TECHNICAL MEMORANDUM

DATE: December 1, 2025

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

FROM: Ian Klein, P.E., *Environmental Engineer, Harbor*

RE: Bi-weekly Site Inspection
NABORS Landfill
Mountain Home, AR
Harbor Project No: L8247885

Harbor conducted the bi-weekly site visit at the NABORS landfill in Mountain Home, Arkansas on November 25, 2025, 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 repair the system again. 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 these activities was submitted 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.

EnSafe submitted a Scope of Services and Fee Estimate (Revision 1) to the Arkansas Department of Energy and Environment Division of Environmental Quality (DEQ) Office of Land Resources on February 28, 2025, which included proposals from Harbor and Landmarc to complete repairs to the LCS. On July 10, 2025, the DEQ approved EnSafe's Scope of Services and Fee Estimate for LCS repairs, which were conducted on September 2-5, 2025. The LCS system was partially repaired, which included installation of 30-amp power disconnects and new PD6000 controllers. Harbor received a report from Landmarc on October 13, 2025, which was included with a report summarizing repairs prepared by Harbor and submitted on October 24, 2025.

Findings and observations from the current landfill inspection are summarized below:

- Vertical leachate collection sump (VLCS)-1 was not functioning correctly, and the sump was observed overflowing (see photograph 1).
- VLCS-2 appeared to be functioning correctly and was observed at 1/2 capacity.
- The leachate tank battery level was 71.5 inches. This is the same level recorded during the previous site visit.

- Three inches of stormwater was observed in the secondary containment. The pH of the stormwater was measured at 8.9, and the drainpipe was opened to release it (see photograph 2).
- LCS-1 displayed a leachate level of 63.4 inches. The sump did not activate in "hand" or "auto."
- LCS-2 displayed a leachate level of 19.4 inches. The station appeared to be operating in both "hand" and "auto" modes.
- LCS-3 displayed a leachate level of 26.6 inches. The station appeared to be operating; however, the "hand" and "auto" modes did not affect the sump, and the leachate level did not change over time.
- LCS-4 displayed a leachate level of 21.0 inches. The station appeared to be operating in both "hand" and "auto" modes.
- LCS-5 displayed a leachate level of 531.3 inches. Landmarc stated that the sump pump is more than likely faulty, causing voltage issues within the VFD. The station is not functioning correctly and will need additional repairs.
- LCS-6 displayed a leachate level of 501.8 inches. The station did not appear to be functioning correctly.
- LCS-7, LCS-8, and LCS-9 remain non-operational. Landmarc will need to make a return trip to complete repairs.
- An erosional washout is present along the road between LCS-4 and LCS-5.
- A damaged pressure relief vent (PRV) was observed on the west side of Area 1-2, between LCS-1 and LCS-2 (see photograph 3). The damage is located near coordinates 36.46144, -92.45128.
- Damaged closure turf was observed on the north side of Area 1-2 at coordinates 36.46181, -92.45045 (see photograph 4). The damage is approximately 30 feet long by 3 feet wide. The damage was first observed on July 2, 2025.
- Damaged closure turf was observed on the east side of Area 1-3, above LCS-7 (see photograph 5). The damage is approximately 100 feet long by 9 feet wide. The closure turf tear was first observed on June 17, 2025.

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.

