



May 14, 2025

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 2025 2nd 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 2025 (FFY 2025) second quarter (Q2) 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 January 1, 2025 through March 31, 2025. 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 2025 Q2 on March 28, 2025. 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 2025 Q2 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.). Not including zero flowrate readings in the calculation of average flowrate provides a more conservative (higher) result for assessment of permit compliance. The monthly injected volume was calculated as the sum of each hourly volume (equal to the hourly flowrate in gpm multiplied by 60 minutes) during the month.

HFSNR disposed a total of 1,557,598 barrels of fluid into the four wells during FFY 2025 Q2. The total Q2 volume per well was:

- 216,082 barrels into WDW-1: 30-015-27592
- 130,609 barrels into WDW-2: 30-015-20894
- 257,129 barrels into WDW-3: 30-015-26575
- 953,778 barrels into WDW-4: 30-015-44677

HF Sinclair Navajo Refining LLC
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 2025 Q2) were within limits given in Condition 3.B as follows:

- WDW-1: max = 1,405 psi (limit = 1,585 psi)
- WDW-2: max = 1,412 psi (limit = 1,514 psi)
- WDW-3: max = 1,400 psi (limit = 1,530 psi)
- WDW-4: max = 943 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. WDW-1 Monitoring Well drilling began March 31, 2025, installation occurred on April 27, 2025 (FFY 2025 Q3), and well development was completed on April 30, 2025. Therefore, the WDW-1 Monitoring Well will be sampled in June 2025 after installation of a permanent bladder pump. Beginning FFY 2025 Q3, quarterly reports will include the required WDW-1 Monitoring Well data which will also be representative of WDW-2, WDW-3, and WDW-4.

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 (January 2025), Figures 4 to 6 (February 2025), and Figures 7 to 9 (March 2025). 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 2025 Q2 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 2025 Q2 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 2025 Q2 (January 2025 – March 2025):**

1. In regard to the Groundwater Monitoring Wells per UICI-8 Discharge Permit Condition 2.B:
 - HFSNR initiated project drilling activities for the monitoring well at WDW-1 on March 31, 2025.
2. In regard to Mechanical Integrity Testing (MIT), Fall Off Testing (FOT), and Remedial Work for the injection wells:
 - HFSNR continued activities in support of Bradenhead valve installation on WDW-1 and WDW-2. Based on excavations to date, additional work is needed to install the valving for performance of the Bradenhead test. Additional excavation is also needed to expose the surface casing for installation of the test equipment.
3. In regard to the renewal of UIC Class I Injection Well Discharge Permit UICI-8:
 - No activities during FFY 2025 Q2.

Planned UIC Activities for FFY 2025 Q3 (April 1, 2025 – June 30, 2025):

1. As mentioned in Item #3 above, WDW-1 Monitoring Well installation occurred on April 27, 2025 and well development was completed on April 30, 2025. Therefore, the WDW-1 Monitoring Well will be sampled in June 2025 after installation of a permanent bladder pump. The FFY 2025 Q3 quarterly report will include the required WDW-1 Monitoring Well data which will also be representative of WDW-2, WDW-3, and WDW-4.
2. WDW-2, WDW-3, and WDW-4 well stimulations are being considered for Q3 or Q4 of FFY 2025. Whether or not stimulations are warranted will be determined based on the results of the 2025 reservoir testing.
3. Fall Off Testing and Part 1 Mechanical Integrity Testing is planned for WDW-1 and WDW-2 during FFY 2025 Q3.
4. As referenced above, operations to complete Bradenhead mitigation are planned for FFY 2025 Q3 or Q4.

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 Jace Ragland at 802-557-8904.

Respectfully,

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

Case Hinkins
Environmental Manager
HF Sinclair Navajo Refining LLC

TABLE 1. FFY 2025 Q2 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	3/28/2025 Concentration
Alkalinity, bicarbonate	mg/L	--	1700
Alkalinity, carbonate	mg/L	--	<2.0
Alkalinity, total	mg/L	--	1700
Conductivity	uS/cm	--	8600
Cyanide (Reactivity)	mg/L	--	0.0750
Flashpoint (Ignitability)	deg F	--	>180
Oxidation Reduction Potential	mV	--	148
pH (Corrosivity)	su	--	7.8
Specific Gravity	su	--	1.0027
Sulfide (Reactivity)	mg/L	--	<1.0
Total Dissolved Solids	mg/L	--	5200
Total Suspended Solids	mg/L	--	800
Bromide	mg/L	--	0.63
Chloride	mg/L	--	530
Fluoride	mg/L	--	14
Nitrate	mg/L	--	--
Nitrate + Nitrite	mg/L	--	1.0
Nitrite	mg/L	--	--
Phosphorus, Ortho PO4	mg/L	--	<2.5
Sulfate	mg/L	--	1800
Calcium	mg/L	--	440
Magnesium	mg/L	--	170
Potassium	mg/L	--	47
Sodium	mg/L	--	1400
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 2025 SECOND 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											
Jan-25	1,344	1,401	1,112	68	81	35.66		697	184	72,707	53,517,939
Feb-25	1,360	1,401	1,029	74	93	33		785	283	70,903	53,590,647
Mar-25	1,334	1,405	1,137	70	99	37		859	325	72,472	53,661,550
											53,734,022
30-015-20894 WDW-2											
Jan-25	1,334	1,412	1,021	44	55	15.66		686	164	46,412	32,662,302
Feb-25	1,380	1,401	1,024	44	53	2.79		742	200	41,954	32,708,714
Mar-25	1,367	1,411	1,041	40	48	12.13		777	507	42,243	32,750,668
											32,792,911
30-015-26575 WDW-3											
Jan-25	1,263	1,351	1,035	81	95	31		767	185	85,373	27,181,426
Feb-25	1,273	1,400	1,033	82	106	37		833	271	78,939	27,266,798
Mar-25	1,219	1,350	286	87	114	43		869	554	92,817	27,345,738
											27,438,555
30-015-44677 WDW-4											
Jan-25	436	943	143	314	394	224		284	31	333,564	18,145,347
Feb-25	441	894	262	304	374	56		336	30	290,959	18,478,910
Mar-25	420	493	383	310	395	273		271	38	329,255	18,769,870
											19,099,125

Figure 1. FFY 2025 Q2 Injection Pressure - January 2025

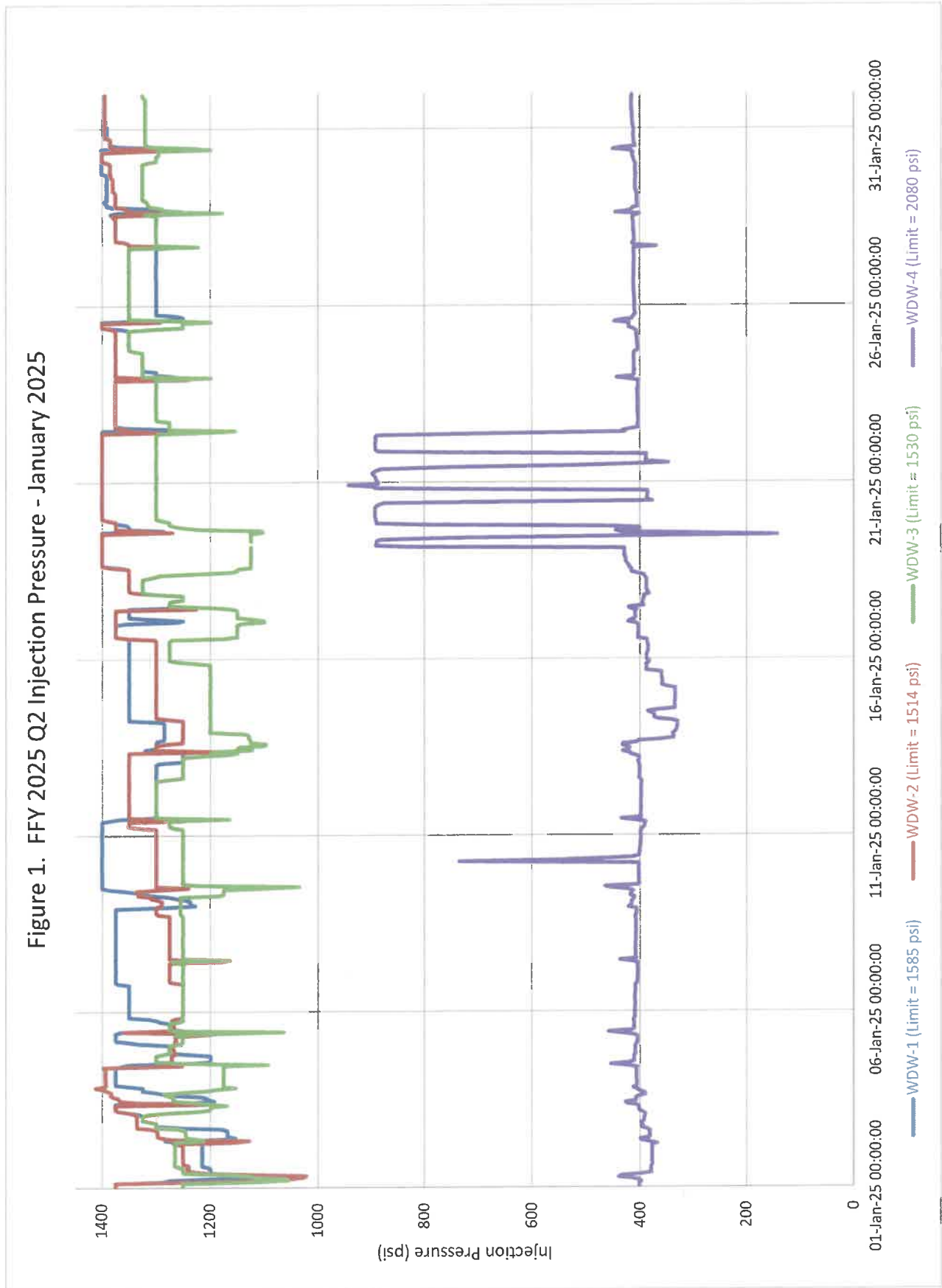
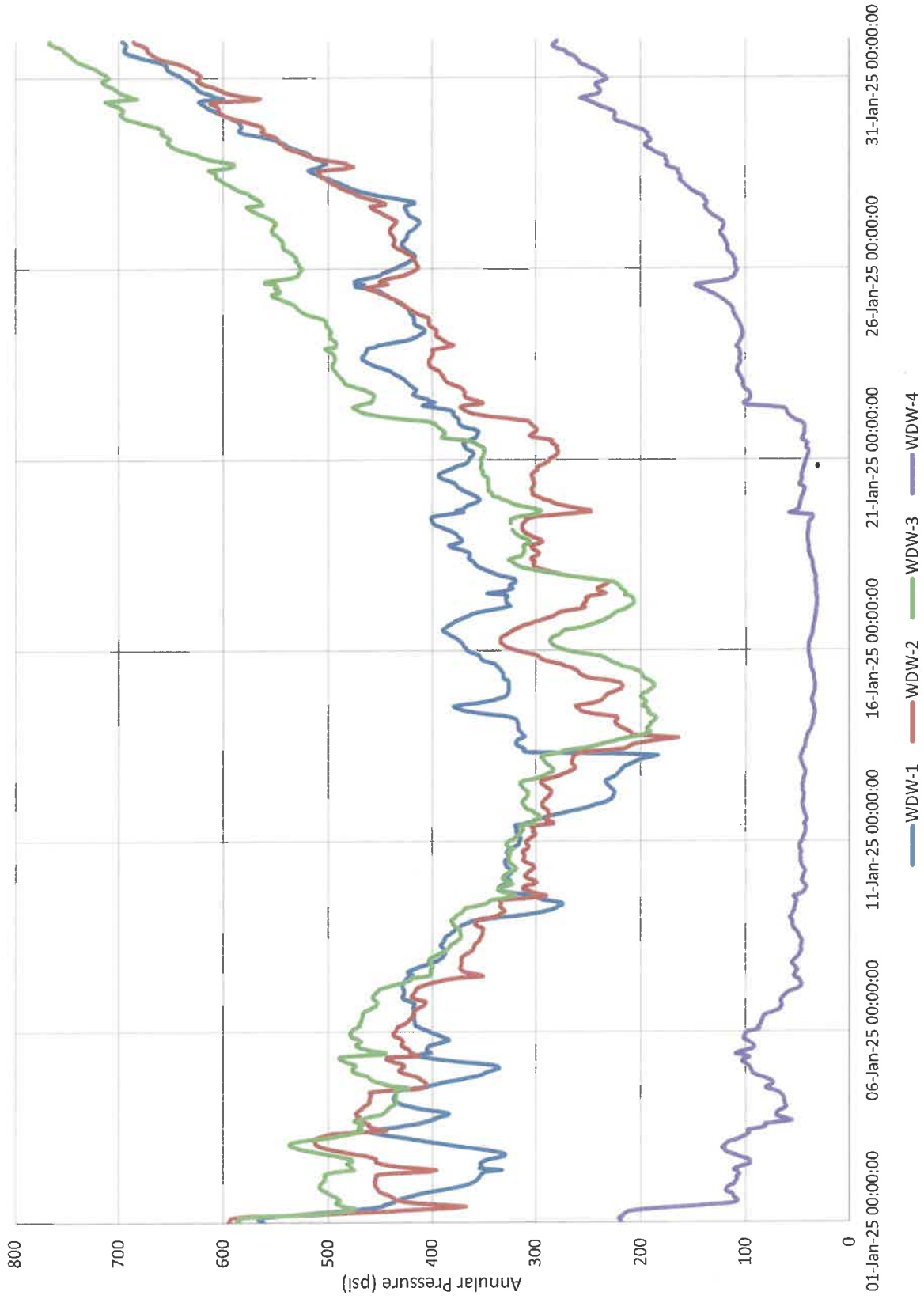


