

DATE: July 16, 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 July 10, 2024, to conduct the bi-weekly site visit to assess the condition of 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 appeared to be functioning correctly. The sump
 was not overflowing but the level of leachate in the sump was at approximately 75%
 capacity.
- VLCS-2 appeared to be functioning correctly and the sump was at half capacity.
- The display at leachate collection sump (LCS)-1 display is no longer functioning correctly. The display reads "FIRMWARE V4.6" and the display will not advance screens. No further information could be gathered (see photograph 1).
- The panel display remains off at LCS-2.
- LCS-3 appeared to be functioning in "hand" mode only, as the pump hours remained at 60 (as documented by Harbor in June 2023). As the hours haven't changed, the station is likely not starting automatically and is malfunctioning.
- LCS-4, LCS-7 and LCS-9 had pump faults and were not functioning.



- LCS-5 is not functioning correctly. The display is on and cycling, and the VFD activates, and pump starts when the station is placed in "hand mode." However, the "pump on" and "pump off" settings are set at 0.0" indicating that the station was not reset properly after repairs were made.
- LCS-6 appears to be functioning correctly.
- The display at LCS-8 is on but not functioning correctly. The display would not advance screens and displayed a strange message of unrecognizable characters (see photograph 2).
- The closure turf is damaged around several vent pipes near LCS-4. A turbine vent near LCS-8 has also detached (see photographs 3-5).
- Approximately 6" of stormwater was observed within the stormwater containment. The pH
 was measured at 8.81. Approximately 2" of stormwater was released while Harbor was onsite.

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. Harbor collected a leachate sample from the leachate tank battery on July 10, 2024, at 0915. The sample was submitted to Arkansas Analytical, Inc. on July 10, 2024, at 1336. The chain-of-custody is included in Attachment D.

The repairs to the leachate collection system have been sufficient to allow leachate generation and tank filling. Harbor contracted 417 Services LLC (417 Services) to begin hauling leachate and began hauling leachate on July 2, 2024. As of 7/14/24, 417 Services hauled 18 loads of leachate totaling 62,900 gallons to the City of Springfield, Missouri wastewater treatment plant under wastewater contribution permit #593. The ending leachate tank battery level as of the above date was 21 inches.

Attachments:

Attachment A – Site Map

Attachment B – Site Photographs

Attachment C - Field Notes and Leachate Collection System Status Form

Attachment D – Leachate Analytical Sample Chain-of-Custody



Attachment A

Site Map





Attachment B

Site Photographs





Photograph 1: Error message displayed at LCS-1.



Photograph 2: Error message displayed at LCS-8.





Photograph 3: Damaged closure turf around vent pipe near LCS-4.



Photograph 4: Damaged closure turf around vent pipe near LCS-4.





Photograph 5: Damaged wind turbine near LCS-8.



Photograph 6: Damaged electrical part on top of VLCS-1 housing.





Photograph 7: Damaged electrical part on LCS-1 housing.



Photograph 8: Damaged electrical part on LCS-2 housing.



Attachment C

Field Notes and Leachate Collection System
Status Inspection Form



Natsons Landlin 6/27/24	Nations Landsill Tholay
Bi-weethy leachate Management	Bi- weekly leachate Management
weather: 80's, sunny, light breeze	weather: 70's clear
1032; C. Gowly on-5.7c	845: C. Gowly + I klein on-site
1037: Arrive atVLCS-Z	853. Anive at YUCS-Z
1040: Arrive at VLCS-1	856: Amre at VICS-1
10113: Arrive at leachate tank battery	901. Arrive at leacheste tank bottom
- tank level c 144.2"	~6" of sw in confarment
- minimal stormwater in cont.	~ 57.4" of leacate in tank
none released.	915: Leachate sample collected
1048; Arrive at LCS-1	- Stormwater pet e 8,81
1053: Arrive at LCS. Z	- leachate , p.t. @ 6.65
- Station not operational	931: Avriv at CCS-1
1055. Awire at LCS-3	938: Avrive at LCS-Z
- Station works in "hand" only	941: Amire at LCS-3
1057: Arrive at 465-4	aux: Amre at LLS-4
1101: Arrive at LCS-5	149: Ame at LCS-5
1105: Arrive at LCS-9	155: Arrive at LCS-9
1110: Avrive at LCS-8	1007: Anne at ccs-8
1112. Arrive at LCS-7	1005; Amie at CCS-7
1114. Arrive at LCS-6	1008: Anne at LCS-6,
1130. C. Gowly DR site.	1018: C. Gordy + I, Klein off-site.
200 200 200 200 200 200 200 200 200 200	





Leachate Collection System Status

Date: 7/10/24	Arrival Time: 0845	Location: NABORS Landfill	Leachate Tank Battery Level (inches): 5つ. せょ	
Weather Conditions:	705, clear	nggan ng		

