

UICI-8

QUARTERLY REPORT (Qtr.1)

2024



February 14, 2024

Mr. Carl Chavez, CHMM
New Mexico Oil Conservation Division (Albuquerque Office)
Energy, Minerals and Natural Resources Department
5200 Oakland Avenue, NE
Albuquerque, NM 87113

RE: FFY 2024 1st Quarter Injection Report for HF Sinclair Navajo Refining LLC UIC Wells WDW-1, WDW-2, WDW-3 and WDW-4

Dear Mr. Chavez,

Enclosed, please find the federal fiscal year 2024 (FFY 2024) first quarter (Q1) report for HF Sinclair Navajo Refining LLC (HFSNR) fluids injected into WDW-1, WDW-2, WDW-3 and WDW-4. This report has been prepared in accordance with Class I Non-Hazardous Waste Injection Well Discharge Permit UICI-8 (approved December 2017) and covers data collection efforts from October 1, 2023 through December 31, 2023. Condition 2.I of the permit requires reporting of the following four items:

Item #1: Physical, chemical and other relevant characteristics of injected fluids (per Condition 2.A)

One sampling event occurred during FFY 2024 Q1 on December 13, 2023. Table 1 presents results for this event; the corresponding lab report is given in Attachment A. For parameters identified as toxic contaminants in 40 CFR 261.24(b) (EPA Hazardous waste No. D004 through D043), all results were less than the Toxicity Characteristic Leaching Procedure (TCLP) regulatory level and do not exhibit the characteristic of toxicity. TCLP parameters were analyzed as total fractions; results were less than the corresponding reporting level (RL).

Item #2: Monthly average, maximum and minimum values for injection pressure, flow rate, injected volume, and annular pressure (per Condition 3.C)

A summary of monthly injection pressure, flow rate, injected volume, and annular pressure for FFY 2024 Q1 is given in Table 2. Statistics for injection pressure, flow rate and annular pressure for each month were calculated from continuous monitoring recorded on an hourly basis. For example, a month containing 31 days would have a total of 744 hourly data results, assuming no issues with signal communication. For injection flowrate, hourly readings reported as 0 gpm were deleted from the database (representative of either a signal communication issue or a well down for maintenance, testing, etc.). Totalized volume is not recorded hourly, therefore the monthly injected volume was calculated as the average monthly flow rate multiplied by the number of days in the corresponding month.

HFSNR disposed a total of 2,806,683 barrels of fluid into the four wells during FFY 2024 Q1. The total Q1 volume per well was:

- 195,769 barrels into WDW-1: 30-015-27592
- 307,804 barrels into WDW-2: 30-015-20894
- 1,327,480 barrels into WDW-3: 30-015-26575
- 975,630 barrels into WDW-4: 30-015-44677

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501 East Main, Artesia, NM 88210
575-748-3311 | HFSinclair.com



In terms of Discharge Permit UICI-8 compliance, the hourly maximum injection pressures (occurring during FFY 2024 Q1) were within limits given in Condition 3.B as follows:

- WDW-1: max = 1,351 psi (limit = 1,585 psi)
- WDW-2: max = 1,401 psi (limit = 1,514 psi)
- WDW-3: max = 1,376 psi (limit = 1,530 psi)
- WDW-4: max = 427 psi (limit = 2,080 psi)

There were no significant losses as measured from the glycol expansion tanks Well Annulus Monitoring System (WAMS).

Item #3: Groundwater monitoring well Information from Condition 2.B

Discharge Permit UICI-8 Condition 2.B requires the installation of at least one downgradient monitoring well in the proximity of each injection well (WDW-1, 2, 3, and 4). Installation activities for monitoring wells at WDW-2, WDW-3, and WDW-4 were performed but no significant groundwater was encountered and the boreholes were plugged in accordance with the approved Work Plan. A final report for activities at these wells is being prepared for submission to NM OCD. Discussions are on-going for access to WDW-1 with ConocoPhillips. Should well installation occur at WDW-1, future quarterly reports will include the required monitoring well data.

Item #4: Continuous monitoring charts and information from Permit Condition 3.C

Discharge Permit UICI-8 Condition 3.C requires the use of a continuous monitoring device to measure and record hourly values of injection pressure, injection rate, totalized injection volume, and annular pressure. HFSNR uses a digital recording device that can log the results of the above parameters at a user defined-frequency (i.e., can be greater or less than a one-hour interval). This recording/logging system is known as the "PI Historian" system and does not use any pen/chart apparatus described in Condition 3.C. The logged hourly data have been processed graphically and are given for each well in Figures 1 to 3 (October 2023), Figures 4 to 6 (November 2023), and Figures 7 to 9 (December 2023). As mentioned in Item #2 above, "gaps" in charted data reflect periods where signal communication issues occurred or when hourly injection flow was reported as 0 gpm. Archived spreadsheets of the FFY 2024 Q1 data used to generate the graphs are available upon request.

Conclusions and Recommendations

From the observations presented in the Items #1, #2, #3, and #4 above, HFSNR concludes that the injection of fluids (i.e., treated wastewater) into UIC Wells WDW-1, WDW-2, WDW-3, and WDW-4 during FFY 2024 Q1 was in compliance with the requirements and limitations given in Discharge Permit UICI-8. Specifically, the injection concentrations did not exhibit toxicity as regulated in Discharge Permit Condition 2.A (per reference of 40 CFR 261.24(b)). Further, injection pressures did not exceed limitations given Discharge Permit Condition 3.B for each well.

Other UIC Activities During FFY 2024 Q1:

1. In regard to the Groundwater Monitoring Wells per UICI-8 Discharge Permit Condition 2.B:
 - a. WDW-3:
 - i. 10/4/2023 = Contractor began drilling
 - ii. 10/6/2023 = Total depth of 160 ft bgs achieved at WDW-3 borehole; no significant water-bearing zone was encountered
 - iii. 10/7/2023 = OCD issued approval for abandonment; borehole abandoned

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- b. WDW-2:
 - i. 10/7/2023 = Contractor began drilling
 - ii. 10/10/2023 = total depth of 160 ft bgs achieved at WDW-2 borehole; no significant water-bearing zone was encountered; OCD issued approval for abandonment; borehole abandoned
 - c. WDW-4:
 - i. 10/11/2023 = Contractor began drilling; shutdown for mechanical issue with borehole at 60 ft bgs
 - ii. 10/18/2023 = Contractor resumed drilling following days off and mechanical repair
 - iii. 10/20/2023 = total depth of 150 ft bgs achieved at WDW-4 borehole; no significant water-bearing zone was encountered; OCD issued approval for abandonment; borehole abandoned
 - d. WDW-1: Negotiation of access agreements with ConocoPhillips continued.
2. In regard to Mechanical Integrity Testing (MIT), Fall Off Testing (FOT), and Remedial Work for the injection wells:
- a. A Notice of Intention to Perform Remedial Work (Form C-103R) was submitted to OCD on October 26, 2023 to conduct a cleanout and 2-stage acid stimulation of the injection interval in WDW-1. This Notice was approved (with conditions) by the OCD under Action ID# 278978 on October 27, 2023. The remedial work was performed on WDW-1 (API Number: 30-015-27592) from November 15 through 17, 2023. The deep well stimulation was conducted via coiled tubing without removing the tubing, packer or any wellhead valves. The annulus seal was not disturbed during the operation. The Deep Well Stimulation Final Report (Form C-103R) for WDW-1 (API Number: 30-015-27592) was uploaded to the OCD Permitting Site under Action ID# 297764 on December 28, 2023.
 - b. The annual MIT/FOT report for WDW-3 (API Number: 30-015-26575) was approved by OCD under Action ID# 279780 on November 2, 2023.
 - c. The annual MIT/FOT report for WDW-4 (API Number: 30-015-44677) was approved by OCD under Action ID# 279799 on November 3, 2023.

Planned UIC Activities for FFY 2024 Q2:

- 1. Obtain access from ConocoPhillips for the installation of an OCD-approved groundwater monitoring well at WDW-1. Pursue subsequent OSE monitor well permit and plan schedule for contracted driller mobilization.
- 2. WDW-2, WDW-3, and WDW-4 well stimulation tentatively planned for FFY2024 Q2; exact dates and procedures are to be determined.

This report is signed and certified in accordance with NMAC Section 20.6.2.5101.G. If there are any questions or comments, please contact Teresa Alba at 575-746-5391.

Respectfully,

A handwritten signature in blue ink, appearing to read "Case Hinkins".

Case Hinkins
Environmental Manager
HF Sinclair Navajo Refining LLC

HF Sinclair Navajo Refining LLC
501 East Main, Artesia, NM 88210
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TABLE 1. FFY 2024 Q1 CONCENTRATIONS OF WASTEWATER INJECTED INTO WELLS WDW-1, WDW-2, WDW-3, AND WDW-4
 "<" = value less than the laboratory reporting level (RL)

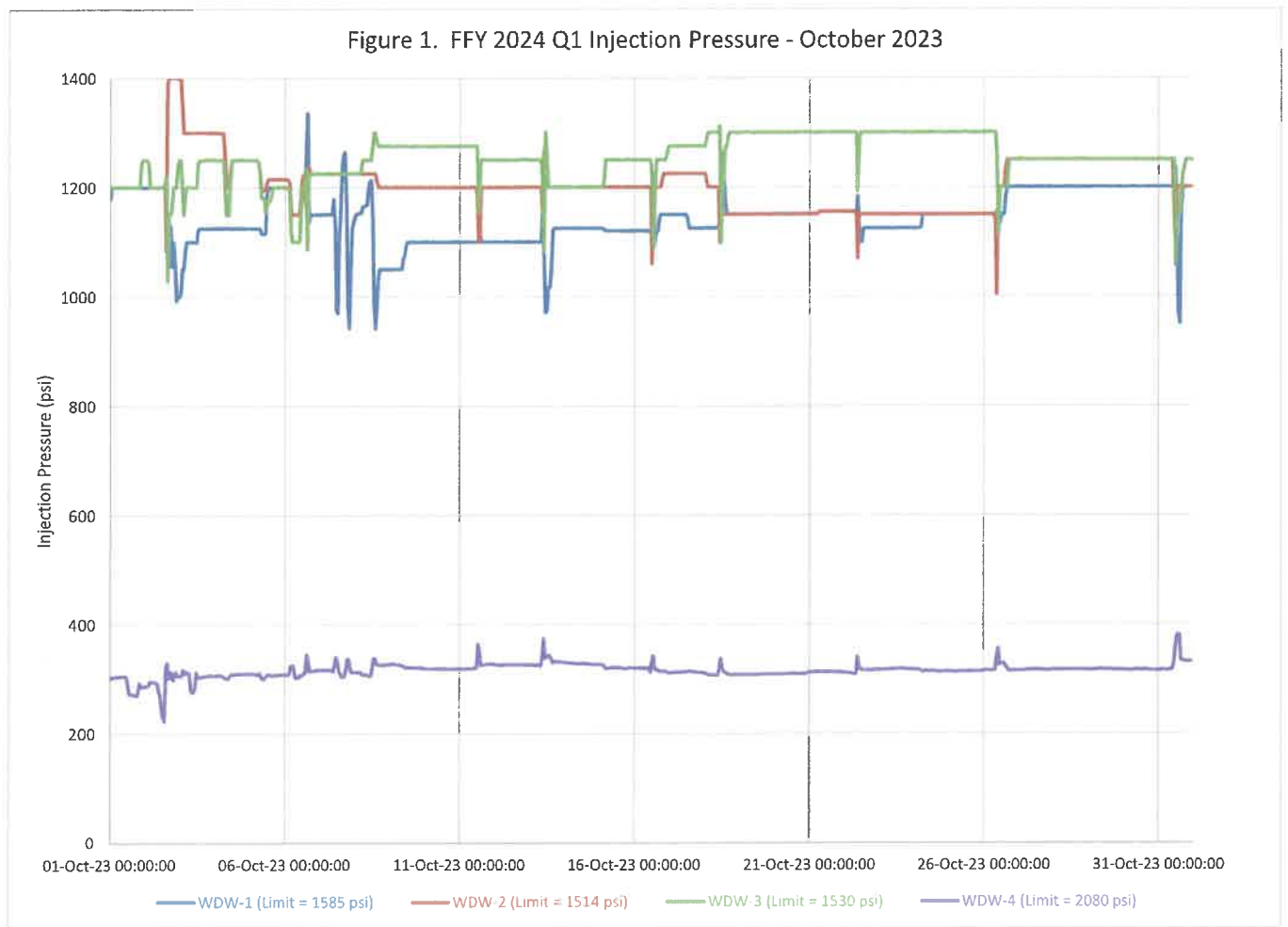
Parameter	Units	UICI-8 Condition 2.A Regulatory Level	12/13/2023 Concentration
Alkalinity, bicarbonate	mg/L	--	424.8
Alkalinity, carbonate	mg/L	--	<2
Alkalinity, total	mg/L	--	424.8
Conductivity	uS/cm	--	4900
Cyanide (Reactivity)	mg/L	--	<0.25
Flashpoint (Ignitability)	deg F	--	>200
Oxidation Reduction Potential	mV	--	not analyzed
pH (Corrosivity)	su	--	7.7
Specific Gravity	su	--	1.0010
Sulfide (Reactivity)	mg/L	--	<150
Total Dissolved Solids	mg/L	--	3620
Total Suspended Solids	mg/L	--	34
Bromide	mg/L	--	0.63
Chloride	mg/L	--	510
Fluoride	mg/L	--	20
Nitrate	mg/L	--	--
Nitrate + Nitrite	mg/L	--	<1.0
Nitrite	mg/L	--	--
Phosphorus, total	mg/L	--	<2.5
Sulfate	mg/L	--	1700
Calcium	mg/L	--	420
Magnesium	mg/L	--	130
Potassium	mg/L	--	73
Sodium	mg/L	--	510
Arsenic	mg/L	TCLP=5	<5
Barium	mg/L	TCLP=100	<100
Cadmium	mg/L	TCLP=1	<1
Chromium	mg/L	TCLP=5	<5
Lead	mg/L	TCLP=5	<5
Mercury	mg/L	TCLP=0.2	<0.02
Selenium	mg/L	TCLP=1	<1
Silver	mg/L	TCLP=5	<5
Chlordane	mg/L	TCLP=0.03	<0.03
1,1-Dichloroethene	mg/L	TCLP=0.7	<0.7
1,2-Dichloroethane	mg/L	TCLP=0.5	<0.5
1,4-Dichlorobenzene	mg/L	TCLP=7.5	<7.5
2,4,5-Trichlorophenol	mg/L	TCLP=400	<400
2,4,6-Trichlorophenol	mg/L	TCLP=2	<2
2,4-Dinitrotoluene	mg/L	TCLP=0.13	<0.13
2-Butanone	mg/L	TCLP=200	<200
2-Methylphenol	mg/L	TCLP=200	<200
3+4-Methylphenol	mg/L	TCLP=200	<200
Benzene	mg/L	TCLP=0.5	<0.5
Carbon tetrachloride	mg/L	TCLP=0.5	<0.5
Chlorobenzene	mg/L	TCLP=100	<100
Chloroform	mg/L	TCLP=6	<6
Cresols	mg/L	TCLP=200	<200
Hexachlorobenzene	mg/L	TCLP=0.13	<0.13
Hexachlorobutadiene	mg/L	TCLP=0.5	<0.5
Hexachloroethane	mg/L	TCLP=3	<3
Nitrobenzene	mg/L	TCLP=2	<2
Pentachlorophenol	mg/L	TCLP=100	<100
Pyridine	mg/L	TCLP=5	<5
Tetrachloroethene	mg/L	TCLP=0.7	<0.7
Trichloroethene	mg/L	TCLP=0.5	<0.5
Vinyl chloride	mg/L	TCLP=0.2	<0.2

