



Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	10/23/2023 – 10/27/2023	
Media Program:	Air	
Regulatory Program(s)	Consent Decree, Civil Action H-01-0978	
Company Name:	Shell Oil Products US	
Facility Name:	Norco Refinery	
Facility Physical Location:	15536 River Road	
(city, state, zip code)	Norco, LA 70079	
Mailing address:	P.O. Box 10	
(city, state, zip code)	Norco, LA 70079	
County/Parish:	St. Charles Parish	
Facility Phone Number	504-465-7111	
Facility Contact:	Renee' Touns	Environmental Manager
	Renee.Touns@shell.com	
FRS Number:	110000448864	
Identification/Permit Number:	Agency Interest Number: 1406 Permit Numbers: 2602-V12, 2902-V5, 2502-V12, 2913-V11, 2600-V5	
Media Identifier Number:	LA0000002208900002	
NAICS:	324110	
SIC:	2911	
Personnel participating in inspection:		
Prince Nfodzo	U.S. EPA, Region 6, ECDAP	Environmental Engineer
Bailey Brown	U.S. EPA Region 6, ECDAP	Physical Scientist
Ashley Cessac	Louisiana Department of Environmental Quality	Environmental Scientist
Tyler Williams	Louisiana Department of Environmental Quality	Environmental Scientist
Dwayne Bertrand	Louisiana Department of Environmental Quality	Environmental Scientist
Laura Sabolyk	Shell Oil Products US	Environmental Team Lead
Janna Bouvier	Shell Oil Products US	Environmental Team Lead
Sarah Hudson	Shell Oil Products US	Senior Environmental Engineer
Renee' Touns	Shell Oil Products US	Environmental Manager
Nick Reine	Shell Oil Products US	Air Program Coordinator
Marybel Loya	Shell Oil Products US	Environmental Engineer
EPA Lead Inspector Signature/Date	BAILEY BROWN Digitally signed by BAILEY BROWN Date: 2023.12.12 09:06:36 -06'00'	
	Bailey Brown	Date
Supervisor Signature/Date	DARRIN LARSON Digitally signed by DARRIN LARSON Date: 2023.12.13 12:29:26 -06'00'	
	Darrin Larson	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors Prince Nfodzo and I, Bailey Brown conducted a consent decree (“CD”) follow-up inspection of Shell Oil Products US (“Shell”), Norco Refinery (“Norco”) from October 23, through October 27, 2023. The refinery is located at 15536 River Road, Norco, Texas. Shell became the sole owner of the facility in May of 2017 following the joint venture separation from Motiva Enterprises. We arrived at the facility on October 23, 2023, at 12:20 pm, and conducted a fence line survey. We made entry to the facility at 12:30 pm and met with representatives of Shell for an opening conference at 1:05 pm. Prince Nfodzo led the opening conference which included introductions, briefing on the purpose, and the scope of the inspection. The sign-in sheet for the opening and closing conference is included as **Appendix 3**. We presented our EPA inspector credentials to Ms. Renee’ Touns, Environmental Manager, Ms. Sarah Hudson, Senior Environmental Engineer, and Ms. Janna Bouviev, Environmental Team Lead. We informed the representatives that this was an EPA inspection to evaluate compliance with the requirements outlined in the CD, Civil Action H-01-0978. The Louisiana Department on Environmental Quality (“LDEQ”) participated in the inspection.

The CD was entered on August 20, 2001, and consists of 19 Parts. The inspection was a Partial Compliance Evaluation (“PCE”) that focused on Parts IV, V, VII, and VIII which require injunctive relief to address nitrogen oxides (“NO_x”), sulfur dioxide (“SO₂”), carbon monoxide (“CO”), particulate matter (“PM”), and volatile organic compounds (“VOCs”) emission reductions through various construction projects, process additives, and program enhancements. The inspection included an evaluation of three marquee issues:

- NO_x CO, PM, and SO₂ reductions,
- Leak detection and repair (LDAR), and
- Control devices for flaring acid gases and hydrocarbons.

FACILITY DESCRIPTION

Norco is a petroleum refinery located next to the Mississippi River about 20 miles west of New Orleans and has a crude conversion capacity of approximately 240,000 barrels per day with operations including catalytic cracking, alkylation, reforming, hydrodesulphurization, isomerization, sulfur recovery, and fuel blending. The facility manufactures and processes petroleum products from crude oil, condensate, natural gas condensate, and partially refined products to produce liquefied petroleum gas, ethylene, propylene, chemical products, finished gasoline, diesel, aviation fuels, heating oils, residuals, petroleum coke, and sulfur. Crude oil is delivered to the refinery via pipeline and ship while products leave the facility by pipeline, railcar, tank truck, and marine shipping. A plant-wide process flow diagram and detailed facility description is included as **Appendix 4**.

Section II – OBSERVATIONS

At the time of the inspection, Norco was undergoing planned turnaround on several units including the Distillation Unit (“DU-5”), Coker Unit (“Coker”), Naptha Hydrotreater (“NHT”), Catalytic Reformer Unit (“CR-2”), Kerosene Unit (“Kero”), and Sulfur No. 2 Plant (“S-2”). The Diesel Hydrotreater (“DHT”) unit was included in the planned turnaround and scheduled to return to operation the week of the inspection. The units not included in the turnaround were the Sulfur No. 3 Plant (“S-3”), Alkylolation Unit (“Alky”), and Hydrocracking Unit (“HCU”). Shell representatives informed us that the Residual Catalytic Cracking Unit (“RCCU”) and the Residual Gas Heater Treater (“RGHT”) have not been in operation since Thursday, October 19, 2023, following a catalyst leak on the RCCU cyclone.

PART IV: AFFIRMATIVE RELIEF**A. NO_x Emission Reductions from Fluidized Catalytic Cracking Units (“FCCUs”) and Fluid Coker Unit (“FCU”)**

Status: On schedule

Program Summary: As specified in Part VI of the CD, Shell shall implement a program to reduce NO_x emissions with the installation and the operation of a Selective Non-Catalytic Reduction (SNCR) system at the Norco FCCU. Shell shall incorporate lower NO_x emission limits into operating permits and will demonstrate future compliance with the lower emission limits using continuous emission monitoring systems (“CEMS”).

Shell refers to the FCCU as the RCCU due to residual oil being the primary feed material. During the inspection, we observed ammonia injection being used to reduce RCCU NO_x emissions (see **Photo No. 1** in **Appendix 1**).

Norco is meeting the NO_x emission limits of 150.8 parts per million by volume (“ppmv”) on a 365-day rolling average and 203.1 ppmv on a 24-hour rolling average, both at 0% oxygen (“O₂”) with a NO_x SNCR system and ammonia vaporizer. There are two separate analyzers associated with the RCCU that are intertwined into each reading. The first analyzer monitors SO₂, NO_x, and O₂, while the other analyzer monitors CO.

Shell has incorporated the NO_x emission limits in permit 2602-V12 issued January 28, 2022. We observed that Norco has installed and is operating the RCCU NO_x CEMS in accordance with the applicable requirements, and certification and concentrations of calibration gases were accurate and current. I verified that Norco conducted cylinder gas audits (“CGA”) and relative accuracy test audits (“RATA”) for the period January 2020 through June 2023 in accordance with the applicable requirements of 40 CFR, Part 60, Appendix F, except for RATAs conducted during the first quarter of 2020, CGAs performed during the third quarter of 2020, and the reporting requirements on the RCCU CEMS analyzer [see **Area of Concern (“AOC”) #s 1 and 2**].