Display Functioning (Yes/No)	Leachate Level (inches)	Green Flashing? (Yes/No)		1000		Working in Auto? (Yes/No)	VFD Status	Hours	Alarm	Comments	
N/A	N/A	N/A	N/A	N	_	_	N/A	N/A	N/A	Sump status:	3/4 2011
N/A	N/A	N/A	N/A	\sim		-	N/A	N/A	N/A	Sump status:	1/2 8-11
Y	_	_	_	_	_	_			_	Display W	ill not advance
\sim	_	_	_	_	_	_ ′	_	-	-	Station	not operational
Y	27.2	N	N	N	Y	N'	_	60	N	Station o	r - no "auto"
Y	0.0	~	N	Y	N	N	_	210	Y	Pimp	fault
Y	9.7	N	N	N	Y	\sim	_	0	N	Station	not calibrated
Y	9.4	~	~	~	Y	Y	_	26	N	Station	OK
Y	0.0	N	N	4	N	N	_	29	Y	Pump à	Paul+
Y	_	_	_	_	-	-	_	_	_	Display	on, not functional
Y	0.0	N	~	N	\sim	\sim	_	zial	4	Pump -	Paul+
	Functioning (Yes/No) N/A N/A Y Y Y Y Y Y	Functioning (Yes/No) Level (inches) N/A N/A N/A N/A Y	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) N/A N/A N/A N/A N/A N/A N/A N/A N/A Y — — Y 27.2 N/A Y 0.0 N/A Y 27.2 N/A Y 9.7 N/A Y 9.7 N/A Y 0.0 N/A Y 0.0 N/A Y 0.0 N/A Y 0.0 N/A	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A Y - - - Y 27.2 N N Y 9.7 N N Y 9.4 N N Y 0.0 N N	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing?	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Hand? (Yes/No) N/A N/A	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Hand? (Yes/No) in Auto? (Yes/No) N/A N/A <t< td=""><td>Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Hand? (Yes/No) In Auto? (Yes/No) Status N/A N/A</td><td>Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Auto? (Yes/No) Status N/A N/A</td><td> Functioning Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) (Y</td><td>Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) in Auto? (Yes/No) Status N/A N/A</td></t<>	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Hand? (Yes/No) In Auto? (Yes/No) Status N/A N/A	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) In Auto? (Yes/No) Status N/A N/A	Functioning Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) (Y	Functioning (Yes/No) Level (inches) Flashing? (Yes/No) Flashing? (Yes/No) Flashing? (Yes/No) in Auto? (Yes/No) Status N/A N/A



Attachment D

Leachate Analytical Sample Chain-of-Custody





8100 National Drive Little Rock, AR 72209 PHONE: 501-455-3233 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION							Project Description Turnaround Time					Preservation Codes:							
Harbor Environmental & Safety							NABORS Landf	1 Day (100%)	1. Cool, 6 Degrees Centigrade					4. Thiosulfate for Dechlorination					
5800 Evergreen Dr.					,			2 Day (50%)), pH < 2		5. Hydrochloric Acid(HCl)					
Little Rock, AR 72205																			
							Telephone: 501-663-8800 5 Day (2076)				3. Nitric Acid (HNO ₃), pH < 2 TEST PARAMET					6. Sodium Hydroxide (NaOH), pH > 12			
Attn: Tom Huetter						Email: thuetter@harborenv.com Preservative Code				1	1,2	1,6	1,2	1,3	LKO		Bottle Type Code G = Glass; P = Plastic		
							Bottle Type:					P	GA	P			V = Septum; A = Amber		
Sampler(s) Signature Field SAMPLE COLLECTION Number Date/s Time/s Grab Comp Bottles Comp Bottles						ed	ed SAMPLE				Ammonia	Cyanide	Oil and Grease	P (200.7), Hg 200.8-(As, -Od, -Or, -On, -Or, -Od, -Or, -Od, -Od, -Od, -Od, -Od, -Od, -Od, -Od			Arkansas Analytical Work Order Number:		
	7/10/24	0915	X	Comp	5		Leachate	TION DEGG	Tur Holt	X Flashpoint, pH	X	X	Х			-	-		
	1	7	X		5			X				X			01				
	-		<u> </u> ^		5	Liquid Leachate Duplicate					Х	Х	Х	X		_	02		
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				-	-			4											
			-	-	-														
								3											
								1											
1. Relinquished by: (Signature) Date/Time 7/10/14				by: (Si	y: (Signature) SAMPLE CONDITION UPON R						REMARKS / SAMPLE COMMENTS								
				1. CUSTODY SEALS					LS:	sI	Vo.	Feil pt c 6.65							
1	7	/	1				2 00	ONTAINERS O		Yes		- 1							
		1336	/									- 11							
	(0: 1			_				OC/LABELS A		Yes		10							
3. Relinguished by	(Signature)	Date/Time	/	4. Rec	eived	by lab:	(Signature) 4. RE	ECEIVED ON	ICE:	Yes	1	10							
			/	S	Id	MI	/ 5. TE	EMPERATURE	ON RECEIPT:	°C		-							
				,		5. TEMPERATURE ON RECEIPT: 6. TEMPERATURE GUN ID: FOR COMPLETION BY													
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Revision 3 1/4/16