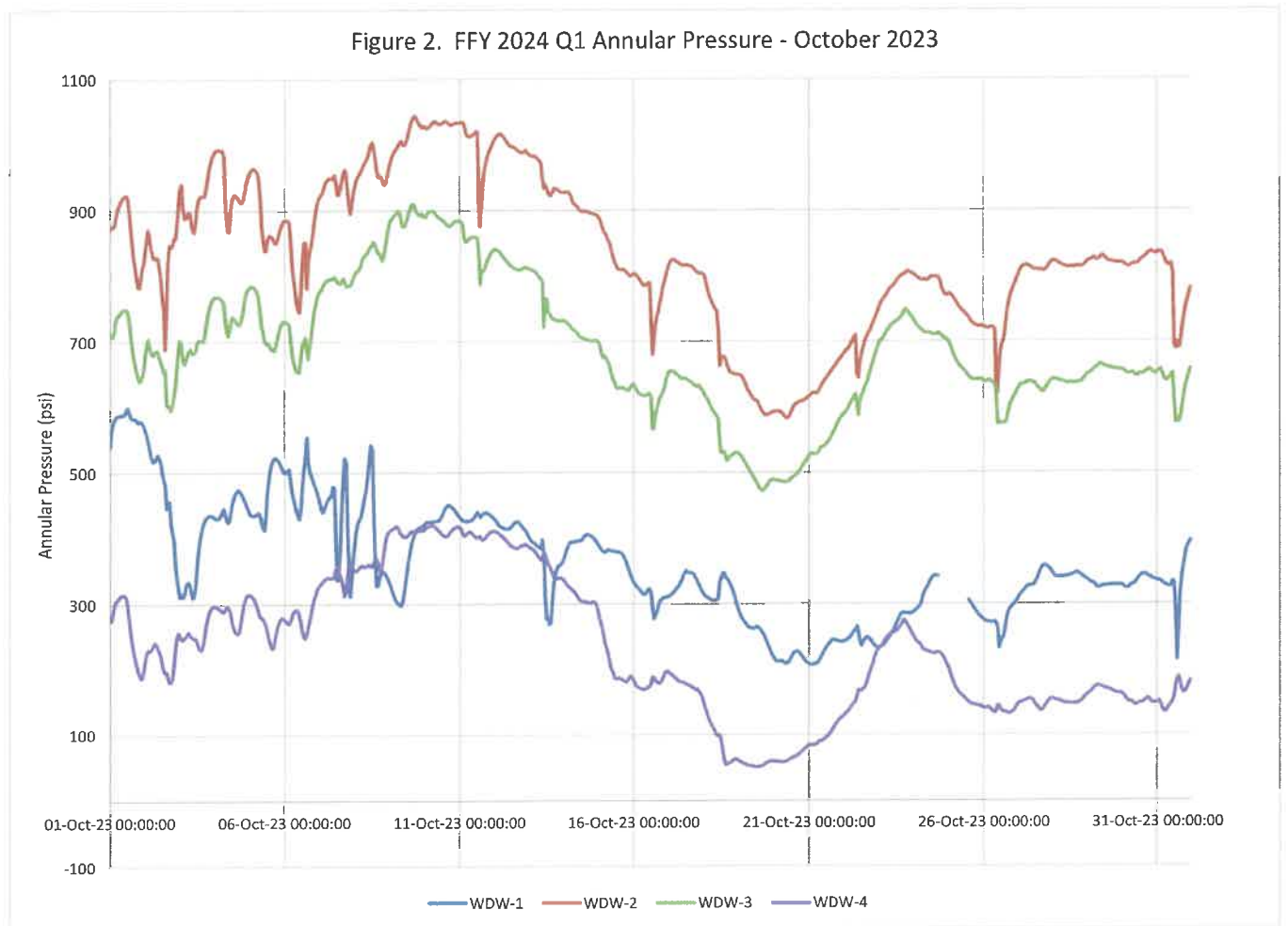
TCLP = Toxicity Characteristic Leaching Procedure with regulatory level given in 40 CFR 261.24(b)

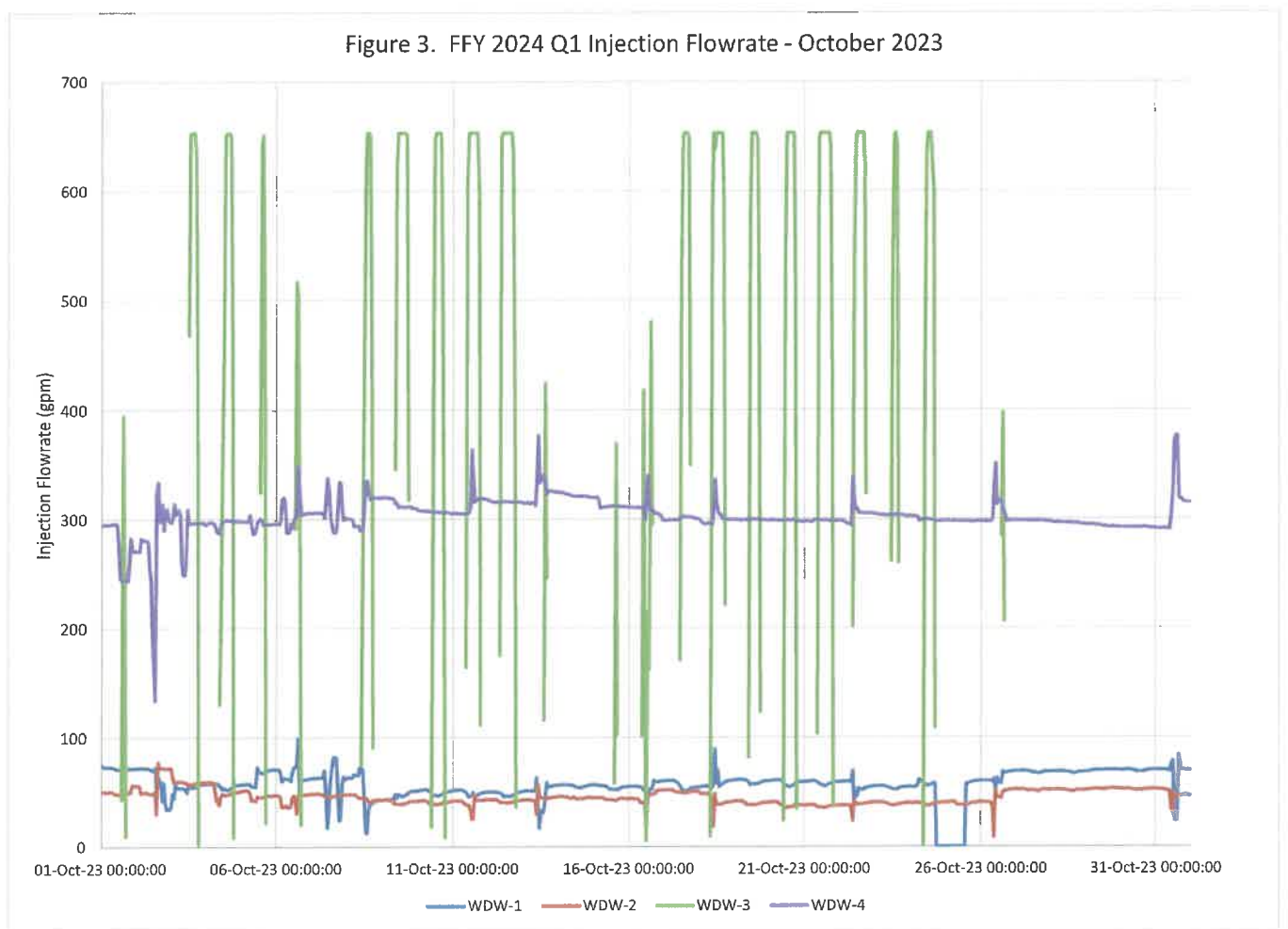
TABLE 2. FFY 2024 FIRST QUARTER MONTHLY INJECTION PRESSURE, FLOW RATE, ANNULAR PRESSURE, AND VOLUME