The trends for the RCCU NO_x emission limits of 150.8 ppmv on a 365-day rolling average basis and 203.1 ppm on a 24-hour rolling average basis, both at 0% O₂ from October 1, 2022, through September 30, 2023, are included as **Appendix 5**. No exceedances of the limits occurred during this period.

B. SO₂ Emission Reductions from FCCUs and FCU

Status: On schedule

Program Summary: As specified in Part V of the CD, Shell shall continue to operate the existing Wet Gas Scrubbers (“WGS”) on the FCCU. Shell shall incorporate lower SO₂ emission limits into operating permits and will demonstrate future compliance with the lower emissions limits using CEMS. In addition, Shell must comply with NSPS Subparts A and J for SO₂, CO, PM, and opacity limits.

Norco continues to operate the existing WGS on the RCCU to meet SO₂ emission limits of 25 parts per million by volume, dry basis (“ppmvd”) on a 365-day rolling average basis, and 50 ppmvd on a 7-day rolling average basis, both at 0% O₂. A photograph of the WGS is included as **Photo No. 2 in Appendix 1**.

Shell is required to comply with a CO emission limit of 500 ppmvd at 0% O₂ on a 1-hour average basis. Shell has incorporated the SO₂ and CO emission limits into permit 2602-V12 issued January 28, 2022.

We observed that Norco has installed and is operating the RCCU SO₂ and CO CEMS in accordance with the applicable requirements, and certification and concentrations of calibration gases were accurate and current. I verified that Norco conducted CGAs and RATAs for the period January 2020 through June 2023 in accordance with the applicable requirements of 40 CFR, Part 60, Appendix F, except for RATAs conducted during the first quarter of 2020, CGAs performed during the third quarter of 2020, and the reporting requirements on the RCCU CEMS analyzer (**see AOC #s 1 and 2**).

On September 29, 2022, Norco installed a temporary analyzer for the CO CEMS (serial number CO3003-M) following issues related to calibration readings associated with the original analyzer (serial number A2A6694T). Analyzer CO3003-M became the permanent analyzer while repairs were being made by the manufacturer. Analyzer A2A6694T was no longer in operation but was still included in CEMS reports (**see AOC #2**). Norco performed the initial RATA on the uncertified analyzer on October 27, 2022 (**see AOC #3**). From the period September 29, 2022, through October 27, 2022, Norco categorized this period as CEMS downtime on quarterly reports while maintenance was being performed (**see AOC #4**).

The trends for the RCCU SO₂ emission limits of 25 ppmvd on a 365-day rolling average basis, and 50 ppmvd on a 7-day rolling average basis, both at 0% from October 1, 2022, through

September 30, 2023, are included as **Appendix 6**. No exceedances of the limits occurred during the period.

The trend for the RCCU CO emission limit of 500 ppmvd at 0% O₂ on a 365-day rolling average basis from October 1, 2022, through September 30, 2023, are included as **Appendix 7**. No exceedances of the limit occurred during this period.

EPA approved Shell's alternative monitoring plan ("AMP") for opacity in lieu of continuous opacity monitoring systems (COMS) per letter dated May 7, 2018. The approved AMP requires Norco to continuously monitor and record (i) the pressure drop ("ΔP") across the WGS, (ii) the scrubber liquid-to-gas ("L/G") ratio, and (iii) the venturi inlet differential pressure ("ΔP_v") to the four venturis directly upstream. Shell has not incorporated all the AMP parameters in permit 2602-V12 issued January 28, 2022. Permit 2602-V12 only refers to the requirements of 40 C.F.R. Part 63 Subpart UUU (see **AOC #5**). The RCCU parameter trends are included as **Appendix 8**.

C. Program Enhancements RE: Leak Detection and Repair ("LDAR")

Status: On schedule

Program Summary: As specified in Part VII of the CD, Shell shall undertake audits of the components in light liquid and gaseous service at each of its refineries to determine compliance with all the requirements of the LDAR regulations and to correct any areas of non-compliance. In addition, Shell shall undertake the CD listed enhancements to its LDAR program consisting of refinery-wide measures to minimize or eliminate fugitive emissions from components in light liquid and gaseous services at its refineries in accordance with the schedule set forth.

Shell utilizes two separate contractors to perform audits on the LDAR program. Alliance Source Testing, LLC ("Alliance") performs internal audits and PROtect, LLC ("PROtect") performs third-party external audits. Shell provides the internal and external CD LDAR audit reports to EPA.

We observed that Norco carries out LDAR instrument calibration accurately utilizing an automated calibration system. The automated system performs mid-day and end-of-day calibration drift checks, as required by the CD. Photographs of the LDAR equipment and instrument calibration set-up are included as **Photo Nos. 3, 4, 5, and 6** in **Appendix 1**. We verified that certification and concentration of calibration gases were accurate and current, and that Norco uses an electronic data collection software for LDAR monitoring by data loggers, leak tracking, and reporting known as SkyBridge. Photographs of the calibration gas cylinders and gauges located outside the LDAR storage are included as **Photo Nos. 7 and 8** in **Appendix 1**.

I reviewed records which showed Shell consistently maintains calibration records and conducts annual training and audits, as required by the CD. We walked through the units and observed that components were tagged with two types of identifiers, silver square tags and blue circular tags. The silver square tags are the updated identifiers and replace the older blue circular tags (see **AOC #6**). A photograph of an equipment piece containing both tags is included as **Photo**

No. 9 in Appendix 1. We queried the LDAR monitoring and reporting software with randomly selected tag numbers from the units and found discrepancies with delay of repair (“DOR”) and LDAR non-detect reports (**see AOC #s 7 and 8**). Excerpts of the DOR and LDAR non-detect reports are included as **Appendix 9**.

Program Enhancements RE: NSPS Subparts A and J SO₂ Emissions from Sulfur Recovery Plants (“SRP’s”) and Flaring

Status: On schedule

Program Summary: As specified in Part VIII of the CD, beginning immediately upon the lodging of this Consent Decree, Shell agrees to take the following measures at all its SRPs and certain flaring devices at the refineries identified in Paragraph 5. Shell shall eliminate all reasonably preventable SO₂ emissions from flaring. Shell will implement procedures for root cause analysis of acid gas flaring incidents at all refineries. Shell shall strive to extend the duration between SRP maintenance shutdowns (unscheduled or scheduled) to three years or greater.

Norco operates four flares (RCCU Elevated Flare, West Ops Ground Flare, Hydrocracking Unit Flare, and Coker Flare) that are subject to NSPS Subpart Ja under the CD. Shell is operating and maintaining a flare gas recovery system (FGRS) to control continuous or routine combustion associated with the West Ops Ground Flare. Shell is complying with the H₂S emission limits of 162 ppmv on a 3-hour rolling averaging basis for fuel gas combusted in flares. The Coker Flare and HCU Flare are equipped with a flare vapor recovery system (“FVRS”) to compress vapors and remove excess sulfur bearing compounds to comply with the H₂S emission limits of 162 ppmv on a 3-hour rolling average basis. Shell has incorporated the emission limits into permit 2502-V12 issued February 2, 2021, and 2913-V11 issued March 15, 2023. A description and diagram of the flare gas recovery systems are included as **Appendix 10**.

Norco monitors H₂S concentrations in the recovered flare gas using a continuous H₂S analyzer. We observed that Norco installed and is operating CEMS in accordance with applicable requirements, and certification and concentration of calibration gases were accurate. During our inspection, we observed an expired calibration gas cylinder associated with the West Ops Ground Flare (**see AOC #9**). A photograph of the calibration gas cylinder is provided as **Photo No. 10 in Appendix 1**. Shell representatives provided clarification stating the calibration gas cylinder was not expired and later provided a certificate of analysis listing the correct expiration date. I verified that Norco conducted CEMS audits for the period of January 2020 through June 2023 in accordance with applicable requirements of 40 CFR, Part 60, Appendix F, except for a CGA conducted during the fourth quarter of 2021 on the Hydrocracking Unit Flare H₂S CEMS (**see AOC #10**).

