May 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 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 2024 (FFY 2024) 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, 2024 through March 31, 2024. 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 Q2 on March 17, 2024. 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 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.). 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 1,871,737 barrels of fluid into the four wells during FFY 2024 Q2. The total Q2 volume per well was:

- 331,484 barrels into WDW-1: 30-015-27592
- 241,661 barrels into WDW-2: 30-015-20894
- 413,921 barrels into WDW-3: 30-015-26575
- 884,671 barrels into WDW-4: 30-015-44677

In terms of Discharge Permit UICI-8 compliance, the hourly maximum injection pressures (occurring during FFY 2024 Q2) were within limits given in Condition 3.B as follows:

- WDW-1: max = 1,401 psi (limit = 1,585 psi)
- WDW-2: max = 1,400 psi (limit = 1,514 psi)
- WDW-3: max = 1,401 psi (limit = 1,530 psi)
- WDW-4: max = 986 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. The final Hydrogeologic Investigation Report for activities at these three wells was submitted to NM OCD on April 16, 2024 (FFY 2024 Q3). 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 (January 2024), Figures 4 to 6 (February 2024), and Figures 7 to 9 (March 2024). 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 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 2024 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 2024 Q2:

1. In regard to the Groundwater Monitoring Wells per UICI-8 Discharge Permit Condition 2.B:
    a. 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. HFSNR performed a cleanout and 2-stage acid stimulation of the injection interval in WDW-1 (API Number: 30-015-27592). The Deep Well Stimulation Final Report (Form C-103R) for WDW-1 was approved by OCD under Action ID# 297764 on January 3, 2024.

Planned UIC Activities for FFY 2024 Q3:

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 stimulations are being considered for FFY2024 Q3 or Q4. Whether or not stimulations are warranted will be determined based on the results of 2024 reservoir testing.

3. WDW-1 MIT testing is scheduled during the week of May 13, 2024

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,

Case Hinkins
Environmental Manager
HF Sinclair Navajo Refining LLC

TABLE 1. FFY 2024 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	3/17/2024 Concentration
Alkalinity, bicarbonate	mg/L	--	380.0
Alkalinity, carbonate	mg/L	--	<2.0
Alkalinity, total	mg/L	--	380.0
Conductivity	uS/cm	--	6100
Cyanide (Reactivity)	mg/L	--	<0.25
Flashpoint (Ignitability)	deg F	--	>200
Oxidation Reduction Potential	mV	--	not analyzed
pH (Corrosivity)	su	--	7.4
Specific Gravity	su	--	1.0003
Sulfide (Reactivity)	mg/L	--	<150
Total Dissolved Solids	mg/L	--	4200
Total Suspended Solids	mg/L	--	85
Bromide	mg/L	--	<0.5
Chloride	mg/L	--	600
Fluoride	mg/L	--	55
Nitrate	mg/L	--	<0.2
Nitrate + Nitrite	mg/L	--	--
Nitrite	mg/L	--	<0.12
Phosphorus, total	mg/L	--	<2.5
Sulfate	mg/L	--	2300
Calcium	mg/L	--	400
Magnesium	mg/L	--	130
Potassium	mg/L	--	170
Sodium	mg/L	--	660
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	ND (a)
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	ND (a)
Hexachlorobutadiene	mg/L	TCLP=0.5	ND (a)
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)
(a) = parameter not detected, however lab error (overdiluted 8270 parameters) caused RL > TCLP

TABLE 2. FFY 2024 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											51,242,723
Jan-24	1,137	1,297	950	88	653	0.4	365	594	190	93,823	51,336,546
Feb-24	1,222	1,380	1,082	114	134	100	583	735	396	113,225	51,449,771
Mar-24	1,235	1,401	948	117	137	96	608	1,097	223	124,436	51,574,207
30-015-20894 WDW-2											31,730,436
Jan-24	1,315	1,350	1,096	162	652	0.2	485	910	245	171,874	31,902,310
Feb-24	1,294	1,353	1,058	40	648	3.2	916	1,141	643	40,053	31,942,363
Mar-24	1,263	1,400	1,099	28	78	6.5	993	1,205	639	29,734	31,972,097
30-015-26575 WDW-3											24,359,805
Jan-24	1,300	1,367	1,107	153	653	10	397	884	162	162,906	24,522,710
Feb-24	1,271	1,347	1,092	125	142	87	852	1,003	613	124,710	24,647,420
Mar-24	1,245	1,401	1,024	119	144	78	861	982	707	126,305	24,773,724
30-015-44677 WDW-4											13,488,675
Jan-24	369	986	228	304	370	76	118	315	43	323,109	13,811,784
Feb-24	326	381	303	287	363	258	314	461	101	285,352	14,097,135
Mar-24	329	441	223	260	379	51	352	441	217	276,210	14,373,345

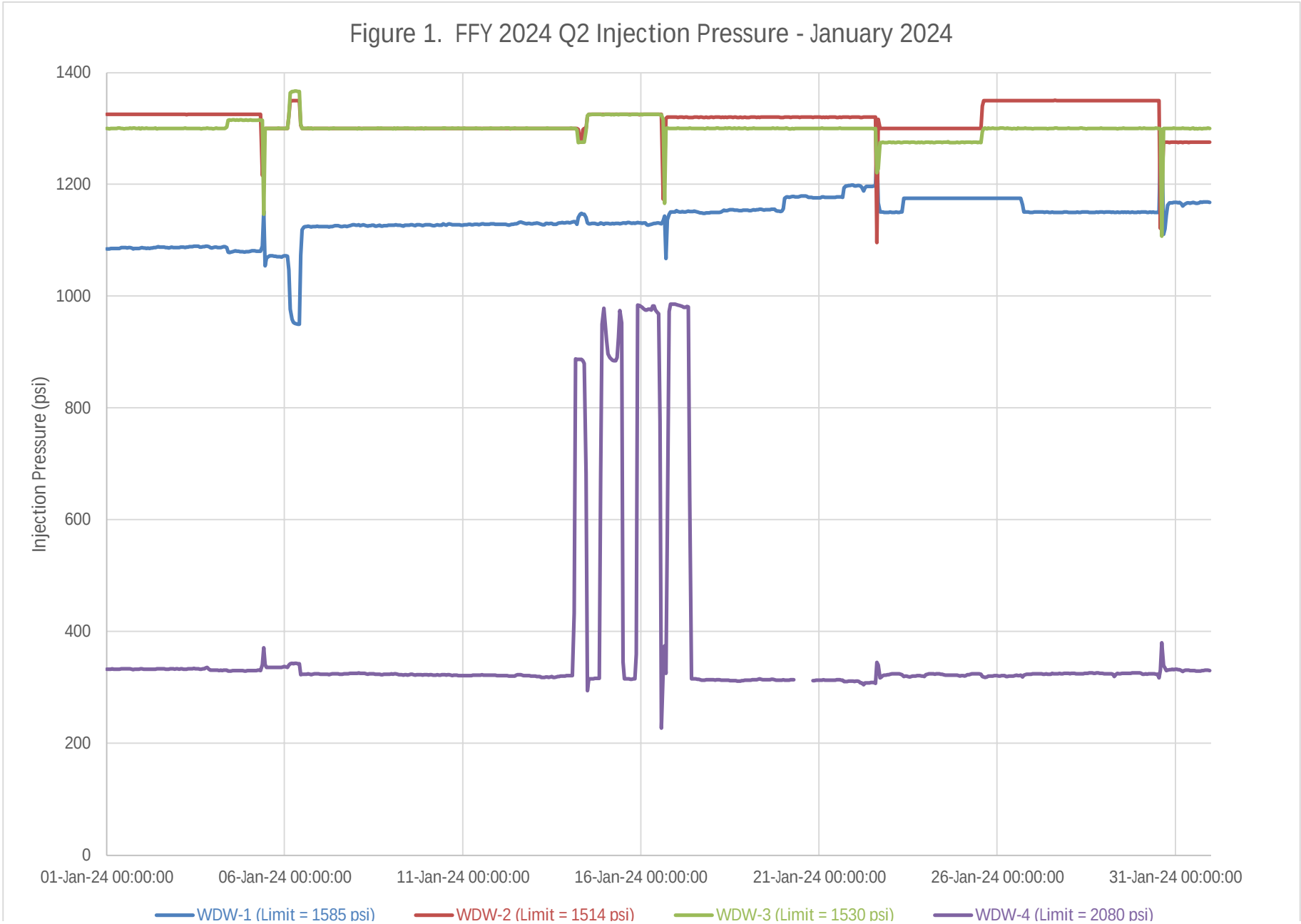


Figure 1. FFY 2024 Q2 Injection Pressure - January 2024
Injection Pressure (psi)
1400
1200
1000
800
600
400
200
0
01-Jan-24 00:00:00
06-Jan-24 00:00:00
11-Jan-24 00:00:00
16-Jan-24 00:00:00
21-Jan-24 00:00:00
26-Jan-24 00:00:00
31-Jan-24 00:00:00
WDW-1 (Limit = 1585 psi)
WDW-2 (Limit = 1514 psi)
WDW-3 (Limit = 1530 psi)
WDW-4 (Limit = 2080 psi)

