

DATE: August 12, 2024

TO: Emily Brickman, P.G., *Senior Project Manager – Geologist, EnSafe*

FROM: Caleb Gourley, *Project Manager, Harbor*

RE: Bi-weekly Site Inspection
NABORS Landfill
Mountain Home, AR
Harbor Project No: ENSF-23299

Harbor visited the NABORS landfill in Mountain Home, Arkansas on August 8, 2024, to conduct the bi-weekly site inspection to assess the condition general condition of the landfill and the leachate collection system. The leachate collection system was last fully repaired by Advanced Fluid Technologies (AFT) in October and November of 2022; however, within a few weeks of these repairs, the system began malfunctioning. By March 2023, most of the leachate collection points were malfunctioning. A quote was then requested and received from AFT to again repair the system. No authorization for the subsequent repairs was provided prior to the expiration of Harbor's contract with DEQ in June 2023.

Upon commencement of the subcontract with EnSafe, Inc. (EnSafe) in April 2024, Harbor retained Comfort Systems USA (CSUSA) to begin repairs of the leachate collection system. CSUSA conducted partial repairs of the system; however, they were unable or unwilling to conduct all of the repairs necessary and have since been terminated as the repair contractor. Harbor and EnSafe are in the process of finding a new contractor to complete the system repairs.

The leachate collection system remains largely unchanged from previous inspections. Findings and observations from the current landfill inspection are summarized below:

- Vertical leachate collection sump (VLCS)-1 was at capacity and overflowing into the nearby area (see photographs 1-2).
 - VLCS-2 appeared to be functioning correctly. The sump was at approximately half capacity.
 - No stormwater was observed in the leachate tank battery secondary containment (see photograph 3).
 - The panel displays were off at LCS-1 – LCS-5, LCS-7, and LCS-8. The displays were completely off and the VFDs did not activate when the sump was placed in "hand" or "auto" mode.
 - LCS-6 displayed a pump fault. However, the green strobe was activated and remain activated when the sump was cycled through the "hand" and "auto" functions.
 - LCS-7 also displayed a pump fault, and the red strobe was activated.
 - The closure turf is damaged around several vent pipes near LCS-4. A turbine vent near LCS-8 has also detached.
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- The closure turf has some significant rills present between LCS-1 and LCS-2, on the north side of Area 1-2. These rills have sediment deposited in them which is allowing vegetation to grow. Woody vegetation is growing on the edges of the liner throughout the landfill. An erosional washout is present along the road between LCS-4 and LCS-5 (see photographs 4-16).

Attachment A is a map showing the LCS points. Photographs are included in Attachment B. Copies of the field notes and the LCS status form are included in Attachment C.

The leachate collection system has been functioning at a minimal level, resulting in some leachate generation. Harbor contract water hauler 417 Services LLC (417 Services) began hauling leachate on July 2, 2024. As of August 10, 2024, 417 Services hauled 37 loads of leachate totaling 139,050 gallons to the City of Springfield, Missouri wastewater treatment plant under wastewater contribution permit #593.

Attachments:

Attachment A – Site Map

Attachment B – Site Photographs

Attachment C – Field Notes and Leachate Collection System Status Form

Attachment A

Site Map



Legend

Landfill Boundary

VLCS Points

LCS Points



Attachment B

Site Photographs



Photograph 1: View of VLCS-1 at capacity.



Photograph 2: View of VLCS-1 overflowing to ground.



Photograph 3: View of dry leachate tank battery secondary containment.



Photograph 4: View of rills present in closure turf of north side of Area 1-2.



Photograph 5: View of rills present in closure turf of north side of Area 1-2.



Photograph 6: View of rills present in closure turf of north side of Area 1-2.



Photograph 7: View of rills present in closure turf of north side of Area 1-2.



Photograph 8: View of woody vegetation growing in closure turf on north side of Area 1-2.