The trends for the H₂S emission limit on a 3-hour rolling average basis from October 1, 2022, through September 30, 2023, for all four flares are included as **Appendix 11**. Norco exceeded the emission limit multiple times during this period (**see AOC #11**). I verified that Norco properly documented and reported exceedances of the limit during the period.

We observed all four flares using a FLIR GF320 optical gas imaging camera and only observed emissions from the RCCU Elevated Flare (**see MOV_0048.mp4 in Appendix 2, AOC #12**). A photograph of the RCCU Elevated Flare is provided as **Photo No. 11 in Appendix 1**.

The facility uses two Claus Sulfur Recovery Units (S-2 and S-3) with two incinerators to comply with the SO₂ emission limit of 250 ppmvd at 0% O₂ on a 12-hour rolling average. Shell has incorporated the emission limit into permit 2902-V5 issued November 2, 2021, but does not include control of sulfur pit emissions (**see AOC #13**). We observed that Norco installed and is operating SO₂ CEMS in accordance with applicable requirements, and certification and concentration of calibration gases were accurate and current. I verified that Norco conducted CEMS audits for the period of January 2020 through June 2023 in accordance with applicable requirements of 40 CFR, Part 60, Appendix F.

Permitting

Status: Needs revision

Program Summary: As specified in Part IX of the CD, Shell agrees to apply for and make all reasonable efforts to obtain in a timely manner all appropriate federally enforceable permits (or construction permit waivers) for the construction of the pollution control technology to meet the above pollution reductions.

Shell has incorporated the CD required emission limits and standards into permits 2602-V12, 2902-V5, 2502-V12, 2913-V11, and 2600-V, except for specifically outlining monitoring requirements and directly referencing regulatory requirements to fully comply with CD requirements (**see AOC #s 5, 13, 14, and 15**). Excerpts of the permits are included as **Appendix 12**.

Section III – AREAS OF CONCERN

1. Shell conducted successive quarterly audits within less than two months at the RCCU CEMS. Paragraphs 19 and 54 of the CD require Shell to certify, calibrate, maintain, and operate FCCU NO_x, SO₂, and CO CEMS in accordance with the provisions of 40 C.F.R. Part 60 Appendices A, B, and F. Appendix F Section 5.1 states *“Auditing Requirements. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months”*. Shell conducted CGAs at the RCCU 6/18/2020 and 8/12/2020.
2. We identified several quality assurance and control (“QA/QC”) issues regarding CD reporting requirements. Shell submitted formal reports with inaccurate or conflicting information. We recommend that Shell update QA/QC procedures pertaining to report submissions. Shell conducted annual RATAs on the RCCU analyzers on January 30, 2020, but reported the audit performed as CGAs in the Second Half of 2020 Semi-Annual report. Shell reported CEMS data in quarterly reports for the incorrect and outdated CO analyzer on the RCCU.
3. The RCCU CO analyzer (serial number CO3003-M) was operating uncertified from September 29, 2022, through October 27, 2022. Paragraphs 19 and 52 require Shell to certify, calibrate, maintain, and operate FCCU NO_x, SO₂, and CO CEMS in accordance with the provisions of 40

- C.F.R. Part 60 Appendices A, B, and F. Shell installed a temporary CO analyzer September 29, 2022, but did not certify the analyzer until October 27, 2022.
4. Shell inaccurately categorizes CEMS downtime within semi-annual reports. CEMS downtime is inaccurately characterized pertaining to maintenance rather than QA/QC. Shell categorizes the uncertified RCCU CO analyzer (serial number CO3003-M) operation as downtime within semi-annual reports during the period of September 29, 2022, through October 29, 2022.
 5. The May 7, 2018, EPA-approved AMP requires Shell to monitor the L/G ratio across the WGS, and the venturi inlet differential pressure to the four venturis directly upstream. Permit 2602-V12, special condition 59 does not include the requirements of 40 C.F.R. Part 60 Subpart J. Special condition 59 made a direct reference to the EPA-approved AMP for opacity dated November 5, 2015. The statement, "The following AMP, approved by EPA on November 5, 2015..." is no longer relevant as the most recent approval issued by EPA was on May 7, 2018.
 6. LDAR monitored equipment and components have conflicting tags within the units. Old LDAR tags are not removed from equipment pieces and components subject to LDAR monitoring requirements. The blue circular LDAR tags are outdated and no longer monitored by Shell.
 7. Components and equipment subject to LDAR monitoring requirements are included on DOR report when no longer considered in DOR status. The DOR report for LDAR Tag 0100561 identify the component as having four consecutive "passed" readings when monitored by LDAR technicians. The component is included in the DOR report although successfully meeting Shell's internal DOR removal process for components with four consecutive passed readings.
 8. DOR and LDAR non-detect reports include conflicting and misleading information pertaining to dates and non-detection types. DOR reports include surpassed dates between the date a component was expected to be repaired and the date a DOR report is pulled for review. LDAR non-detect reports contain several classifications of non-detectable ("ND") components and equipment under the "Type" column which should be included in the "Class" column. We recommend that Shell updates their database to clarify all components and equipment under the report are included as ND under the "Type" column and the classifications are updated accordingly.
 9. An expired H₂S calibration gas cylinder (CC417779) was in use on the West Ops Ground Flare CEMS. The cylinder had an expiration date of August 9, 2023. Shell later clarified the gas cylinder was not expired and provided the certificate of analysis with an expiration date of August 9, 2025. The gas cylinder was mislabeled with inaccurate information and CEMS technicians did not observe this discrepancy.
 10. Shell conducted successive quarterly audits within less than two months at the Hydrocracking Unit ("HCU") Flare CEMS. Paragraphs 145 of the CD require Shell to certify, calibrate, maintain, and operate CEMS in accordance with the provisions of 40 C.F.R. Part 60 Subpart J, and Appendices A, B, and F. Appendix F Section 5.1 states *"Auditing Requirements. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months"*. Shell conducted CGAs at the HCU Flare on 9/30/2021 and 11/22/2021.
 11. The CD requires Shell to comply with emission limits at several units. During the period of October 1, 2022, through September 30, 2023, Norco exceeded the H₂S emission limit of 162 ppmv on a 3-hour rolling average at the HCU Flare, Coker Flare, RCCU Elevated Flare, and the West Ops Ground Flare.
 12. Emissions observed from the RCCU Elevated Flare with the FLIR GF320. The flare pilot was ignited, and no visible emissions were observed. During the time of the observation, the RCCU was not operating.
 13. Paragraph 137 of the CD requires Shell to re-route all sulfur pit emissions from the refinery, such that all sulfur pit emissions to the atmosphere are either eliminated, or included and monitored

as part of the applicable SRP's emissions that meet the emissions limit of 250 ppmvd on a 12-hour rolling average at 0% O₂. Permit 2902-V5 includes the emission limits but does not reference the requirement of sulfur pit emissions to be routed to the incinerator outside of the inventory table.

14. The requirements of the CD should be specified to include the limits and regulations directly referenced. All permits using the terminology "in accordance with the Consent Decree" or "[Consent Decree]" should be revised to specifically incorporate the CD requirements and make direct reference to the regulatory requirements of 40 C.F.R. Part 60 and 40 C.F.R. Part 63. For example, permit 2602-V12, special conditions 98 through 103 refer to the CD requirements but do not specifically outline the requirements of 40 C.F.R. Part 60.
15. The permits for units demonstrating compliance with monitoring requirements through CEMS do not specify the requirements of 40 C.F.R. Part 60 Appendices A, B, and F. Special conditions referencing CEMS should be revised to include all monitoring requirements to fully comply with CD requirements.