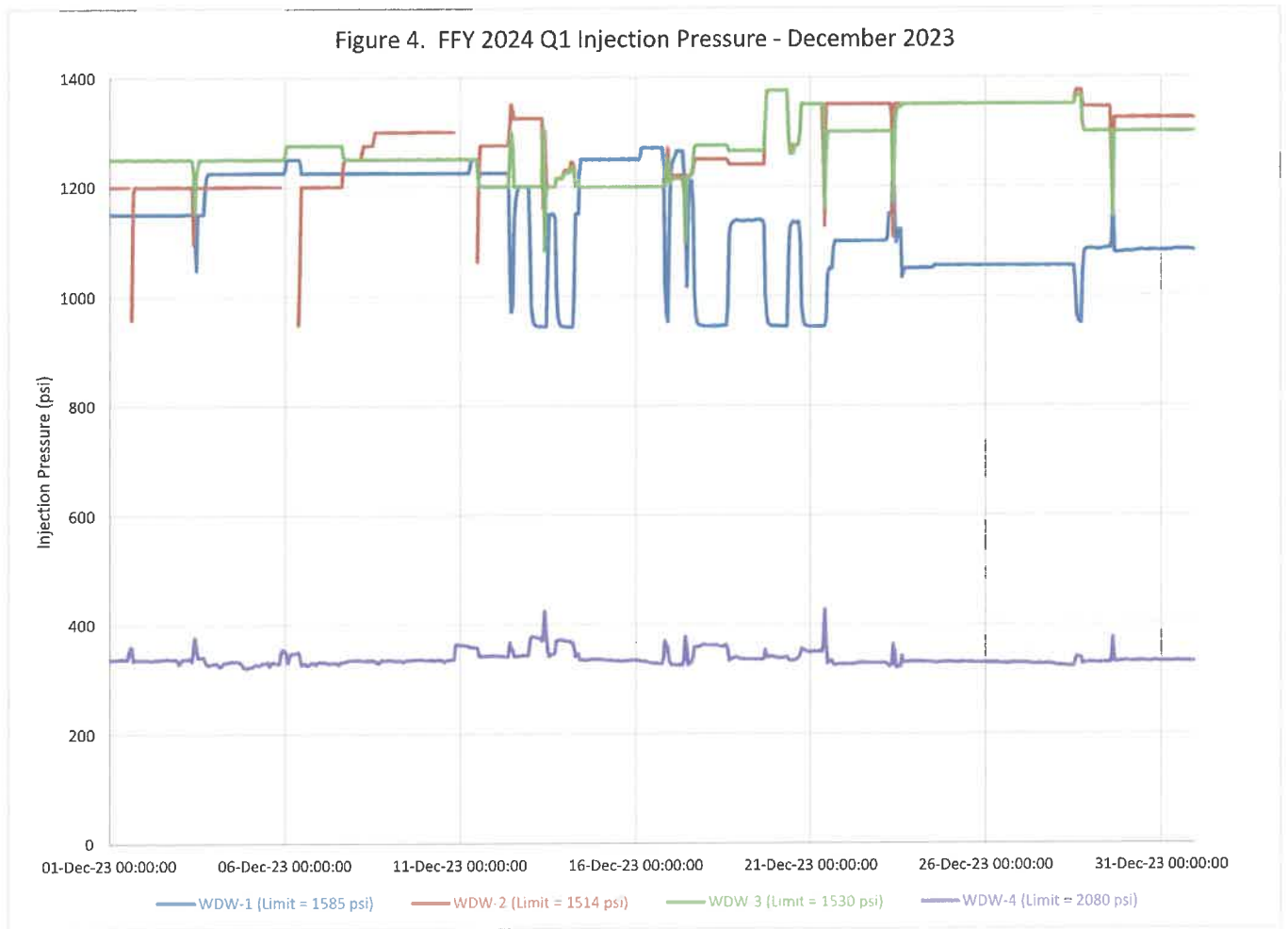
Based on continuous monitors that record pressure and flow rate data on an hourly basis (per UICI-8 Condition 3.C)

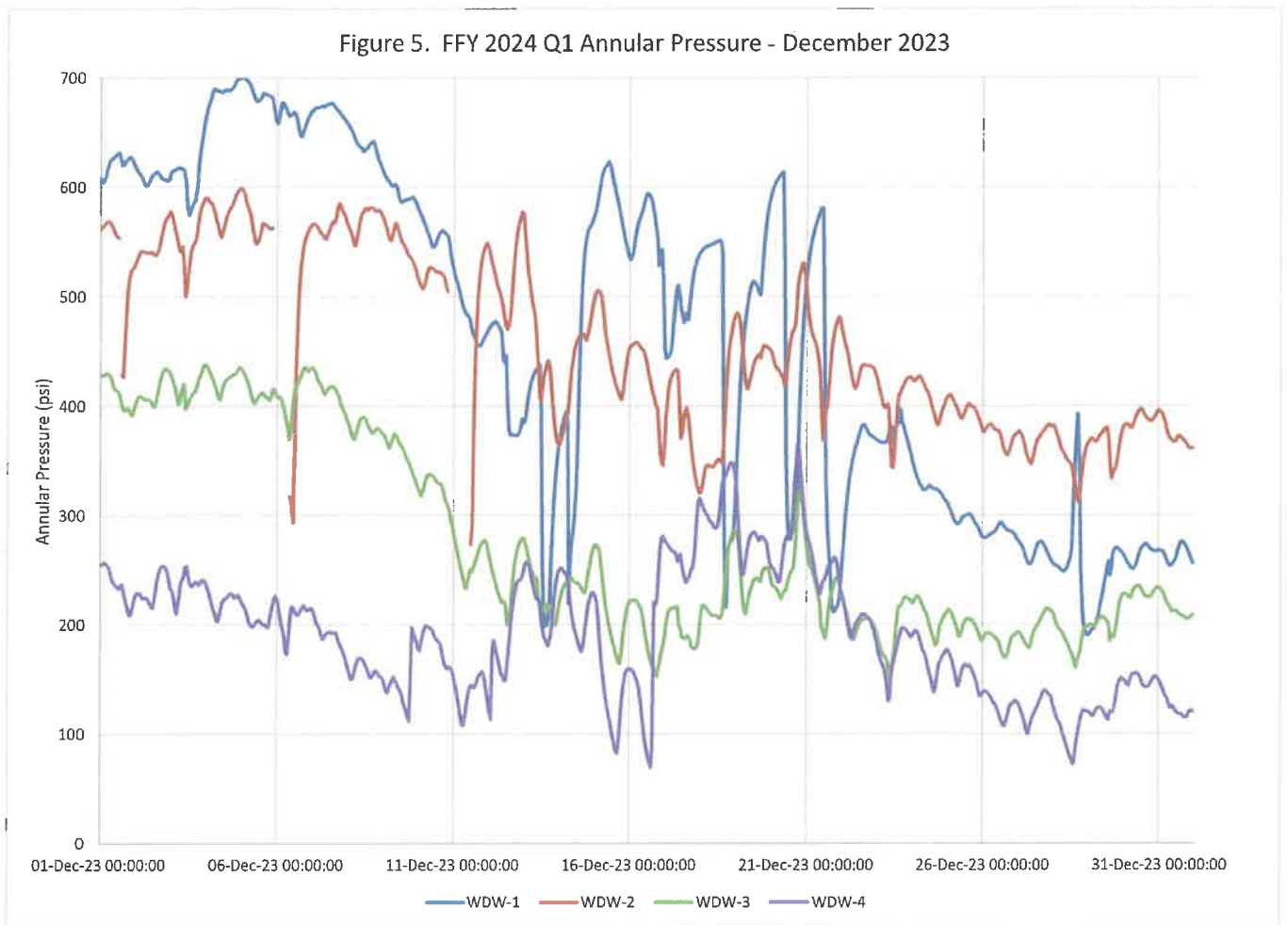
Month	Injection Pressure			Injection Flowrate			Annular Pressure			Totalized Injected Volume	
	Average (psi)	Maximum (psi)	Minimum (psi)	Average (gpm)	Maximum (gpm)	Minimum (gpm)	Average (psi)	Maximum (psi)	Minimum (psi)	Monthly (barrels)	Cumulative (barrels)
30-015-27592 WDW-1											51,242,723
Oct-23	1,143	1,336	942	58	99	12.1	362	600	207	61,969	51,304,693
Nov-23	1,135	1,351	251	65	96	0.74	539	804	203	67,161	51,371,854
Dec-23	1,131	1,271	944	63	95	30.1	464	701	190	66,639	51,438,493
30-015-20894 WDW-2											31,730,436
Oct-23	1,205	1,401	1,004	45	77	8.4	834	1,044	583	48,036	31,778,471
Nov-23	1,260	1,335	1,078	71	647	0.1	647	826	255	73,552	31,852,024
Dec-23	1,277	1,375	948	175	653	0.0	457	599	274	186,216	32,038,240
30-015-26575 WDW-3											24,359,805
Oct-23	1,252	1,312	1,028	468	653	1	689	910	472	497,696	24,857,501
Nov-23	1,253	1,351	1,048	454	653	0.51	486	668	139	467,197	25,324,697
Dec-23	1,274	1,376	1,083	341	653	0.02	275	438	146	362,587	25,687,285
30-015-44677 WDW-4											13,488,675
Oct-23	316	382	223	302	376	134	232	420	51	321,345	13,810,020
Nov-23	324	392	302	304	390	263	198	404	30	313,374	14,123,394
Dec-23	337	427	321	321	427	297	191	364	69	340,911	14,464,304