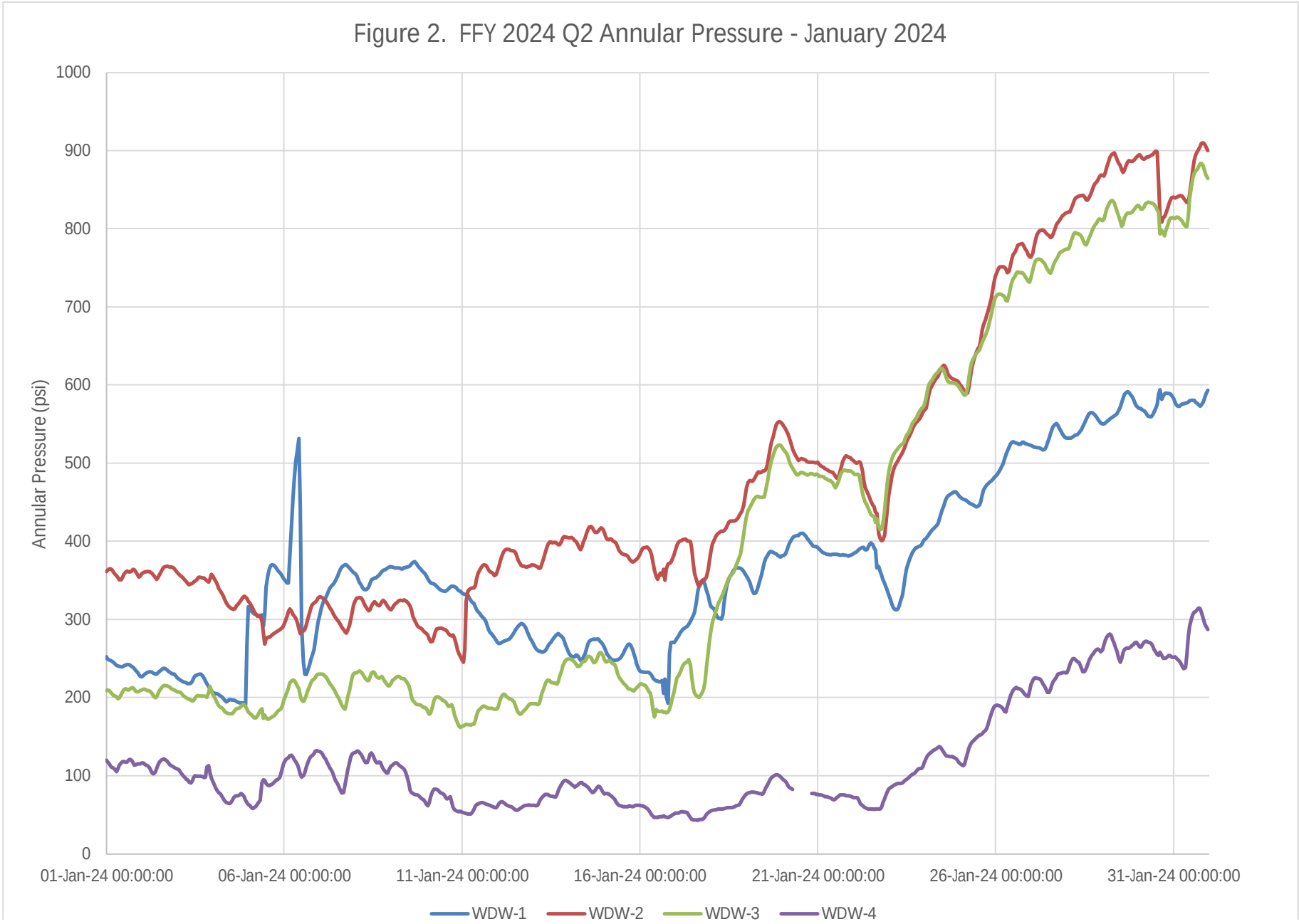


Figure 2. FFY 2024 Q2 Annular Pressure - January 2024
Annular Pressure (psi)
1000
900
800
700
600
500
400
300
200
100
0
01-Jan-24 00:00:00
06-Jan-24 00:00:00
11-Jan-24 00:00:00
16-Jan-24 00:00:00
21-Jan-24 00:00:00
26-Jan-24 00:00:00
31-Jan-24 00:00:00
WDW-1
WDW-2
WDW-3
WDW-4