Figure 2. FFY 2025 Q2 Annular Pressure - January 2025



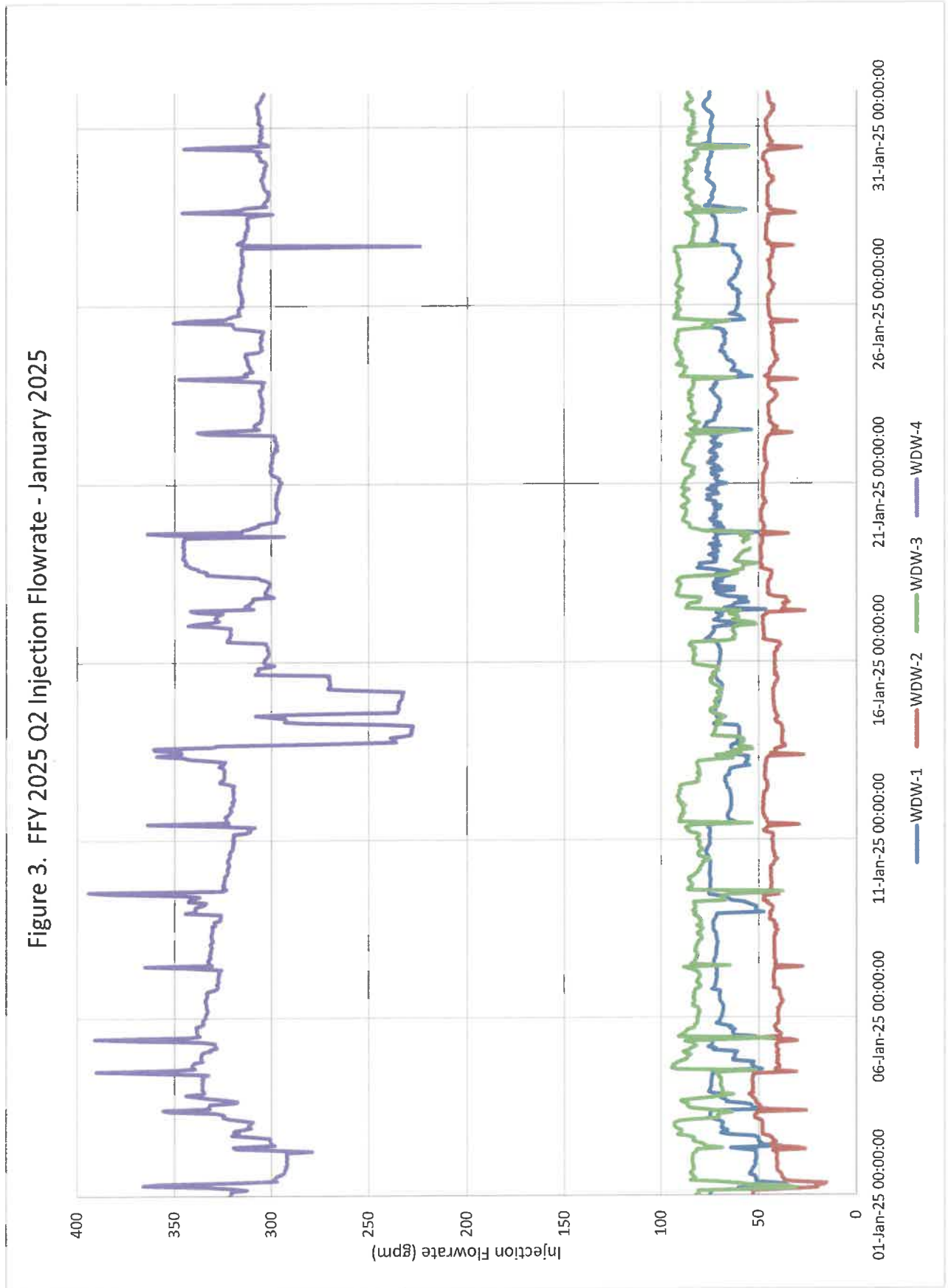


Figure 4. FFY 2025 Q2 Injection Pressure - February 2025

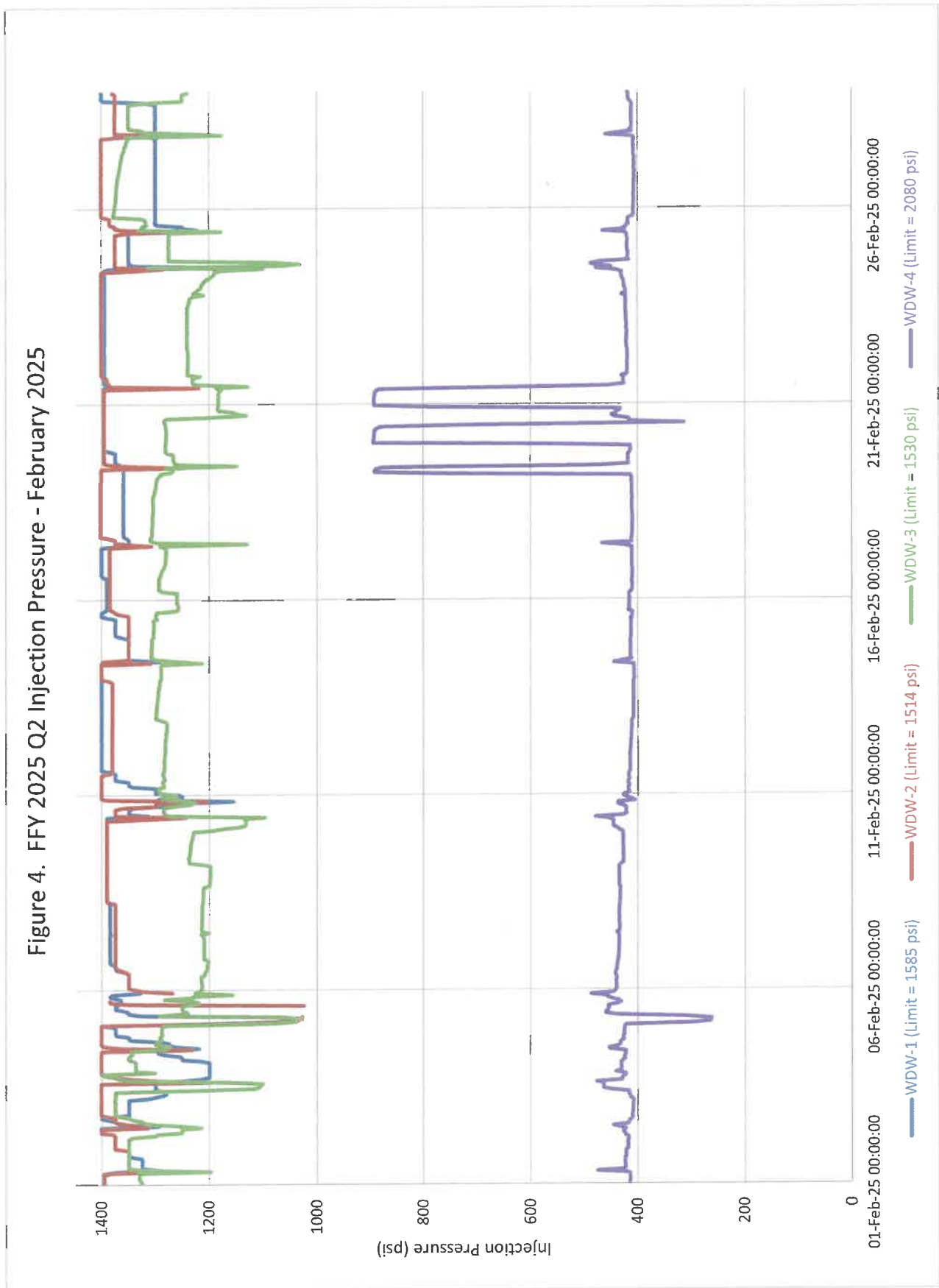


Figure 5. FFY 2025 Q2 Annular Pressure - February 2025

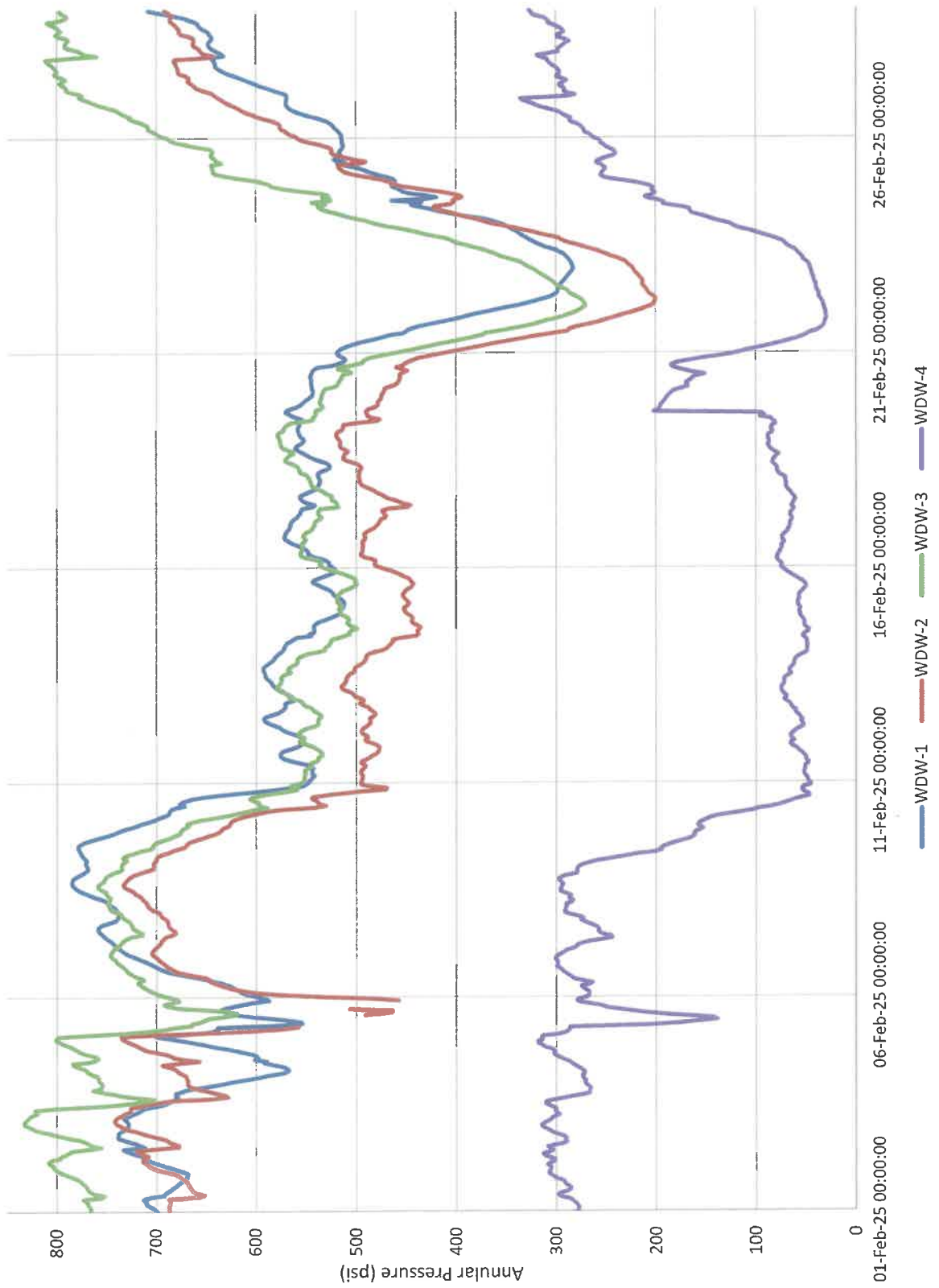


Figure 6. FFY 2025 Q2 Injection Flowrate - February 2025

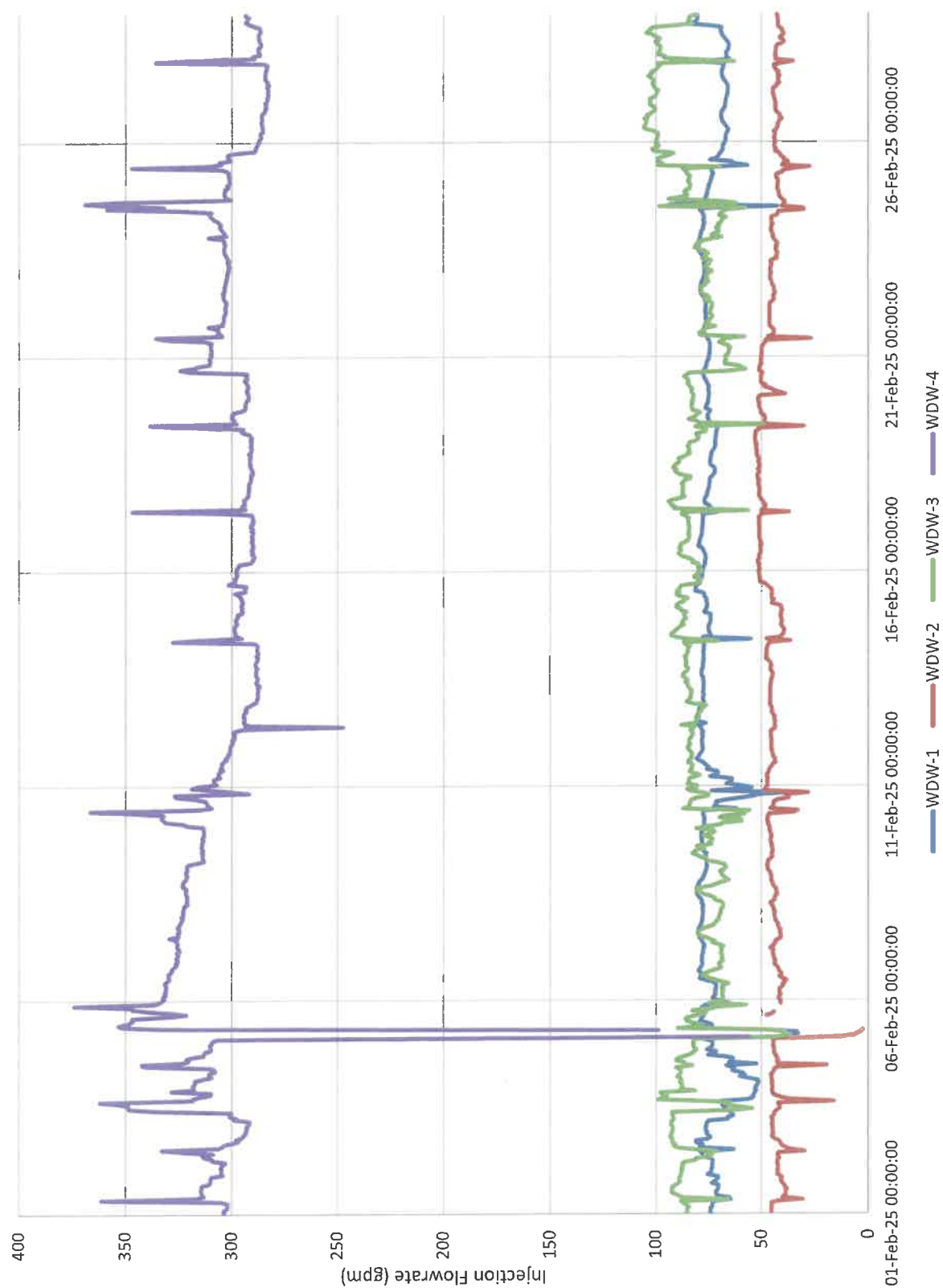


Figure 7. FFY 2025 Q2 Injection Pressure - March 2025

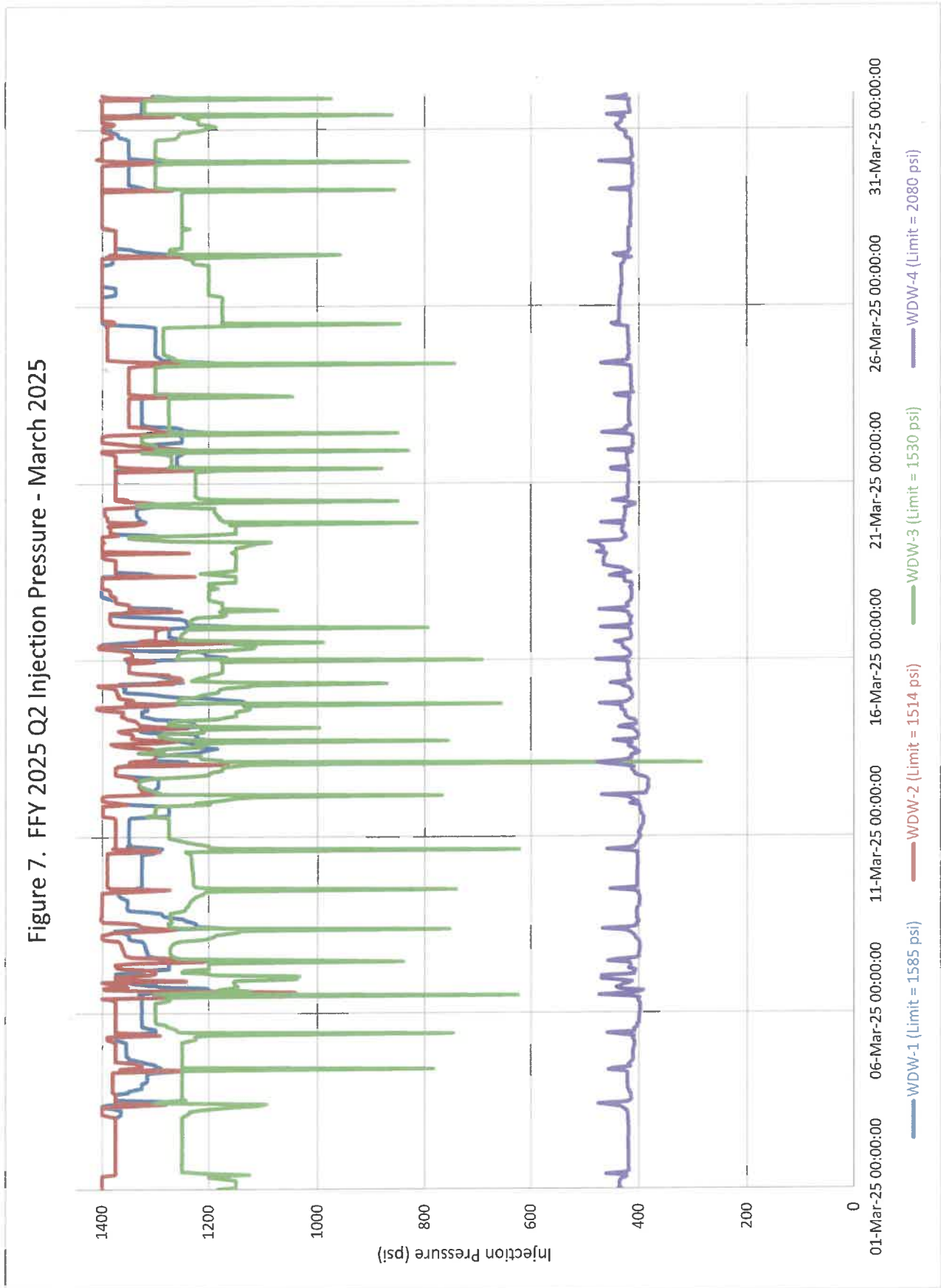


Figure 8. FFY 2025 Q2 Annular Pressure - March 2025

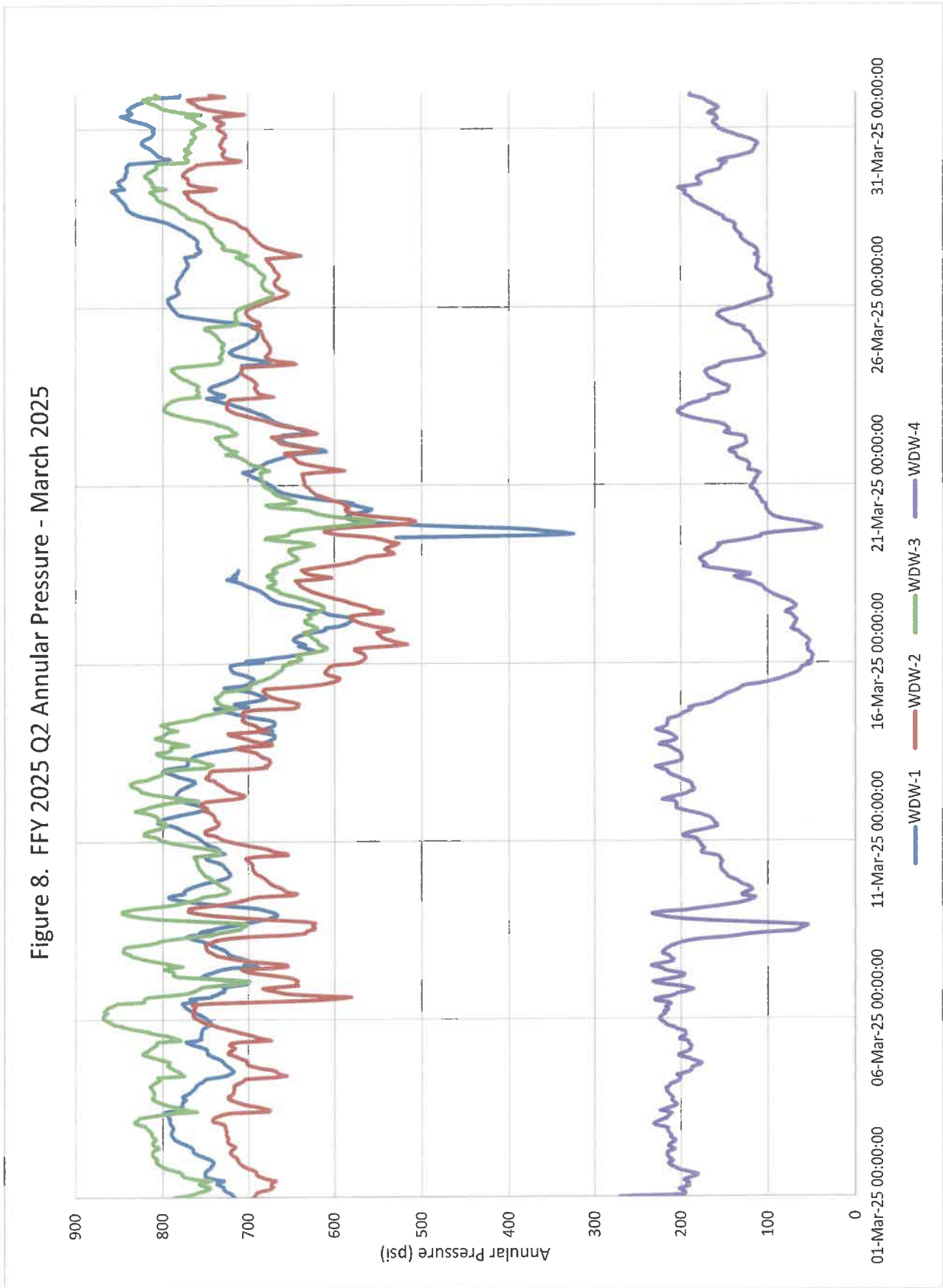
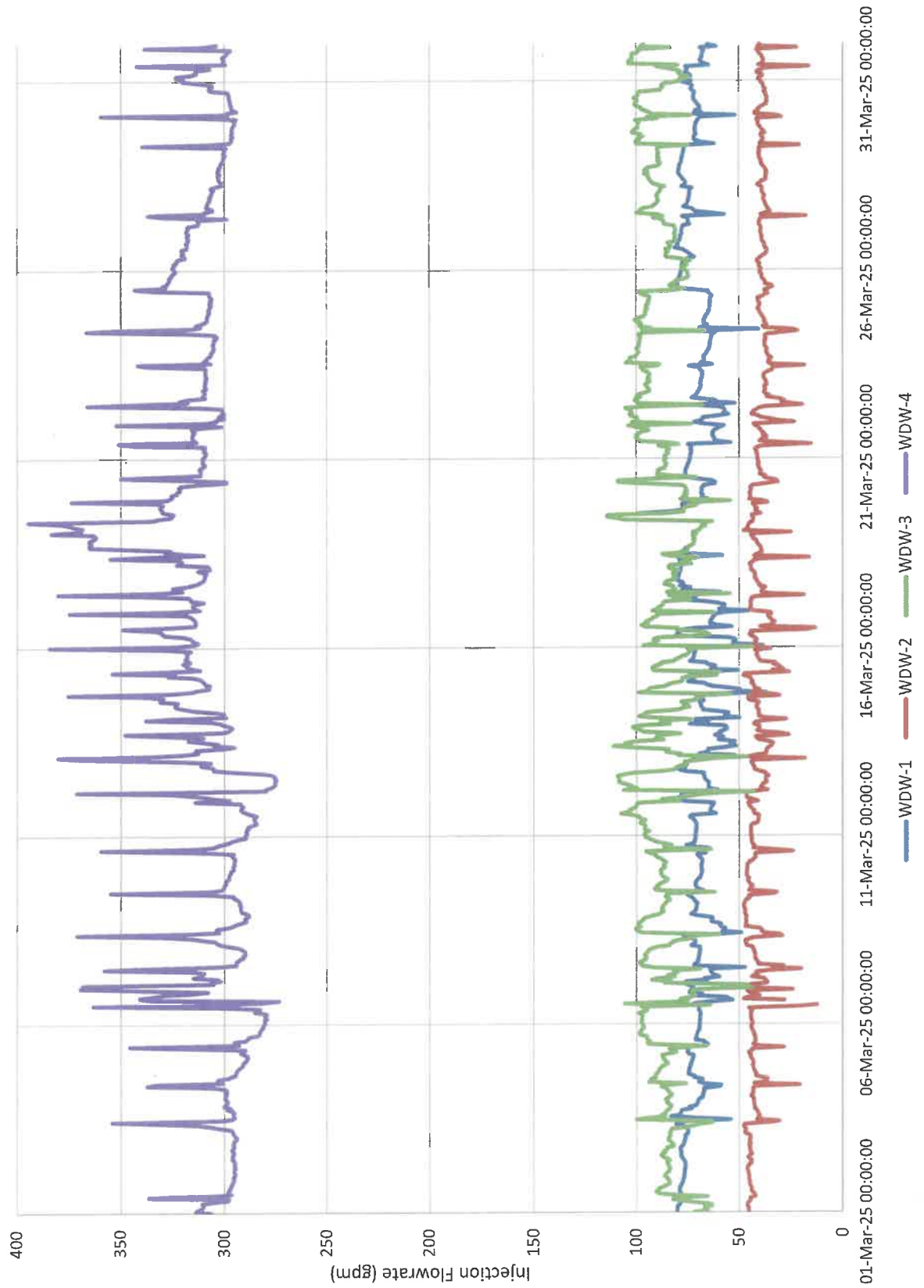


Figure 9. FFY 2025 Q2 Injection Flowrate - March 2025





Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Nat Paengpongsavanh
HF Sinclair Asphalt Navajo Refining LLC
PO BOX 159
Artesia, New Mexico 88211

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JOB DESCRIPTION

Quarterly Inj Well WDW-1, 2, 3, & 4

JOB NUMBER

885-22351-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109


See page two for job notes and contact information.