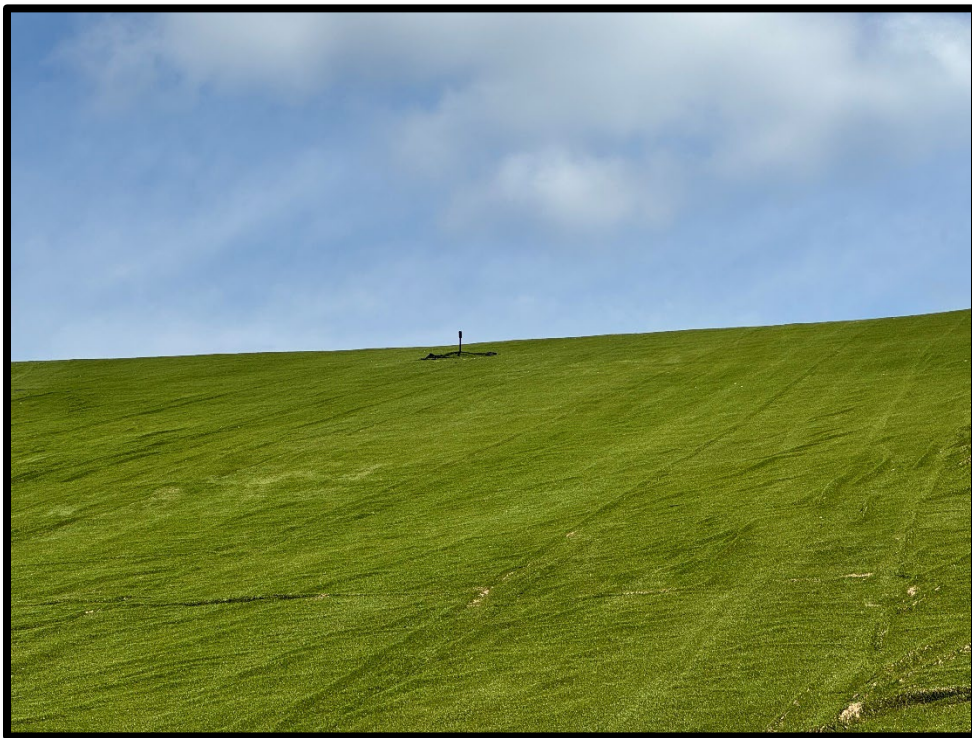
Photograph 9: View of rills present in closure turf of north side of Area 1-2.



Photograph 10: View of woody vegetation growing in closure turf on north side of Area 1-2.



Photograph 11: View of rills present in closure turf of north side of Area 1-2.



Photograph 12: View of damaged closure turf around vent near LCS-4.



Photograph 13: View of sediment present on closure turf near LCS-4.



Photograph 14: View of washout present in road between LCS-4 and LCS-5.



Photograph 15: View of woody vegetation growing in closure turf near LCS-5.



Photograph 16: View of woody vegetation growing in closure turf near LCS-7.



Photograph 17: View of EB-1.



Photograph 18: View of EB-2.



Photograph 19: View of EB-4.



Photograph 20: View of EB-5.



Photograph 21: View of IW-1.

Attachment C

**Field Notes and Leachate Collection System
Status Inspection Form**

Nabors Landfill

8/8/24

Bi-Weekly Leachate Management

weather: 80's, Partly cloudy, light breeze

1030: C. Gowdy on-site

1037: Arrive at VLCS-2

1039: Arrive at VLCS-1

- sump overflowing, panel making buzzing noise

1044: Arrive at leachate tank battery

- no stormwater

- tank level @ 61.3"

1047: Arrive at IW-1

- TOC + Grout - 12" 20" ~~to grout~~

1052: Arrive at LCS-1

- display is off

1103: Arrive at LCS-2

- display off

1107: Arrive at LCS-3

- display off

1108: Arrive at LCS-4

- display off

1115: Arrive at LCS-5

- display off

1120: Arrive at LCS-9

- display off

1124: Arrive at LCS-8

- display off

1126: Arrive at LCS-7

1128: Arrive at LCS-6

1131: Arrive at EB-2

- TOC to ground = 13.5"

- TOC to grout = 58.4"

1138: Arrive at EB-1

- TOC at ground

- TOC to grout = 96"

1145: Arrive at EB-4

- TOC to ground = 17"


- TOC to grout = 63.5"

1155: Arrive at EB-5

- TOC to ground = 6.5"

- TOC to grout = 15"

1205: C. Gowdy off-site.





Leachate Collection System Status

Date: 8/8/24 Arrival Time: 1030 Location: NABORS Landfill Leachate Tank Battery Level (inches): 61.3

Weather Conditions: 80's, partly cloudy, light breeze

Panel Number	Display Functioning (Yes/No)	Leachate Level (inches)	Green Flashing? (Yes/No)	Amber Flashing? (Yes/No)	Red Flashing? (Yes/No)	Working in Hand? (Yes/No)	Working in Auto? (Yes/No)	VFD Status	Hours	Alarm	Comments	
VLCS-1	N/A	N/A	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	Sump status:	at capacity
VLCS-2	N/A	N/A	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	Sump status:	1/2 full
LCS-1	✓	—	—	—	—	—	—	—	—	—	station not operational	
LCS-2	✓	—	—	—	—	—	—	—	—	—	"	"
LCS-3	✓	—	—	—	—	—	—	—	—	—	"	"
LCS-4	✓	—	—	—	—	—	—	—	—	—	"	"
LCS-5	✓	—	—	—	—	—	—	—	—	—	"	"
LCS-6	✓	9.4	✓	✓	✓	✓	✓	—	29	✓	Pump Fault	
LCS-7	✓	0.0	✓	✓	✓	✓	✓	—	29	✓	Pump Fault	
LCS-8	✓	—	—	—	—	—	—	—	—	—	station not operational	
LCS-9	✓	—	—	—	—	—	—	—	—	—	"	"
General Comments:												