Figure 3. FFY 2024 Q2 Injection Flowrate - January 2024

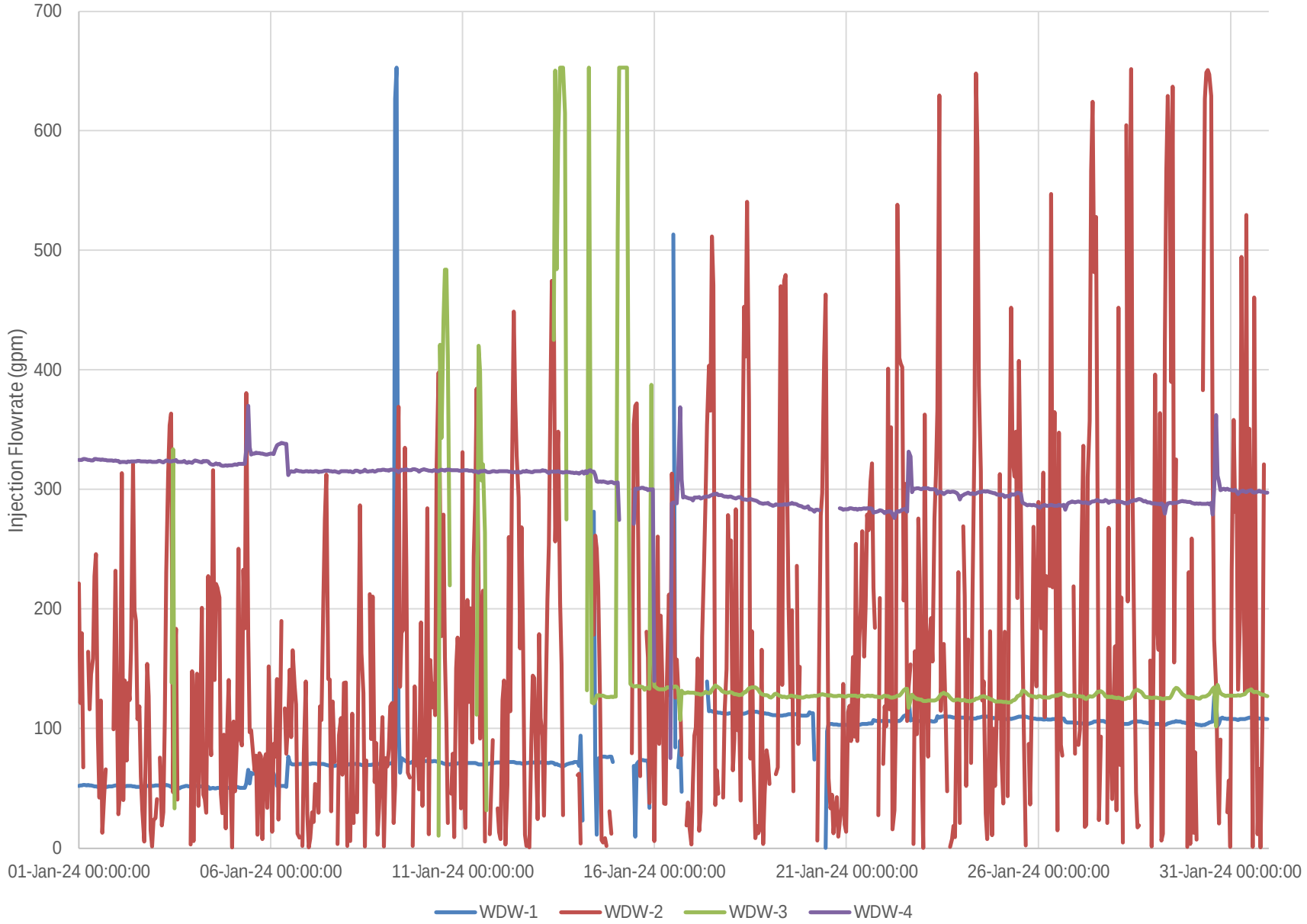


Figure 4. FFY 2024 Q2 Injection Pressure - February 2024

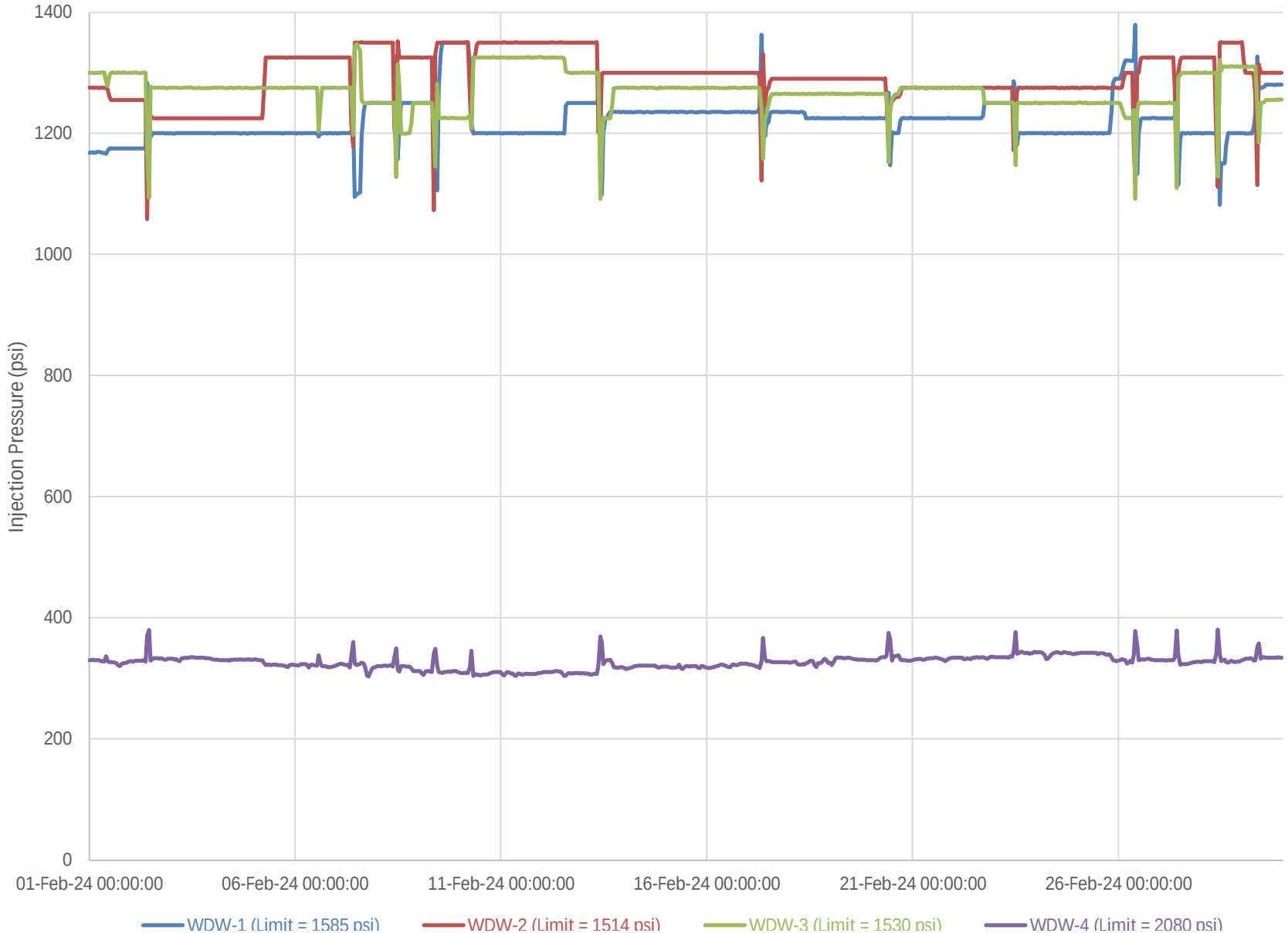


Figure 5. FFY 2024 Q2 Annular Pressure - February 2024

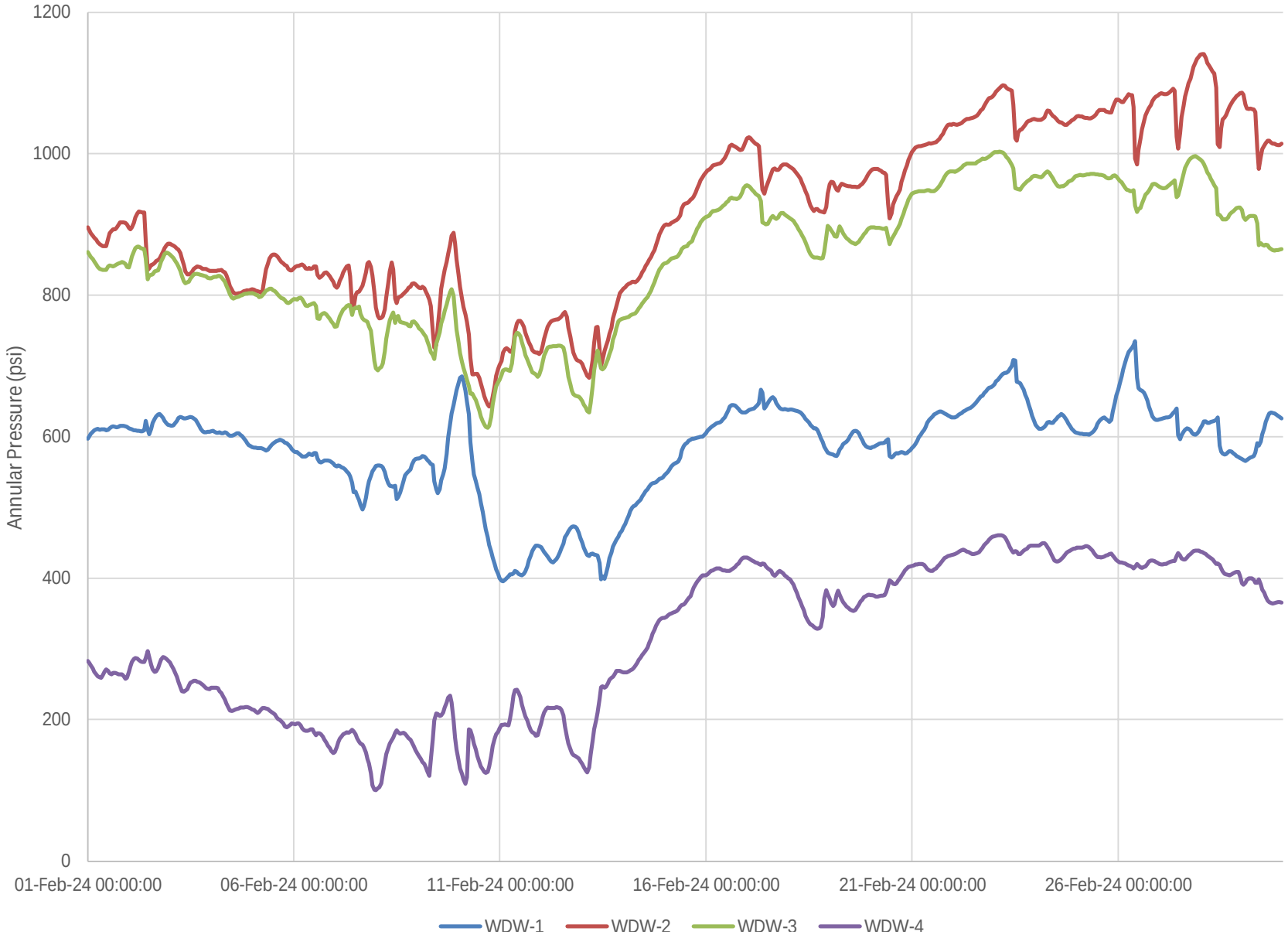


Figure 6. FFY 2024 Q2 Injection Flowrate - February 2024

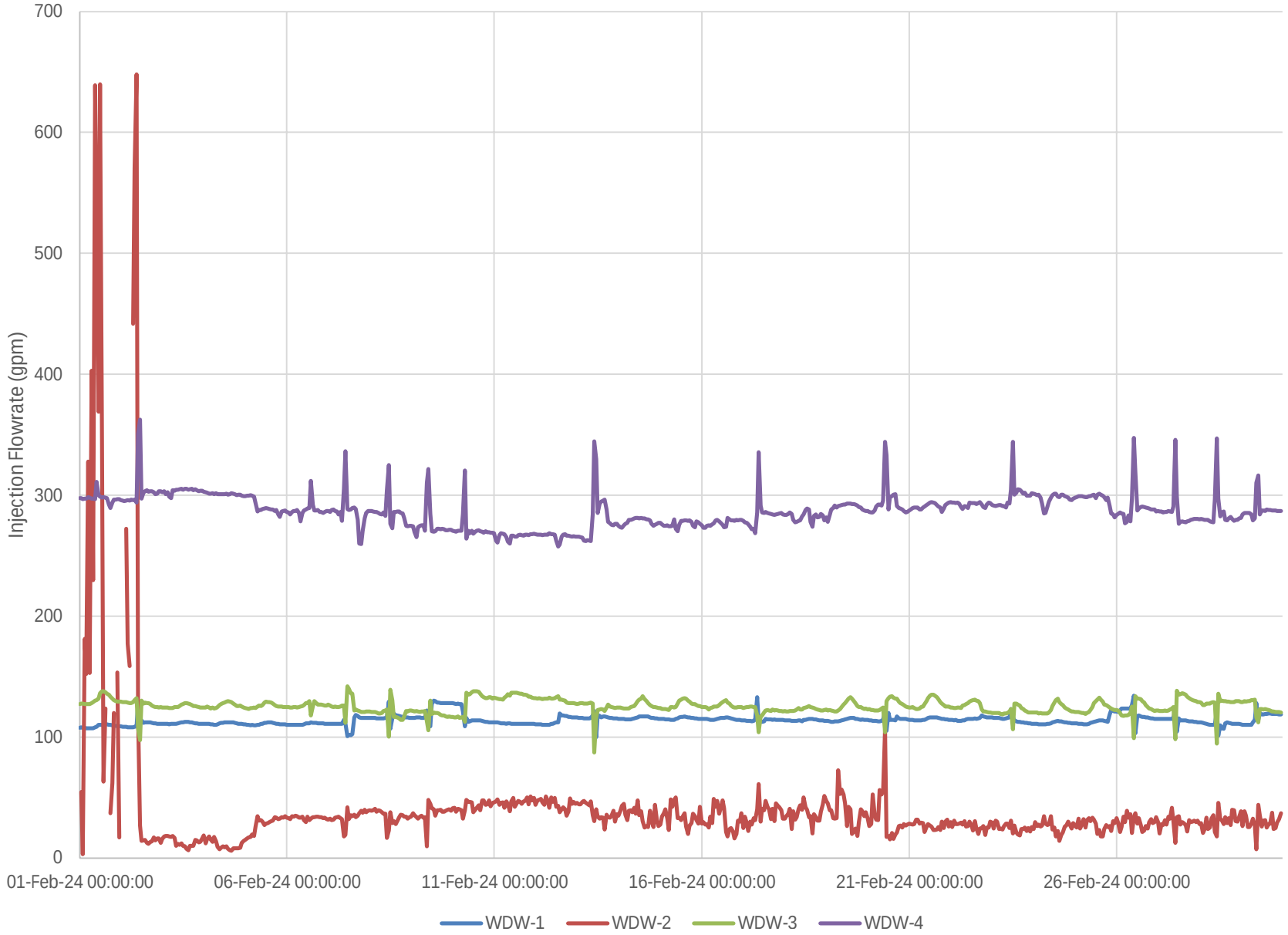


Figure 7. FFY 2024 Q2 Injection Pressure - March 2024

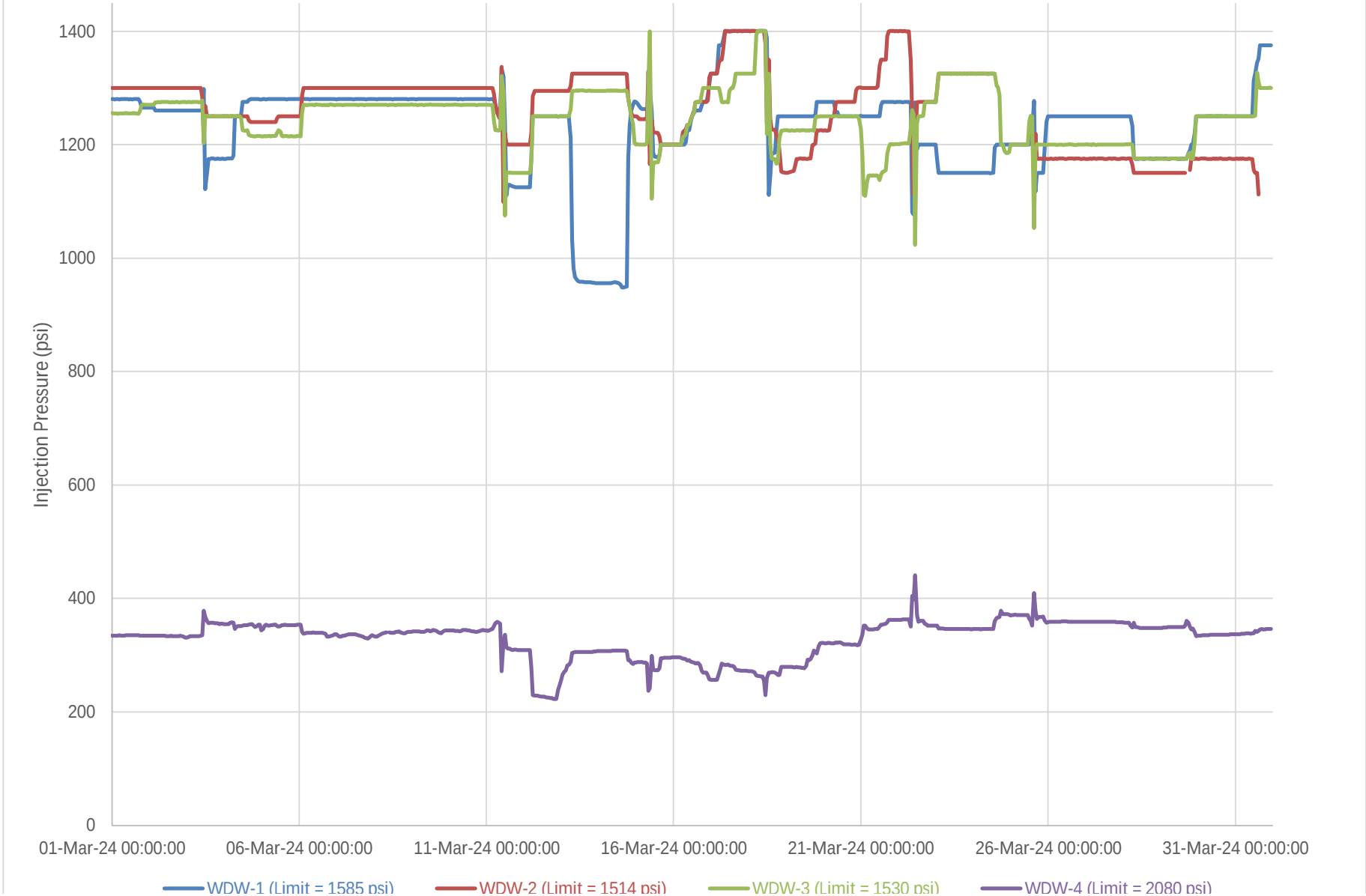


Figure 8. FFY 2024 Q2 Annular Pressure - March 2024

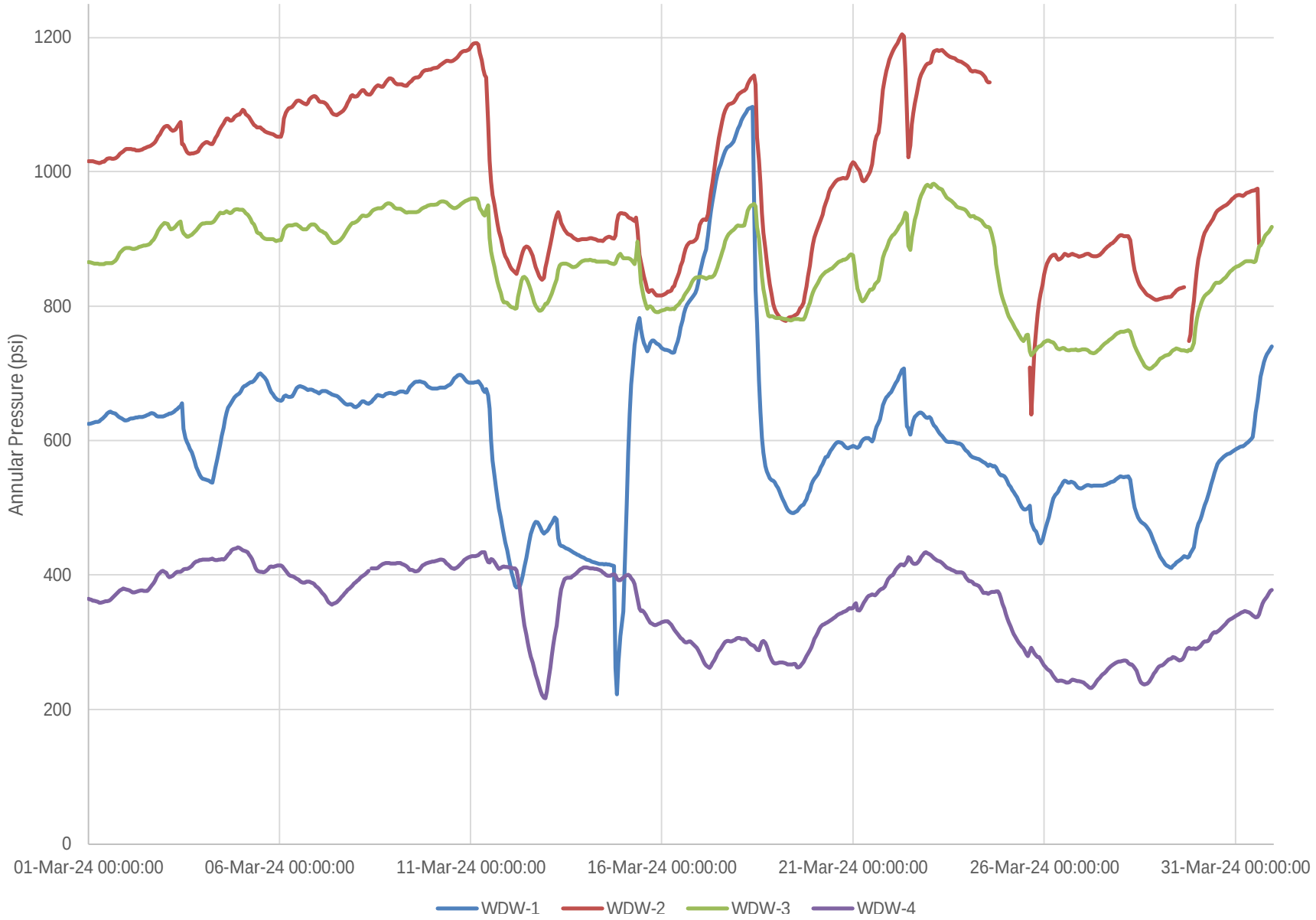
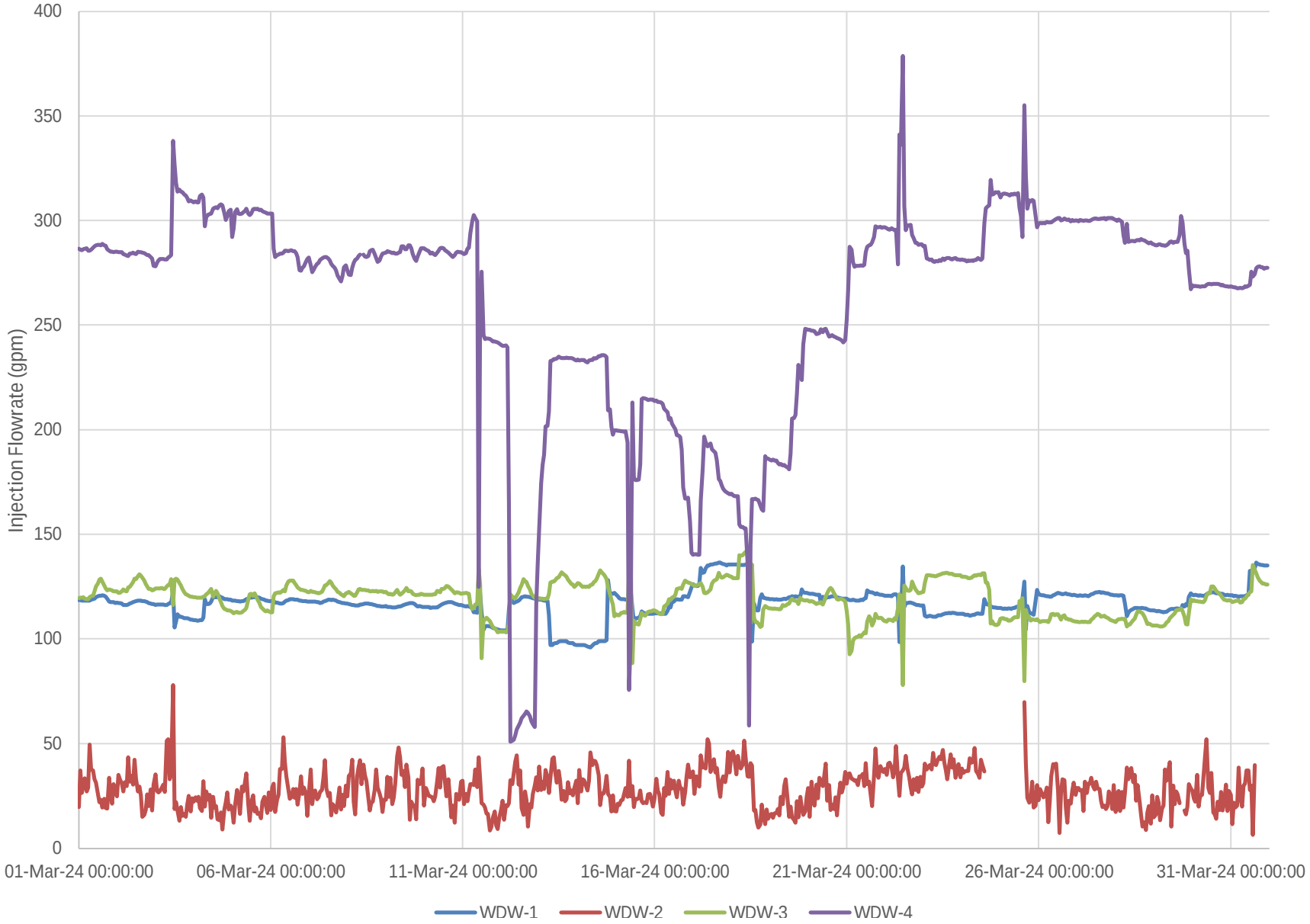


Figure 9. FFY 2024 Q2 Injection Flowrate - March 2024



ATTACHMENT A

Analytical Lab Report(s)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/13/2024 10:56:28 AM

JOB DESCRIPTION

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

JOB NUMBER

885-1471-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

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

Generated
5/13/2024 10:56:28 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

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

Laboratory Job ID: 885-1471-1

Table of Contents

Definitions/Glossary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

Qualifiers

GC/MS 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.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
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.

GC Semi VOA

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

Metals

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
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.

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)

Definitions/Glossary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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 Job ID: 885-1471-1
Project: Quarterly WDW-1, 2, 3, & 4 Inj Well

Job ID: 885-1471-1 **Eurofins Albuquerque**

Job Narrative
885-1471-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 3/20/2024 8:00 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 -2.1°C.

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

Specific Gravity
Specific Gravity is reported as 1.0 in this report. The raw data result for this sample result is 1.0003.

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 laboratory control sample (LCS) for preparation batch 885-2050 and analytical batch 885-3953 recovered outside control limits for the following analytes:1,2-Dichlorobenzene, 1,4-Dichlorobenzene and Hexachloroethane. There is insufficient sample to re-extract and the affected analytes will be reported as an estimated value.

Method 8270C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 885-2050 and analytical batch 885-4004 recovered outside control limits for the following analytes: Acenaphthene, Phenol and Pyrene. There is insufficient sample to re-extract and the affected analytes will be reported as an estimated value.

Method 8270C: The following samples were diluted due to the nature of the sample matrix: WDW-1, 2, 3 & 4 Effluent (885-1471-1). 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.

Pesticides
Method 8081B: The following samples were diluted due to the nature of the sample matrix: WDW-1, 2, 3 & 4 Effluent (885-1471-1). 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.