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Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



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Revision 1

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Laboratory Job ID: 885-22351-1

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Definitions/Glossary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.

Metals

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.

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.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Case Narrative

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

Job ID: 885-22351-1

Job ID: 885-22351-1**Eurofins Albuquerque**

Job Narrative
885-22351-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/1/2025 7:55 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 time was 0.5°C.

Receipt Exceptions

The following samples were received at the laboratory without a sample collection time documented on the chain of custody: WDW-1,2,3 & 4 Effluent (885-22351-1). The sample was logged in using the date and time provided on the containers.

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

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.

The unrounded specific gravity of the samples was 1.0027.

GC/MS VOA

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

GC/MS Semi VOA

Method 8270C: The following samples were diluted due to the nature of the sample matrix: WDW-1,2,3 & 4 Effluent (885-22351-1). Elevated reporting limits (RLs) are provided.

Method 8270C: Surrogate recovery for the following samples were outside control limits: WDW-1,2,3 & 4 Effluent (885-22351-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C: Internal standard (ISTD) response for the following samples were outside of acceptance limits: WDW-1,2,3 & 4 Effluent (885-22351-1). The sample(s) was not re-analyzed due to holding time expired. Samples are ND for associated high IS failures; results biased low; reporting as is.

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

Pesticides

Method 8081B: The following samples were diluted due to the nature of the sample matrix: WDW-1,2,3 & 4 Effluent (885-22351-1). Elevated reporting limits (RLs) are provided.