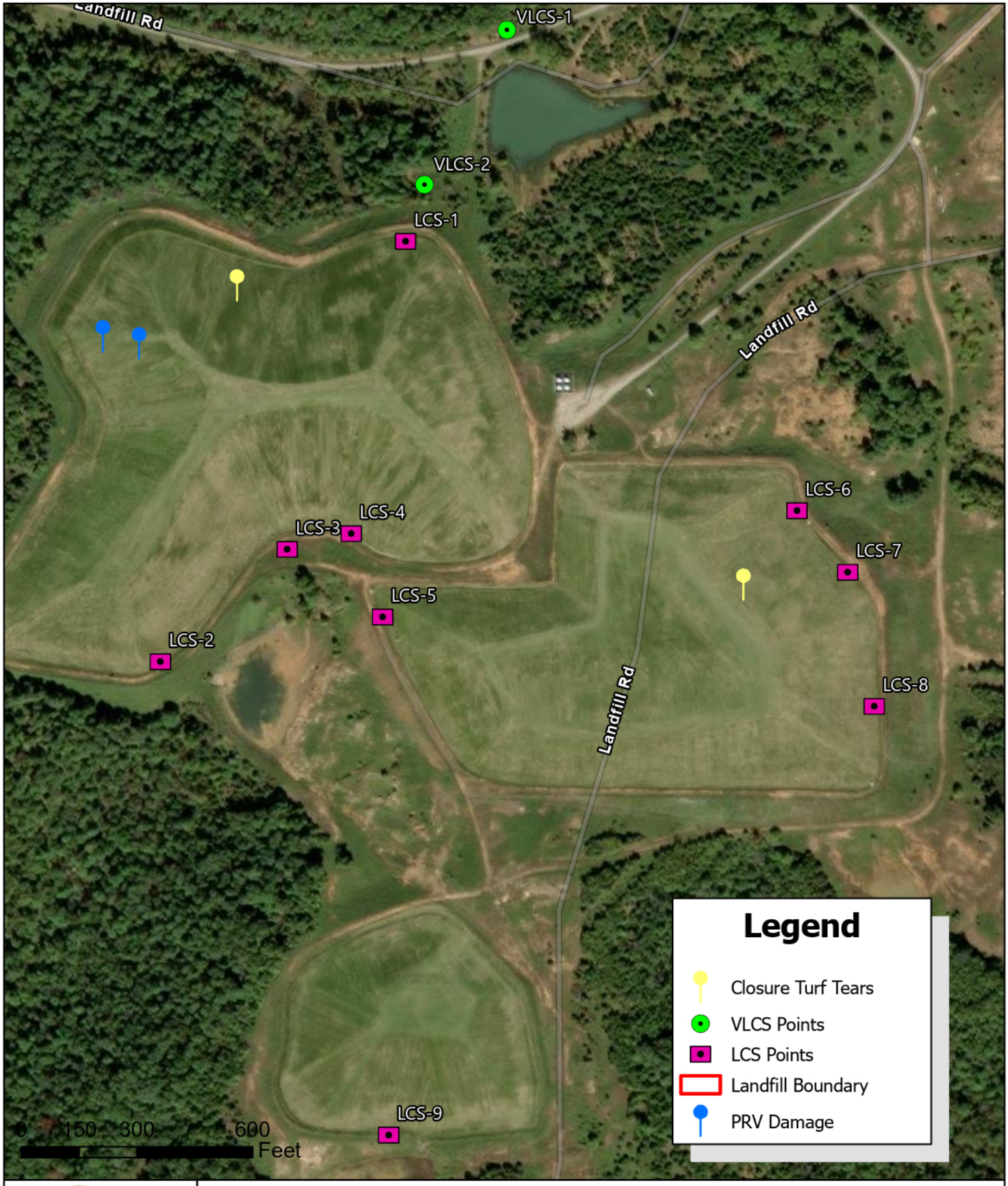
The LCS functionality has improved significantly since Landmarc made their recent repairs. 417 Services began hauling leachate on July 2, 2024. From July 2, 2024 through February 23, 2025, 226 loads of leachate (866,700 gallons) was hauled to the City of Springfield, Missouri wastewater treatment plant under wastewater contribution permit #593.

No leachate was hauled between February 24, 2025, and April 10, 2025. 417 Services resumed hauling leachate on April 11, 2025. As of October 17, 2025, 180 loads of leachate (693,000 gallons) have been hauled to the City of Springfield for disposal. Leachate hauling has been paused since October 17, 2025, until more funds become available.

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

Attachment A

Site Map



Harbor
A Terracon Company
5800 Evergreen Drive
Little Rock, AR 72205
P: 501.663.8800
www.HarborEnv.com

Client: ENSAFE

N W E S

Site Location Map
NABORS Landfill
Three Brothers, Baxter County, AR

Date:	10/9/2025
Drawn by:	CG
Checked by:	TH
Revision No:	0

Attachment B

Site Photographs

Photograph 1: View of VLCS-1 at capacity and overflowing.

Photograph 2: View of stormwater in secondary containment at leachate tank battery.

