped (possibly hit with mower) will need bentonite or clay added at base to help make a seal around well
(facing E).

Photo #	Date
30	11/5/19

Description

Subject Property: LHW-94-3 tipped (possibly hit with mower) will need bentonite or clay added at base to help make a seal around well. Cannot access lock or remove cover (potentially full well repair/abandonment)

PHOTOGRAPHIC LOG

Photo #	Date
31	11/5/19

Description

Subject Property:
New cover added to LHW-94-5
(facing E).

Photo #	Date
32	11/5/19

Description

Subject Property:
Repair made to boot of GV-138 (facing N).

PHOTOGRAPHIC LOG

Photo #	Date
33	11/5/19

Description

Subject Property: Repair made to boot of GV-137 (at base) needs follow up repair as it is pulling away from boot.

Photo #	Date
34	11/5/19

Description

Subject Property: Repair made to boot of GV-119 (facing N).

PHOTOGRAPHIC LOG

Photo #	Date
35	11/5/19

Description

Subject Property: Repair made to boot of GV-135 (facing E).

Photo #	Date
36	11/5/19

Description

Subject Property: G-117 and area near pond not mowed (too wet when mowing activities took place (facing E).

PHOTOGRAPHIC LOG

Photo #	Date
37	11/5/19

Description

Subject Property: Repairs made to the erosion down the main hill face, area closer to the pond not mowed (too wet when mowing activities took place) (facing ESE).

Photo #	Date
38	11/5/19

Description

Subject Property: Repairs made to the erosion down the main hill face, area closer to the pond not mowed (too wet when mowing activities took place) (facing ESE).

PHOTOGRAPHIC LOG

Photo #	Date
39	11/5/19

Description

Subject Property:
Repairs made to the erosion down the main hill face
(facing WNW).

Photo #	Date
40	11/8/19

Description

Subject Property:
B-94-14A slope at base of monitoring well is eroding away
(facing W)

PHOTOGRAPHIC LOG

Photo #	Date
41	11/8/19

Description

Subject Property: B-96-18A and B-96-18B branches and landscape debris disposed of near well nest have been cleared to make wells accessible (facing W).

Photo #	Date
42	11/5/19

Description

Subject Property: B-94-19A needs new well cap and darker ID.

PHOTOGRAPHIC LOG

Photo #	Date
43	11/19/19

Description

Subject Property:
B-15A needs new well cap and darker ID.

Photo #	Date
44	11/5/19

Description

Subject Property:
ID condition of W-23 (left) and W-23A (right) needs darker ID.

PHOTOGRAPHIC LOG

Photo #	Date
45	11/5/19

Description

Subject Property:
New protective casing around B-19 (Repairs made in September 2019) (facing W).

Photo #	Date
46	11/4/19

Description

Subject Property:
GP-6 needs different well caps, J-Plug style for ease of access.

PHOTOGRAPHIC LOG

Photo #	Date
47	11/4/19

Description

Subject Property: Example of fading gas probe ID (GP-8) (facing NE).

Photo #	Date
48	11/5/19

Description

Subject Property: Access road northeast of northwest retention pond is rutted from vehicle and mowing traffic (facing E)

PHOTOGRAPHIC LOG

Photo #	Date
49	11/5/19

Description

Subject Property:
Area east of the northwest retention pond rutted from mowing activities. Should be filled in.
(facing NE).

Photo #	Date
50	11/5/19

Description

Subject Property:
Connection to leachate storage tank should be shortened to prevent breaking
(facing N).