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

Eurofins Albuquerque

Case Narrative

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

Job ID: 885-22351-1

Job ID: 885-22351-1 (Continued) Eurofins Albuquerque

HPLC/IC

Method 300_OF_48H_PREC: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: WDW-1,2,3 & 4 Effluent (885-22351-1).

Method 300_OF_48H_PREC: The following samples were diluted due to the nature of the sample matrix: WDW-1,2,3 & 4 Effluent (885-22351-1). Elevated reporting limits (RLs) are provided.

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

Metals

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

General Chemistry

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

Eurofins Albuquerque

Client Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

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

Lab Sample ID: 885-22351-1

Date Collected: 03/28/25 11:38

Matrix: Water

Date Received: 04/01/25 07:55

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		50	11	ug/L			04/07/25 20:21	50
Carbon tetrachloride	ND		50	9.0	ug/L			04/07/25 20:21	50
Chlorobenzene	ND		50	23	ug/L			04/07/25 20:21	50
1,4-Dichlorobenzene	ND		50	5.5	ug/L			04/07/25 20:21	50
1,2-Dichloroethane (EDC)	ND		50	15	ug/L			04/07/25 20:21	50
1,1-Dichloroethene	ND		50	10	ug/L			04/07/25 20:21	50
2-Butanone	ND		500	100	ug/L			04/07/25 20:21	50
Tetrachloroethene (PCE)	ND		50	8.9	ug/L			04/07/25 20:21	50
Trichloroethene (TCE)	ND		50	10	ug/L			04/07/25 20:21	50
Vinyl chloride	ND		50	16	ug/L			04/07/25 20:21	50
Chloroform	ND		50	13	ug/L			04/07/25 20:21	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		70 - 130		04/07/25 20:21	50
Toluene-d8 (Surr)	97		70 - 130		04/07/25 20:21	50
4-Bromofluorobenzene (Surr)	114		70 - 130		04/07/25 20:21	50
Dibromofluoromethane (Surr)	121		70 - 130		04/07/25 20:21	50

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND	D	40	19	ug/L		04/03/25 06:48	04/08/25 02:55	2
3 & 4 Methylphenol	ND	D	40	20	ug/L		04/03/25 06:48	04/08/25 02:55	2
2,4-Dinitrotoluene	ND	D *3	20	20	ug/L		04/03/25 06:48	04/08/25 02:55	2
Hexachlorobenzene	ND	D	80	19	ug/L		04/03/25 06:48	04/08/25 02:55	2
Hexachlorobutadiene	ND	D	80	45	ug/L		04/03/25 06:48	04/08/25 02:55	2
Hexachloroethane	ND	D	80	44	ug/L		04/03/25 06:48	04/08/25 02:55	2
Nitrobenzene	ND	D	20	14	ug/L		04/03/25 06:48	04/08/25 02:55	2
Pentachlorophenol	ND	D	80	60	ug/L		04/03/25 06:48	04/08/25 02:55	2
Pyridine	ND	D	80	10	ug/L		04/03/25 06:48	04/08/25 02:55	2
2,4,5-Trichlorophenol	ND	D	40	21	ug/L		04/03/25 06:48	04/08/25 02:55	2
2,4,6-Trichlorophenol	ND	D	40	17	ug/L		04/03/25 06:48	04/08/25 02:55	2
Cresols, Total	ND	D	40	20	ug/L		04/03/25 06:48	04/08/25 02:55	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	0	S1-	15 - 130	04/03/25 06:48	04/08/25 02:55	2
2-Fluorophenol (Surr)	0	S1-	15 - 130	04/03/25 06:48	04/08/25 02:55	2
2,4,6-Tribromophenol (Surr)	NaN	*3	15 - 130	04/03/25 06:48	04/08/25 02:55	2
Nitrobenzene-d5 (Surr)	43		29 - 130	04/03/25 06:48	04/08/25 02:55	2
2-Fluorobiphenyl (Surr)	50		20 - 130	04/03/25 06:48	04/08/25 02:55	2
p-Terphenyl-d14 (Surr)	52		41 - 130	04/03/25 06:48	04/08/25 02:55	2

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane	ND		20	10	ug/L		04/04/25 09:36	04/16/25 12:46	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	61		53 - 130				04/04/25 09:36	04/16/25 12:46	2
Tetrachloro-m-xylene	53		18 - 130				04/04/25 09:36	04/16/25 12:46	2

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Client Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

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

Lab Sample ID: 885-22351-1

Date Collected: 03/28/25 11:38

Matrix: Water

Date Received: 04/01/25 07:55

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.63		0.50	0.25	mg/L			04/01/25 20:35	5
Chloride	530		10	5.0	mg/L			04/01/25 21:16	20
Nitrate Nitrite as N	1.0	H H3	1.0	0.11	mg/L			04/01/25 20:35	5
Sulfate	1800		10	7.8	mg/L			04/01/25 21:16	20
Fluoride	14		0.50	0.23	mg/L			04/01/25 20:35	5
Orthophosphate as P	ND	H H3	2.5	1.3	mg/L			04/01/25 20:35	5

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	440		10	0.65	mg/L			04/02/25 12:57	10
Magnesium	170		100	2.4	mg/L			04/02/25 08:34	100
Potassium	47		10	1.2	mg/L			04/02/25 12:57	10
Sodium	1400		100	23	mg/L			04/02/25 08:34	100

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050	0.025	mg/L		04/03/25 11:19	04/05/25 11:07	5
Barium	0.058		0.050	0.025	mg/L		04/03/25 11:19	04/05/25 11:07	5
Cadmium	ND		0.050	0.025	mg/L		04/03/25 11:19	04/05/25 11:07	5
Chromium	ND		0.050	0.025	mg/L		04/03/25 11:19	04/05/25 11:07	5
Lead	ND		0.050	0.030	mg/L		04/03/25 11:19	04/05/25 11:07	5
Selenium	0.074		0.050	0.040	mg/L		04/03/25 11:19	04/05/25 11:07	5
Silver	ND		0.050	0.025	mg/L		04/03/25 11:19	04/05/25 11:07	5

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00028		0.00020	0.00012	mg/L		04/07/25 10:21	04/08/25 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010B)	>180		1.0	1.0	Degrees F			04/07/25 15:01	1
Total Dissolved Solids (SM 2540C)	5200		1000	500	mg/L			04/03/25 10:09	1
pH (SW846 9040C)	7.8	HF			SU			04/03/25 15:08	1
Temperature (SW846 9040C)	15.6	HF			Degrees C			04/03/25 15:08	1
Corrosivity (SW846 9040C)	7.8	HF			SU			04/03/25 15:08	1
Cyanide, Total (EPA Kelada 01)	0.075		0.0050	0.0020	mg/L			04/04/25 20:14	1
Total Alkalinity as CaCO3 (SM 2320B)	1700		20	20	mg/L			04/08/25 12:33	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	1700		20	20	mg/L			04/08/25 12:33	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	ND		2.0	2.0	mg/L			04/08/25 12:33	1
Specific Conductance (SM 2510B)	8600		50	50	umhos/cm			04/12/25 12:25	5
Total Suspended Solids (SM 2540D)	800		40	40	mg/L			04/03/25 12:56	1
Specific Gravity (SM 2710F)	1.0				NONE			04/08/25 08:27	1
pH (SM 4500 H+ B)	7.6	HF	0.1	0.1	SU			04/08/25 12:07	1
Sulfide (SM 4500 S2 D)	0.96	J	1.0	0.29	mg/L			04/03/25 14:08	10

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Client Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Client Sample ID: Trip Blank

Lab Sample ID: 885-22351-2

Date Collected: 03/28/25 00:00

Matrix: Water

Date Received: 04/01/25 07:55

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.23	ug/L			04/07/25 19:57	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			04/07/25 19:57	1
Chlorobenzene	ND		1.0	0.46	ug/L			04/07/25 19:57	1
1,4-Dichlorobenzene	ND		1.0	0.11	ug/L			04/07/25 19:57	1
1,2-Dichloroethane (EDC)	ND		1.0	0.30	ug/L			04/07/25 19:57	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			04/07/25 19:57	1
2-Butanone	ND		10	2.0	ug/L			04/07/25 19:57	1
Tetrachloroethene (PCE)	ND		1.0	0.18	ug/L			04/07/25 19:57	1
Trichloroethene (TCE)	ND		1.0	0.20	ug/L			04/07/25 19:57	1
Vinyl chloride	ND		1.0	0.32	ug/L			04/07/25 19:57	1
Chloroform	ND		1.0	0.25	ug/L			04/07/25 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		70 - 130		04/07/25 19:57	1
Toluene-d8 (Surr)	104		70 - 130		04/07/25 19:57	1
4-Bromofluorobenzene (Surr)	87		70 - 130		04/07/25 19:57	1
Dibromofluoromethane (Surr)	118		70 - 130		04/07/25 19:57	1

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

CATION/ANION BALANCE SHEET FOR WATER ANALYSES

HEAL LAB NUMBER	WDW-1,2,3,4 Effluent 885-22351							
CATIONS	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L
Sodium	1400	60.90						
Potassium	47	1.20						
Calcium	440	21.96						
Magnesium	170	13.99						
Total Cations	98.05							
ANIONS	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L
Sulfate	1800	37.48						
Chloride	530	14.95						
Bicarbonate (CaCO3)	1700	33.97	-					
Carbonate (CaCO3)								
Phosphate (P)								
Nitrite (N)								
Nitrate (N)	1.0	0.07		-				
Fluoride	14	0.74						
Bromide	0.63	0.01						
Total Anions	87.22							
Elect. Cond. (µMhos/cm)	8600							
CATION/ANION RATIO	1.12							
% Difference	6							
TOTAL DISSOLVED SOLIDS RATIOS								
TDS (measured)	5200							
TDS (calculated)	5426							
Ratio meas TDS:calc TDS	1.0							
Ratio Meas. TDS:EC	0.60							
Ratio Calc. TDS:EC	0.63							
Ratio of anion sum:EC	1.0							
Ratio of cation sum:EC	1.1							

* Analyte not detected (below method detection limit).

** Values below 0.55 can be obtained in waters containing appreciable concentrations of free acid or alkalinity, or not within pH 6 to 9. Values much higher than 0.7 are possible in highly saline waters.

GENERALLY ACCEPTED RANGES

Cation/Anion balance: 0-3 meq/L- 0.2 meq/L, 3-10 meq/L- 2%, >10 meq/L - 5%

Ratio measured TDS:calculated TDS -- 1.0-1.2. Ratio Calculated TDS:EC -- 0.55-0.7. Ratio Measured TDS:EC--0.55-0.7. Ratio of anion sum:EC -- 0.9-1.1.