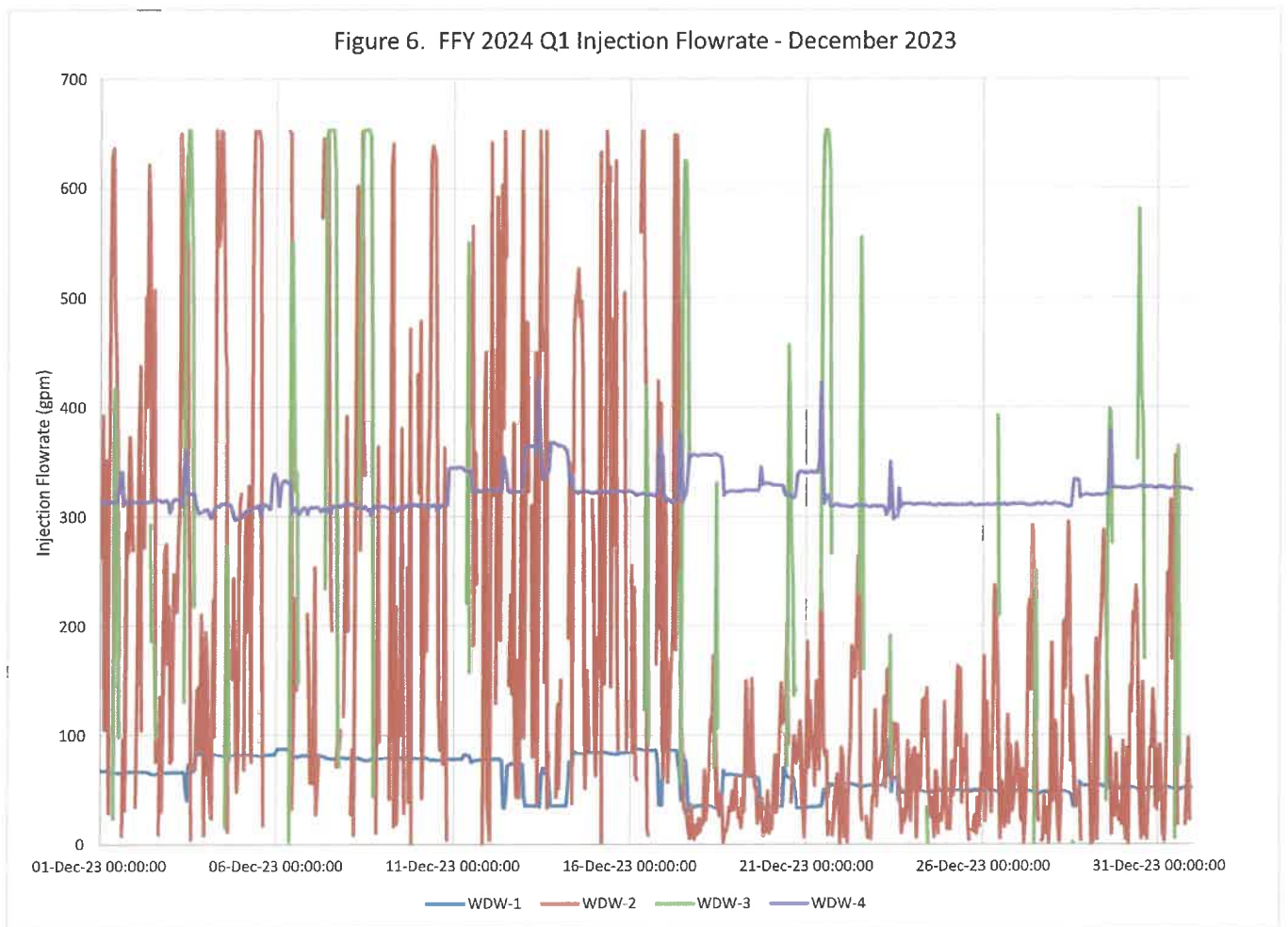


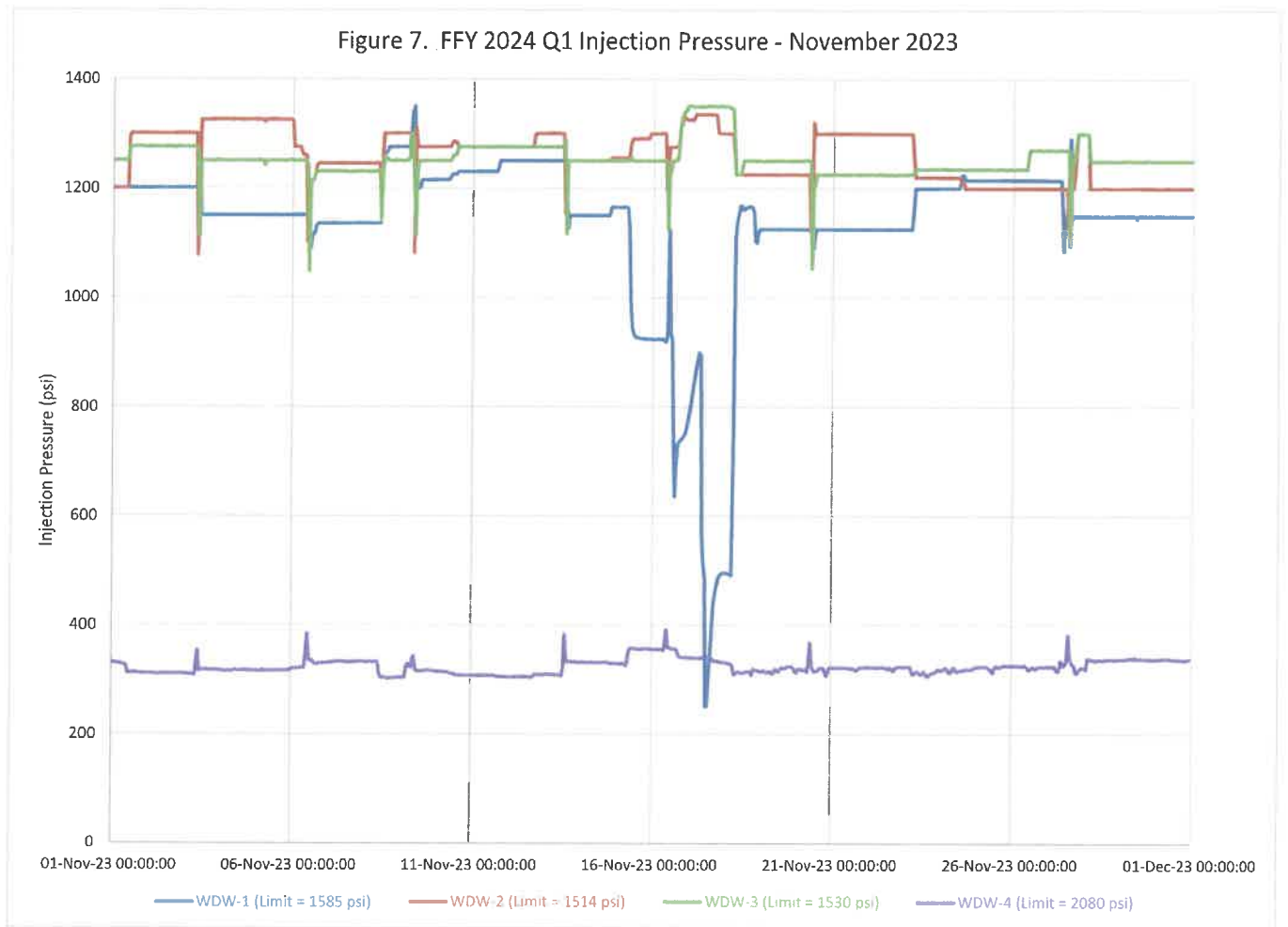


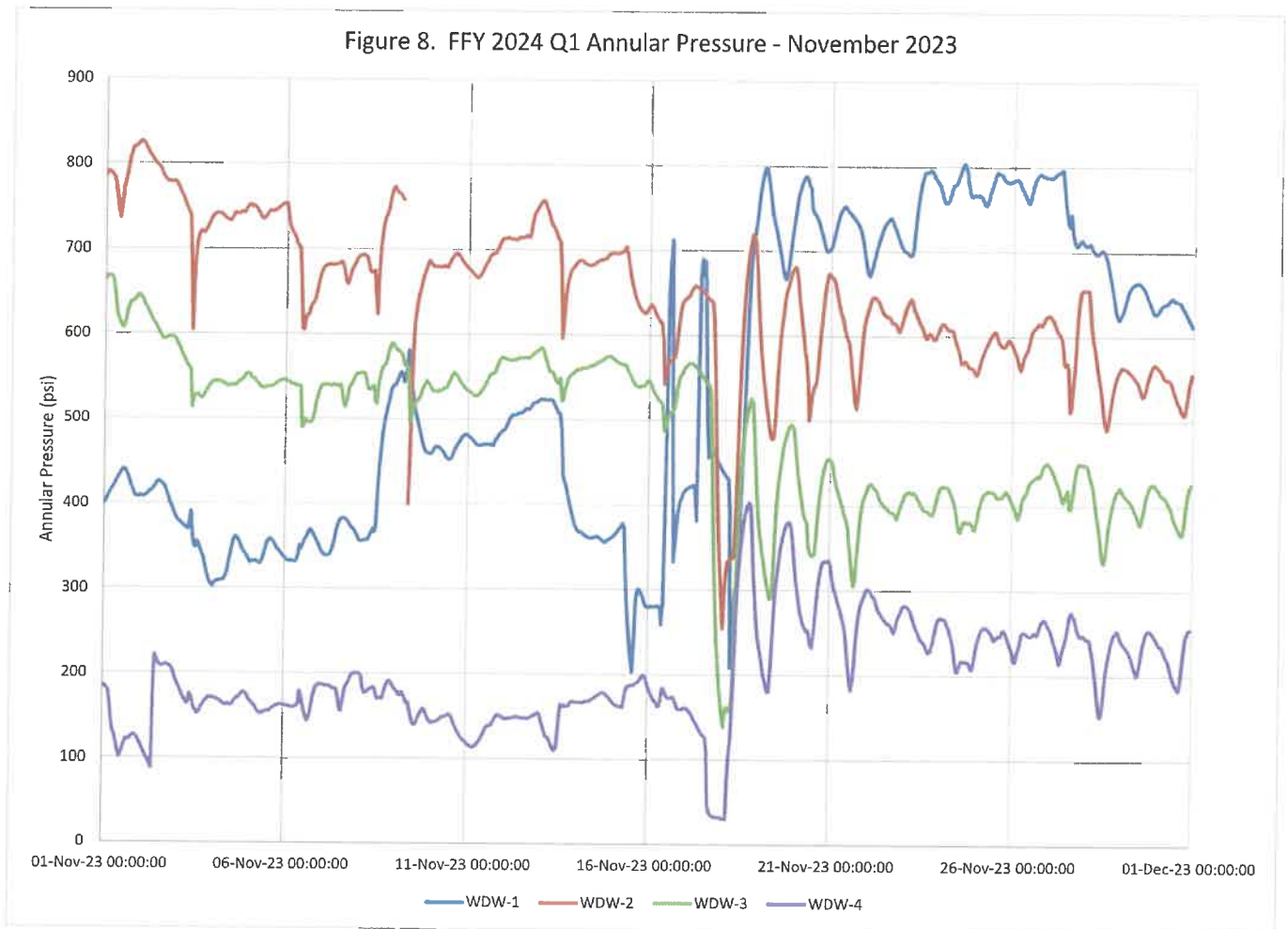


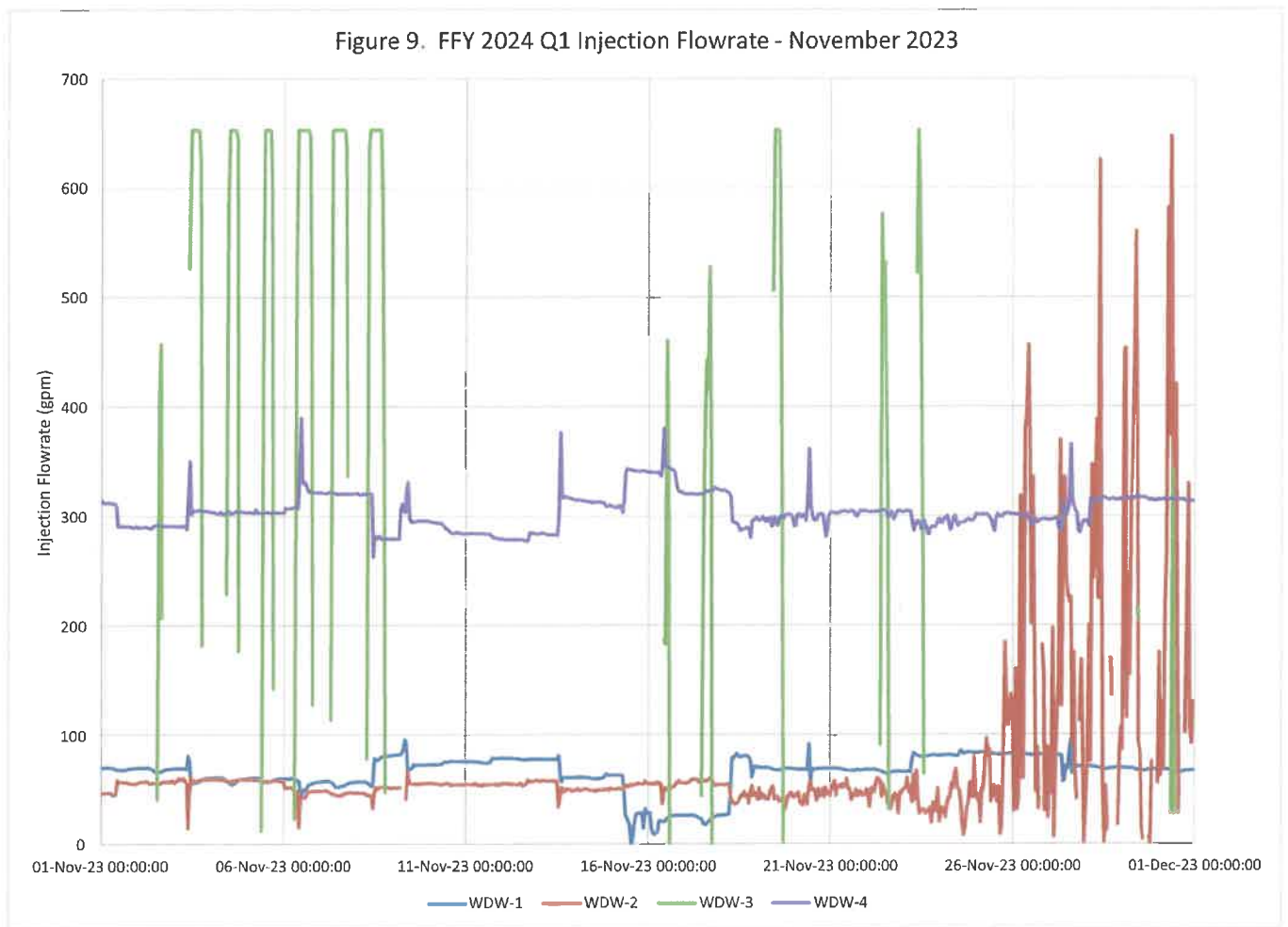














ATTACHMENT A

Analytical Lab Report(s)



Environment Testing

*Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

February 09, 2024

Nat Paengpongsavanh
HF Sinclair Asphalt Navajo Refining LLC
P.O. Box 159
Artesia, NM 88211-0159
TEL: (575) 748-3311
FAX:

RE: Quarterly WDW 1 2 3 4 Inj Well

OrderNo.: 2312909

Dear Nat Paengpongsavanh:

Eurofins Environment Testing South Central, LLC received 2 sample(s) on 12/15/2023 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued January 12, 2024.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Environment Testing

*Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com*

Case Narrative

WO#: 2312909

Date: 2/9/2024

CLIENT: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Ini Well**Analytical Notes:**

TCLP parameters were requested for the sample in this report. Per the TCLP Method 1311, "If a total analysis of the waste demonstrates that individual analytes are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the TCLP need not be run". All TCLP compounds are reported as totals in this report, at the TCLP Limits, since the low solids content did not require filtration. The TCLP term is used in the method header; this is used to represent that the compounds listed are the specific TCLP compounds and that these compounds are reported at the TCLP regulatory limits.

The cations were filtered using a 0.45um filter for the C/A balance determination.