HPLC/IC
Method 300_OF_48H_PREC: The following samples were received outside of 48HR holding time: WDW-1, 2, 3 & 4 Effluent (885-1471-1).

Method 300_OF_48H_PREC: The following samples were diluted due to the nature of the sample matrix: WDW-1, 2, 3 & 4 Effluent

Case Narrative

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project: Quarterly WDW-1, 2, 3, & 4 Inj Well

Job ID: 885-1471-1 (Continued) Eurofins Albuquerque

(885-1471-1). 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
Method 7470A: The following sample(s) was analyzed outside of analytical holding time due to analyst error. WDW-1, 2, 3 & 4 Effluent (885-1471-1).

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

General Chemistry
Method SM4500_H+: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: WDW-1, 2, 3 & 4 Effluent (885-1471-1).

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

Client Sample Results

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

Job ID: 885-1471-1

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

Date Collected: 03/17/24 11:02
Date Received: 03/20/24 08:00

Lab Sample ID: 885-1471-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		200	40	ug/L			03/27/24 23:28	200
1,2-Dichloroethane (EDC)	ND		200	60	ug/L			03/27/24 23:28	200
1,4-Dichlorobenzene	ND		200	21	ug/L			03/27/24 23:28	200
2-Butanone	ND		2000	410	ug/L			03/27/24 23:28	200
Benzene	ND		200	45	ug/L			03/27/24 23:28	200
Carbon tetrachloride	ND		200	35	ug/L			03/27/24 23:28	200
Chlorobenzene	ND		200	92	ug/L			03/27/24 23:28	200
Chloroform	ND		200	50	ug/L			03/27/24 23:28	200
Tetrachloroethene (PCE)	ND		200	36	ug/L			03/27/24 23:28	200
Trichloroethene (TCE)	ND		200	41	ug/L			03/27/24 23:28	200
Vinyl chloride	ND		200	64	ug/L			03/27/24 23:28	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*03/27/24 23:28*	*200*
Toluene-d8 (Surr)	*96*		*70 - 130*		*03/27/24 23:28*	*200*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*		*03/27/24 23:28*	*200*
Dibromofluoromethane (Surr)	*120*		*70 - 130*		*03/27/24 23:28*	*200*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND	D	1000	510	ug/L		03/21/24 06:59	04/27/24 04:49	10
2,4,6-Trichlorophenol	ND	D	1000	430	ug/L		03/21/24 06:59	04/27/24 04:49	10
2,4-Dinitrotoluene	ND	D	500	500	ug/L		03/21/24 06:59	04/27/24 04:49	10
2-Methylphenol	ND	D	1000	470	ug/L		03/21/24 06:59	04/27/24 04:49	10
3 & 4 Methylphenol	ND	D	1000	490	ug/L		03/21/24 06:59	04/27/24 04:49	10
Cresols, Total	ND	D	1000	490	ug/L		03/21/24 06:59	04/27/24 04:49	10
Hexachlorobenzene	ND	D	2000	460	ug/L		03/21/24 06:59	04/27/24 04:49	10
Hexachlorobutadiene	ND	D	2000	1100	ug/L		03/21/24 06:59	04/27/24 04:49	10
Hexachloroethane	ND	D	2000	1100	ug/L		03/21/24 06:59	04/27/24 04:49	10
Nitrobenzene	ND	D	500	360	ug/L		03/21/24 06:59	04/27/24 04:49	10
Pentachlorophenol	ND	D	2000	1500	ug/L		03/21/24 06:59	04/27/24 04:49	10
Pyridine	ND	D	2000	260	ug/L		03/21/24 06:59	04/27/24 04:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*0*	*S1- D*	*15 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*
2-Fluorophenol (Surr)	*0*	*S1- D*	*15 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*
2,4,6-Tribromophenol (Surr)	*0*	*S1- D*	*15 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*
Nitrobenzene-d5 (Surr)	*0*	*S1- D*	*29 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*
2-Fluorobiphenyl (Surr)	*0*	*S1- D*	*20 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*
p-Terphenyl-d14 (Surr)	*0*	*S1- D*	*41 - 130*	*03/21/24 06:59*	*04/27/24 04:49*	*10*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane	ND	D	10	5.0	ug/L		03/22/24 14:36	03/29/24 08:58	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*0*	*S1- D*	*53 - 130*	*03/22/24 14:36*	*03/29/24 08:58*	*10*
Tetrachloro-m-xylene	*0*	*S1- D*	*18 - 130*	*03/22/24 14:36*	*03/29/24 08:58*	*10*

Client Sample Results

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

Job ID: 885-1471-1

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

Date Collected: 03/17/24 11:02
Date Received: 03/20/24 08:00

Lab Sample ID: 885-1471-1

Matrix: Water

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			03/22/24 19:07	10
Nitrate as N	**0.42**	**J H H3**	1.0	0.20	mg/L			03/23/24 04:10	10
Chloride	**600**		50	25	mg/L			03/22/24 19:19	100
Nitrite as N	ND	H H3	1.0	0.12	mg/L			03/23/24 04:10	10
Sulfate	**2300**		50	25	mg/L			03/22/24 19:19	100
Fluoride	**55**		10	4.6	mg/L			03/22/24 19:19	100
Orthophosphate as P	ND	H H3	5.0	2.5	mg/L			03/22/24 19:07	10

Method: SW846 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**400**		10	0.89	mg/L			03/26/24 17:55	10
Magnesium	**130**		10	0.98	mg/L			03/26/24 17:55	10
Potassium	**170**		10	1.3	mg/L			03/26/24 17:55	10
Sodium	**660**		10	3.0	mg/L			03/26/24 17:55	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.019**		0.010	0.0050	mg/L		03/26/24 15:44	04/02/24 14:52	10
Barium	**0.044**		0.010	0.0050	mg/L		03/26/24 15:44	04/02/24 14:52	10
Cadmium	ND		0.010	0.0050	mg/L		03/26/24 15:44	04/02/24 14:52	10
Chromium	**0.0090**	**J**	0.010	0.0050	mg/L		03/26/24 15:44	04/04/24 09:45	10
Lead	ND		0.010	0.0060	mg/L		03/26/24 15:44	04/02/24 14:52	10
Selenium	**0.052**		0.010	0.0080	mg/L		03/26/24 15:44	04/04/24 09:45	10
Silver	ND		0.010	0.0050	mg/L		03/26/24 15:44	04/02/24 14:52	10

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	H *- ^+	0.00020	0.00012	mg/L		04/24/24 12:04	04/25/24 11:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010B)	**>200**		60	60	Degrees F			04/08/24 14:24	1
Total Dissolved Solids (SM 2540C)	**4200**		250	130	mg/L			03/21/24 10:05	1
Cyanide, Reactive (SW846 9014)	ND		0.25	0.25	mg/L		03/27/24 15:24	03/28/24 17:25	1
Sulfide, Reactive (SW846 9034)	ND		150	150	mg/L		03/27/24 15:26	03/28/24 11:00	1
Total Alkalinity as CaCO3 (SM 2320B)	**380**		20	20	mg/L			03/21/24 20:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**380**		20	20	mg/L			03/21/24 20:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	ND		2.0	2.0	mg/L			03/21/24 20:57	1
Specific Conductance (SM 2510B)	**6100**		10	10	umhos/cm			03/21/24 20:57	1
Total Suspended Solids (SM 2540D)	**85**		20	20	mg/L			03/21/24 16:53	1
Specific Gravity (SM 2710F)	**1.0**				NONE			03/22/24 14:20	1
pH (SM 4500 H+ B)	**7.4**	**HF**	0.1	0.1	SU			03/21/24 20:57	1

Client Sample Results

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

Job ID: 885-1471-1

Client Sample ID: Trip Blank

Date Collected: 03/17/24 00:00
Date Received: 03/20/24 08:00

Lab Sample ID: 885-1471-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/27/24 23:55	1
1,2-Dichloroethane (EDC)	ND		1.0	0.30	ug/L			03/27/24 23:55	1
1,4-Dichlorobenzene	ND		1.0	0.10	ug/L			03/27/24 23:55	1
2-Butanone	ND		10	2.0	ug/L			03/27/24 23:55	1
Benzene	ND		1.0	0.23	ug/L			03/27/24 23:55	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			03/27/24 23:55	1
Chlorobenzene	ND		1.0	0.46	ug/L			03/27/24 23:55	1
Chloroform	**0.36**	**J**	1.0	0.25	ug/L			03/27/24 23:55	1
Tetrachloroethene (PCE)	ND		1.0	0.18	ug/L			03/27/24 23:55	1
Trichloroethene (TCE)	ND		1.0	0.20	ug/L			03/27/24 23:55	1
Vinyl chloride	ND		1.0	0.32	ug/L			03/27/24 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*03/27/24 23:55*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/27/24 23:55*	*1*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*		*03/27/24 23:55*	*1*
Dibromofluoromethane (Surr)	*123*		*70 - 130*		*03/27/24 23:55*	*1*

Action Limit Summary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

Client Sample ID: WDW-1, 2, 3 & 4 Effluent Lab Sample ID: 885-1471-1

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
1,1-Dichloroethene	ND		ug/L	700.0	200	8260B	Total/NA
1,2-Dichloroethane (EDC)	ND		ug/L	500.0	200	8260B	Total/NA
1,4-Dichlorobenzene	ND		ug/L	7500.0	200	8260B	Total/NA
2-Butanone	ND		ug/L	200000	2000	8260B	Total/NA
Benzene	ND		ug/L	500.0	200	8260B	Total/NA
Carbon tetrachloride	ND		ug/L	500.0	200	8260B	Total/NA
Chlorobenzene	ND		ug/L	100000	200	8260B	Total/NA
Chloroform	ND		ug/L	6000	200	8260B	Total/NA
Tetrachloroethene (PCE)	ND		ug/L	700.0	200	8260B	Total/NA
Trichloroethene (TCE)	ND		ug/L	500.0	200	8260B	Total/NA
Vinyl chloride	ND		ug/L	200.0	200	8260B	Total/NA
2,4,5-Trichlorophenol	ND	D	ug/L	400000	1000	8270C	Total/NA
2,4,6-Trichlorophenol	ND	D	ug/L	2000	1000	8270C	Total/NA
2,4-Dinitrotoluene	ND	D	ug/L	130.00	500	8270C	Total/NA
2-Methylphenol	ND	D	ug/L	200000	1000	8270C	Total/NA
Hexachlorobenzene	ND	D	ug/L	130.00	2000	8270C	Total/NA
Hexachlorobutadiene	ND	D	ug/L	500.0	2000	8270C	Total/NA
Hexachloroethane	ND	D	ug/L	3000	2000	8270C	Total/NA
Nitrobenzene	ND	D	ug/L	2000	500	8270C	Total/NA
Pentachlorophenol	ND	D	ug/L	100000	2000	8270C	Total/NA
Pyridine	ND	D	ug/L	5000	2000	8270C	Total/NA
Arsenic	0.019		mg/L	5	0.010	6020A	Total Recoverable
Barium	0.044		mg/L	100	0.010	6020A	Total Recoverable
Cadmium	ND		mg/L	1	0.010	6020A	Total Recoverable
Lead	ND		mg/L	5	0.010	6020A	Total Recoverable
Silver	ND		mg/L	5	0.010	6020A	Total Recoverable
Mercury	ND	H *- ^+	mg/L	0.2	0.00020	7470A	Total/NA