Ratio of cation sum:EC -- 0.9-1.1

Action Limit Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

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

Lab Sample ID: 885-22351-1

POTENTIAL STLC / TCLP / TTLC LIMITS EXCEEDANCE

STLC limits in boxes signify the result exceeds 10x STLC limit. TCLP limits in boxes signify the result exceeds 20x TCLP limit

Analyte	Result	Qualifier	Unit	TCLP Limit	RL	Method	Prep Type
Benzene	ND		ug/L	500.0	50	8260B	Total/NA
Carbon tetrachloride	ND		ug/L	500.0	50	8260B	Total/NA
Chlorobenzene	ND		ug/L	100000	50	8260B	Total/NA
1,4-Dichlorobenzene	ND		ug/L	7500.0	50	8260B	Total/NA
1,2-Dichloroethane (EDC)	ND		ug/L	500.0	50	8260B	Total/NA
1,1-Dichloroethene	ND		ug/L	700.0	50	8260B	Total/NA
2-Butanone	ND		ug/L	200000	500	8260B	Total/NA
Tetrachloroethene (PCE)	ND		ug/L	700.0	50	8260B	Total/NA
Trichloroethene (TCE)	ND		ug/L	500.0	50	8260B	Total/NA
Vinyl chloride	ND		ug/L	200.0	50	8260B	Total/NA
Chloroform	ND		ug/L	6000	50	8260B	Total/NA
2-Methylphenol	ND	D	ug/L	200000	40	8270C	Total/NA
2,4-Dinitrotoluene	ND	D *3	ug/L	130.00	20	8270C	Total/NA
Hexachlorobenzene	ND	D	ug/L	130.00	80	8270C	Total/NA
Hexachlorobutadiene	ND	D	ug/L	500.0	80	8270C	Total/NA
Hexachloroethane	ND	D	ug/L	3000	80	8270C	Total/NA
Nitrobenzene	ND	D	ug/L	2000	20	8270C	Total/NA
Pentachlorophenol	ND	D	ug/L	100000	80	8270C	Total/NA
Pyridine	ND	D	ug/L	5000	80	8270C	Total/NA
2,4,5-Trichlorophenol	ND	D	ug/L	400000	40	8270C	Total/NA
2,4,6-Trichlorophenol	ND	D	ug/L	2000	40	8270C	Total/NA
Chlordane	ND		ug/L	30.00	20	8081B	Total/NA
Arsenic	ND		mg/L	5	0.050	6020A	Total Recoverable
Barium	0.058		mg/L	100	0.050	6020A	Total Recoverable
Cadmium	ND		mg/L	1	0.050	6020A	Total Recoverable
Chromium	ND		mg/L	5	0.050	6020A	Total Recoverable
Lead	ND		mg/L	5	0.050	6020A	Total Recoverable
Selenium	0.074		mg/L	1	0.050	6020A	Total Recoverable
Silver	ND		mg/L	5	0.050	6020A	Total Recoverable
Mercury	0.00028		mg/L	0.2	0.00020	7470A	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 885-22351-2

POTENTIAL STLC / TCLP / TTLC LIMITS EXCEEDANCE

STLC limits in boxes signify the result exceeds 10x STLC limit. TCLP limits in boxes signify the result exceeds 20x TCLP limit

Analyte	Result	Qualifier	Unit	TCLP Limit	RL	Method	Prep Type
Benzene	ND		ug/L	500.0	1.0	8260B	Total/NA
Carbon tetrachloride	ND		ug/L	500.0	1.0	8260B	Total/NA
Chlorobenzene	ND		ug/L	100000	1.0	8260B	Total/NA
1,4-Dichlorobenzene	ND		ug/L	7500.0	1.0	8260B	Total/NA
1,2-Dichloroethane (EDC)	ND		ug/L	500.0	1.0	8260B	Total/NA
1,1-Dichloroethene	ND		ug/L	700.0	1.0	8260B	Total/NA

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Action Limit Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Client Sample ID: Trip Blank (Continued)

Lab Sample ID: 885-22351-2

POTENTIAL STLC / TCLP / TTLC LIMITS EXCEEDANCE

STLC limits in boxes signify the result exceeds 10x STLC limit. TCLP limits in boxes signify the result exceeds 20x TCLP limit

Analyte	Result	Qualifier	Unit	TCLP Limit	RL	Method	Prep Type
2-Butanone	ND		ug/L	200000	10	8260B	Total/NA
Tetrachloroethene (PCE)	ND		ug/L	700.0	1.0	8260B	Total/NA
Trichloroethene (TCE)	ND		ug/L	500.0	1.0	8260B	Total/NA
Vinyl chloride	ND		ug/L	200.0	1.0	8260B	Total/NA
Chloroform	ND		ug/L	6000	1.0	8260B	Total/NA

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-23806/7

Matrix: Water

Analysis Batch: 23806

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.23	ug/L			04/07/25 15:03	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			04/07/25 15:03	1
Chlorobenzene	ND		1.0	0.46	ug/L			04/07/25 15:03	1
1,4-Dichlorobenzene	ND		1.0	0.11	ug/L			04/07/25 15:03	1
1,2-Dichloroethane (EDC)	ND		1.0	0.30	ug/L			04/07/25 15:03	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			04/07/25 15:03	1
2-Butanone	ND		10	2.0	ug/L			04/07/25 15:03	1
Tetrachloroethene (PCE)	ND		1.0	0.18	ug/L			04/07/25 15:03	1
Trichloroethene (TCE)	ND		1.0	0.20	ug/L			04/07/25 15:03	1
Vinyl chloride	ND		1.0	0.32	ug/L			04/07/25 15:03	1
Chloroform	ND		1.0	0.25	ug/L			04/07/25 15:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		70 - 130		04/07/25 15:03	1
Toluene-d8 (Surr)	101		70 - 130		04/07/25 15:03	1
4-Bromofluorobenzene (Surr)	87		70 - 130		04/07/25 15:03	1
Dibromofluoromethane (Surr)	117		70 - 130		04/07/25 15:03	1

Lab Sample ID: LCS 885-23806/5

Matrix: Water

Analysis Batch: 23806

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.0	21.2		ug/L		106	70 - 130
Chlorobenzene	20.0	21.9		ug/L		109	70 - 130
1,1-Dichloroethene	20.0	20.0		ug/L		100	70 - 130
Trichloroethene (TCE)	20.0	18.6		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 130
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	89		70 - 130
Dibromofluoromethane (Surr)	114		70 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 885-23595/1-A

Matrix: Water

Analysis Batch: 23800

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23595

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		10	4.7	ug/L		04/03/25 06:48	04/07/25 17:15	1
3 & 4 Methylphenol	ND		10	4.9	ug/L		04/03/25 06:48	04/07/25 17:15	1
2,4-Dinitrotoluene	ND		5.0	5.0	ug/L		04/03/25 06:48	04/07/25 17:15	1
Hexachlorobenzene	ND		20	4.6	ug/L		04/03/25 06:48	04/07/25 17:15	1
Hexachlorobutadiene	ND		20	11	ug/L		04/03/25 06:48	04/07/25 17:15	1
Hexachloroethane	ND		20	11	ug/L		04/03/25 06:48	04/07/25 17:15	1
Nitrobenzene	ND		5.0	3.6	ug/L		04/03/25 06:48	04/07/25 17:15	1

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QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 885-23595/1-A

Matrix: Water

Analysis Batch: 23800

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23595

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		20	15	ug/L		04/03/25 06:48	04/07/25 17:15	1
Pyridine	ND		20	2.6	ug/L		04/03/25 06:48	04/07/25 17:15	1
2,4,5-Trichlorophenol	ND		10	5.1	ug/L		04/03/25 06:48	04/07/25 17:15	1
2,4,6-Trichlorophenol	ND		10	4.3	ug/L		04/03/25 06:48	04/07/25 17:15	1
Cresols, Total	ND		10	4.9	ug/L		04/03/25 06:48	04/07/25 17:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	30		15 - 130	04/03/25 06:48	04/07/25 17:15	1
2-Fluorophenol (Surr)	39		15 - 130	04/03/25 06:48	04/07/25 17:15	1
2,4,6-Tribromophenol (Surr)	38		15 - 130	04/03/25 06:48	04/07/25 17:15	1
Nitrobenzene-d5 (Surr)	46		29 - 130	04/03/25 06:48	04/07/25 17:15	1
2-Fluorobiphenyl (Surr)	37		20 - 130	04/03/25 06:48	04/07/25 17:15	1
p-Terphenyl-d14 (Surr)	56		41 - 130	04/03/25 06:48	04/07/25 17:15	1

Lab Sample ID: LCS 885-23595/2-A

Matrix: Water

Analysis Batch: 23800

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23595

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	100	42.7		ug/L		43	38 - 130
Pentachlorophenol	200	75.6		ug/L		38	15 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5 (Surr)	31		15 - 130
2-Fluorophenol (Surr)	39		15 - 130
2,4,6-Tribromophenol (Surr)	49		15 - 130
Nitrobenzene-d5 (Surr)	45		29 - 130
2-Fluorobiphenyl (Surr)	32		20 - 130
p-Terphenyl-d14 (Surr)	58		41 - 130

Lab Sample ID: LCSD 885-23595/3-A

Matrix: Water

Analysis Batch: 23800

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23595

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-Dinitrotoluene	100	41.1		ug/L		41	38 - 130	4	39
Pentachlorophenol	200	73.7		ug/L		37	15 - 130	3	55

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Phenol-d5 (Surr)	27		15 - 130
2-Fluorophenol (Surr)	36		15 - 130
2,4,6-Tribromophenol (Surr)	50		15 - 130
Nitrobenzene-d5 (Surr)	44		29 - 130
2-Fluorobiphenyl (Surr)	37		20 - 130
p-Terphenyl-d14 (Surr)	62		41 - 130

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-23459/4

Matrix: Water

Analysis Batch: 23459

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.10	0.050	mg/L			04/01/25 11:01	1
Chloride	ND		0.50	0.25	mg/L			04/01/25 11:01	1
Sulfate	ND		0.50	0.39	mg/L			04/01/25 11:01	1
Fluoride	ND		0.10	0.046	mg/L			04/01/25 11:01	1

Lab Sample ID: MB 885-23459/50

Matrix: Water

Analysis Batch: 23459

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.10	0.050	mg/L			04/01/25 19:12	1
Chloride	ND		0.50	0.25	mg/L			04/01/25 19:12	1
Sulfate	ND		0.50	0.39	mg/L			04/01/25 19:12	1
Fluoride	ND		0.10	0.046	mg/L			04/01/25 19:12	1

Lab Sample ID: LCS 885-23459/5

Matrix: Water

Analysis Batch: 23459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	2.50	2.44		mg/L		98	90 - 110
Chloride	5.00	5.01		mg/L		100	90 - 110
Sulfate	10.0	9.91		mg/L		99	90 - 110
Fluoride	0.500	0.518		mg/L		104	90 - 110