APPENDIX B

INSPECTION FORMS

Operation and Maintenance Inspection Report – Barrett Landfill, New Berlin, WI

Specific Inspection Items	Frequency	Inspection Tasks / Potential Problem Areas	Status *	Notes
Perimeter Security Fence	Annually	Serviceability, damage to fence fabric, posts, etc. signs of tampering	Good - 1	
Perimeter Security Gates & Locking Mechanism	Annually	Serviceability, damage to gates, locks, etc. missing locks, signs of tampering	Good - 1	
Access Roads	Annually	Erosion, ponding, rutting, barriers	Good -1	
Perimeter of Landfill Property Large trees	Biennially (Odd years)	Large trees and/or shrubs which may negatively impact landfill management systems	NA	Not applicable
Landfill Cover Vegetation	Annually	Bare spots, stressed vegetation, deep rooted vegetation, shrubs or trees	Monitor - 1	Minor bare spots, woody vegetation present
Landfill Cover Erosion/Slope	Annually	Erosion, gullies, lack of vegetation, subsidence, ponding.	Erosion -2	Erosion on north, east hill faces, near NW retention pond, possible slumping on south slope
Landfill Cover Burrowing animals	Annually	Damage to landfill cover	Needs repair - 2	6 burrows identified, marked with flags
Storm Water Drainage channels	Annually	Excessive erosion, unsuitable vegetation, slope, debris, barriers	Good -1	
Storm Water Culverts and overflow structures	Annually	Excessive erosion, unsuitable vegetation, slope, debris, barriers, structural damage	Good -1	Western drains flowing 11/4-5/19
Groundwater Monitoring Wells General	Annually	Overall condition and operational effectiveness including casing, caps, locks, barriers, excessive vegetation, signs of tampering or burrowing animals	Good -1	See notes on MW inspection page
Leachate Head Wells General	Annually	Overall condition and operational effectiveness including casing, caps, locks, barriers, excessive vegetation, signs of tampering or burrowing animals	Good -1	See notes on MW inspection page
Leachate Extraction System General	Monthly	Non-functional or damaged components including electrical controls, leachate level controls, panels, pumps, load out area, floats, piping & connections	NA/NI -2	Components not inspected, system off for year. Connection from above ground piping to storage tank should be shortened
Landfill Gas Monitoring Probes General	Annually	Overall condition and operational effectiveness	Good -1	See notes on GP inspection page
Landfill Gas Venting System General	Annually	Overall condition and operational effectiveness including vent pipes/risers, barriers, excessive or stressed vegetation, signs of tampering or burrowing animals	Good -1	See notes on GV inspection page

* (1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: See individual inspection forms for details on monitoring wells, leachate head wells, gas probes and gas vents.

Signature of Inspector Ashley Wagner, Jenny Skweres Date November 4-19, 2019

KAPUR & ASSOCIATES LANDFILL GAS PROBE INSPECTION FIELD FORM

Probe	GEMS ID	Time	Protective Casing Condition	Lock Present? Y/N	Lock Condition	Key #	Probe Numbered? Y/N	Cap Present? Y/N	Probe Condition	NOTES
GP-1	280	13:45	Good	Yes	Good	2258	Yes	Yes	Good	
GP-2S	284	13:30	Good	Yes	Good	2258	Yes	Yes	Good	Water inside protective casing
GP-2D	286	13:30	Good	Yes	Good	2258	Yes	Yes	Good	
GP-3S	287	14:00	Good	No	NA	NA	Yes	Yes	Good	Protective casing not locable
GP-3M	288	14:00	Good	No	NA	NA	Yes	Yes	Good	
GP-3D	289	14:00	Good	No	NA	NA	Yes	No*	Good	See notes below
GP-4	290	Lost/Abandoned								
GP-5S	294	13:57	Good	Yes	Good	2258	Yes	Yes	Good	
GP-5M	295	13:57	Good	Yes	Good	2258	Yes	Yes	Good	
GP-5D	296	13:57	Good	Yes	Good	2258	Yes	Yes	Good	
GP-6S	297	13:36	Dented	Yes	Good	2258	Yes	Yes	Good	Plug style caps would be better.
GP-6M	298	13:36	Dented	Yes	Good	2258	Yes	Yes	Good	Small amount of space within the
GP-6D	299	13:36	Dented	Yes	Good	2258	Yes	Yes	Good	protective casing.
GP-7	300	Lost/Abandoned								
GP-8S	264	12:36	Good	Yes	Good	2258	Yes	No*	Good	See notes below
GP-8M	265	12:36	Good	Yes	Good	2258	Yes	Yes	Good	ID on GP-8 fading, make darker
GP-8D	266	12:36	Good	Yes	Good	2258	Yes	Yes	Good	
GP-9S	267	12:47	Good	Yes	New	2258	Yes	Yes	Good	Lock was not present upon
GP-9M	268	12:47	Good	Yes	New	2258	Yes	Yes	Good	arrival, lock was added during
GP-9D	269	12:47	Good	Yes	New	2258	Yes	Yes	Good	Inspection.
GP-10S	270	12:55	Good	Yes	Good	2258	Yes	Yes	Good	
GP-10M	271	12:55	Good	Yes	Good	2258	Yes	Yes	Good	
GP-10D	272	12:55	Good	Yes	Good	2258	Yes	Yes	Good	
GP-11S	273	13:05	Good	Yes	Good	2258	Yes	Yes	Good	
GP-11M	274	13:05	Good	Yes	Good	2258	Yes	Yes	Good	
GP-11D	275	13:05	Good	Yes	Good	2258	Yes	Yes	Good	
GP-12S	276	13:18	Good	Yes	Good	2258	Yes	Yes	Good	
GP-12M	277	13:18	Good	Yes	Good	2258	Yes	Yes	Good	
GP-12D	278	13:18	Good	Yes	Good	2258	Yes	Yes	Good	

*GP-3D and GP-8S well caps were dropped during sampling into the protective casing and were not able to be retrieved. Need to be replaced.