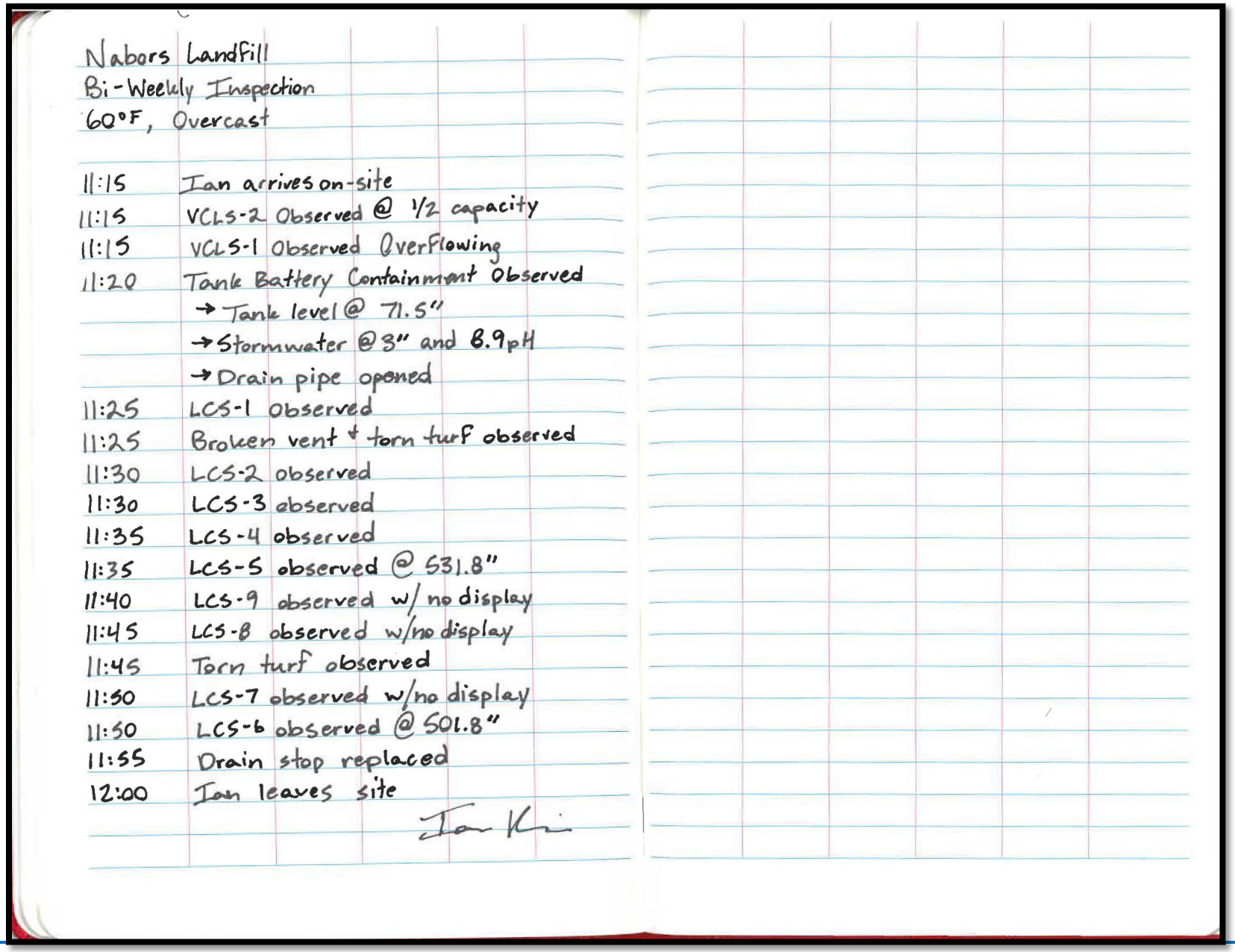
Photograph 3: View of damaged pressure relief vent on west side of Area 1-2.

Photograph 4: View of damaged closure turf on the north side of Area 1-2.

Photograph 5: View of damaged closure turf on east side of Area 1-3**.**

Attachment C

Field Notes and Leachate Collection System Status Inspection Form



Nabors Landfill
Bi-Weekly Inspection
60°F, Overcast

11:15	Ian arrives on-site
11:15	VCLS-2 Observed @ 1/2 capacity
11:15	VCLS-1 Observed Overflowing
11:20	Tank Battery Containment Observed
	→ Tank level @ 71.5"
	→ Stormwater @ 3" and 8.9pH
	→ Drain pipe opened
11:25	LCS-1 Observed
11:25	Broken vent + torn turf observed
11:30	LCS-2 observed
11:30	LCS-3 observed
11:35	LCS-4 observed
11:35	LCS-5 observed @ 531.8"
11:40	LCS-9 observed w/ no display
11:45	LCS-8 observed w/no display
11:45	Torn turf observed
11:50	LCS-7 observed w/no display
11:50	LCS-6 observed @ 501.8"
11:55	Drain stop replaced
12:00	Ian leaves site

Ian K

Harbor
A Terracon Company

Harbor

Leachate Collection System Status

Date: 11.25.25 **Arrival Time:** 11:15 **Location:** NABORS Landfill **Leachate Tank Battery Level (inches):** 71.5

Weather Conditions: 60's Overcast

3 inches of stormwater in tank battery containment, pH measured at 8.9, drain opened

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 Operational? (Yes/No)	Comments	
VLCS-1	N/A	N/A	N/A	N/A	N	N	N	N/A	Sump Capacity:	Overflow
VLCS-2	N/A	N/A	N/A	N/A	N	—	—	N/A	Sump Capacity:	1/2 Full
LCS-1	Y	63.4	N	N	N	N	—	N		
LCS-2	Y	19.4	N	N	N	Y	—	Y		
LCS-3	Y	26.6	N	N	N	—	—	—	Pump was on, could not turn off + level was not dropping	
LCS-4	Y	21.0	N	N	N	Y	—	Y		
LCS-5	Y	531.3	N	N	N	N	N	N		
LCS-6	Y	501.8	N	N	N	N	N	N		
LCS-7	N	—	N	N	N	N	N	N		
LCS-8	N	—	N	N	N	N	N	N		
LCS-9	N	—	N	N	N	N	N	N		
General Comments:										

5800 Evergreen Drive • Little Rock, Arkansas 72205 • Phone 501.663.8800 • Facsimile 501.588.0123
www.HarborEnv.com

End of Report