



**DIVISION OF
ENVIRONMENTAL QUALITY**

Sarah Huckabee Sanders
GOVERNOR

Shane E. Khoury
SECRETARY

July 10, 2025

Elizabeth Mack, Senior Environmental Compliance Specialist
Department of Environmental Services
755 N. Franklin, Springfield MO 65802

**Re: Semi-Annual Leachate Report - First Half 2025
 NABORS Landfill, Mountain Home, Arkansas
 ADEQ Permit No. 0249-S1-R2, AFIN 03-00051
 Wastewater Contribution Permit No. 593**

Dear Ms. Mack:

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), is pleased to submit the enclosed *Semi-Annual Leachate Report – First Half 2025* for the NABORS Landfill. The report, prepared by Harbor, documents the results of leachate sampling and analysis conducted during the reporting period.

As indicated in the report, none of the analytical results exceeded the permit limits.

If you have any questions or require additional information, please contact me at (501) 682-0836 or clay.mcdaniel@arkansas.gov.

Sincerely,

A handwritten signature in blue ink that reads "Clay McDaniel".

Clay McDaniel
Engineer,
Office of Land Resources

Enclosure: Harbor Technical Memorandum – *Semi-Annual Leachate Report – First Half 2025*

DATE: July 2, 2025

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

CC: Bryan Leamons, P.E., *Associate Director, Office of Land Resources, Division of Environmental Quality*

FROM: Thomas Huetter, P.G., *Senior Project Manager, Harbor*

RE: Semi-Annual Leachate Report – First Half 2025
NABORS Landfill
Mountain Home, AR
Harbor Project No: L82247885

Attached are the results of the leachate analysis for the First Half 2025 reporting period for the referenced facility. The leachate generated at the NABORS Landfill is transported by 417 Services LLC to the City of Springfield, MO wastewater collection system under Wastewater Contribution Permit #593. A total of 127 loads totaling 488,950 gallons of leachate were generated and hauled during the six-month period.

A sample of the leachate plus a duplicate sample was collected on May 7, 2025, and submitted for laboratory analysis. A copy of the laboratory analytical report is attached to this letter report. None of the detected concentrations exceeded the permit requirements. Table 1 below summarizes the analytical methods and results of the analyses. The metals results were converted from micrograms per liter to milligrams per liter for comparison to the permit requirements.

Also attached is the Certification Statement to be signed by the designated signatory at DEQ.

Attachments:

Attachment A – Laboratory Analytical Report

Attachment B – Certification Statement

Table 1 – Summary of Leachate Analytical Results – May 2025

Parameter	Analytical Method	Units	Permit Requirement	Leachate	Leachate Duplicate
Ammonia as N	SM 4500-NH ₃ B,D,C-2011	mg/L	Monitoring Requirement Only	27.1	27.0
Cyanide (total)	SM 4500-CN B,E-2011	mg/L	0.33	< 0.010	< 0.010
Flashpoint	SW 1010B, 2018	°C	< 140°F	Did Not Flash	Did Not Flash
Oil and Grease	EPA 1664 Mod, Rev. B 2010	mg/L	100	< 4.95	< 4.95
pH	SM 4500-H+ B-2011	S.U.	5.0 (minimum) 12.5 (maximum)	6.44	6.54
Arsenic	EPA 200.8 Rev 5.4 (1994)	mg/L	0.51	0.00291	0.00294
Cadmium	EPA 200.8 Rev 5.4 (1994)	mg/L	0.13	< 0.00026	< 0.00026
Chromium	EPA 200.8 Rev 5.4 (1994)	mg/L	2.91	0.000629	0.000658
Copper	EPA 200.8 Rev 5.4 (1994)	mg/L	2.44	0.00184	0.00188
Lead	EPA 200.8 Rev 5.4 (1994)	mg/L	0.53	< 0.000416	< 0.000416
Mercury	SW7470A/EPA245.1,3.0 (1994)	mg/L	0.02	< 0.00020	< 0.00020
Nickel	EPA 200.8 Rev 5.4 (1994)	mg/L	5.79	0.00714	0.00704
Phosphorus	EPA 200.8 Rev 5.4 (1994)	mg/L	Monitoring Requirement Only	< 0.094	< 0.094
Zinc	EPA 200.8 Rev 5.4 (1994)	mg/L	6.54	0.0270	0.0284

Notes: S.U. – standard units; °C – degrees Celsius; mg/L – milligrams per liter; metals results converted from micrograms per liter to milligrams per liter for comparison to permit requirements.