Lab Sample ID: LCS 885-23459/51

Matrix: Water

Analysis Batch: 23459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	2.50	2.45		mg/L		98	90 - 110
Chloride	5.00	5.00		mg/L		100	90 - 110
Sulfate	10.0	9.89		mg/L		99	90 - 110
Fluoride	0.500	0.522		mg/L		104	90 - 110

Lab Sample ID: MRL 885-23459/3

Matrix: Water

Analysis Batch: 23459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.100	0.113		mg/L		113	50 - 150
Chloride	0.500	0.526		mg/L		105	50 - 150
Sulfate	0.500	0.517		mg/L		103	50 - 150
Fluoride	0.100	0.120		mg/L		120	50 - 150

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 885-23460/4

Matrix: Water

Analysis Batch: 23460

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.20	0.022	mg/L			04/01/25 11:01	1
Orthophosphate as P	ND		0.50	0.25	mg/L			04/01/25 11:01	1

Lab Sample ID: MB 885-23460/50

Matrix: Water

Analysis Batch: 23460

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.20	0.022	mg/L			04/01/25 19:12	1
Orthophosphate as P	ND		0.50	0.25	mg/L			04/01/25 19:12	1

Lab Sample ID: LCS 885-23460/5

Matrix: Water

Analysis Batch: 23460

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.54		mg/L		102	90 - 110
Nitrite as N	1.00	0.951		mg/L		95	90 - 110
Orthophosphate as P	5.00	5.00		mg/L		100	90 - 110

Lab Sample ID: LCS 885-23460/51

Matrix: Water

Analysis Batch: 23460

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.55		mg/L		102	90 - 110
Nitrite as N	1.00	0.951		mg/L		95	90 - 110
Orthophosphate as P	5.00	5.05		mg/L		101	90 - 110

Lab Sample ID: MRL 885-23460/3

Matrix: Water

Analysis Batch: 23460

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.105		mg/L		105	50 - 150
Nitrite as N	0.100	0.107		mg/L		107	50 - 150
Orthophosphate as P	0.500	0.519		mg/L		104	50 - 150

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 885-23524/17

Matrix: Water

Analysis Batch: 23524

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND		1.0	0.024	mg/L			04/02/25 08:26	1
Sodium	ND		1.0	0.23	mg/L			04/02/25 08:26	1

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 885-23524/18

Matrix: Water

Analysis Batch: 23524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	50.0	52.8		mg/L		106	85 - 115
Sodium	50.0	52.4		mg/L		105	85 - 115

Lab Sample ID: MRL 885-23524/14

Matrix: Water

Analysis Batch: 23524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	0.500	0.526	J	mg/L		105	50 - 150
Sodium	0.500	0.526	J	mg/L		105	50 - 150

Lab Sample ID: MB 885-23564/18

Matrix: Water

Analysis Batch: 23564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		1.0	0.065	mg/L			04/02/25 12:54	1
Potassium	ND		1.0	0.12	mg/L			04/02/25 12:54	1

Lab Sample ID: LCS 885-23564/19

Matrix: Water

Analysis Batch: 23564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	50.8		mg/L		102	85 - 115
Potassium	50.0	50.6		mg/L		101	85 - 115

Lab Sample ID: MRL 885-23564/14

Matrix: Water

Analysis Batch: 23564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	0.500	0.503	J	mg/L		101	50 - 150
Potassium	0.500	0.568	J	mg/L		114	50 - 150

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MRL 885-23760/9

Matrix: Water

Analysis Batch: 23760

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.00100	0.000988	J	mg/L		99	70 - 130
Barium	0.00100	0.000931	J	mg/L		93	70 - 130
Cadmium	0.00100	0.000933	J	mg/L		93	70 - 130
Chromium	0.00100	0.000986	J	mg/L		99	70 - 130
Lead	0.00100	0.00101		mg/L		101	70 - 130
Selenium	0.00100	0.000987	J	mg/L		99	70 - 130
Silver	0.00100	0.00103		mg/L		103	70 - 130

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 885-23619/1-A ^5

Matrix: Water

Analysis Batch: 23760

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 23619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0025	mg/L		04/03/25 11:19	04/05/25 10:58	5
Barium	ND		0.0050	0.0025	mg/L		04/03/25 11:19	04/05/25 10:58	5
Cadmium	ND		0.0050	0.0025	mg/L		04/03/25 11:19	04/05/25 10:58	5
Chromium	ND		0.0050	0.0025	mg/L		04/03/25 11:19	04/05/25 10:58	5
Lead	ND		0.0050	0.0030	mg/L		04/03/25 11:19	04/05/25 10:58	5
Selenium	ND		0.0050	0.0040	mg/L		04/03/25 11:19	04/05/25 10:58	5
Silver	ND		0.0050	0.0025	mg/L		04/03/25 11:19	04/05/25 10:58	5

Lab Sample ID: LCS 885-23619/3-A ^5

Matrix: Water

Analysis Batch: 23760

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 23619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.0500	0.0487		mg/L		97	80 - 120
Barium	0.0500	0.0489		mg/L		98	80 - 120
Cadmium	0.0500	0.0502		mg/L		100	80 - 120
Chromium	0.0500	0.0488		mg/L		98	80 - 120
Lead	0.0500	0.0504		mg/L		101	80 - 120
Selenium	0.0500	0.0506		mg/L		101	80 - 120

Lab Sample ID: LCS 885-23619/4-A ^5

Matrix: Water

Analysis Batch: 23760

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 23619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.0250	0.0246		mg/L		98	80 - 120

Lab Sample ID: LLCS 885-23619/2-A ^5

Matrix: Water

Analysis Batch: 23760

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 23619

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.00100	ND		mg/L		112	
Barium	0.00100	ND		mg/L		93	
Cadmium	0.00100	ND		mg/L		91	
Chromium	0.00100	ND		mg/L		114	
Lead	0.00100	ND		mg/L		105	
Selenium	0.00100	ND		mg/L		122	
Silver	0.00100	ND		mg/L		109	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MRL 885-23769/9-A

Matrix: Water

Analysis Batch: 23873

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23769

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000150	0.000147	J	mg/L		98	50 - 150

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 885-23770/1-A

Matrix: Water

Analysis Batch: 23873

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		04/07/25 10:21	04/08/25 09:24	1

Lab Sample ID: LCS 885-23770/3-A

Matrix: Water

Analysis Batch: 23873

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00531		mg/L		106	85 - 115

Lab Sample ID: LLCS 885-23770/2-A

Matrix: Water

Analysis Batch: 23873

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23770

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000150	0.000144	J	mg/L		96	50 - 150

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

Lab Sample ID: LCS 860-227323/1

Matrix: Water

Analysis Batch: 227323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	126	132		Degrees F		105	90 - 110

Method: 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 885-23611/1

Matrix: Water

Analysis Batch: 23611

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		50	25	mg/L			04/03/25 10:09	1

Lab Sample ID: LCS 885-23611/2

Matrix: Water

Analysis Batch: 23611

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1020		mg/L		102	80 - 120

Method: Kelada 01 - Cyanide, Total, Acid Dissociable and Thiocyanate

Lab Sample ID: MB 860-227301/24

Matrix: Water

Analysis Batch: 227301

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.0050	0.0020	mg/L			04/04/25 19:47	1

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
 Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: Kelada 01 - Cyanide, Total, Acid Dissociable and Thiocyanate (Continued)

Lab Sample ID: LCS 860-227301/25

Matrix: Water

Analysis Batch: 227301

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.108		mg/L		108	90 - 110

Lab Sample ID: LCSD 860-227301/26

Matrix: Water

Analysis Batch: 227301

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.110		mg/L		110	90 - 110	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 885-23919/1

Matrix: Water

Analysis Batch: 23919

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO ₃	ND		20	20	mg/L			04/08/25 12:33	1
Bicarbonate Alkalinity as CaCO ₃	ND		20	20	mg/L			04/08/25 12:33	1
Carbonate Alkalinity as CaCO ₃	ND		2.0	2.0	mg/L			04/08/25 12:33	1

Lab Sample ID: LCS 885-23919/2

Matrix: Water

Analysis Batch: 23919

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO ₃	84.8	80.0		mg/L		94	90 - 110

Lab Sample ID: LCSD 885-23919/3

Matrix: Water

Analysis Batch: 23919

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Alkalinity as CaCO ₃	84.8	81.0		mg/L		96	90 - 110	1	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: LCS 885-24187/4

Matrix: Water

Analysis Batch: 24187

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	99.2	101		umhos/cm		102	85 - 115

Lab Sample ID: LCSD 885-24187/5

Matrix: Water

Analysis Batch: 24187

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	99.2	101		umhos/cm		102	85 - 115	0	

Eurofins Albuquerque

QC Sample Results

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: MRL 885-24187/3

Matrix: Water

Analysis Batch: 24187

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	9.83	ND		umhos/cm		97	50 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 885-23627/1

Matrix: Water

Analysis Batch: 23627

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			04/03/25 12:56	1

Lab Sample ID: LCSSRM 885-23627/2

Matrix: Water

Analysis Batch: 23627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	100		mg/L		100.0	77.1 - 110.0

Method: SM 2710F - Specific Gravity

Lab Sample ID: MB 885-23842/1

Matrix: Water

Analysis Batch: 23842

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Gravity	0.999				NONE			04/08/25 08:27	1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 860-226763/3

Matrix: Water

Analysis Batch: 226763

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.029	mg/L			04/03/25 14:08	1

Lab Sample ID: LCS 860-226763/4

Matrix: Water

Analysis Batch: 226763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.00	1.07		mg/L		107	90 - 110

Lab Sample ID: LCSD 860-226763/5

Matrix: Water

Analysis Batch: 226763

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.00	1.06		mg/L		106	90 - 110	0	20

Eurofins Albuquerque

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

GC/MS VOA

Analysis Batch: 23806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	8260B	
885-22351-2	Trip Blank	Total/NA	Water	8260B	
MB 885-23806/7	Method Blank	Total/NA	Water	8260B	
LCS 885-23806/5	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 23595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	3510C	
MB 885-23595/1-A	Method Blank	Total/NA	Water	3510C	
LCS 885-23595/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 885-23595/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 23800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	8270C	23595
MB 885-23595/1-A	Method Blank	Total/NA	Water	8270C	23595
LCS 885-23595/2-A	Lab Control Sample	Total/NA	Water	8270C	23595
LCSD 885-23595/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	23595

GC Semi VOA

Prep Batch: 23681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	3510C	

Analysis Batch: 24346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	8081B	23681

HPLC/IC

Analysis Batch: 23459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	300.0	
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	300.0	
MB 885-23459/4	Method Blank	Total/NA	Water	300.0	
MB 885-23459/50	Method Blank	Total/NA	Water	300.0	
LCS 885-23459/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 885-23459/51	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-23459/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 23460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	300.0	
MB 885-23460/4	Method Blank	Total/NA	Water	300.0	
MB 885-23460/50	Method Blank	Total/NA	Water	300.0	
LCS 885-23460/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 885-23460/51	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-23460/3	Lab Control Sample	Total/NA	Water	300.0	