On October 27, 2023, we met with Shell representatives at 8:15 am for the closing conference and presented preliminary findings of the inspection and reviewed **AOCs #s 2 – 9, and 12 – 15**, which were noted during the onsite inspection. Prince informed the representatives of the procedures that will follow the field inspection including the inspection report that will be made public on EPA's website. **AOC #s 1, 10, and 11** were determined after the conclusion of the onsite inspection and were not included in the closing conference. The attendance sheets for the opening and closing conferences are included as **Appendix 3**.

Section IV – FOLLOW UP

Additional information requested during the inspection was received on November 5, 2023.

Section V – LIST OF APPENDICES

- Appendix 1 – Photo Log – 11 photos taken 10/23/23 – 10/27/23
- Appendix 2 – Video Log – 1 FLIR video taken 10/26/23
- Appendix 3 – Opening and closing conference sign-in sheets
- Appendix 4 – Plant-wide process flow diagram and written facility description
- Appendix 5 – FCCU NO_x emission trends
- Appendix 6 – FCCU SO₂ emission trends
- Appendix 7 – FCCU CO emission trends
- Appendix 8 – FCCU opacity AMP trends
- Appendix 9 – Excerpts of DOR and LDAR non-detect reports
- Appendix 10 – Description of flare gas recovery systems
- Appendix 11 – Flare H₂S emission trends
- Appendix 12 – Excerpts of permits

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0855.JPG

Date of Photo: 10/24/2023

Time of Photo: 9:26 am

Photographer: Bailey Brown

Description: Selective non-catalytic reduction (SNCR) system and ammonia vaporizer used for NOx emission reduction on the residual catalytic cracking unit (RCCU).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0857.JPG

Date of Photo: 10/24/2023

Time of Photo: 9:57 am

Photographer: Bailey Brown

Description: Wet gas scrubber (WGS) used for SO2 emission reduction on RCCU.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0859.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:52 am

Photographer: Prince Nfodzo

Description: Left side storage shelving containing Leak Detection and Repair (LDAR) equipment beside automated calibration system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0860.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:52 am

Photographer: Prince Nfodzo

Description: LDAR automated calibration system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0861.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:52 am

Photographer: Prince Nfodzo

Description: Right side storage shelving containing LDAR equipment beside automated calibration system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0862.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:52 am

Photographer: Prince Nfodzo

Description: Complete overview of LDAR automated calibration system and equipment storage.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0863.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:54 am

Photographer: Prince Nfodzo

Description: Calibration gas cylinders located outside of LDAR storage and automated calibration system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0864.JPG

Date of Photo: 10/27/2023

Time of Photo: 7:55 am

Photographer: Prince Nfodzo

Description: Calibration gas gauges located outside of LDAR storage and calibration system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0856.JPG

Date of Photo: 10/24/2023

Time of Photo: 9:49 am

Photographer: Bailey Brown

Description: Equipment #FV-4333 with silver and blue LDAR tags.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DSCN0858.JPG

Date of Photo: 10/26/2023

Time of Photo: 8:33 am

Photographer: Prince Nfodzo

Description: Expired hydrogen sulfide calibration gas cylinder on the West Ops Ground Flare continuous emission monitoring system.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Shell Oil Products US / Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana



Photo File Name: DC_0049.JPG

Date of Photo: 10/26/2023

Time of Photo: 8:15 am

Photographer: Bailey Brown

Description: RCCU Elevated Flare with pilot flame lit.

Appendix 2

Video Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 2

Video Log

Location: Shell Oil Products US / Shell Norco Refinery		
City: Norco	Parish: St. Charles	State: Louisiana

Video File Name: [MOV_0048.mp4](#)

Date of Video: 10/26/2023

Time of Video: 8:15 am

Videographer: Bailey Brown

Description: The Residual Catalytic Cracking Unit (RCCU) Elevated Flare observed with emissions.

Appendix 3

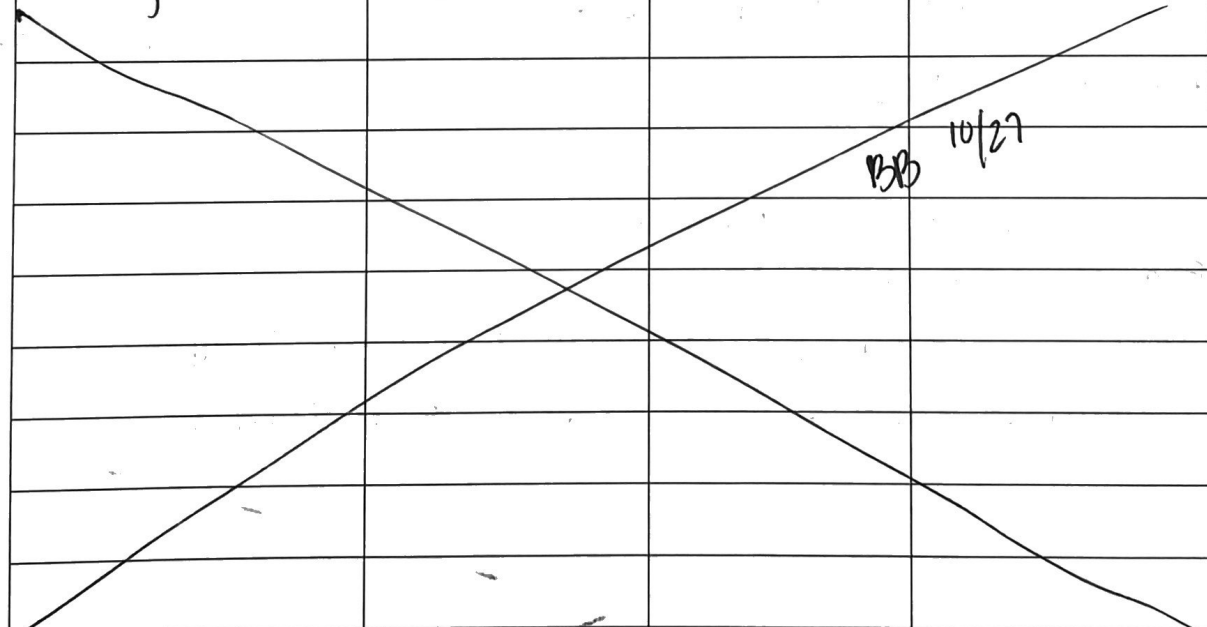
Opening and closing conference sign-in sheets

FRS# 110000448864

Shell Norco Refinery

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Opening/Pre-Inspection MeetingCommence opening/pre-inspection meeting.....Time: 1:05 pm

Name	Title	Representing	Telephone No.
Ashley Cessac	Env. Scientist	LDEQ	504-736-7743
Dwayne Bertrand	Env. Scientist	LDEQ	504-736-7730
Laura Sabolyk	Env. Teamlead	Shell	504-669-4451
Janna Bouvier	Env. Team Lead	Shell	985-665-3847
Sarah Hudson	Sr ENV Engr	Shell	713 494 8218
Renee Toups	ENV. MANAGER	SHELL	985 665 3834
Nick Reine	Air Program Coord.	Shell	504-417-9797
Prince Nfoobz	Env'tl Engr	EPA RB	214 665 7491
Bailey Brown	Physical Scientist	EPA RB	214-665-6632
			

Conclude opening/pre-inspection meeting.....Time: 1:30 pm 1:50 pm BB 10/23Initials / Date: BB / 10/23/23