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: MB 885-2414/25
Matrix: Water
Analysis Batch: 2414

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			03/27/24 13:50	1
1,2-Dichloroethane (EDC)	ND		1.0	0.30	ug/L			03/27/24 13:50	1
1,4-Dichlorobenzene	ND		1.0	0.10	ug/L			03/27/24 13:50	1
2-Butanone	ND		10	2.0	ug/L			03/27/24 13:50	1
Benzene	ND		1.0	0.23	ug/L			03/27/24 13:50	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			03/27/24 13:50	1
Chlorobenzene	ND		1.0	0.46	ug/L			03/27/24 13:50	1
Chloroform	ND		1.0	0.25	ug/L			03/27/24 13:50	1
Tetrachloroethene (PCE)	ND		1.0	0.18	ug/L			03/27/24 13:50	1
Trichloroethene (TCE)	ND		1.0	0.20	ug/L			03/27/24 13:50	1
Vinyl chloride	ND		1.0	0.32	ug/L			03/27/24 13:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*03/27/24 13:50*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*03/27/24 13:50*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*03/27/24 13:50*	*1*
Dibromofluoromethane (Surr)	*116*		*70 - 130*		*03/27/24 13:50*	*1*

Lab Sample ID: LCS 885-2414/24
Matrix: Water
Analysis Batch: 2414

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	20.1	18.7		ug/L		93	70 - 130
Benzene	20.1	21.0		ug/L		105	70 - 130
Chlorobenzene	20.1	18.8		ug/L		94	70 - 130
Trichloroethene (TCE)	20.2	19.2		ug/L		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
Dibromofluoromethane (Surr)	*111*		*70 - 130*

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

Lab Sample ID: MB 885-2050/1-A
Matrix: Water
Analysis Batch: 3953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2050

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		10	5.1	ug/L		03/21/24 06:59	04/25/24 15:41	1
2,4,6-Trichlorophenol	ND		10	4.3	ug/L		03/21/24 06:59	04/25/24 15:41	1
2,4-Dinitrotoluene	ND		5.0	5.0	ug/L		03/21/24 06:59	04/25/24 15:41	1
2-Methylphenol	ND		10	4.7	ug/L		03/21/24 06:59	04/25/24 15:41	1
3 & 4 Methylphenol	ND		10	4.9	ug/L		03/21/24 06:59	04/25/24 15:41	1
Cresols, Total	ND		10	4.9	ug/L		03/21/24 06:59	04/25/24 15:41	1
Hexachlorobenzene	ND		20	4.6	ug/L		03/21/24 06:59	04/25/24 15:41	1

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: MB 885-2050/1-A
Matrix: Water
Analysis Batch: 3953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2050

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		20	11	ug/L		03/21/24 06:59	04/25/24 15:41	1
Hexachloroethane	ND		20	11	ug/L		03/21/24 06:59	04/25/24 15:41	1
Nitrobenzene	ND		5.0	3.6	ug/L		03/21/24 06:59	04/25/24 15:41	1
Pentachlorophenol	ND		20	15	ug/L		03/21/24 06:59	04/25/24 15:41	1
Pyridine	ND		20	2.6	ug/L		03/21/24 06:59	04/25/24 15:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*41*		*15 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*
2-Fluorophenol (Surr)	*56*		*15 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*
2,4,6-Tribromophenol (Surr)	*87*		*15 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*
Nitrobenzene-d5 (Surr)	*66*		*29 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*
2-Fluorobiphenyl (Surr)	*54*		*20 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*
p-Terphenyl-d14 (Surr)	*102*		*41 - 130*	*03/21/24 06:59*	*04/25/24 15:41*	*1*

Lab Sample ID: LCS 885-2050/2-A
Matrix: Water
Analysis Batch: 3953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	100	28.2		ug/L		28	22 - 130
1,4-Dichlorobenzene	100	26.7		ug/L		27	22 - 130
2,4-Dinitrotoluene	100	37.6		ug/L		38	38 - 130
2-Chlorophenol	200	81.9		ug/L		41	38 - 130
4-Chloro-3-methylphenol	200	84.0		ug/L		42	42 - 130
4-Nitrophenol	200	59.5		ug/L		30	16 - 130
Acenaphthene	100	36.4	*-	ug/L		36	39 - 130
N-Nitrosodi-n-propylamine	100	41.4		ug/L		41	38 - 130
Pentachlorophenol	200	102		ug/L		51	15 - 130
Phenol	200	44.5	*-	ug/L		22	27 - 130
Pyrene	100	58.3	*-	ug/L		58	65 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5 (Surr)	*29*		*15 - 130*
2-Fluorophenol (Surr)	*37*		*15 - 130*
2,4,6-Tribromophenol (Surr)	*61*		*15 - 130*
Nitrobenzene-d5 (Surr)	*47*		*29 - 130*
2-Fluorobiphenyl (Surr)	*35*		*20 - 130*
p-Terphenyl-d14 (Surr)	*79*		*41 - 130*

Lab Sample ID: LCSD 885-2050/3-A
Matrix: Water
Analysis Batch: 3953

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2050

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	33.7		ug/L		34	22 - 130	18	42
1,4-Dichlorobenzene	100	31.8		ug/L		32	22 - 130	18	44
2,4-Dinitrotoluene	100	40.7		ug/L		41	38 - 130	8	39
2-Chlorophenol	200	85.2		ug/L		43	38 - 130	4	65

Eurofins Albuquerque

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: LCSD 885-2050/3-A
Matrix: Water
Analysis Batch: 3953

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2050

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	200	87.7		ug/L		44	42 - 130	4	48
4-Nitrophenol	200	63.4		ug/L		32	16 - 130	6	55
Acenaphthene	100	41.3		ug/L		41	39 - 130	13	45
N-Nitrosodi-n-propylamine	100	43.7		ug/L		44	38 - 130	6	44
Pentachlorophenol	200	106		ug/L		53	15 - 130	5	55
Phenol	200	46.8	*-	ug/L		23	27 - 130	5	49
Pyrene	100	61.0	*-	ug/L		61	65 - 130	5	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Phenol-d5 (Surr)	*31*		*15 - 130*
2-Fluorophenol (Surr)	*41*		*15 - 130*
2,4,6-Tribromophenol (Surr)	*69*		*15 - 130*
Nitrobenzene-d5 (Surr)	*53*		*29 - 130*
2-Fluorobiphenyl (Surr)	*42*		*20 - 130*
p-Terphenyl-d14 (Surr)	*85*		*41 - 130*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 885-2179/1-A
Matrix: Water
Analysis Batch: 2501

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2179

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane	ND		1.0	0.50	ug/L		03/22/24 14:36	03/29/24 08:20	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-2191/11
Matrix: Water
Analysis Batch: 2191

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			03/22/24 09:39	1
Chloride	ND		0.50	0.25	mg/L			03/22/24 09:39	1
Sulfate	ND		0.50	0.25	mg/L			03/22/24 09:39	1
Fluoride	ND		0.10	0.046	mg/L			03/22/24 09:39	1

Lab Sample ID: LCS 885-2191/12
Matrix: Water
Analysis Batch: 2191

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	2.50		mg/L		100	90 - 110
Chloride	5.00	4.92		mg/L		98	90 - 110
Sulfate	10.0	9.91		mg/L		99	90 - 110
Fluoride	0.500	0.539		mg/L		108	90 - 110

QC Sample Results

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

Job ID: 885-1471-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 885-2191/13
Matrix: Water
Analysis Batch: 2191

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
Bromide			2.50	2.51		mg/L		101	90 - 110	1	20
Chloride			5.00	4.95		mg/L		99	90 - 110	0	20
Sulfate			10.0	9.97		mg/L		100	90 - 110	1	20
Fluoride			0.500	0.539		mg/L		108	90 - 110	0	20

Lab Sample ID: MRL 885-2191/10
Matrix: Water
Analysis Batch: 2191

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	0.0973	J	mg/L		97	50 - 150
Chloride			0.500	0.536		mg/L		107	50 - 150
Sulfate			0.500	0.525		mg/L		105	50 - 150
Fluoride			0.100	0.113		mg/L		113	50 - 150

Lab Sample ID: MB 885-2192/11
Matrix: Water
Analysis Batch: 2192

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.020	mg/L			03/22/24 09:39	1
Nitrite as N	ND		0.10	0.012	mg/L			03/22/24 09:39	1
Orthophosphate as P	ND		0.50	0.25	mg/L			03/22/24 09:39	1

Lab Sample ID: MB 885-2192/68
Matrix: Water
Analysis Batch: 2192

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.020	mg/L			03/22/24 21:35	1
Nitrite as N	ND		0.10	0.012	mg/L			03/22/24 21:35	1
Orthophosphate as P	ND		0.50	0.25	mg/L			03/22/24 21:35	1

Lab Sample ID: LCS 885-2192/12
Matrix: Water
Analysis Batch: 2192

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	2.64		mg/L		106	90.0 - 110.0
Nitrite as N			1.00	0.998		mg/L		100	90.0 - 110.0
Orthophosphate as P			5.00	4.83		mg/L		97	90.0 - 110.0

QC Sample Results

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

Job ID: 885-1471-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-2192/69
Matrix: Water
Analysis Batch: 2192

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	2.74		mg/L		109	90.0 - 110.0
Nitrite as N	1.00	1.03		mg/L		103	90.0 - 110.0
Orthophosphate as P	5.00	5.20		mg/L		104	90.0 - 110.0

Lab Sample ID: LCSD 885-2192/13
Matrix: Water
Analysis Batch: 2192

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
Nitrate as N	2.50	2.65		mg/L		106	90.0 - 110.0	1	20
Nitrite as N	1.00	1.00		mg/L		100	90.0 - 110.0	0	20
Orthophosphate as P	5.00	4.89		mg/L		98	90.0 - 110.0	1	20