Analytical Report

Lab Order 2312909

Date Reported: 2/9/2024

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HF Sinclair Asphalt Navajo Refining LL

Client Sample ID: WDW-1,2,3&4 Effluent

Project: Quarterly WDW 1 2 3 4 Inj Well

Collection Date: 12/13/2023 2:19:00 PM

Lab ID: 2312909-001

Matrix: AQUEOUS

Received Date: 12/15/2023 8:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES TCLP								
							Analyst: mb	
Chlordane	ND	0.00050	0.030		mg/L	1	12/29/2023 8:25:21 AM	79479
Surr: Decachlorobiphenyl	78.2	0	40.9-111		%Rec	1	12/29/2023 8:25:21 AM	79479
Surr: Tetrachloro-m-xylene	52.0	0	15-107		%Rec	1	12/29/2023 8:25:21 AM	79479
EPA METHOD 300.0: ANIONS								
							Analyst: JMT	
Fluoride	20	0.23	0.50	*	mg/L	5	12/16/2023 1:25:56 PM	R1018E
Chloride	510	12	25	*	mg/L	50	1/6/2024 2:21:50 AM	R10227
Bromide	0.63	0.25	0.50		mg/L	5	12/16/2023 1:25:56 PM	R1018E
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	12/16/2023 1:25:56 PM	R1018E
Sulfate	1700	12	25	*	mg/L	50	1/9/2024 2:20:41 AM	R10231
Nitrate+Nitrite as N	0.90	0.11	1.0	J	mg/L	5	12/16/2023 6:14:39 PM	R1018E
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: VP	
Calcium	420	0.32	5.0		mg/L	5	12/27/2023 1:21:10 PM	A10207
Magnesium	130	0.12	5.0		mg/L	5	12/27/2023 1:21:10 PM	A10207
Potassium	73	0.12	1.0		mg/L	1	12/27/2023 1:09:36 PM	A10207
Sodium	510	2.3	10		mg/L	10	1/8/2024 4:22:17 PM	B10230
EPA METHOD 6020A: TCLP METALS								
							Analyst: ELS	
Arsenic	0.023	0.00050	5.0	J	mg/L	1	12/29/2023 11:06:54 AM	79491
Lead	ND	0.012	5.0		mg/L	20	1/2/2024 12:47:42 PM	79491
Selenium	0.046	0.00080	1.0	J	mg/L	1	12/29/2023 11:06:54 AM	79491
EPA METHOD 7470A: MERCURY								
							Analyst: tem	
Mercury	ND	0.000081	0.00020		mg/L	1	12/28/2023 2:16:04 PM	79607
EPA 6010B: TCLP METALS								
							Analyst: VP	
Barium	0.047	0.00044	100	J	mg/L	1	12/22/2023 11:05:16 AM	79491
Cadmium	ND	0.0012	1.0		mg/L	1	12/22/2023 11:05:16 AM	79491
Chromium	0.0031	0.0012	5.0	J	mg/L	1	12/22/2023 11:05:16 AM	79491
Silver	0.0095	0.0013	5.0	J	mg/L	1	12/22/2023 12:35:55 PM	79491
EPA METHOD 8270C TCLP								
							Analyst: mb	
2-Methylphenol	ND	0.0050	200		mg/L	1	12/27/2023 12:57:25 PM	79482
3+4-Methylphenol	ND	0.0051	200		mg/L	1	12/27/2023 12:57:25 PM	79482
2,4-Dinitrotoluene	ND	0.0049	0.13		mg/L	1	12/27/2023 12:57:25 PM	79482
Hexachlorobenzene	ND	0.019	0.13		mg/L	1	12/27/2023 12:57:25 PM	79482
Hexachlorobutadiene	ND	0.017	0.50		mg/L	1	12/27/2023 12:57:25 PM	79482
Hexachloroethane	ND	0.014	3.0		mg/L	1	12/27/2023 12:57:25 PM	79482
Nitrobenzene	ND	0.0049	2.0		mg/L	1	12/27/2023 12:57:25 PM	79482
Pentachlorophenol	ND	0.027	100		mg/L	1	12/27/2023 12:57:25 PM	79482
Pyridine	ND	0.014	5.0		mg/L	1	12/27/2023 12:57:25 PM	79482

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Analytical Report

Lab Order 2312909

Date Reported: 2/9/2024

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HF Sinclair Asphalt Navajo Refining LL

Client Sample ID: WDW-1,2,3&4 Effluent

Project: Quarterly WDW 1 2 3 4 Inj Well

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Lab ID: 2312909-001

Matrix: AQUEOUS

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
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EPA METHOD 8270C TCLP

Analyst: mb

2,4,5-Trichlorophenol	ND	0.0063	400		mg/L	1	12/27/2023 12:57:25 PM	79482
2,4,6-Trichlorophenol	ND	0.0059	2.0		mg/L	1	12/27/2023 12:57:25 PM	79482
Cresols, Total	ND	0.027	200		mg/L	1	12/27/2023 12:57:25 PM	79482
Surr: 2-Fluorophenol	40.8	0	20.8-71.9		%Rec	1	12/27/2023 12:57:25 PM	79482
Surr: Phenol-d5	30.4	0	16.2-54.5		%Rec	1	12/27/2023 12:57:25 PM	79482
Surr: 2,4,6-Tribromophenol	45.9	0	18.8-117		%Rec	1	12/27/2023 12:57:25 PM	79482
Surr: Nitrobenzene-d5	52.3	0	33-85.9		%Rec	1	12/27/2023 12:57:25 PM	79482
Surr: 2-Fluorobiphenyl	39.8	0	26.3-79.6		%Rec	1	12/27/2023 12:57:25 PM	79482
Surr: 4-Terphenyl-d14	61.9	0	53.9-124		%Rec	1	12/27/2023 12:57:25 PM	79482

TCLP VOLATILES BY 8260B

Analyst: CCM

Benzene	ND	0.50	0.50		mg/L	200	12/22/2023 11:55:00 PM	T10206
1,2-Dichloroethane (EDC)	ND	0.50	0.50		mg/L	200	12/22/2023 11:55:00 PM	T10206
2-Butanone	ND	200	200		mg/L	200	12/22/2023 11:55:00 PM	T10206
Carbon Tetrachloride	ND	0.50	0.50		mg/L	200	12/22/2023 11:55:00 PM	T10206
Chloroform	ND	6.0	6.0		mg/L	200	12/22/2023 11:55:00 PM	T10206
1,4-Dichlorobenzene	ND	7.5	7.5		mg/L	200	12/22/2023 11:55:00 PM	T10206
1,1-Dichloroethene	ND	0.70	0.70		mg/L	200	12/22/2023 11:55:00 PM	T10206
Tetrachloroethene (PCE)	ND	0.70	0.70		mg/L	200	12/22/2023 11:55:00 PM	T10206
Trichloroethene (TCE)	ND	0.50	0.50		mg/L	200	12/22/2023 11:55:00 PM	T10206
Vinyl chloride	ND	0.20	0.20		mg/L	200	12/22/2023 11:55:00 PM	T10206
Chlorobenzene	ND	100	100		mg/L	200	12/22/2023 11:55:00 PM	T10206
Surr: 1,2-Dichloroethane-d4	93.9	0	70-130		%Rec	200	12/22/2023 11:55:00 PM	T10206
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	200	12/22/2023 11:55:00 PM	T10206
Surr: Dibromofluoromethane	99.9	0	70-130		%Rec	200	12/22/2023 11:55:00 PM	T10206
Surr: Toluene-d8	94.7	0	70-130		%Rec	200	12/22/2023 11:55:00 PM	T10206

SM2510B: SPECIFIC CONDUCTANCE

Analyst: RBC

Conductivity	4900	10	10		µmhos/c	1	12/28/2023 1:54:17 PM	R10214
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SM4500-H+B / 9040C: PH

Analyst: RBC

pH	8.00			H	pH units	1	12/22/2023 11:40:19 PM	R10208
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SM2320B: ALKALINITY

Analyst: RBC

Bicarbonate (As CaCO3)	424.8	20.00	20.00		mg/L Ca	1	12/22/2023 11:40:19 PM	R10208
Carbonate (As CaCO3)	ND	2.000	2.000		mg/L Ca	1	12/22/2023 11:40:19 PM	R10208
Total Alkalinity (as CaCO3)	424.8	20.00	20.00		mg/L Ca	1	12/22/2023 11:40:19 PM	R10208

SPECIFIC GRAVITY

Analyst: RBC

Specific Gravity	1.001	0	0			1	12/20/2023	R10195
------------------	-------	---	---	--	--	---	------------	--------

SM2540C MOD: TOTAL DISSOLVED SOLIDS

Analyst: KS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2312909
Date Reported: 2/9/2024

CLIENT: HF Sinclair Asphalt Navajo Refining LL
Project: Quarterly WDW 1 2 3 4 Inj Well
Lab ID: 2312909-001

Client Sample ID: WDW-1,2,3&4 Effluent
Collection Date: 12/13/2023 2:19:00 PM
Received Date: 12/15/2023 8:00:00 AM

Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS	
Total Dissolved Solids	3620	50.0	100	*D	mg/L	1	12/22/2023 11:46:00 AM	79519
SM 2540D: TSS							Analyst: KS	
Suspended Solids	34	4.0	4.0		mg/L	1	12/21/2023 10:31:00 AM	79522

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2312909
Date Reported: 2/9/2024

CLIENT: HF Sinclair Asphalt Navajo Refining LL
Project: Quarterly WDW 1 2 3 4 Inj Well
Lab ID: 2312909-002

Client Sample ID: Trip Blank
Collection Date:
Matrix: TRIP BLANK
Received Date: 12/15/2023 8:00:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
TCLP VOLATILES BY 8260B							Analyst: CCM	
Benzene	ND	0.0025	0.0025		mg/L	1	12/23/2023 12:19:00 AM	T10206
1,2-Dichloroethane (EDC)	ND	0.0025	0.0025		mg/L	1	12/23/2023 12:19:00 AM	T10206
2-Butanone	ND	1.0	1.0		mg/L	1	12/23/2023 12:19:00 AM	T10206
Carbon Tetrachloride	ND	0.0025	0.0025		mg/L	1	12/23/2023 12:19:00 AM	T10206
Chloroform	ND	0.030	0.030		mg/L	1	12/23/2023 12:19:00 AM	T10206
1,4-Dichlorobenzene	ND	0.038	0.038		mg/L	1	12/23/2023 12:19:00 AM	T10206
1,1-Dichloroethene	ND	0.0035	0.0035		mg/L	1	12/23/2023 12:19:00 AM	T10206
Tetrachloroethene (PCE)	ND	0.0035	0.0035		mg/L	1	12/23/2023 12:19:00 AM	T10206
Trichloroethene (TCE)	ND	0.0025	0.0025		mg/L	1	12/23/2023 12:19:00 AM	T10206
Vinyl chloride	ND	0.0010	0.0010		mg/L	1	12/23/2023 12:19:00 AM	T10206
Chlorobenzene	ND	0.50	0.50		mg/L	1	12/23/2023 12:19:00 AM	T10206
Surr: 1,2-Dichloroethane-d4	93.1	0	70-130		%Rec	1	12/23/2023 12:19:00 AM	T10206
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	12/23/2023 12:19:00 AM	T10206
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	12/23/2023 12:19:00 AM	T10206
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	12/23/2023 12:19:00 AM	T10206

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Andy Freeman
Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite D
Albuquerque, New Mexico 87109

Generated 1/5/2024 2:09:21 PM

JOB DESCRIPTION

2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP 8151 & RCI

JOB NUMBER

400-248666-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

Page 1 of 21



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Job Notes

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Authorization



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Authorized for release by
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Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP 8151 & RCI

Laboratory Job ID: 400-248666-1

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Case Narrative

Client: Hall Environmental Analysis Laboratory
Project: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP 8151 &

Job ID: 400-248666-1

Job ID: 400-248666-1**Eurofins Pensacola****Job Narrative
400-248666-1****Receipt**

The samples were received on 12/20/2023 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.5° C.

GC Semi VOA

Method 8151A: Surrogate recovery for the following sample was outside the upper control limit: (LB 400-655742/1-F). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Client Sample ID: 2312909-001F/WDW-1,2,3&4 EFFLUENT

Lab Sample ID: 400-248666-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Flashpoint	>200		60	60	Degrees F	1			1010B	Total/NA
Corrosivity	7.7	HF			SU	1			9040C	Total/NA

Client Sample ID: 2312909-001H/WDW-1,2,3&4 EFFLUENT

Lab Sample ID: 400-248666-3

No Detections.