FRS# 110000448864

Shell Norco Refinery

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Exit interview / Out-briefing Meeting

Commenced meeting..... Time: 8:15 AM

Name	Title	Representing	Telephone No.
Martin Padilla	HSE Mgr	Shell	713 824 0986
Katie Brown	Air Prog. Coord.	Shell	504-231-4259
Nick Reine	Air Prog. Coord.	Shell	504-417-9797
Laura Sabolyk	Env. Team Lead	Shell	504 669 6457
Renee Towps	Env. Manager	Shell	504 465 6380
Michael Labatut	Env. Engineer	Shell	504-465-5207
Prince Nforozo	Env. Engr	EPA R6	214 665 7491
Jamie Lee	Attorney Advisor	virtually EPA R6	214 665-6795
Daniel Nelson	Env. Specialist	Shell	504-465-5223
Tyler Williams	Env. Scientist	LDEQ	504 736 7729
DANIELEE	ENV ENG	Shell	504 460-2179
Marybel Loya	Env Eng	Shell	504-465-6691
Maurice Pinder	WDR Coordinator	Shell	504 331 0840
Pierre Espejo	Counsel	Shell	832-337-4611
Jack Holden	Production Manager	Shell	504-465-2901
Alfredo Escudero-Hernandez	Fired Source Specialist	Shell	504-465-7253 504-465-7253
Alpur Prashanth Kumar Reddy	Data Engineer	Shell	+91 939 820 6289
Frank Matherne	E&I Manager	Shell	504-465-7042

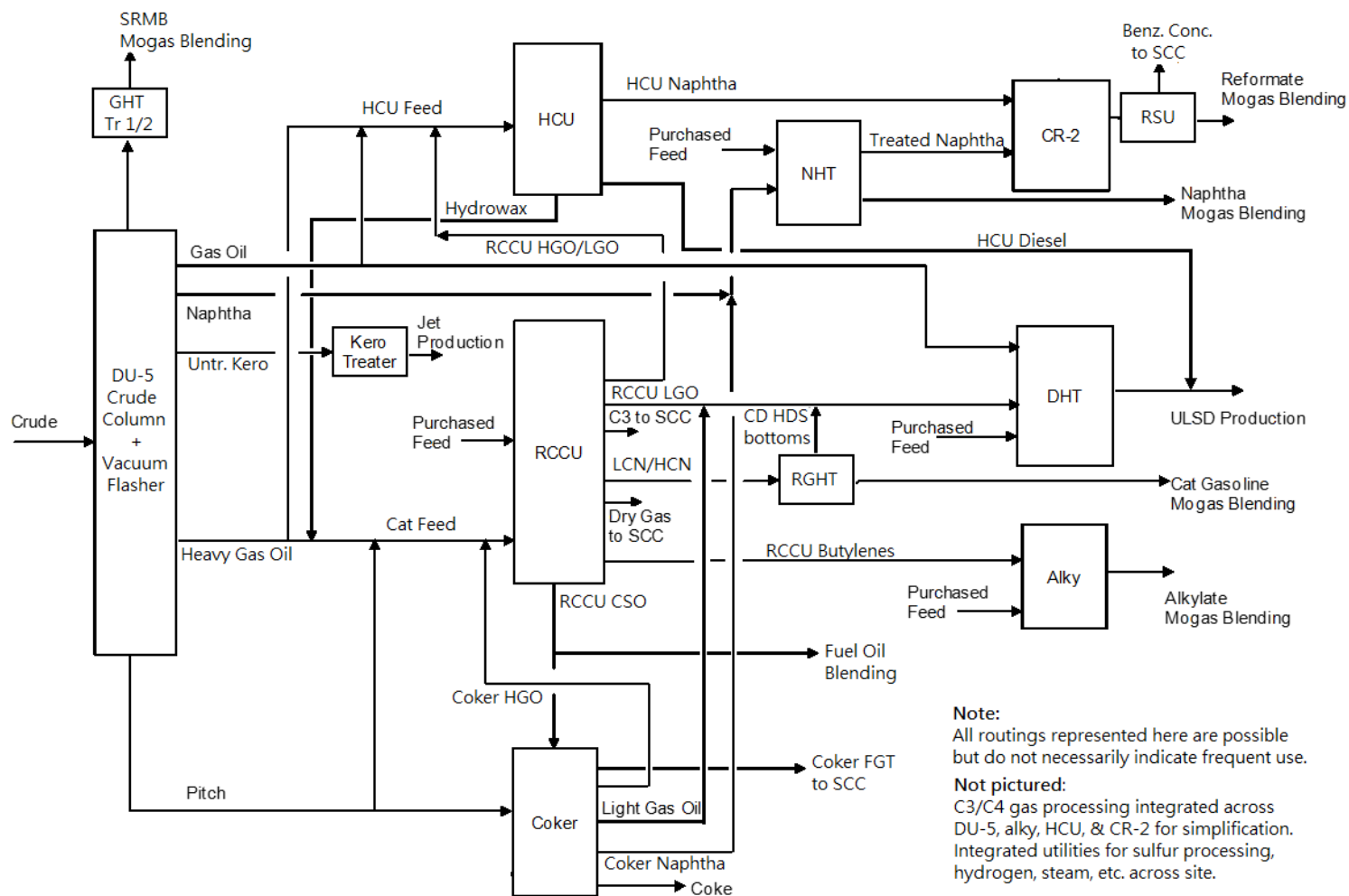
Bailey Brown | Phy. Scientist | EPA R6 | 214-665-6632
Conclude meeting..... Time: 9:00 AM

LeAnne Sharow | Attorney Advisor | EPA R6 | 214-665-7405

Initials / Date: BB / 10/27/23

Appendix 4

Plant-wide process flow diagram and written facility description



Brief Written Facility Description of the Motiva Norco Refinery:

The Norco Refining Company is located next to the Mississippi River, about 20 miles west of New Orleans, Louisiana. Headquartered in Houston, Texas, we refine and market gasoline to about 14,000 Shell-branded gasoline stations together with our affiliate Shell Oil Products US. Company assets include three refineries, capable of refining approximately 690,000 barrels per day (bpd) and ownership or partial interest in 50 products terminals.

The Motiva Norco refinery supplies gasoline and low sulfur diesel to the New Orleans markets. We also supply jet fuel to the New Orleans International Airport. In addition, our products leave by ship and pipeline to destinations all over the southeast United States and abroad.

Listed below is a typical daily production schedule:

- 170,000 barrels per day of gasoline
- 46,000 barrels per day of jet fuel
- 50,000 barrels per day of low sulfur diesel fuel

Adjoining sites:

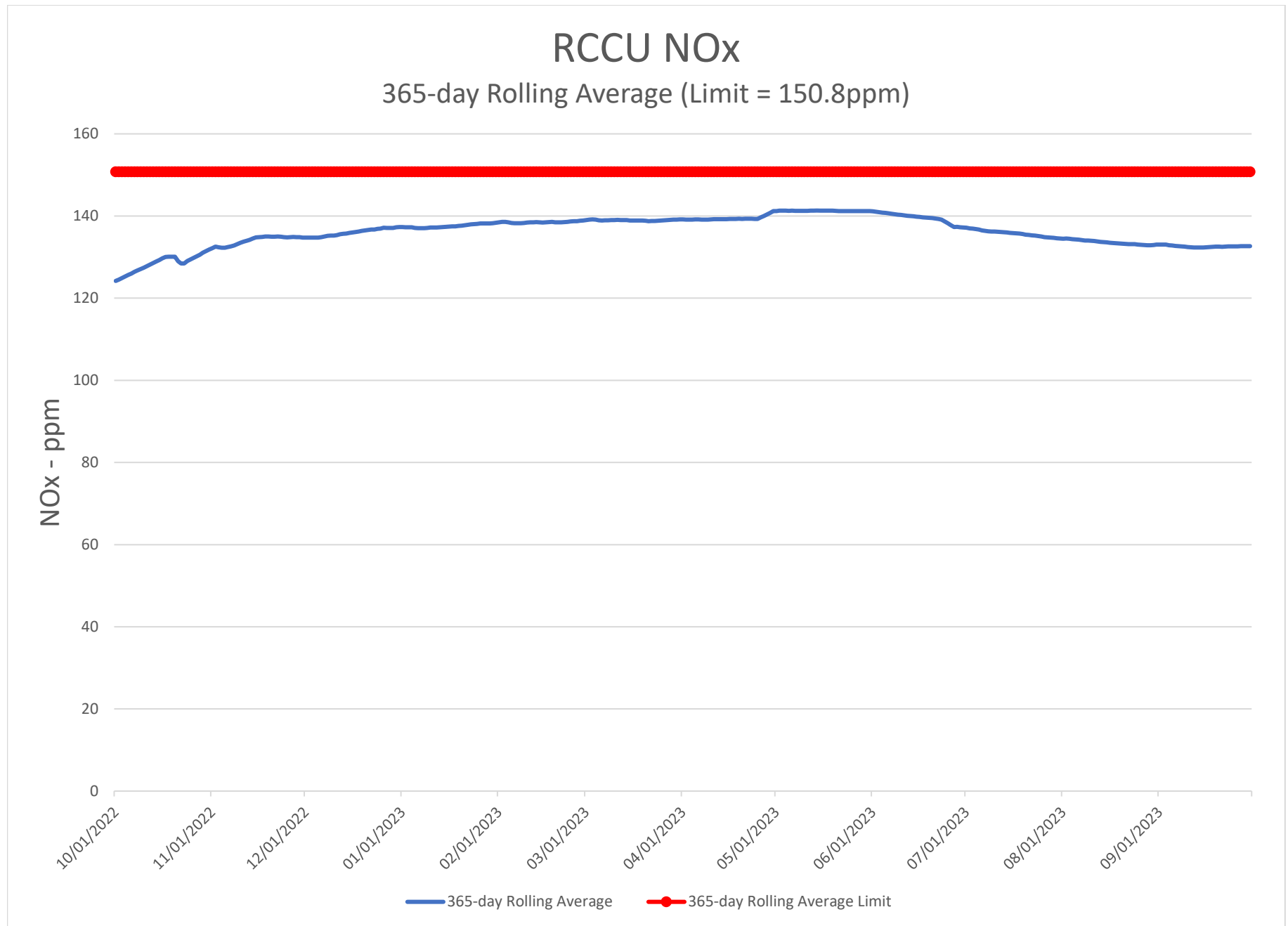
Shell Chemical (integrated into site)

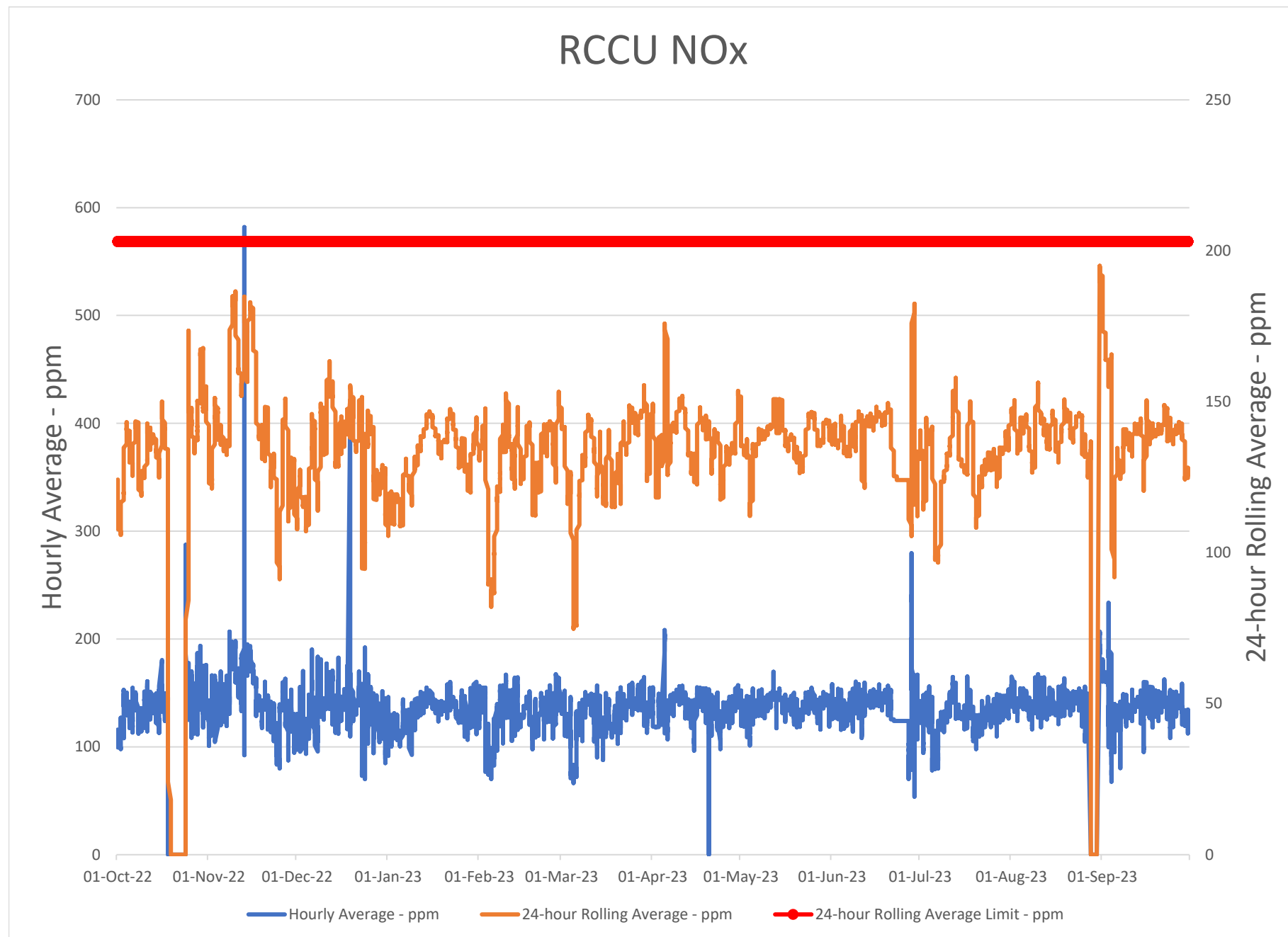
Principal activities:

Conversion of approximately 240,000 barrels per day of crude oil, which is made up of approximately 75% of Louisiana sweet crudes and 25% of foreign crudes. The refinery also converts approximately 20,000 - 40,000 barrels per day of other feedstocks into gasoline, jet fuel, diesel and byproducts. We are considered a light, sweet (low sulfur) crude oil refinery.