INSPECTORS: Ashley Wagner, Jenny Skweres **DATE:** November 4, 2019

KAPUR & ASSOCIATES LANDFILL GAS VENT INSPECTION FIELD FORM

AVent	Vent Numbered? Y/N	Tilt Direction	Screen Present? Y/N	Hose Clamp Present? Y/N	Hose Clamp Condition	Boot Condition	NOTES
GV-102	Yes	Slightly West	Yes	Yes	Good	Good	
GV-103	Yes	Straight	Yes	Yes	Good	Good	
GV-104	Yes	West Northwest	Yes	Yes	Good	Good	
GV-110	Yes	South	Yes	Yes	Good	Good	
GV-109	Yes	North	Yes	Yes	Good	Good	
GV-4	Yes	Slightly North	Yes	Yes	Good	Good	
GV-3	Yes	North	Yes	Yes	Good	Good	
GV-2	Yes	V. NorthSlightly	Yes	Yes	Good*	Good	Hose clamp should be moved/sealed better
GV-115	Yes	North	Yes	Yes	Good	Good	
GV-121	Yes	Straight	Yes	Yes	Good	Good	
GV-122	Yes	Slightly East	Yes	Yes	Good	Good	
GV-124	Yes	Straight	Yes	Yes	Good	Good	Repair previously made, woody veg. next to vent
GV-129	Yes	Straight	Yes	Yes	Good	Good	
GV-113	Yes	West	Yes	NA	NA	NA	
GV-145	Yes	Straight	Yes	Yes	Good	Good	
GV-130	Yes	Straight	Yes	Yes	Good	Good	
GV-131	Yes	East	Yes	Yes	Good	Good	
GV-125	Yes	Slightly East	Yes	Yes	Good	Tear	Small hole/tear at base
GV-127	Yes	Slightly North	Yes	Yes	Good	Good	
GV-134	Yes	V. Slightly North	Yes	Yes	Good	Good	
GV-135	Yes	Straight	Yes	Yes	Good	Good	Repair previously made
GV-133	Yes	Straight	Yes	Yes	Good	Good	
GV-132	Yes	Straight	Yes	Yes	Good	Good	
GV-100	Yes	Straight	Yes	Yes	Good	Good	
GV-114	Yes	West	Yes	NA	NA	NA	

INSPECTORS: Ashley Wagner, Jenny Skweres **DATE:** November 5, 2019

KAPUR & ASSOCIATES LANDFILL GAS VENT INSPECTION FIELD FORM

Vent	Vent Numbered? Y/N	Tilt Direction	Screen Present? Y/N	Hose Clamp Present? Y/N	Hose Clamp Condition	Boot Condition	NOTES
GV-108	Yes	North	Yes	Yes	Good	Good	
GV-107	Yes	North	Yes	Yes	Good	Good	
GV-105	Yes	Northwest	Yes	Yes	Good	Good	
GV-106	Yes	North	Yes	Yes	Good	Good	
GV-112	Yes	East	Yes	Yes	Good	Good	
GV-116	Yes	North	Yes	Yes	Good	Good	
GV-1	Yes	Northeast	Yes	Yes	Good	Good	Screen partially off
GV-111	Yes	North	Yes	Yes	Good	Good	
GV-120	Yes	North	Yes	Yes	Good	Good	
GV-5	Yes	West	Yes	Yes	Good	Good	
GV-119	Yes	North	Yes	Yes	Good	Good	Repair previously made
GV-128	Yes	North	Yes	Yes	Good	Good	
GV-144	Yes	North	Yes	Yes	Good	Good	
GV-143	Yes	North	Yes	Yes	Good	Good	
GV-142	Yes	Southeast	Yes	Yes	Good	Good	
GV-141	Yes	South	Yes	Yes	Good	Good	
GV-140	Yes	South	Yes	Yes	Good	Good	
GV-139	Yes	East	Yes	Yes	Good	Good	
GV-138	Yes	Southeast	Yes	Yes	Good	Good	Repair previously made
GV-137	Yes	South	Yes	Yes	Good	Good	Repair previously made