Method Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Method	Method Description	Protocol	Laboratory
8151A	Herbicides (GC)	SW846	EET PEN
1010B	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET PEN
9014	Cyanide, Reactive	SW846	EET PEN
9034	Sulfide, Reactive	SW846	EET PEN
9040C	pH	SW846	EET PEN
1311	TCLP Extraction	SW846	EET PEN
7.3.3	Cyanide, Reactive	SW846	EET PEN
7.3.4	Sulfide, Reactive	SW846	EET PEN
8151A	Extraction (Herbicides)	SW846	EET PEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Eurofins Pensacola

Sample Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Water	12/13/23 14:19	12/20/23 10:05
400-248666-3	2312909-001H/WDW-1,2,3&4 EFFLUENT	Water	12/13/23 14:19	12/20/23 10:05



Client Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Client Sample ID: 2312909-001F/WDW-1,2,3&4 EFFLUENT

Lab Sample ID: 400-248666-1

Date Collected: 12/13/23 14:19

Matrix: Water

Date Received: 12/20/23 10:05

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010B)	>200		60	60	Degrees F			01/03/24 08:16	1
Cyanide, Reactive (SW846 9014)	0.25	U	0.25	0.25	mg/L		01/04/24 09:42	01/04/24 17:27	1
Sulfide, Reactive (SW846 9034)	150	U	150	150	mg/L		01/04/24 09:44	01/04/24 13:03	1
Corrosivity (SW846 9040C)	7.7	HF			SU			12/28/23 13:05	1

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Client Sample Results

Client: Hall Environmental Analysis Laboratory

Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP

8151 & RCI

Job ID: 400-248666-1

Client Sample ID: 2312909-001H/WDW-1,2,3&4 EFFLUENT

Date Collected: 12/13/23 14:19

Date Received: 12/20/23 10:05

Lab Sample ID: 400-248666-3

Matrix: Water

Method: SW846 8151A - Herbicides (GC) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	13	U	100	13	ug/L		12/29/23 17:07	01/04/24 14:22	1
Silvex (2,4,5-TP)	4.5	U	20	4.5	ug/L		12/29/23 17:07	01/04/24 14:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	52		30 - 142				12/29/23 17:07	01/04/24 14:22	1

Definitions/Glossary

Client: Hall Environmental Analysis Laboratory
 Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
 8151 & RCI

Job ID: 400-248666-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▣	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Surrogate Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA1 (30-142)	
LCS 400-656177/2-A	Lab Control Sample	67	
LCSD 400-656177/3-A	Lab Control Sample Dup	62	
Surrogate Legend			
DCPAA = 2,4-Dichlorophenylacetic acid			

Method: 8151A - Herbicides (GC)

Matrix: Water

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA1 (30-142)	
400-248666-3	2312909-001H/WDW-1,2,3&4 E	52	
LB 400-655742/1-F	Method Blank	148 S1+	
Surrogate Legend			
DCPAA = 2,4-Dichlorophenylacetic acid			

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QC Association Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

GC Semi VOA

Leach Batch: 655742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-3	2312909-001H/WDW-1,2,3&4 EFFLUENT	TCLP	Water	1311	
LB 400-655742/1-F	Method Blank	TCLP	Water	1311	

Prep Batch: 656177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-3	2312909-001H/WDW-1,2,3&4 EFFLUENT	TCLP	Water	8151A	655742
LB 400-655742/1-F	Method Blank	TCLP	Water	8151A	655742
LCS 400-656177/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 400-656177/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 656416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-656177/2-A	Lab Control Sample	Total/NA	Water	8151A	656177
LCSD 400-656177/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	656177

Analysis Batch: 656417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-3	2312909-001H/WDW-1,2,3&4 EFFLUENT	TCLP	Water	8151A	656177
LB 400-655742/1-F	Method Blank	TCLP	Water	8151A	656177

General Chemistry

Analysis Batch: 655993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	9040C	
LCS 400-655993/4	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 656531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	1010B	
MB 400-656531/3	Method Blank	Total/NA	Water	1010B	
LCS 400-656531/1	Lab Control Sample	Total/NA	Water	1010B	
LCSD 400-656531/2	Lab Control Sample Dup	Total/NA	Water	1010B	

Prep Batch: 656622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	7.3.3	
MB 400-656622/1-A	Method Blank	Total/NA	Water	7.3.3	
LCS 400-656622/2-A	Lab Control Sample	Total/NA	Water	7.3.3	

Prep Batch: 656624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	7.3.4	
MB 400-656624/1-A	Method Blank	Total/NA	Water	7.3.4	
LCS 400-656624/2-A	Lab Control Sample	Total/NA	Water	7.3.4	

Analysis Batch: 656678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	9034	656624
MB 400-656624/1-A	Method Blank	Total/NA	Water	9034	656624

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QC Association Summary

Client: Hall Environmental Analysis Laboratory

Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP

8151 & RCI

Job ID: 400-248666-1

General Chemistry (Continued)

Analysis Batch: 656678 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-656624/2-A	Lab Control Sample	Total/NA	Water	9034	656624

Analysis Batch: 656740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-248666-1	2312909-001F/WDW-1,2,3&4 EFFLUENT	Total/NA	Water	9014	656622
MB 400-656622/1-A	Method Blank	Total/NA	Water	9014	656622
LCS 400-656622/2-A	Lab Control Sample	Total/NA	Water	9014	656622

QC Sample Results

Client: Hall Environmental Analysis Laboratory
 Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
 8151 & RCI

Job ID: 400-248666-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: LCS 400-656177/2-A
 Matrix: Water
 Analysis Batch: 656416

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 656177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	10.1	7.40	J	ug/L		74	27 - 123
Silvex (2,4,5-TP)	10.2	7.91		ug/L		78	25 - 122
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4-Dichlorophenylacetic acid	67		30 - 142				

Lab Sample ID: LCSD 400-656177/3-A
 Matrix: Water
 Analysis Batch: 656416

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 656177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D	10.1	6.81	J	ug/L		68	27 - 123	8	40
Silvex (2,4,5-TP)	10.2	7.29		ug/L		72	25 - 122	8	40
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
2,4-Dichlorophenylacetic acid	62		30 - 142						

Lab Sample ID: LB 400-655742/1-F
 Matrix: Water
 Analysis Batch: 656417

Client Sample ID: Method Blank
 Prep Type: TCLP
 Prep Batch: 656177

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	13	U	100	13	ug/L		12/29/23 17:07	01/04/24 12:52	1
Silvex (2,4,5-TP)	4.5	U	20	4.5	ug/L		12/29/23 17:07	01/04/24 12:52	1
Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2,4-Dichlorophenylacetic acid	148	S1+	30 - 142	12/29/23 17:07	01/04/24 12:52	1			

Method: 1010B - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: MB 400-656531/3
 Matrix: Water
 Analysis Batch: 656531

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>200		60	60	Degrees F			01/03/24 08:16	1

Lab Sample ID: LCS 400-656531/1
 Matrix: Water
 Analysis Batch: 656531

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	149	151		Degrees F		101	90 - 110

Eurofins Pensacola

QC Sample Results

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Method: 1010B - Ignitability, Pensky-Martens Closed-Cup Method (Continued)

Lab Sample ID: LCSD 400-656531/2				Client Sample ID: Lab Control Sample Dup						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 656531										
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Flashpoint	149	149		Degrees F		100	90 - 110	1	4	

Method: 9014 - Cyanide, Reactive

Lab Sample ID: MB 400-656622/1-A				Client Sample ID: Method Blank						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 656740				Prep Batch: 656622						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Cyanide, Reactive	0.25	U	0.25	0.25	mg/L		01/04/24 09:42	01/04/24 17:21		1

Lab Sample ID: LCS 400-656622/2-A				Client Sample ID: Lab Control Sample						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 656740				Prep Batch: 656622						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits			
Cyanide, Reactive	1.00	0.583		mg/L		58	10 - 110			

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 400-656624/1-A				Client Sample ID: Method Blank						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 656678				Prep Batch: 656624						
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Sulfide, Reactive	150	U	150	150	mg/L		01/04/24 09:44	01/04/24 13:03		1

Lab Sample ID: LCS 400-656624/2-A				Client Sample ID: Lab Control Sample						
Matrix: Water				Prep Type: Total/NA						
Analysis Batch: 656678				Prep Batch: 656624						
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits			
Sulfide, Reactive	1010	259		mg/L		26	10 - 110			

Eurofins Pensacola

Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Client Sample ID: 2312909-001F/WDW-1,2,3&4 EFFLUENT

Lab Sample ID: 400-248666-1

Date Collected: 12/13/23 14:19

Matrix: Water

Date Received: 12/20/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010B		1	100 mL	100 mL	656531	01/03/24 08:16	SF	EET PEN
Total/NA	Prep	7.3.3			10 g	100 mL	656622	01/04/24 09:42	JP	EET PEN
Total/NA	Analysis	9014		1	100 mL	100 mL	656740	01/04/24 17:27	VB	EET PEN
Total/NA	Prep	7.3.4			10 g	100 mL	656624	01/04/24 09:44	JP	EET PEN
Total/NA	Analysis	9034		1	50 mL	50 mL	656678	01/04/24 13:03	JP	EET PEN
Total/NA	Analysis	9040C		1			655993	12/28/23 13:05	SF	EET PEN

Client Sample ID: 2312909-001H/WDW-1,2,3&4 EFFLUENT

Lab Sample ID: 400-248666-3

Date Collected: 12/13/23 14:19

Matrix: Water

Date Received: 12/20/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	655742	12/27/23 09:35	CD	EET PEN
TCLP	Prep	8151A			20 mL	10 mL	656177	12/29/23 17:07	AMM	EET PEN
TCLP	Analysis	8151A		1	1 mL	1 mL	656417	01/04/24 14:22	JAW	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: LB 400-655742/1-F

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			2000 g	2000 mL	655742	12/27/23 09:35	CD	EET PEN
TCLP	Prep	8151A			20 mL	10 mL	656177	12/29/23 17:07	AMM	EET PEN
TCLP	Analysis	8151A		1	1 mL	1 mL	656417	01/04/24 12:52	JAW	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-656531/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010B		1	100 mL	100 mL	656531	01/03/24 08:16	SF	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-656622/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7.3.3			10 g	100 mL	656622	01/04/24 09:42	JP	EET PEN
Total/NA	Analysis	9014		1	100 mL	100 mL	656740	01/04/24 17:21	VB	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Client Sample ID: Method Blank

Lab Sample ID: MB 400-656624/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7.3.4			10 g	100 mL	656624	01/04/24 09:44	JP	EET PEN
Total/NA	Analysis	9034		1	50 mL	50 mL	656678	01/04/24 13:03	JP	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-655993/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1			655993	12/28/23 13:05	SF	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-656177/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			250 mL	10 mL	656177	12/29/23 17:07	AMM	EET PEN
Total/NA	Analysis	8151A		1	1 mL	1 mL	656416	01/04/24 05:22	JAW	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-656531/1

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010B		1	100 mL	100 mL	656531	01/03/24 08:16	SF	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-656622/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7.3.3			10 g	100 mL	656622	01/04/24 09:42	JP	EET PEN
Total/NA	Analysis	9014		1	100 mL	100 mL	656740	01/04/24 17:23	VB	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-656624/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7.3.4			10 g	100 mL	656624	01/04/24 09:44	JP	EET PEN
Total/NA	Analysis	9034		1	100 mL	50 mL	656678	01/04/24 13:03	JP	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-656177/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			250 mL	10 mL	656177	12/29/23 17:07	AMM	EET PEN
Total/NA	Analysis	8151A		1	1 mL	1 mL	656416	01/04/24 05:52	JAW	EET PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-656531/2

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010B		1	100 mL	100 mL	656531	01/03/24 08:16	SF	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Eurofins Pensacola

Accreditation/Certification Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2312909-001/WDW-1,2,3&4 EFFLUENT - TCLP
8151 & RCI

Job ID: 400-248666-1

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	P330-21-00056	05-17-24
USDA	US Federal Programs	FLGNV23001	01-08-26
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-24
West Virginia DEP	State	136	03-31-24

Eurofins Pensacola



Environment Testing

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.halleenvironmental.com



SUB CONTRACTOR: Eurofins Pensacola		COMPANY: Eurofins		400-248668 COC	
ADDRESS: 3355 McLemore Dr		PHONE: (850) 474-1001		FAX:	
CITY, STATE, ZIP: Pensacola, FL 32514-7045		ACCOUNT #:		EMAIL:	
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE
1	2312909-001F	WDW-1,2,3&4 Effluent	500HDPE	Aqueous	12/13/2023 2:19:00 PM
2	2312909-001G	WDW-1,2,3&4 Effluent	125HDP	Aqueous	12/13/2023 2:19:00 PM
3	2312909-001H	WDW-1,2,3&4 Effluent	1LAMGU	Aqueous	12/13/2023 2:19:00 PM
					# CONTAINERS
					3 RCI. Please apply ICO Prices.
					1 Oxidation Reduction Potential . Please apply ICO Prices.
					1 Herbicides. Report TCLP Limits. Please apply ICO Prices.
ANALYTICAL COMMENTS					

SPECIAL INSTRUCTIONS / COMMENTS:

Include the LAB ID and CLIENT SAMPLE ID on final reports. Email results to Hall.Lab@et.eurofins.com. For Questions email Hall.samplecontrol@et.eurofins.com. Please return all coolers and blue ice.
Thank you.