Appendix 5

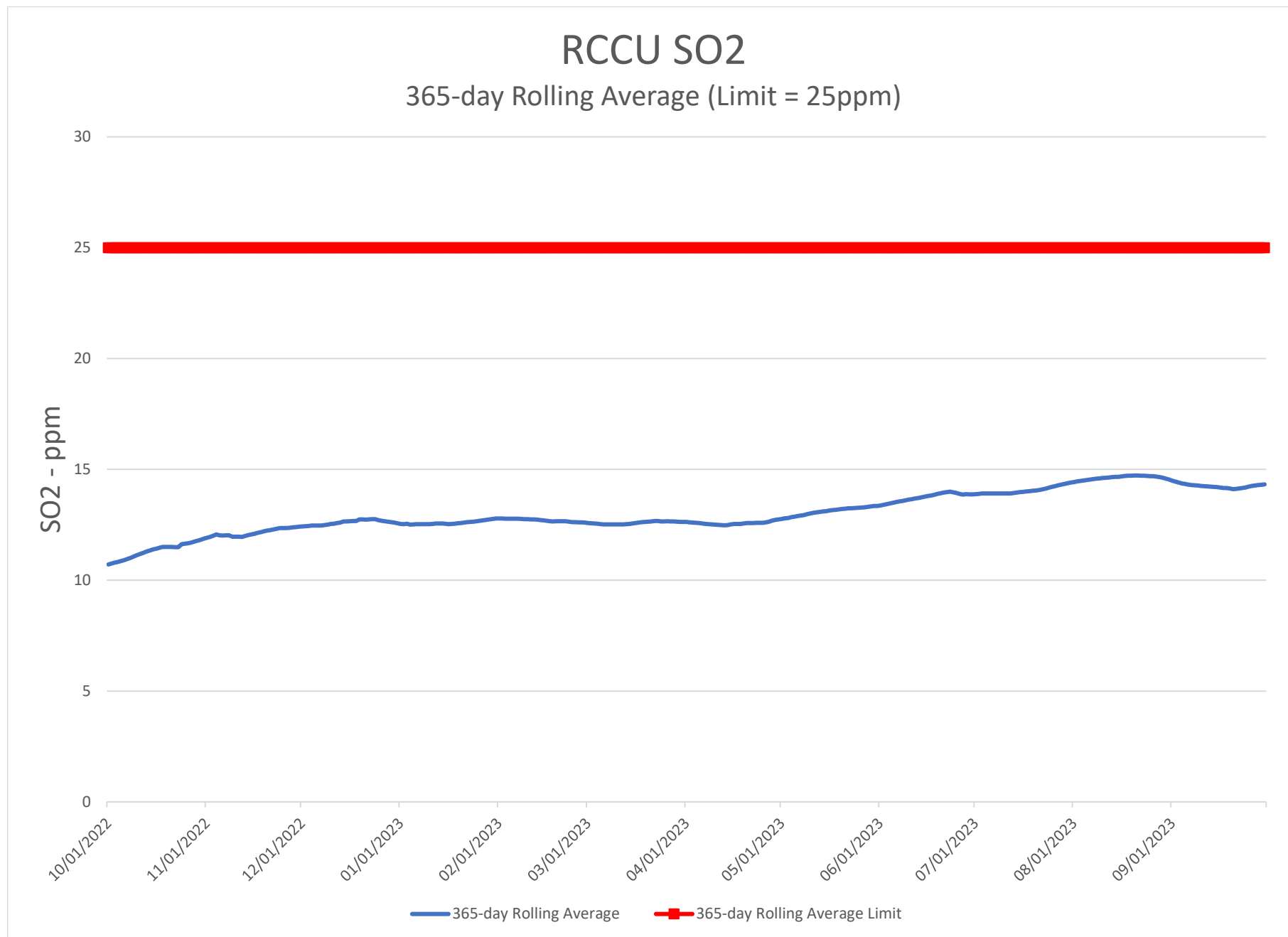
FCCU NO_x emission trends

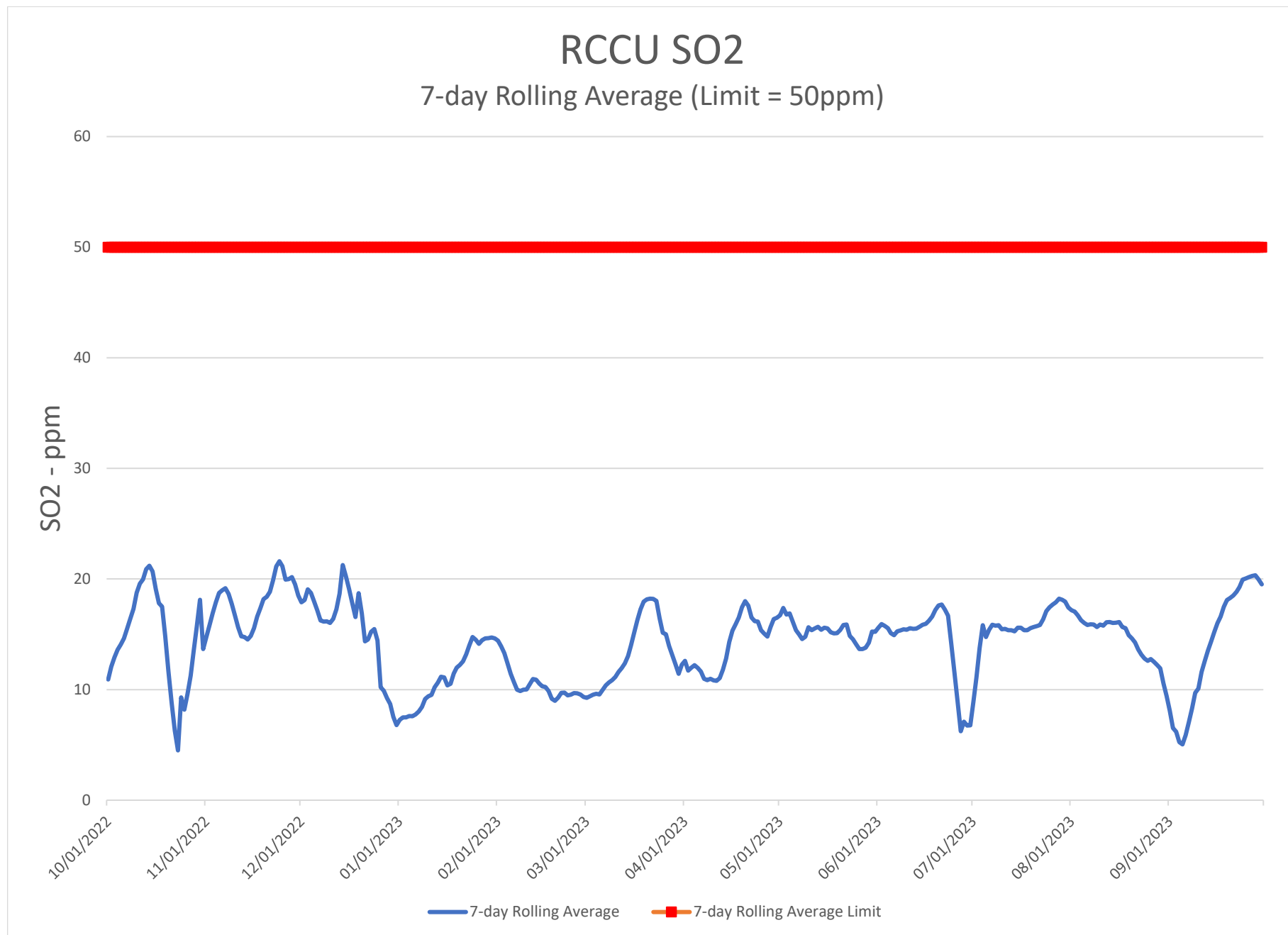