Attachment A

Laboratory Analytical Report



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 May 2025

Tom Huetter
Harbor Environmental & Safety
5800 Evergreen Dr.
Little Rock, AR 72205

Project: NABORS Landfill Leachate Sample(s)

Project Number: May 2025

SDG Number: 2505209

Enclosed are the results of analyses for samples received by the laboratory on 08-May-25 08:13. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	5.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
Technical Director

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22 May 2025

Tom Huetter
Harbor Environmental & Safety
5800 Evergreen Dr.
Little Rock, AR 72205
Project: NABORS Landfill Leachate Sample(s)
Project Number: May 2025
Date Received: 08-May-25 08:13



CASE NARRATIVE

Sample Delivery Group – 2505209

One OR more of the qualifiers described below may appear in this report. Qualifiers in RED apply to this SDG (Sample Delivery Group).

FLASHPOINT QUALIFIER:

<u>Qualifier</u>	<u>Description</u>
DF	Sample DID FLASH below method required temperature of 60 degrees C or 140 degrees F.
DNF	Sample DID NOT FLASH at or below method required temperature of 100 degrees C or 212 degrees F.

pH QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
E2	Result qualified as it was received and analyzed outside of holding time. Analysis is considered a "Field" analysis.

22 May 2025



Tom Huetter
 Harbor Environmental & Safety
 5800 Evergreen Dr.
 Little Rock, AR 72205
 Project: NABORS Landfill Leachate Sample(s)
 Project Number: May 2025
 Date Received: 08-May-25 08:13

ANALYTICAL RESULTS

Lab Number: 2505209-01
 Sample Name: Leachate
 Date/Time Collected: 5/7/25 10:41
 Sample Matrix: Leachate

<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Arsenic	ug/L	2.91		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Cadmium	ug/L	< 0.260		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Chromium	ug/L	0.629		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Copper	ug/L	1.84		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Lead	ug/L	< 0.416		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Mercury	ug/L	< 0.200		5/9/25 14:27	B505220	SW7470A/EPA245.1,3.0- 1994
Nickel	ug/L	7.14		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
Phosphorus	mg/L	< 0.094		5/19/25 13:54	B505401	EPA 200.7, Rev 4.4 (1994)
Zinc	ug/L	27.0		5/20/25 15:19	B505396	EPA 200.8, Rev. 5.4(1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	27.1		5/14/25 8:14	B505302	SM 4500-NH3 B,D,C-2021/EPA 200.1
Cyanide (total)	mg/L	< 0.010		5/21/25 8:05	B505484	SM 4500-CN B,C,E,G 2021
Flashpoint	°C	Did Not Flash	DNF*	5/12/25 8:16	B505224	SW 1020C, 2018
Oil and Grease	mg/L	< 4.95		5/14/25 15:59	B505300	EPA1664 Mod, Rev. B 2010
pH	S.U.	6.44	E2	5/9/25 15:45	B505299	SM 4500-H+ B-2021
Temp of pH	°C	20.1		5/9/25 15:45	B505299	SM 2550 B-2010

22 May 2025



Tom Huetter
 Harbor Environmental & Safety
 5800 Evergreen Dr.
 Little Rock, AR 72205
 Project: NABORS Landfill Leachate Sample(s)
 Project Number: May 2025
 Date Received: 08-May-25 08:13

ANALYTICAL RESULTS

Lab Number: 2505209-02
 Sample Name: Leachate Duplicate
 Date/Time Collected: 5/7/25 10:41
 Sample Matrix: Leachate

<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Arsenic	ug/L	2.94		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Cadmium	ug/L	< 0.260		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Chromium	ug/L	0.658		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Copper	ug/L	1.88		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Lead	ug/L	< 0.416		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Mercury	ug/L	< 0.200		5/9/25 14:31	B505220	SW7470A/EPA245.1,3.0- 1994
Nickel	ug/L	7.04		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
Phosphorus	mg/L	< 0.094		5/19/25 13:55	B505401	EPA 200.7, Rev 4.4 (1994)
Zinc	ug/L	28.4		5/20/25 15:22	B505396	EPA 200.8, Rev. 5.4(1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	27.0		5/14/25 8:14	B505302	SM 4500-NH3 B,D,C-2021/EPA 200.1
Cyanide (total)	mg/L	< 0.010		5/21/25 8:05	B505484	SM 4500-CN B,C,E,G 2021
Flashpoint	°C	Did Not Flash	DNF*	5/12/25 8:16	B505224	SW 1020C, 2018
Oil and Grease	mg/L	< 4.95		5/14/25 15:59	B505300	EPA1664 Mod, Rev. B 2010
pH	S.U.	6.54	E2	5/9/25 15:45	B505299	SM 4500-H+ B-2021
Temp of pH	°C	20.2		5/9/25 15:45	B505299	SM 2550 B-2010