Relinquished By:	Date: 12/15/2023	Time: 11:16 AM	Received By: SP	Date: 12/13/23	Time: 1005
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT:	Standard	RUSH	Next BD	2nd BD	3rd BD
Temp of samples: C Attempt to Cool ?					
Comments:					

0.52 7.52 8.11

Login Sample Receipt Checklist

Client: Hall Environmental Analysis Laboratory

Job Number: 400-248666-1

Login Number: 248666

List Source: Eurofins Pensacola

List Number: 1

Creator: Earnest, Tamantha

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.5°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	False	1 of the Sample(s) multiphasic
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-A	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: A102076	RunNo: 102076								
Prep Date:	Analysis Date: 12/27/2023	SeqNo: 3767985 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID: LCSLL-A	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: A102076	RunNo: 102076								
Prep Date:	Analysis Date: 12/27/2023	SeqNo: 3767986 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.47	1.0	0.5000	0	94.3	50	150			J
Magnesium	0.47	1.0	0.5000	0	93.1	50	150			J
Potassium	0.42	1.0	0.5000	0	83.6	50	150			J

Sample ID: LCS_CAT-A	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: LCSW	Batch ID: A102076	RunNo: 102076								
Prep Date:	Analysis Date: 12/27/2023	SeqNo: 3767988 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	103	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Potassium	50	1.0	50.00	0	99.3	85	115			

Sample ID: MB-B	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: B102307	RunNo: 102307								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3777755 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: LCSLL-B	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: B102307	RunNo: 102307								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3777757 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.31	1.0	0.5000	0	62.4	50	150			J

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 6 of 26

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909
09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC
Project: Quarterly WDW 1 2 3 4 Inj Well

Sample ID: LCS_CAT-B		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: LCSW		Batch ID: B102307		RunNo: 102307						
Prep Date:		Analysis Date: 1/8/2024		SeqNo: 3777762			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	100	85	115			

- Qualifiers:
- *

Value exceeds Maximum Contaminant Level.

D

Sample Diluted Due to Matrix

H

Holding times for preparation or analysis exceeded

ND

Not Detected at the Reporting Limit

PQL

Practical Quantitative Limit

S

% Recovery outside of standard limits. If undiluted results may be estimated.

B

Analyte detected in the associated Method Blank

E

Above Quantitation Range/Estimated Value

J

Analyte detected below quantitation limits

P

Sample pH Not In Range

RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R101895	RunNo: 101895								
Prep Date:	Analysis Date: 12/16/2023	SeqNo: 3757764 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R101895	RunNo: 101895								
Prep Date:	Analysis Date: 12/16/2023	SeqNo: 3757765 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Bromide	2.5	0.10	2.500	0	98.3	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.4	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R102274	RunNo: 102274								
Prep Date:	Analysis Date: 1/5/2024	SeqNo: 3776083 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R102274	RunNo: 102274								
Prep Date:	Analysis Date: 1/5/2024	SeqNo: 3776084 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.9	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R102274	RunNo: 102274								
Prep Date:	Analysis Date: 1/5/2024	SeqNo: 3776132 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 8 of 26

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R102274	RunNo: 102274								
Prep Date:	Analysis Date: 1/5/2024	SeqNo: 3776133 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	100	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R102312	RunNo: 102312								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3778112 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R102312	RunNo: 102312								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3778113 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	94.3	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R102312	RunNo: 102312								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3778166 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R102312	RunNo: 102312								
Prep Date:	Analysis Date: 1/8/2024	SeqNo: 3778167 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	94.2	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 9 of 26

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79491	SampType: MBLK	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: PBW	Batch ID: 79491	RunNo: 102149								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3770447 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID: MSLCSLL-79491	SampType: LCSLL	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: BatchQC	Batch ID: 79491	RunNo: 102149								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3770448 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	70	130			
Lead	0.00098	0.0010	0.001000	0	98.0	70	130			J

Sample ID: MSLCS-79491	SampType: LCS	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: LCSW	Batch ID: 79491	RunNo: 102149								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3770449 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.050	0.0010	0.05000	0	100	80	120			
Lead	0.050	0.0010	0.05000	0	100	80	120			
Selenium	0.053	0.0010	0.05000	0	105	80	120			

Sample ID: MSLCSLL-79491	SampType: LCSLL	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: BatchQC	Batch ID: 79491	RunNo: 102149								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3770467 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0014	0.0010	0.001000	0	139	70	130			S

Sample ID: MB-79491	SampType: MBLK	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: PBW	Batch ID: 79491	RunNo: 102181								
Prep Date: 12/19/2023	Analysis Date: 1/2/2024	SeqNo: 3772148 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID: MSLCSLL-79491	SampType: LCSLL	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: BatchQC	Batch ID: 79491	RunNo: 102181								
Prep Date: 12/19/2023	Analysis Date: 1/2/2024	SeqNo: 3772149 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MSLCSLL-79491	SampType: LCSLL	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: BatchQC	Batch ID: 79491	RunNo: 102181								
Prep Date: 12/19/2023	Analysis Date: 1/2/2024	SeqNo: 3772149 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0015	0.0010	0.001000	0	152	70	130			S

Sample ID: MSLCS-79491	SampType: LCS	TestCode: EPA Method 6020A: TCLP Metals								
Client ID: LCSW	Batch ID: 79491	RunNo: 102181								
Prep Date: 12/19/2023	Analysis Date: 1/2/2024	SeqNo: 3772150 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.054	0.0010	0.05000	0	107	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **2312909****09-Feb-24****Client:** HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79479	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773717 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Endrin	ND	0.020								
gamma-BHC (Lindane)	ND	0.40								
Heptachlor	ND	0.0080								
Heptachlor epoxide	ND	0.0080								
Methoxychlor	ND	10								
Toxaphene	ND	0.50								
Surr: Decachlorobiphenyl	0.0019		0.002500		75.5	40.9	111			
Surr: Tetrachloro-m-xylene	0.00078		0.002500		31.0	15	107			

Sample ID: LCS-79479	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773718 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin	0.00047	0.00010	0.0005000	0	93.4	47.7	126			
gamma-BHC (Lindane)	0.00042	0.00010	0.0005000	0	83.8	39.6	109			
Heptachlor	0.00022	0.00010	0.0005000	0	44.4	20.4	91.8			
Heptachlor epoxide	0.00041	0.00010	0.0005000	0	81.1	48.3	112			
Methoxychlor	0.00054	0.00010	0.0005000	0	107	49	139			
Surr: Decachlorobiphenyl	0.0020		0.002500		80.0	40.9	111			
Surr: Tetrachloro-m-xylene	0.00082		0.002500		32.9	15	107			

Sample ID: LCSD-79479	SampType: LCSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSS02	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773719 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin	0.00052	0.00010	0.0005000	0	105	47.7	126	11.6	20	
gamma-BHC (Lindane)	0.00047	0.00010	0.0005000	0	93.4	39.6	109	10.9	20	
Heptachlor	0.00028	0.00010	0.0005000	0	56.6	20.4	91.8	24.2	20	R
Heptachlor epoxide	0.00047	0.00010	0.0005000	0	94.8	48.3	112	15.6	20	
Methoxychlor	0.00057	0.00010	0.0005000	0	114	49	139	6.47	20	
Surr: Decachlorobiphenyl	0.0023		0.002500		91.3	40.9	111	0	0	
Surr: Tetrachloro-m-xylene	0.0013		0.002500		53.8	15	107	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79479	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773721	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Endrin	ND	0.020								
gamma-BHC (Lindane)	ND	0.40								
Heptachlor	ND	0.0080								
Heptachlor epoxide	ND	0.0080								
Methoxychlor	ND	10								
Toxaphene	ND	0.50								
Surr: Decachlorobiphenyl	0.0018		0.002500		72.3	40.9	111			
Surr: Tetrachloro-m-xylene	0.00076		0.002500		30.5	15	107			

Sample ID: LCS-79479	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773722	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin	0.00043	0.00010	0.0005000	0	86.8	47.7	126			
gamma-BHC (Lindane)	0.00039	0.00010	0.0005000	0	77.0	39.6	109			
Heptachlor	0.00020	0.00010	0.0005000	0	39.5	20.4	91.8			
Heptachlor epoxide	0.00037	0.00010	0.0005000	0	74.2	48.3	112			
Methoxychlor	0.00052	0.00010	0.0005000	0	103	49	139			
Surr: Decachlorobiphenyl	0.0019		0.002500		76.7	40.9	111			
Surr: Tetrachloro-m-xylene	0.00078		0.002500		31.1	15	107			

Sample ID: LCSD-79479	SampType: LCSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSS02	Batch ID: 79479	RunNo: 102223								
Prep Date: 12/19/2023	Analysis Date: 12/29/2023	SeqNo: 3773723	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin	0.00049	0.00010	0.0005000	0	98.0	47.7	126	12.1	20	
gamma-BHC (Lindane)	0.00043	0.00010	0.0005000	0	86.5	39.6	109	11.6	20	
Heptachlor	0.00026	0.00010	0.0005000	0	51.8	20.4	91.8	26.9	20	R
Heptachlor epoxide	0.00043	0.00010	0.0005000	0	86.6	48.3	112	15.4	20	
Methoxychlor	0.00054	0.00010	0.0005000	0	109	49	139	5.06	20	
Surr: Decachlorobiphenyl	0.0022		0.002500		87.8	40.9	111	0	0	
Surr: Tetrachloro-m-xylene	0.0013		0.002500		51.6	15	107	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: 100ng lcs		SampType: LCS		TestCode: TCLP Volatiles by 8260B						
Client ID: LCSW		Batch ID: T102062		RunNo: 102062						
Prep Date:		Analysis Date: 12/22/2023		SeqNo: 3766438		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.020	0.010	0.02000	0	101	70	130			
1,1-Dichloroethene	0.019	0.010	0.02000	0	96.4	70	130			
Trichloroethene (TCE)	0.019	0.010	0.02000	0	94.2	70	130			
Chlorobenzene	0.019	0.010	0.02000	0	96.2	70	130			
Surr: 1,2-Dichloroethane-d4	0.0094		0.01000		94.1	70	130			
Surr: 4-Bromofluorobenzene	0.011		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		101	70	130			
Surr: Toluene-d8	0.0097		0.01000		96.6	70	130			

Sample ID: mb	SampType: MBLK			TestCode: TCLP Volatiles by 8260B						
Client ID: PBW	Batch ID: T102062			RunNo: 102062						
Prep Date:	Analysis Date: 12/22/2023			SeqNo: 3766439		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50								
1,2-Dichloroethane (EDC)	ND	0.50								
2-Butanone	ND	200								
Carbon Tetrachloride	ND	0.50								
Chloroform	ND	6.0								
1,4-Dichlorobenzene	ND	7.5								
1,1-Dichloroethene	ND	0.70								
Tetrachloroethene (PCE)	ND	0.70								
Trichloroethene (TCE)	ND	0.50								
Vinyl chloride	ND	0.20								
Chlorobenzene	ND	100								
Surr: 1,2-Dichloroethane-d4	0.0092		0.01000		92.4	70	130			
Surr: 4-Bromofluorobenzene	0.011		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		100	70	130			
Surr: Toluene-d8	0.0096		0.01000		96.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79482	SampType: MBLK		TestCode: EPA Method 8270C TCLP							
Client ID: PBW	Batch ID: 79482		RunNo: 102103							
Prep Date: 12/19/2023	Analysis Date: 12/27/2023		SeqNo: 3768638		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.085		0.2000		42.4	20.8	71.9			
Surr: Phenol-d5	0.065		0.2000		32.4	16.2	54.5			
Surr: 2,4,6-Tribromophenol	0.080		0.2000		39.8	18.8	117			
Surr: Nitrobenzene-d5	0.050		0.1000		49.8	33	85.9			
Surr: 2-Fluorobiphenyl	0.037		0.1000		37.2	26.3	79.6			
Surr: 4-Terphenyl-d14	0.073		0.1000		72.8	53.9	124			

Sample ID: LCS-79482	SampType: LCS			TestCode: EPA Method 8270C TCLP						
Client ID: LCSW	Batch ID: 79482			RunNo: 102103						
Prep Date: 12/19/2023	Analysis Date: 12/27/2023			SeqNo: 3768639		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.052	0.00010	0.1000	0	52.1	26.8	92.9			
3+4-Methylphenol	0.11	0.00010	0.2000	0	53.7	23.7	100			
2,4-Dinitrotoluene	0.050	0.00010	0.1000	0	49.9	22.3	71.2			
Hexachlorobenzene	0.065	0.00010	0.1000	0	64.5	26.1	91.6			
Hexachlorobutadiene	0.029	0.00010	0.1000	0	29.1	15	74.2			
Hexachloroethane	0.034	0.00010	0.1000	0	34.1	15	85.4			
Nitrobenzene	0.051	0.00010	0.1000	0	51.0	26.1	89.6			
Pentachlorophenol	0.042	0.00010	0.1000	0	42.1	21.7	89.4			
Pyridine	0.020	0.00010	0.1000	0	19.7	15	68.4			
2,4,5-Trichlorophenol	0.048	0.00010	0.1000	0	48.4	27	97.9			
2,4,6-Trichlorophenol	0.046	0.00010	0.1000	0	45.9	27.9	92.6			
Cresols, Total	0.16	0.00010	0.3000	0	53.2	24.8	97.7			
Surr: 2-Fluorophenol	0.087		0.2000		43.7	20.8	71.9			
Surr: Phenol-d5	0.066		0.2000		32.9	16.2	54.5			
Surr: 2,4,6-Tribromophenol	0.10		0.2000		50.3	18.8	117			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: LCS-79482	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 79482	RunNo: 102103								
Prep Date: 12/19/2023	Analysis Date: 12/27/2023	SeqNo: 3768639 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.056		0.1000		56.0	33	85.9			
Surr: 2-Fluorobiphenyl	0.043		0.1000		42.9	26.3	79.6			
Surr: 4-Terphenyl-d14	0.073		0.1000		72.5	53.9	124			