Eurofins Albuquerque

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Metals

Analysis Batch: 23524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Dissolved	Water	200.7 Rev 4.4	
MB 885-23524/17	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 885-23524/18	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
MRL 885-23524/14	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	

Analysis Batch: 23564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Dissolved	Water	200.7 Rev 4.4	
MB 885-23564/18	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 885-23564/19	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
MRL 885-23564/14	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 23619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total Recoverable	Water	3005A	
MB 885-23619/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 885-23619/3-A ^5	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 885-23619/4-A ^5	Lab Control Sample	Total Recoverable	Water	3005A	
LLCS 885-23619/2-A ^5	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 23760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total Recoverable	Water	6020A	23619
MB 885-23619/1-A ^5	Method Blank	Total Recoverable	Water	6020A	23619
LCS 885-23619/3-A ^5	Lab Control Sample	Total Recoverable	Water	6020A	23619
LCS 885-23619/4-A ^5	Lab Control Sample	Total Recoverable	Water	6020A	23619
LLCS 885-23619/2-A ^5	Lab Control Sample	Total Recoverable	Water	6020A	23619
MRL 885-23760/9	Lab Control Sample	Total/NA	Water	6020A	

Prep Batch: 23769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 885-23769/9-A	Lab Control Sample	Total/NA	Water	245.1	

Prep Batch: 23770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	7470A	
MB 885-23770/1-A	Method Blank	Total/NA	Water	7470A	
LCS 885-23770/3-A	Lab Control Sample	Total/NA	Water	7470A	
LLCS 885-23770/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 23873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	7470A	23770
MB 885-23770/1-A	Method Blank	Total/NA	Water	7470A	23770
LCS 885-23770/3-A	Lab Control Sample	Total/NA	Water	7470A	23770
LLCS 885-23770/2-A	Lab Control Sample	Total/NA	Water	7470A	23770
MRL 885-23769/9-A	Lab Control Sample	Total/NA	Water	7470A	23769

Eurofins Albuquerque

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

General Chemistry

Analysis Batch: 23611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	2540C	
MB 885-23611/1	Method Blank	Total/NA	Water	2540C	
LCS 885-23611/2	Lab Control Sample	Total/NA	Water	2540C	

Analysis Batch: 23627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 2540D	
MB 885-23627/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 885-23627/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 23842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 2710F	
MB 885-23842/1	Method Blank	Total/NA	Water	SM 2710F	

Analysis Batch: 23919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 2320B	
MB 885-23919/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 885-23919/2	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 885-23919/3	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 23968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 24187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 2510B	
LCS 885-24187/4	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 885-24187/5	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 885-24187/3	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 226763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	SM 4500 S2 D	
MB 860-226763/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 860-226763/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 860-226763/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 226826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	9040C	

Analysis Batch: 227301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	Kelada 01	
MB 860-227301/24	Method Blank	Total/NA	Water	Kelada 01	
LCS 860-227301/25	Lab Control Sample	Total/NA	Water	Kelada 01	
LCSD 860-227301/26	Lab Control Sample Dup	Total/NA	Water	Kelada 01	

Eurofins Albuquerque

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

General Chemistry

Analysis Batch: 227323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-22351-1	WDW-1,2,3 & 4 Effluent	Total/NA	Water	1010B	
LCS 860-227323/1	Lab Control Sample	Total/NA	Water	1010B	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Lab Chronicle

Client: HF Sinclair Asphalt Navajo Refining LLC
 Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

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

Lab Sample ID: 885-22351-1

Date Collected: 03/28/25 11:38

Matrix: Water

Date Received: 04/01/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		50	23806	CM	EET ALB	04/07/25 20:21
Total/NA	Prep	3510C			23595	JM	EET ALB	04/03/25 06:48
Total/NA	Analysis	8270C		2	23800	MB	EET ALB	04/08/25 02:55
Total/NA	Prep	3510C			23681	JM	EET ALB	04/04/25 09:36
Total/NA	Analysis	8081B		2	24346	MB	EET ALB	04/16/25 12:46
Total/NA	Analysis	300.0		5	23459	RC	EET ALB	04/01/25 20:35
Total/NA	Analysis	300.0		5	23460	RC	EET ALB	04/01/25 20:35
Total/NA	Analysis	300.0		20	23459	RC	EET ALB	04/01/25 21:16
Dissolved	Analysis	200.7 Rev 4.4		100	23524	VP	EET ALB	04/02/25 08:34
Dissolved	Analysis	200.7 Rev 4.4		10	23564	VP	EET ALB	04/02/25 12:57
Total Recoverable	Prep	3005A			23619	JE	EET ALB	04/03/25 11:19
Total Recoverable	Analysis	6020A		5	23760	ES	EET ALB	04/05/25 11:07
Total/NA	Prep	7470A			23770	JR	EET ALB	04/07/25 10:21
Total/NA	Analysis	7470A		1	23873	JR	EET ALB	04/08/25 10:30
Total/NA	Analysis	1010B		1	227323	MK	EET HOU	04/07/25 15:01
Total/NA	Analysis	2540C		1	23611	HR	EET ALB	04/03/25 10:09
Total/NA	Analysis	9040C		1	226826	MR	EET HOU	04/03/25 15:08
Total/NA	Analysis	Kelada 01		1	227301	BW	EET HOU	04/04/25 20:14
Total/NA	Analysis	SM 2320B		1	23919	KB	EET ALB	04/08/25 12:33
Total/NA	Analysis	SM 2510B		5	24187	MA	EET ALB	04/12/25 12:25
Total/NA	Analysis	SM 2540D		1	23627	KS	EET ALB	04/03/25 12:56
Total/NA	Analysis	SM 2710F		1	23842	RC	EET ALB	04/08/25 08:27
Total/NA	Analysis	SM 4500 H+ B		1	23968	KB	EET ALB	04/08/25 12:07
Total/NA	Analysis	SM 4500 S2 D		10	226763	SCI	EET HOU	04/03/25 14:08

Client Sample ID: Trip Blank

Lab Sample ID: 885-22351-2

Date Collected: 03/28/25 00:00

Matrix: Water

Date Received: 04/01/25 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	23806	CM	EET ALB	04/07/25 19:57

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Eurofins Albuquerque

Accreditation/Certification Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-27-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
200.7 Rev 4.4		Water	Calcium
200.7 Rev 4.4		Water	Magnesium
200.7 Rev 4.4		Water	Potassium
200.7 Rev 4.4		Water	Sodium
2540C		Water	Total Dissolved Solids
300.0		Water	Bromide
300.0		Water	Chloride
300.0		Water	Fluoride
300.0		Water	Nitrate Nitrite as N
300.0		Water	Orthophosphate as P
300.0		Water	Sulfate
6020A	3005A	Water	Arsenic
6020A	3005A	Water	Barium
6020A	3005A	Water	Cadmium
6020A	3005A	Water	Chromium
6020A	3005A	Water	Lead
6020A	3005A	Water	Selenium
6020A	3005A	Water	Silver
7470A	7470A	Water	Mercury
8081B	3510C	Water	Chlordane
8260B		Water	1,1-Dichloroethene
8260B		Water	1,2-Dichloroethane (EDC)
8260B		Water	1,4-Dichlorobenzene
8260B		Water	2-Butanone
8260B		Water	Benzene
8260B		Water	Carbon tetrachloride
8260B		Water	Chlorobenzene
8260B		Water	Chloroform
8260B		Water	Tetrachloroethene (PCE)
8260B		Water	Trichloroethene (TCE)
8260B		Water	Vinyl chloride
8270C	3510C	Water	2,4,5-Trichlorophenol
8270C	3510C	Water	2,4,6-Trichlorophenol
8270C	3510C	Water	2,4-Dinitrotoluene
8270C	3510C	Water	2-Methylphenol
8270C	3510C	Water	3 & 4 Methylphenol
8270C	3510C	Water	Cresols, Total
8270C	3510C	Water	Hexachlorobenzene
8270C	3510C	Water	Hexachlorobutadiene
8270C	3510C	Water	Hexachloroethane
8270C	3510C	Water	Nitrobenzene
8270C	3510C	Water	Pentachlorophenol
8270C	3510C	Water	Pyridine
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

Eurofins Albuquerque

Accreditation/Certification Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Project/Site: Quarterly Inj Well WDW-1, 2, 3, & 4

Job ID: 885-22351-1

Laboratory: Eurofins Albuquerque (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Total Alkalinity as CaCO ₃
SM 2510B		Water	Specific Conductance
SM 2540D		Water	Total Suspended Solids
SM 2710F		Water	Specific Gravity
SM 4500 H+ B		Water	pH
Oregon	NELAP	NM100001	02-26-26
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8270C	3510C	Water	Cresols, Total
SM 2320B		Water	Bicarbonate Alkalinity as CaCO ₃
SM 2320B		Water	Carbonate Alkalinity as CaCO ₃
SM 2710F		Water	Specific Gravity

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-25
Florida	NELAP	E871002	06-30-25
Louisiana (All)	NELAP	03054	12-20-25
Oklahoma	NELAP	1306	08-31-25
Texas	NELAP	T104704215	07-01-26
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Eurofins Albuquerque

Eurotins Albuquerque

4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

Chain of Custody Record



Environment Testing

[illegible]

4901 Hawkins NE
Albuquerque, NM 87109
Phone: 505-345-3975 Fax: 505-345-4107

Chain of Custody Record



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: HF Sinclair Asphalt Navajo Refining LLC

Job Number: 885-22351-1

Login Number: 22351

List Source: Eurofins Albuquerque

List Number: 1

Creator: Proctor, Nancy

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	No sample date and/or time on COC, logged in per container labels.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
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.	False	Did not receive all required containers.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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").	True	

Login Sample Receipt Checklist

Client: HF Sinclair Asphalt Navajo Refining LLC

Job Number: 885-22351-1

Login Number: 22351

List Number: 2

Creator: Torrez, Lisandra

List Source: Eurofins Houston

List Creation: 04/02/25 11:35 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
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	
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.	True	
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").	True	

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 462222

COMMENTS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 462222
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Quarterly Report FY25 Q2	7/10/2025

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 462222

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 462222
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Conditions of Approval are: 1. Stimulate WDWs that exhibit elevated skin, operating pressure, tagged fill, etc. prior to FOT. 2. Evaluate, assess efficiencies of the WDW Filtration Systems to improve injection flow rate capabilities at all WDWs. 3. Ensure Chain-of-Custody Sampling Forms are properly completed concurrently with sample labelling; all samples, i.e., Trip Blanks, and the required number of sample containers are included with samples to the lab.	7/10/2025