22 May 2025



Tom Huetter
Harbor Environmental & Safety
5800 Evergreen Dr.
Little Rock, AR 72205
Project: NABORS Landfill Leachate Sample(s)
Project Number: May 2025
Date Received: 08-May-25 08:13

QUALITY CONTROL RESULTS

Total Metals -- Batch: B505220 (Water)

Prepared: 09-May-25 11:24 By: KAW -- Analyzed: 09-May-25 13:31 By: KW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Mercury	<0.200 ug/L	109% / NA	105% / 101%		3.67%	

Wet Chemistry -- Batch: B505224 (Water)

Prepared: 09-May-25 12:54 By: CNW -- Analyzed: 12-May-25 08:16 By: CNW

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Flashpoint	NA	Ignitable / Ignitable	NA / NA		0.00%	Pass1

Wet Chemistry -- Batch: B505299 (Water)

Prepared: 09-May-25 15:45 By: CGF -- Analyzed: 09-May-25 15:45 By: CGF

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
pH	NA	101% / 101%	NA / NA		0.00%	

Wet Chemistry -- Batch: B505300 (Water)

Prepared: 13-May-25 15:30 By: CL -- Analyzed: 14-May-25 15:59 By: CL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Oil and Grease	<5.00 mg/L	84.1% / 86.0%	91.5% / NA		2.22%	

Wet Chemistry -- Batch: B505302 (Water)

Prepared: 14-May-25 08:14 By: KJ -- Analyzed: 14-May-25 08:14 By: KJ

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Ammonia as N	<0.500 mg/L	92.5% / NA	91.1% / 91.2%		0.0530%	

Total Metals -- Batch: B505396 (Water)

Prepared: 16-May-25 12:35 By: ST -- Analyzed: 20-May-25 13:33 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Arsenic	<0.260 ug/L	92.6% / NA	97.1% / 97.0%		0.0543%	
Cadmium	<0.260 ug/L	93.1% / NA	96.7% / 96.8%		0.156%	
Chromium	<0.260 ug/L	91.8% / NA	79.0% / 79.6%		0.764%	
Copper	<0.520 ug/L	91.7% / NA	90.8% / 91.6%		0.885%	
Lead	<0.416 ug/L	92.4% / NA	88.7% / 90.4%		1.25%	
Nickel	<1.56 ug/L	94.8% / NA	94.4% / 94.6%		0.200%	
Zinc	<20.8 ug/L	99.9% / NA	91.6% / 91.6%		0.00984%	

22 May 2025



Tom Huetter
Harbor Environmental & Safety
5800 Evergreen Dr.
Little Rock, AR 72205
Project: NABORS Landfill Leachate Sample(s)
Project Number: May 2025
Date Received: 08-May-25 08:13

QUALITY CONTROL RESULTS

Total Metals -- Batch: B505401 (Water)

Prepared: 16-May-25 14:38 By: JY -- Analyzed: 19-May-25 13:51 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Phosphorus	<0.094 mg/L	93.8% / NA	103% / 104%		0.916%	

Wet Chemistry -- Batch: B505484 (Water)

Prepared: 21-May-25 08:05 By: KJ -- Analyzed: 21-May-25 08:05 By: KJ

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Cyanide (total)	<0.010 mg/L	97.0% / 106%	97.0% / NA		8.87%	

QUALIFIER(S)

DNF: Sample DID NOT FLASH at or below method required temperature of 100 degrees C or 212 degrees F.
*E2: Estimated Result; Analyzed Outside of Holding Time
*Pass1: Quality Control Meets Lab Acceptability Requirements

All Analysis performed according to EPA approved methodology when available:

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink that reads "Norma James".