Sample ID: 2312909-001BMS	SampType: MS	TestCode: EPA Method 8270C TCLP								
Client ID: WDW-1,2,3&4 Efflue	Batch ID: 79482	RunNo: 102103								
Prep Date: 12/19/2023	Analysis Date: 12/27/2023	SeqNo: 3768641 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.048	0.00010	0.1000	0	47.8	22.6	130			
3+4-Methylphenol	0.095	0.00010	0.2000	0	47.7	21	130			
2,4-Dinitrotoluene	0.051	0.00010	0.1000	0	50.7	21.2	130			
Hexachlorobenzene	0.048	0.00010	0.1000	0	48.4	27.4	130			
Hexachlorobutadiene	0.030	0.00010	0.1000	0	29.8	15	130			
Hexachloroethane	0.033	0.00010	0.1000	0	32.7	15	130			
Nitrobenzene	0.050	0.00010	0.1000	0	49.7	20.6	130			
Pentachlorophenol	0.049	0.00010	0.1000	0	49.0	15	130			
Pyridine	0.0074	0.00010	0.1000	0	7.43	15	130			S
2,4,5-Trichlorophenol	0.046	0.00010	0.1000	0	46.5	15	130			
2,4,6-Trichlorophenol	0.045	0.00010	0.1000	0	44.6	15	130			
Cresols, Total	0.14	0.00010	0.3000	0	47.8	18.1	130			
Surr: 2-Fluorophenol	0.081		0.2000		40.6	20.8	71.9			
Surr: Phenol-d5	0.062		0.2000		31.0	16.2	54.5			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		55.0	18.8	117			
Surr: Nitrobenzene-d5	0.054		0.1000		54.4	33	85.9			
Surr: 2-Fluorobiphenyl	0.044		0.1000		43.8	26.3	79.6			
Surr: 4-Terphenyl-d14	0.064		0.1000		63.9	53.9	124			

Sample ID: 2312909-001BMSD	SampType: MSD	TestCode: EPA Method 8270C TCLP								
Client ID: WDW-1,2,3&4 Efflue	Batch ID: 79482	RunNo: 102103								
Prep Date: 12/19/2023	Analysis Date: 12/27/2023	SeqNo: 3768642 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.058	0.00010	0.1000	0	57.8	22.6	130	18.8	20	
3+4-Methylphenol	0.11	0.00010	0.2000	0	57.4	21	130	18.3	20	
2,4-Dinitrotoluene	0.053	0.00010	0.1000	0	53.1	21.2	130	4.60	20	
Hexachlorobenzene	0.058	0.00010	0.1000	0	58.2	27.4	130	18.3	20	
Hexachlorobutadiene	0.032	0.00010	0.1000	0	32.5	15	130	8.51	20	
Hexachloroethane	0.036	0.00010	0.1000	0	36.2	15	130	10.1	20	
Nitrobenzene	0.055	0.00010	0.1000	0	55.0	20.6	130	10.2	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: 2312909-001BMSD		SampType: MSD		TestCode: EPA Method 8270C TCLP						
Client ID: WDW-1,2,3&4 Efflue		Batch ID: 79482		RunNo: 102103						
Prep Date: 12/19/2023		Analysis Date: 12/27/2023		SeqNo: 3768642		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.044	0.00010	0.1000	0	43.6	15	130	11.5	20	R
Pyridine	0.039	0.00010	0.1000	0	39.3	15	130	136	20	
2,4,5-Trichlorophenol	0.053	0.00010	0.1000	0	52.5	15	130	12.2	20	
2,4,6-Trichlorophenol	0.052	0.00010	0.1000	0	51.8	15	130	14.8	20	
Cresols, Total	0.17	0.00010	0.3000	0	57.5	18.1	130	18.5	20	
Surr: 2-Fluorophenol	0.095		0.2000		47.6	20.8	71.9	0	0	
Surr: Phenol-d5	0.072		0.2000		36.2	16.2	54.5	0	0	
Surr: 2,4,6-Tribromophenol	0.12		0.2000		62.2	18.8	117	0	0	
Surr: Nitrobenzene-d5	0.060		0.1000		59.6	33	85.9	0	0	
Surr: 2-Fluorobiphenyl	0.048		0.1000		48.5	26.3	79.6	0	0	
Surr: 4-Terphenyl-d14	0.069		0.1000		69.4	53.9	124	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: Quarterly WDW 1 2 3 4 Inj Well

Sample ID: LCS-1 98.8uS eC	SampType: LCS	TestCode: SM2510B: Specific Conductance
Client ID: LCSW	Batch ID: R102142	RunNo: 102142
Prep Date:	Analysis Date: 12/28/2023	SeqNo: 3769973 Units: µmhos/cm
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Conductivity	100	10 98.80 0 104 85 115

Sample ID: LCS-2 99.8uS eC	SampType: LCS	TestCode: SM2510B: Specific Conductance
Client ID: LCSW	Batch ID: R102142	RunNo: 102142
Prep Date:	Analysis Date: 12/28/2023	SeqNo: 3770000 Units: µmhos/cm
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Conductivity	100	10 99.80 0 102 85 115

Sample ID: LCS-3 99.8uS eC	SampType: LCS	TestCode: SM2510B: Specific Conductance
Client ID: LCSW	Batch ID: R102142	RunNo: 102142
Prep Date:	Analysis Date: 12/28/2023	SeqNo: 3770027 Units: µmhos/cm
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Conductivity	110	10 99.80 0 108 85 115

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79607		SampType: MBLK		TestCode: EPA Method 7470A: Mercury						
Client ID: PBW		Batch ID: 79607		RunNo: 102124						
Prep Date: 12/27/2023		Analysis Date: 12/28/2023		SeqNo: 3769287		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCSLL-79607		SampType: LCSLL		TestCode: EPA Method 7470A: Mercury						
Client ID: BatchQC		Batch ID: 79607		RunNo: 102124						
Prep Date: 12/27/2023		Analysis Date: 12/28/2023		SeqNo: 3769288		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00013	0.00020	0.0001500	0	85.6	50	150			J

Sample ID: LCS-79607		SampType: LCS		TestCode: EPA Method 7470A: Mercury						
Client ID: LCSW		Batch ID: 79607		RunNo: 102124						
Prep Date: 12/27/2023		Analysis Date: 12/28/2023		SeqNo: 3769289		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79491	SampType: MBLK	TestCode: EPA 6010B: TCLP Metals								
Client ID: PBW	Batch ID: 79491	RunNo: 102032								
Prep Date: 12/19/2023	Analysis Date: 12/22/2023	SeqNo: 3765317 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID: LCS-79491	SampType: LCS	TestCode: EPA 6010B: TCLP Metals								
Client ID: LCSW	Batch ID: 79491	RunNo: 102032								
Prep Date: 12/19/2023	Analysis Date: 12/22/2023	SeqNo: 3765319 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.49	0.0060	0.5000	0	98.9	80	120			
Silver	0.096	0.0050	0.1000	0	96.1	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909
09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: Quarterly WDW 1 2 3 4 Inj Well

Sample ID: 2312909-001CDUP		SampType: DUP		TestCode: SM4500-H+B / 9040C: pH						
Client ID: WDW-1,2,3&4 Efflue		Batch ID: R102082		RunNo: 102082						
Prep Date:		Analysis Date: 12/22/2023		SeqNo: 3767495		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.03									H

- Qualifiers:
- *

D

H

ND

PQL

S

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Practical Quantitative Limit

% Recovery outside of standard limits. If undiluted results may be estimated.

B

E

J

P

RL

Analyte detected in the associated Method Blank

Above Quantitation Range/Estimated Value

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-1 Alk	SampType: MBLK	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767348	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: LCS-1 Alk	SampType: LCS	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767349	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	76.64	20.00	80.00	0	95.8	90	110			

Sample ID: MB-2 alk	SampType: MBLK	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767372	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: LCS-2 alk	SampType: LCS	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767373	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.12	20.00	80.00	0	98.9	90	110			

Sample ID: MB-3 alk	SampType: MBLK	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767398	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: LCS-3 alk	SampType: LCS	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R102082	RunNo: 102082								
Prep Date:	Analysis Date: 12/22/2023	SeqNo: 3767399	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.92	20.00	80.00	0	98.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: Quarterly WDW 1 2 3 4 Inj Well

Sample ID: 2312909-001CDUP		SampType: DUP		TestCode: SM2320B: Alkalinity						
Client ID: WDW-1,2,3&4 Efflue		Batch ID: R102082		RunNo: 102082						
Prep Date:		Analysis Date: 12/22/2023		SeqNo: 3767403		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	381.6	20.00						10.7	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: 2312909-001CDUP		SampType: DUP		TestCode: Specific Gravity						
Client ID: WDW-1,2,3&4 Efflu		Batch ID: R101995		RunNo: 101995						
Prep Date:		Analysis Date: 12/20/2023		SeqNo: 3763294		Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.000	0						0.0231	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79519	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 79519	RunNo: 102043								
Prep Date: 12/20/2023	Analysis Date: 12/22/2023	SeqNo: 3765883 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: LCS-79519	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 79519	RunNo: 102043								
Prep Date: 12/20/2023	Analysis Date: 12/22/2023	SeqNo: 3765884 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	50.0	1000	0	102	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312909

09-Feb-24

Client: HF Sinclair Asphalt Navajo Refining LLC**Project:** Quarterly WDW 1 2 3 4 Inj Well

Sample ID: MB-79522	SampType: MBLK	TestCode: SM 2540D: TSS
Client ID: PBW	Batch ID: 79522	RunNo: 102014
Prep Date: 12/20/2023	Analysis Date: 12/21/2023	SeqNo: 3764409 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Suspended Solids	ND	4.0

Sample ID: LCS-79522	SampType: LCS	TestCode: SM 2540D: TSS
Client ID: LCSW	Batch ID: 79522	RunNo: 102014
Prep Date: 12/20/2023	Analysis Date: 12/21/2023	SeqNo: 3764410 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Suspended Solids	97	4.0 91.90 0 106 83.89 119.7

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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Environment Testin

Eurofins Environment Testing South
Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HF Sinclair Asphalt Work Order Number: 2312909 RcptNo: 1
Received By: Tracy Casarrubias 12/15/2023 8:00:00 AM
Completed By: Tracy Casarrubias 12/15/2023 8:54:34 AM
Reviewed By: *TC 12/15/23*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☒ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 3 2
(3 or >2 unless noted)

Adjusted? NOChecked by: *JL 12-15-23*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: *poured off 125ml from sample 001H for ORP analysis. JL 12-15-23*

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.3	Good	Yes	Morty		

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 314158

COMMENTS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 314158
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	UICI-8 FY2024 Q1 Quarterly Report (Note: All Quarterly Reports are filed under the UICI-8-1 WDW-1 Admin. Record)	3/27/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 314158

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 314158
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Conditions of Approval are: QA/QC Field Sampling: 1. Chain of Custody Seals must be placed on coolers containing lab samples after sample collection at site before delivery to lab; 2. Cooler Temperatures must not exceed 4 degrees Celsius up receipt by the Lab; 3. Proper sample containers and they must match Chain of Custody Forms; 4. Plenty of sample shall be present for lab analysis. 5. Environmental sampler(s) must address lab comments received in lab reports so they do not reoccur. and 6. Some field parameters may be obtained in the field, i.e., pH, Specific Conductance, ORP, etc. to eliminate holding time comments received from lab. QA/QC Laboratory: 1. Confirm Eurofins Lab is NELAC compliant in Albuquerque Lab Location (If not, change to NELAC compliance lab; 2. Care not to "over dilute" lab samples prior to analysis (i.e., 8270C Sample); 3. Dilution Factor must not be excessive (i.e., 8260 sample DF of 200 seems excessive); and 4. Abide by Holding Time requirements.	3/27/2025