INSPECTORS: Ashley Wagner, Jenny Skweres **DATE:** November 5, 2019

KAPUR & ASSOCIATES MONITORING WELL INSPECTION FIELD FORM

Well ID	GEMS ID	Protective Casing Condition	Lock Present? Y/N	Lock Condition	Key Number	Well Numbered? Y/N	Cap Present? Y/N	Well Condition	NOTES
B-96-13A	911	Good	Yes	Good	2258	Yes	Yes	Good	
B-94-14A	903	Good	Yes	Good	2258	Yes	Yes	Good	Ground eroding at base of well
B-94-14R	902	Good	Yes	Good	2258	Yes	Yes	Good	
B-15	225	Good	Yes	Good	2258	Yes	Yes	Good	ID fading
B-15A	251	Good	Yes	Good	2258	Yes	No	Good	ID fading
B-96-17	913	Good	Yes	Good	2258	Yes	Yes	Good	
B-96-17A	914	Good	Yes	Good	2258	Yes	Yes	Good	
B-96-18A	915	Good	Yes	Good	2258	Yes	Yes	Good	Trees/brush disposed of around wells
B-96-18B	916	Good	Yes	Good	2258	Yes	Yes	Good	
B-94-19A	904	Good	Yes	Good	2258	Yes	No	Good	ID fading
B-19	--	Good	Yes	Good	2258	Yes	Yes	Good	
B-21	252	Good	Yes	Good	2258	Yes	Yes	Good	
B-21A	253	Good	Yes	Good	2258	Yes	Yes	Good	
W-23	259	Good	Yes	Good	2258	Yes	Yes	Good	ID fading
W-23A	260	Good	Yes	Good	2258	Yes	Yes	Good	ID fading
W-24	263	Good	Yes	Good	2258	Yes	Yes	Good	
B-94-25	905	Good	Yes	Good	2258	Yes	Yes	Good	
B-94-25A	906	Good	Yes	Good	2258	Yes	Yes	Good	
LHW-94-1	--	Tilted east	Yes	Good	2258	Yes	Yes	Good	Wells appear to have been hit by mower, space/seal at base needs to be filled in repaired
LHW-94-3	--	Tilted west	Well has sunk into ground, access to cover restricted						
LHW-94-5	--		Yes	Good	2258	Yes	Yes	Good	
LHW-94-6	--		Yes	Good	2258	Yes	Yes	Good	

INSPECTORS: Ashley Wagner, Jenny Skweres

DATE: November 4-19, 2019

APPENDIX C

SUGGESTED REPAIR MATERIALS





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No reviews

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It has no metal parts to resist corrosion and a high-tech liquid tight seamless dual rubber gasket. When needed the Torquer plug can be easily disassembled. We can customize the plug with any companies logos and branding. Please contact us for details.

- 1" Torquer Locking Plug T1 min. size .925 (23.5mm) max. size 1.260 (32mm)
- No metal parts.
- Accepts #1 or #3 type padlocks or Safety Lock-Out Tags.
- High-tech liquid tight seamless dual rubber gasket.
- Easily disassembled in the field for decon.
- Strong instrument tethering tool. Dual use with anvil tip.
- Manufactured from an engineering grade polymer blend commonly used to replace steel gears in industry, resistant to most chemicals, unaffected by freezing or high temperatures. Smooth acting ergo grip.

- Easy on, easy off wingnut.
- Large, bold, easy to read well ID lettering.
- Bright safety coloring.
- Lightweight, yet super strong.
- Flush OD design for easy well installation.
- Advanced engineered design will not separate in well.
- Easily convertible for vapor extraction, pressure gauges, vacuum gages, and threaded line fittings.
- Domed top prevents liquids from pooling.
- Specified by grounDouble Wallater professionals.
- Designed, engineered and manufactured in the U.S.A.

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Brand Name: **T-REX**

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- Withstands temperatures from -70°F to 200°F

Specifications

Actual Length	5 yard	Actual Width	4 inch
Color/Pattern	black	Maximum Application Temperature	200 degrees Fahrenheit
Maximum Hold Temperature	200 degrees Fahrenheit	Minimum Application Temperature	32 degrees Fahrenheit
Minimum Hold Temperature	-70 degrees Fahrenheit	Package Quantity	1
Product Form	Roll	Product Type	Waterproof Tape

Print Email

Plumbing > Pipe, Tubing and Fittings > Pipe Fittings > Flexible Pipe Fittings >
PVC Flexible Cap, For Pipe Size 2", 2-25/64" Inside Dia. >

FERNCO

PVC Flexible Cap, For Pipe Size 2", 2-25/64" Inside Dia.

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Item	**Flexible Cap**
Pipe Fitting Material	**PVC**
Pipe Size - Pipe Fitting	**2"**
Standards	**ASTM D5926**
Fitting Length	**1-1/8"**
Inside Dia.	**2-25/64"**

Max. Pressure	**4.3 psi**
Band Material	**300 Stainless Steel**
Resistant To	**Chemicals, Fungus Growth, Normal Sewer Gases, Ultraviolet Rays**
Max. Temp.	**140 Degrees F**

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