Reviewed by:

Norma James
Technical Director



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 Landfill		1 Day (100%)	1. Cool, 6 Degrees Centigrade						4. Thiosulfate for Dechlorination				
5800 Evergreen Dr.						2 Day (50%)	2. Sulfuric Acid (H ₂ SO ₄), pH < 2						5. Hydrochloric Acid(HCl)				
Little Rock, AR 72205				Reporting Information		3 Day (25%)	3. Nitric Acid (HNO ₃), pH < 2						6. Sodium Hydroxide (NaOH), pH > 12				
Attn: Tom Huetter				Telephone: 501-663-8800		5 Day (Routine)	TEST PARAMETERS										Bottle Type Code
				Email: thuetter@harborenv.com		Preservative Code:	1,5	1	1,6	1,6,Zn Acetate	1,5	1,3				G = Glass; P = Plastic	
						Bottle Type:	GV	P	P	P	GV	P				V = Septum; A = Amber	
Sampler(s) Signature				Sampler(s) Printed				Volatiles	Chloride, Sulfate, TDS	Cyanide	Sulfide	TOC	ICP/MS-6020 - (Sb, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Ni, Se, Ag, Ti, Sn, V, Zn), Hg	Arkansas Analytical Work Order Number:			
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION										
	Date/s	Time/s															
MW-6890	5/7/25	0932	X		9	Water			X	X	X	X	X	X			
NAB-5	5/7/25	1008	X		9	Water			X	X	X	X	X	X			
Leachate	5/7/25	1041 *	X		9	Water			X	X	X	X	X	X		01	
Leachate Dup	5/7/25	1041 *	X		9	Water			X	X	X	X	X	X		02	
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
			X		9	Water			X	X	X	X	X	X			
1. Relinquished by: (Signature)			Date/Time		2. Received by: (Signature)			SAMPLE CONDITION UPON RECEIPT IN LAB					REMARKS / SAMPLE COMMENTS				
			5/8/25					1. CUSTODY SEALS: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					* See attached CUC for correct leachate parameters to be analyzed - 5/9/25-(81)				
			613					2. CONTAINERS CORRECT: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
								3. COC/LABELS AGREE: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
								4. RECEIVED ON ICE: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
3. Relinquished by: (Signature)			Date/Time		4. Received by lab: (Signature)			5. TEMPERATURE ON RECEIPT: °C									
								6. TEMPERATURE GUN ID: HHT#									
FOR COMPLETION BY LAB ONLY																	



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 Landfill		1 Day (100%)	1. Cool, 6 Degrees Centigrade					4. Thiosulfate for Dechlorination					
5800 Evergreen Dr.				Leachate Sample		2 Day (50%)	2. Sulfuric Acid (H ₂ SO ₄), pH < 2					5. Hydrochloric Acid(HCl)					
Little Rock, AR 72205				Reporting Information		3 Day (25%)	3. Nitric Acid (HNO ₃), pH < 2					6. Sodium Hydroxide (NaOH), pH > 12					
Attn: Tom Huetter				Telephone: 501-663-8800		5 Day (Routine)	TEST PARAMETERS										Bottle Type Code
				Email: thuetter@harborenv.com		Preservative Code:	1	1,2	1,6	1,2	1,3					G = Glass; P = Plastic	
						Bottle Type:	P	P	P	GA	P					V = Septum; A = Amber	
Sampler(s) Signature				Sampler(s) Printed				Flashpoint, pH	Ammonia	Cyanide	Oil and Grease	P (200.7), Hg	200.8-(As, Cd, Cr, Cu, Pb, Ni, Zn)			Arkansas Analytical Work Order Number:	
Field Number	SAMPLE COLLECTION Date/s Time/s		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION										
Leachate	5-7-25	1041	X		5	Liquid	Leachate	X	X	X	X	X				01	
Leachate Dup	5-7-25	1041	X		5	Liquid	Leachate Duplicate	X	X	X	X	X				02	
1. Relinquished by: (Signature)			Date/Time		2. Received by: (Signature)			SAMPLE CONDITION UPON RECEIPT IN LAB					REMARKS / SAMPLE COMMENTS				
								1. CUSTODY SEALS: Yes ___ No ___									
								2. CONTAINERS CORRECT: Yes ___ No ___									
								3. COC/LABELS AGREE: Yes ___ No ___									
3. Relinquished by: (Signature)			Date/Time		4. Received by lab: (Signature)			4. RECEIVED ON ICE: Yes ___ No ___									
			5-8-25 8:13		Natasha Howard			5. TEMPERATURE ON RECEIPT: 5 °C									
								6. TEMPERATURE GUN ID: HHT# 6-8									
FOR COMPLETION BY LAB ONLY																	

Attachment B

Certification Statement

Discharge Monitoring Report Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

All samples and measurements taken are to the best of my knowledge representative of the permitted wastewater discharge.

All sampling, measurements, and analyses were conducted in accordance with guidelines prescribed in 40 CFR 136 and the Wastewater Contribution Permit obtained from the City of Springfield, Missouri.

Bryan Leamon
Signature (Legible)

Deputy Director
Title

NABORS LANDFILL
Name of Facility

7/9/25
Date