Lab Sample ID: MRL 885-2192/10
Matrix: Water
Analysis Batch: 2192

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	0.108		mg/L		108	50 - 150
Nitrite as N	0.0999	0.106		mg/L		106	50 - 150
Orthophosphate as P	0.500	0.553		mg/L		111	50 - 150

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MRL 885-2690/11
Matrix: Water
Analysis Batch: 2690

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	0.000914	J	mg/L		91	70 - 130
Barium	0.00100	0.00103		mg/L		103	70 - 130
Cadmium	0.00100	0.000942	J	mg/L		94	70 - 130
Chromium	0.00100	0.00112		mg/L		112	70 - 130
Lead	0.00100	0.00108		mg/L		108	70 - 130
Selenium	0.00100	ND		mg/L		70	70 - 130
Silver	0.00100	0.00102		mg/L		102	70 - 130

Lab Sample ID: MRL 885-2785/9
Matrix: Water
Analysis Batch: 2785

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	0.000996	J	mg/L		100	70 - 130
Barium	0.00100	0.000947	J	mg/L		95	70 - 130
Cadmium	0.00100	0.00102		mg/L		102	70 - 130

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: MRL 885-2785/9
Matrix: Water
Analysis Batch: 2785

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.00100	0.00101		mg/L		101	70 - 130
Lead	0.00100	0.00111		mg/L		111	70 - 130
Selenium	0.00100	0.00101		mg/L		101	70 - 130
Silver	0.00100	0.000997	J	mg/L		100	70 - 130

Lab Sample ID: MB 885-2339/1-A
Matrix: Water
Analysis Batch: 2690

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2339

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00050	mg/L		03/26/24 15:44	04/02/24 14:57	1
Barium	ND		0.0010	0.00050	mg/L		03/26/24 15:44	04/02/24 14:57	1
Lead	ND		0.0010	0.00060	mg/L		03/26/24 15:44	04/02/24 14:57	1

Lab Sample ID: LCS 885-2339/5-A
Matrix: Water
Analysis Batch: 2690

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Barium	0.0500	0.0455		mg/L		91	80 - 120
Lead	0.0500	0.0516		mg/L		103	80 - 120

Lab Sample ID: LCSD 885-2339/14-A
Matrix: Water
Analysis Batch: 2690

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2339

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.0500	0.0502		mg/L		100	80 - 120	1	20
Barium	0.0500	0.0471		mg/L		94	80 - 120	3	20
Lead	0.0500	0.0517		mg/L		103	80 - 120	0	20

Lab Sample ID: LLCS 885-2339/4-A
Matrix: Water
Analysis Batch: 2690

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2339

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.00100	0.00109		mg/L		109	
Lead	0.00100	0.000888	J	mg/L		89	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 885-3819/1-A
Matrix: Water
Analysis Batch: 3893

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3819

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		04/24/24 12:04	04/25/24 10:38	1

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: LCS 885-3819/3-A
Matrix: Water
Analysis Batch: 3893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3819

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00455		mg/L		91	85 - 115

Lab Sample ID: LCSD 885-3819/26-A
Matrix: Water
Analysis Batch: 3893

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3819

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00500	0.00437		mg/L		87	85 - 115	4	20

Lab Sample ID: LLCS 885-3819/2-A
Matrix: Water
Analysis Batch: 3893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3819

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.000150	ND	^+	mg/L		55	50 - 150

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

Lab Sample ID: MB 400-667249/3
Matrix: Water
Analysis Batch: 667249

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			04/08/24 14:24	1

Lab Sample ID: LCS 400-667249/1
Matrix: Water
Analysis Batch: 667249

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	140	153		Degrees F		109	90 - 110

Lab Sample ID: LCSD 400-667249/2
Matrix: Water
Analysis Batch: 667249

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
Flashpoint	140	151		Degrees F		108	90 - 110	1	4

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

Lab Sample ID: MB 885-2074/1
Matrix: Water
Analysis Batch: 2074

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			03/21/24 10:05	1

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: LCS 885-2074/2
Matrix: Water
Analysis Batch: 2074

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	1010		mg/L		101	80 - 120

Method: 9014 - Cyanide, Reactive

Lab Sample ID: MB 400-666006/1-A
Matrix: Water
Analysis Batch: 666236

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 666006

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	ND		0.25	0.25	mg/L		03/27/24 15:24	03/28/24 17:22	1

Lab Sample ID: LCS 400-666006/2-A
Matrix: Water
Analysis Batch: 666236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 666006

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	1.00	0.599		mg/L		60	10 - 110

Lab Sample ID: 885-1471-1 DU
Matrix: Water
Analysis Batch: 666236

Client Sample ID: WDW-1, 2, 3 & 4 Effluent
Prep Type: Total/NA
Prep Batch: 666006

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Reactive	ND		ND		mg/L		NC	30

Lab Sample ID: MRL 400-666236/5
Matrix: Water
Analysis Batch: 666236

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	0.00400	ND		mg/L		93	50 - 150

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 400-666008/1-A
Matrix: Water
Analysis Batch: 666107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 666008

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		150	150	mg/L		03/27/24 15:26	03/28/24 11:00	1

Lab Sample ID: LCS 400-666008/2-A
Matrix: Water
Analysis Batch: 666107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 666008

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Reactive	1000	205		mg/L		21	10 - 110

QC Sample Results

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

Job ID: 885-1471-1

Method: 9034 - Sulfide, Reactive (Continued)

Lab Sample ID: 885-1471-1 DU
Matrix: Water
Analysis Batch: 666107

Client Sample ID: WDW-1, 2, 3 & 4 Effluent
Prep Type: Total/NA
Prep Batch: 666008

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide, Reactive	ND		ND		mg/L		NC	30

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 885-2312/2
Matrix: Water
Analysis Batch: 2312

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 CaCO3	ND		20	20	mg/L			03/21/24 13:03	1
Bicarbonate Alkalinity as CaCO3	ND		20	20	mg/L			03/21/24 13:03	1
Carbonate Alkalinity as CaCO3	ND		2.0	2.0	mg/L			03/21/24 13:03	1

Lab Sample ID: LCS 885-2312/3
Matrix: Water
Analysis Batch: 2312

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 CaCO3	84.8	77.4		mg/L		91	90 - 110

Lab Sample ID: MRL 885-2312/1
Matrix: Water
Analysis Batch: 2312

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	21.2	23.2		mg/L		110	50 - 150

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: LCS 885-2240/4
Matrix: Water
Analysis Batch: 2240

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	101	104		umhos/cm		104	85 - 115

Lab Sample ID: MRL 885-2240/3
Matrix: Water
Analysis Batch: 2240

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	9.85	ND		umhos/cm		92	50 - 150

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

Lab Sample ID: MB 885-2126/1
Matrix: Water
Analysis Batch: 2126

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			03/21/24 16:53	1

QC Sample Results

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

Job ID: 885-1471-1

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

Lab Sample ID: LCSSRM 885-2126/2
Matrix: Water
Analysis Batch: 2126

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	95.0		mg/L		95.0	77.1 - 110.0		

Method: SM 2710F - Specific Gravity

Lab Sample ID: MB 885-2180/1
Matrix: Water
Analysis Batch: 2180

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			03/22/24 14:20	1

QC Association Summary

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

Job ID: 885-1471-1

GC/MS VOA

Analysis Batch: 2414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	8260B	
885-1471-2	Trip Blank	Total/NA	Water	8260B	
MB 885-2414/25	Method Blank	Total/NA	Water	8260B	
LCS 885-2414/24	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 2050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	3510C	
MB 885-2050/1-A	Method Blank	Total/NA	Water	3510C	
LCS 885-2050/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 885-2050/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 3953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-2050/1-A	Method Blank	Total/NA	Water	8270C	2050
LCS 885-2050/2-A	Lab Control Sample	Total/NA	Water	8270C	2050
LCSD 885-2050/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	2050

Analysis Batch: 4004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	8270C	2050

GC Semi VOA

Prep Batch: 2179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	3510C	
MB 885-2179/1-A	Method Blank	Total/NA	Water	3510C	
LCS 885-2179/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 885-2179/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 2501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	8081B	2179
MB 885-2179/1-A	Method Blank	Total/NA	Water	8081B	2179
LCS 885-2179/2-A	Lab Control Sample	Total/NA	Water	8081B	2179
LCSD 885-2179/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	2179

HPLC/IC

Analysis Batch: 2191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	300.0	
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	300.0	
MB 885-2191/11	Method Blank	Total/NA	Water	300.0	
LCS 885-2191/12	Lab Control Sample	Total/NA	Water	300.0	
LCSD 885-2191/13	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 885-2191/10	Lab Control Sample	Total/NA	Water	300.0	

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

HPLC/IC

Analysis Batch: 2192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	300.0	
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	300.0	
MB 885-2192/11	Method Blank	Total/NA	Water	300.0	
MB 885-2192/68	Method Blank	Total/NA	Water	300.0	
LCS 885-2192/12	Lab Control Sample	Total/NA	Water	300.0	
LCS 885-2192/69	Lab Control Sample	Total/NA	Water	300.0	
LCSD 885-2192/13	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 885-2192/10	Lab Control Sample	Total/NA	Water	300.0	

Metals

Filtration Batch: 2005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Dissolved	Water	Filtration	

Prep Batch: 2339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total Recoverable	Water	3005A	
MB 885-2339/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 885-2339/5-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 885-2339/14-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
LLCS 885-2339/4-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 2345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Dissolved	Water	6010B	2005

Analysis Batch: 2690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total Recoverable	Water	6020A	2339
MB 885-2339/1-A	Method Blank	Total Recoverable	Water	6020A	2339
LCS 885-2339/5-A	Lab Control Sample	Total Recoverable	Water	6020A	2339
LCSD 885-2339/14-A	Lab Control Sample Dup	Total Recoverable	Water	6020A	2339
LLCS 885-2339/4-A	Lab Control Sample	Total Recoverable	Water	6020A	2339
MRL 885-2690/11	Lab Control Sample	Total/NA	Water	6020A	

Analysis Batch: 2785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total Recoverable	Water	6020A	2339
MRL 885-2785/9	Lab Control Sample	Total/NA	Water	6020A	

Prep Batch: 3819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7470A	
MB 885-3819/1-A	Method Blank	Total/NA	Water	7470A	
LCS 885-3819/3-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 885-3819/26-A	Lab Control Sample Dup	Total/NA	Water	7470A	
LLCS 885-3819/2-A	Lab Control Sample	Total/NA	Water	7470A	

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

Metals

Analysis Batch: 3893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7470A	3819
MB 885-3819/1-A	Method Blank	Total/NA	Water	7470A	3819
LCS 885-3819/3-A	Lab Control Sample	Total/NA	Water	7470A	3819
LCSD 885-3819/26-A	Lab Control Sample Dup	Total/NA	Water	7470A	3819
LLCS 885-3819/2-A	Lab Control Sample	Total/NA	Water	7470A	3819

