TECHNICAL MEMORANDUM

DATE: April 15, 2025

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

FROM: Caleb Gourley, Senior Staff Scientist*, 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 April 10, 2025, to conduct the bi-weekly site inspection to assess the general condition of the landfill and the leachate collection system (LCS). The LCS was last fully repaired by Advanced Fluid Technologies (AFT) in October and November of 2022; however, within a few weeks of these repairs, the LCS began malfunctioning. By March 2023, most of the LCS 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.

Landmarc Environmental (Landmarc), a company specializing in LCS installation and service, conducted a full assessment of the LCS on December 3-4, 2024. A report summarizing the findings was submitted to DEQ on January 20, 2025. Harbor discontinued site visits in February 2025 until DEQ approved a new budget for activities occurring at NABORS. The budget was approved on April 3, 2025, and site visits will continue until 2026.

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

- Vertical leachate collection sump (VLCS)-1 is not functioning correctly and was observed at capacity and overflowing (see photographs 1-2).
- VLCS-2 appeared to be functioning correctly and was observed at 1/2 capacity.
- The NABORS Landfill area received approximately 12.92 inches of precipitation since the last site inspection on February 13, 2025 (based on data published by the Southern Regional Climate Center). As such, the leachate tank battery containment was near full at the time of inspection (see photographs 3-5). The water inside the containment had no odor, good clarity, and the pH was measured at 8.44 standard units. The stormwater was released from the containment.
- Staining was later observed on the side of several of the leachate storage tanks inside the secondary containment. Based on this, it appears that leachate likely overflowed through the top vent system into the secondary containment (see photographs 3-5).
- The panel displays were off at all LCS stations except LCS-2, LCS-5, and LCS-7.

- LCS-2 level was at 0.0 inches and did not activate when the sump was placed in "hand" or "auto" mode. LCS-2 also displayed a pump fault alarm.
- LCS-5 level remained at 9.7 inches and did not activate when the sump was placed in "hand" or "auto" mode.
- LCS-7 level remained at 0.0 inches and did not activate when the sump was placed in "hand" or "auto" mode. LCS-7 also displayed a pump fault alarm.
- The display at LCS-9 had been removed.
- The closure turf has some significant rills present near LCS-1 and LCS-2 (see photograph 6). These rills have sediment deposited in them which allows vegetation to grow. An erosional washout is present along the road between LCS-4 and LCS-5.
- A turbine vent atop of Area 1-2 has become detached near coordinates 36.46114, -92.45014 (see photograph 7).
- Damaged closure turf was observed around a pressure relief vent on the north side of Area 1-2 (see photograph 8).
- No damage to the closure turf was observed on top of the landfill cells (see photographs 9-12).

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, mainly by placing some of the LCS points in "hand" mode. Harbor contract water hauler 417 Services LLC (417 Services) began hauling leachate on July 2, 2024. As of February 23, 2025, 417 Services hauled 226 loads of leachate totaling 866,700 gallons to the City of Springfield, Missouri wastewater treatment plant under wastewater contribution permit #593. No leachate was hauled between February 24, 2025, and the date of this inspection.

Attachments:
Attachment A – Site Map
Attachment B – Site Photographs
Attachment C – Field Notes and Leachate Collection System Status Form

Attachment A

Site Map

Harbor
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Client: ENSAFE

N W E S

Leachate Collection Points
NABORS Landfill
Mountain Home, Baxter County, AR

Date: 5/17/2024
Drawn by: TH
Checked by: LD

Attachment B

Site Photographs

Photograph 1: View of erosional rill from VLCS-1 overflow.

Photograph 2: View of VLCS-1 sump at capacity.

Photograph 3: View of leachate tank containment near capacity and staining on sides of tanks.

Photograph 4: View of leachate tank containment near capacity.

Photograph 5: View of leachate tank containment near capacity and staining on side of tank.

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

Photograph 7: View of detached turbine vent on north side of Area 1-2.

Photograph 8: View of damaged turf around PRV on north side of Area 1-2.

Photograph 9: View across the top of Area 1-2.

Photograph 10: View across the top of Area 1-2.

Photograph 11: View across the top of Area 1-3.

Photograph 12: View across the top of Area 1-3.

Attachment C

Field Notes and Leachate Collection System Status Inspection Form

Harbor
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Nabors Landfill 4/10/25
Bi-weekly leachate management
weather: 70's, clear, breezy

1029: C. Gourley on-site
1034: Arrive at VLCS-2
1042: Arrive at VLCS-1
- sump overflowing
1047: Arrive at leachate tank battery
- tank level @ 159.4"
- water in containment approx. 8" from top of dike.
- pH level @ 8.44
1100: Arrive at LCS-1
1111: Arrive at LCS-2
1115: Arrive at LCS-3
1120: Arrive at LCS-5
1125: Arrive at LCS-9
1135: Arrive at LCS-8
1138: Arrive at LCS-6
1141: leachate tank containment left open to drain excess water
1150: C. Gourley off-site

Harbor
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Harbor

Leachate Collection System Status

Date: 4/10/25 **Arrival Time:** 1029 **Location:** NABORS Landfill **Leachate Tank Battery Level (inches):** 159.4

Weather Conditions: 70's, clear, breezy

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	~	Y	Y	N/A	N/A	N/A	Sump status: 1/2 full
LCS-1	~	—	—	—	—	—	—	—	—	—	station not operational
LCS-2	Y	0.0	~	~	~	~	~	—	1853	Y	Pump fault
LCS-3	~	—	—	—	—	—	—	—	—	—	station not operational
LCS-4	~	—	—	—	—	—	—	—	—	—	" "
LCS-5	Y	9.7	~	~	~	~	~	—	0	N	Station ok
LCS-6	~	—	—	—	—	—	—	—	—	—	station not operational
LCS-7	Y	0.0	~	~	~	~	~	—	29	Y	Pump fault
LCS-8	~	—	—	—	—	—	—	—	—	—	station not operational
LCS-9	~	—	—	—	—	—	—	—	—	—	" "

General Comments: Leachate tank battery containment near capacity

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End of Report