General Chemistry

Analysis Batch: 2074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	2540C	
MB 885-2074/1	Method Blank	Total/NA	Water	2540C	
LCS 885-2074/2	Lab Control Sample	Total/NA	Water	2540C	

Analysis Batch: 2126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	SM 2540D	
MB 885-2126/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 885-2126/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 2180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	SM 2710F	
MB 885-2180/1	Method Blank	Total/NA	Water	SM 2710F	

Analysis Batch: 2240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	SM 2510B	
LCS 885-2240/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MRL 885-2240/3	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 2241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 2312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	SM 2320B	
MB 885-2312/2	Method Blank	Total/NA	Water	SM 2320B	
LCS 885-2312/3	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 885-2312/1	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 666006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7.3.3	
MB 400-666006/1-A	Method Blank	Total/NA	Water	7.3.3	
LCS 400-666006/2-A	Lab Control Sample	Total/NA	Water	7.3.3	
885-1471-1 DU	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7.3.3	

QC Association Summary

Client: HF Sinclair Asphalt Navajo Refining LLC
Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

General Chemistry

Prep Batch: 666008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7.3.4	
MB 400-666008/1-A	Method Blank	Total/NA	Water	7.3.4	
LCS 400-666008/2-A	Lab Control Sample	Total/NA	Water	7.3.4	
885-1471-1 DU	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	7.3.4	

Analysis Batch: 666107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	9034	666008
MB 400-666008/1-A	Method Blank	Total/NA	Water	9034	666008
LCS 400-666008/2-A	Lab Control Sample	Total/NA	Water	9034	666008
885-1471-1 DU	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	9034	666008

Analysis Batch: 666236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	9014	666006
MB 400-666006/1-A	Method Blank	Total/NA	Water	9014	666006
LCS 400-666006/2-A	Lab Control Sample	Total/NA	Water	9014	666006
MRL 400-666236/5	Lab Control Sample	Total/NA	Water	9014	
885-1471-1 DU	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	9014	666006

Analysis Batch: 667249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-1471-1	WDW-1, 2, 3 & 4 Effluent	Total/NA	Water	1010B	
MB 400-667249/3	Method Blank	Total/NA	Water	1010B	
LCS 400-667249/1	Lab Control Sample	Total/NA	Water	1010B	
LCSD 400-667249/2	Lab Control Sample Dup	Total/NA	Water	1010B	

Lab Chronicle

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

Job ID: 885-1471-1

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

Lab Sample ID: 885-1471-1
Matrix: Water
Date Collected: 03/17/24 11:02
Date Received: 03/20/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		200	2414	JR	EET ALB	03/27/24 23:28
Total/NA	Prep	3510C			2050	JM	EET ALB	03/21/24 06:59
Total/NA	Analysis	8270C		10	4004	SB	EET ALB	04/27/24 04:49
Total/NA	Prep	3510C			2179	JM	EET ALB	03/22/24 14:36
Total/NA	Analysis	8081B		10	2501	MB	EET ALB	03/29/24 08:58
Total/NA	Analysis	300.0		10	2191	SS	EET ALB	03/22/24 19:07
Total/NA	Analysis	300.0		10	2192	SS	EET ALB	03/22/24 19:07
Total/NA	Analysis	300.0		100	2191	SS	EET ALB	03/22/24 19:19
Total/NA	Analysis	300.0		10	2192	SS	EET ALB	03/23/24 04:10
Dissolved	Filtration	Filtration			2005	CC	EET ALB	03/20/24 11:58
Dissolved	Analysis	6010B		10	2345	VP	EET ALB	03/26/24 17:55
Total Recoverable	Prep	3005A			2339	JN	EET ALB	03/26/24 15:44
Total Recoverable	Analysis	6020A		10	2690	ES	EET ALB	04/02/24 14:52
Total Recoverable	Prep	3005A			2339	JN	EET ALB	03/26/24 15:44
Total Recoverable	Analysis	6020A		10	2785	ES	EET ALB	04/04/24 09:45
Total/NA	Prep	7470A			3819	JR	EET ALB	04/24/24 12:04
Total/NA	Analysis	7470A		1	3893	JR	EET ALB	04/25/24 11:41
Total/NA	Analysis	1010B		1	667249	VB	EET PEN	04/08/24 14:24
Total/NA	Analysis	2540C		1	2074	JU	EET ALB	03/21/24 10:05
Total/NA	Prep	7.3.3			666006	JP	EET PEN	03/27/24 15:24
Total/NA	Analysis	9014		1	666236	VB	EET PEN	03/28/24 17:25
Total/NA	Prep	7.3.4			666008	JP	EET PEN	03/27/24 15:26
Total/NA	Analysis	9034		1	666107	JP	EET PEN	03/28/24 11:00
Total/NA	Analysis	SM 2320B		1	2312	DL	EET ALB	03/21/24 20:57
Total/NA	Analysis	SM 2510B		1	2240	DL	EET ALB	03/21/24 20:57
Total/NA	Analysis	SM 2540D		1	2126	KS	EET ALB	03/21/24 16:53
Total/NA	Analysis	SM 2710F		1	2180	RC	EET ALB	03/22/24 14:20
Total/NA	Analysis	SM 4500 H+ B		1	2241	DL	EET ALB	03/21/24 20:57

Client Sample ID: Trip Blank

Lab Sample ID: 885-1471-2
Matrix: Water
Date Collected: 03/17/24 00:00
Date Received: 03/20/24 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	2414	JR	EET ALB	03/27/24 23:55

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

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	02-26-25

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
2540C		Water	Total Dissolved Solids
300.0		Water	Bromide
300.0		Water	Chloride
300.0		Water	Fluoride
300.0		Water	Nitrate as N
300.0		Water	Nitrite as N
300.0		Water	Orthophosphate as P
300.0		Water	Sulfate
6010B		Water	Calcium
6010B		Water	Magnesium
6010B		Water	Potassium
6010B		Water	Sodium
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

Accreditation/Certification Summary

Client: HF Sinclair Asphalt Navajo Refining LLC Job ID: 885-1471-1
Project/Site: Quarterly WDW-1, 2, 3, & 4 Inj Well

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
Oregon	NELAP	NM100001	02-26-25

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	Carbonate Alkalinity as CaCO3
SM 2320B		Water	Total Alkalinity as CaCO3
SM 2510B		Water	Specific Conductance
SM 2540D		Water	Total Suspended Solids
SM 2710F		Water	Specific Gravity
SM 4500 H+ B		Water	pH

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 CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2710F		Water	Specific Gravity

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	01-31-25
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	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

Chain-of-Custody Record

Client: HF Sinclair Navajo Refining

Mailing Address: P.O. Box 159

Artesia, NM 88211-0159

Phone #. 575-748-6733

email or Fax#. Teresa Alba@HFSinclair.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time.

☑ Standard ☐ Rush

Project Name.

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

Project #: PO #251841

Project Manager:

Teresa Alba

Sampler. Brady Hubbard

On Ice: ☑ Yes ☐ No Yogi

# of Coolers:

Cooler Temp(including CF): -2.1 -0 = -2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmen

4901 Hawkins NE - Albuquerque

Tel. 505-345-3975 Fax 505-3

885-1471 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	**	**	
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	3-40ml VOA	HCL	
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	1-1L Amber	none	
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	***	***	
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	1-250ml P	HNO3	
3.17.24	11:02	Liquid	WDW-1, 2, 3 & 4 Effluent	1-1L Amber	none	

Analysis Request

Specific Gravity, C/A Balance, ORP, pH, TSS	8260 TCLP Compounds	8270 TCLP Compounds	RCI	RCRA 8 Metals TCLP	8081 TCLP Chlordane (ONLY)
x					
	x				
		x			
			x		
				x	
					x

Date.	Time:	Relinquished by:	Received by:	Via:	Date	Time
3.19.24	8:00	Brady Hubbard			3/19/24	800
3/19/24	1910			3/20/24	0800	

Remarks: Dissolved Cations by EPA Method 200.7. ** 1-500ml unpreserved plastic, 1-125ml H2SO4 plastic, 1-125ml HNO3 plastic *** 1-500ml unpreserved plastic, 1-500ml NaOH plastic, 1-500ml NaOH/ZnAcetate plastic

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility Any sub-contracted data will be clearl

5/13/2024

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman, Andy	Carrier Tracking No(s):	COC No: 885-174.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy.freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note): NELAP - Oregon; State - New Mexico		Job #: 885-1471-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 4/2/2024			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Quarterly WDW-1, 2, 3, & 4 Inj Well	Project #: 88501214			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1010B	9034_Reactive/7.3.4	9014_ReactiveCN/7.3.3	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WDW-1, 2, 3 & 4 Effluent (885-1471-1)	3/17/24	11:07 Mountain		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3/20/24 15:00		BP	3/21/24 904	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.4°C IR8

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: HF Sinclair Asphalt Navajo Refining LLC Job Number: 885-1471-1

Login Number: 1471 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Cason, Cheyenne

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.	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	
TCEQ Mtd 1005 soil sample was frozen/delivered for prep within 48H of sampling.	N/A	

Login Sample Receipt Checklist

Client: HF Sinclair Asphalt Navajo Refining LLC Job Number: 885-1471-1

Login Number: 1471 **List Source: Eurofins Albuquerque**
List Number: 2
Creator: Cason, Cheyenne

Question	Answer	Comment
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		

Login Sample Receipt Checklist

Client: HF Sinclair Asphalt Navajo Refining LLC Job Number: 885-1471-1

Login Number: 1471
List Number: 3
Creator: Pardonner, Brett

List Source: Eurofins Pensacola
List Creation: 03/22/24 10:38 AM

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	3.4°C IR8
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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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 344319

COMMENTS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 344319
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Quarterly Report FY24 Q2 Table 1 Haz. Tox. Characteristics Analytical Lab Data Results Notes: 1. Mercury analyzed beyond holding time. 2. 8270 Parameters Overdiluted Lab Error reported as ND Chain of Custody Observations: 1. Samples collected on Sunday 3/17/2024 and delivered to lab on Tuesday 3/19/2024 2. Cooler temperature at lab was recorded to be close to 20 degrees C (Dry Ice?)	3/14/2025

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 344319

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 344319
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Condition of Approval: 1. Care must be taken at the lab not to overdilute 8270 parameters. 2. Haz. Tox. Characteristics Parameters including Metals, i.e., Hg, should not be analyzed beyond the QA/QC specified holding times before analysis.	3/14/2025