Appendix 6

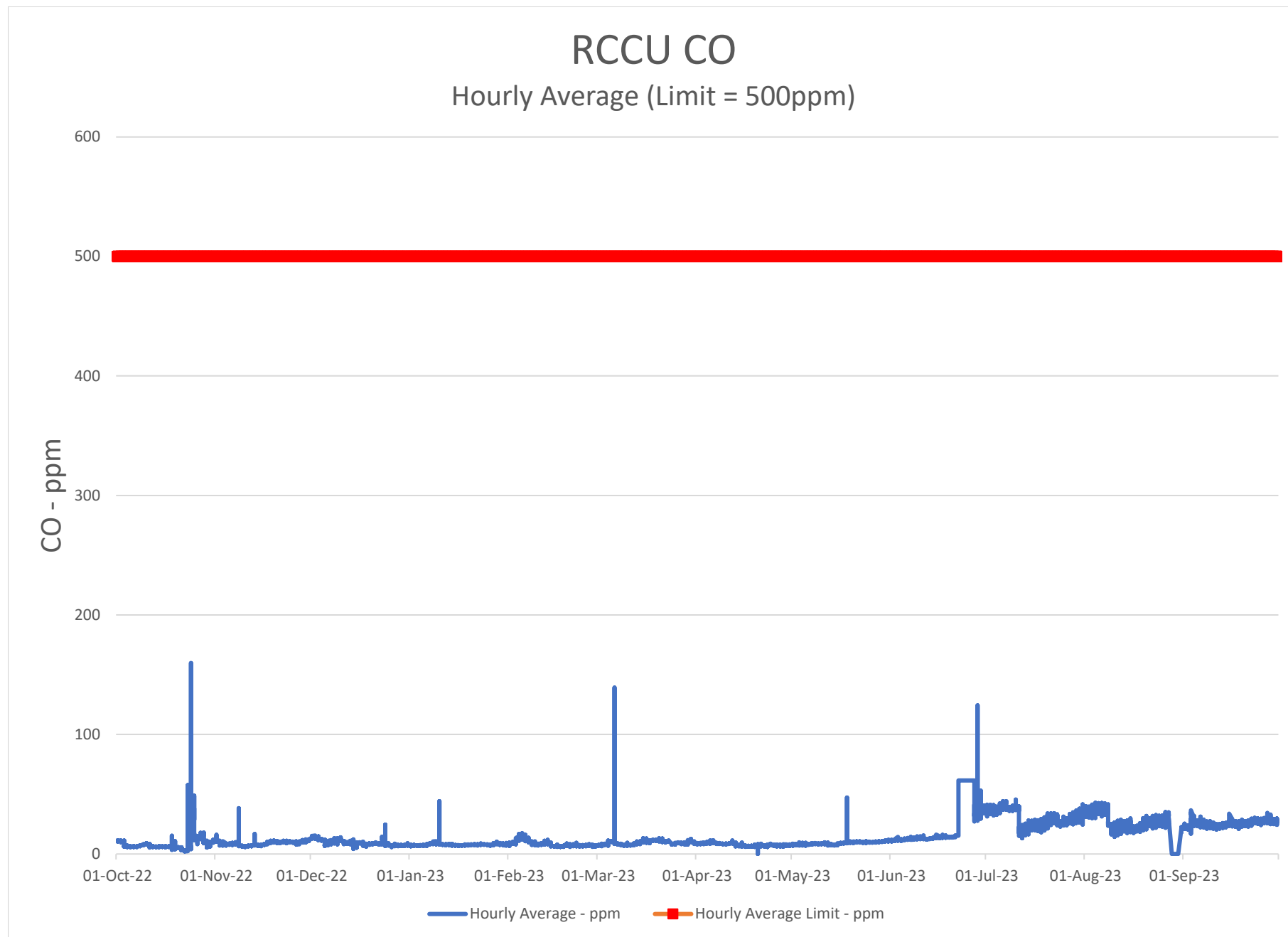
FCCU SO₂ emission trends





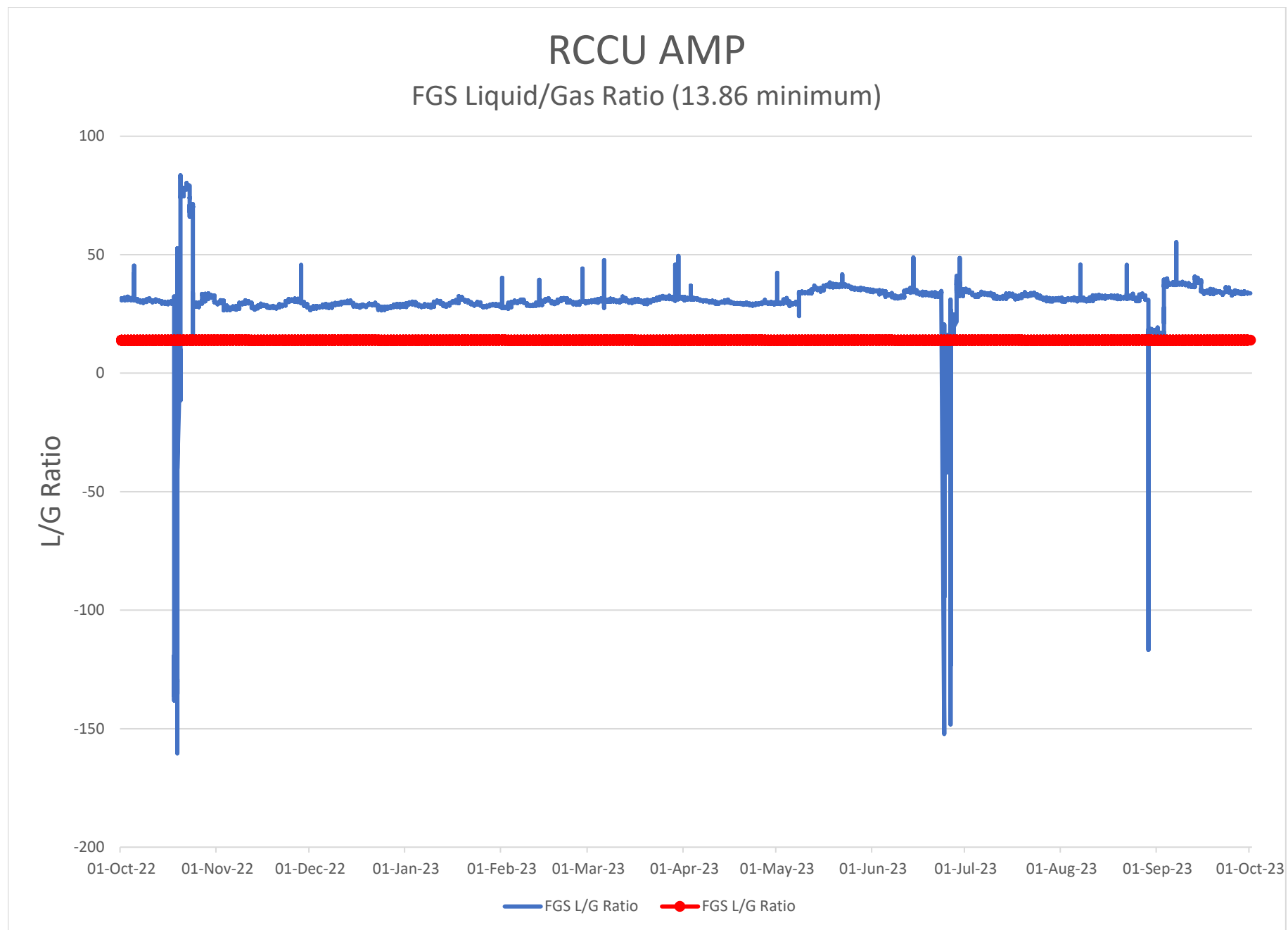
Appendix 7

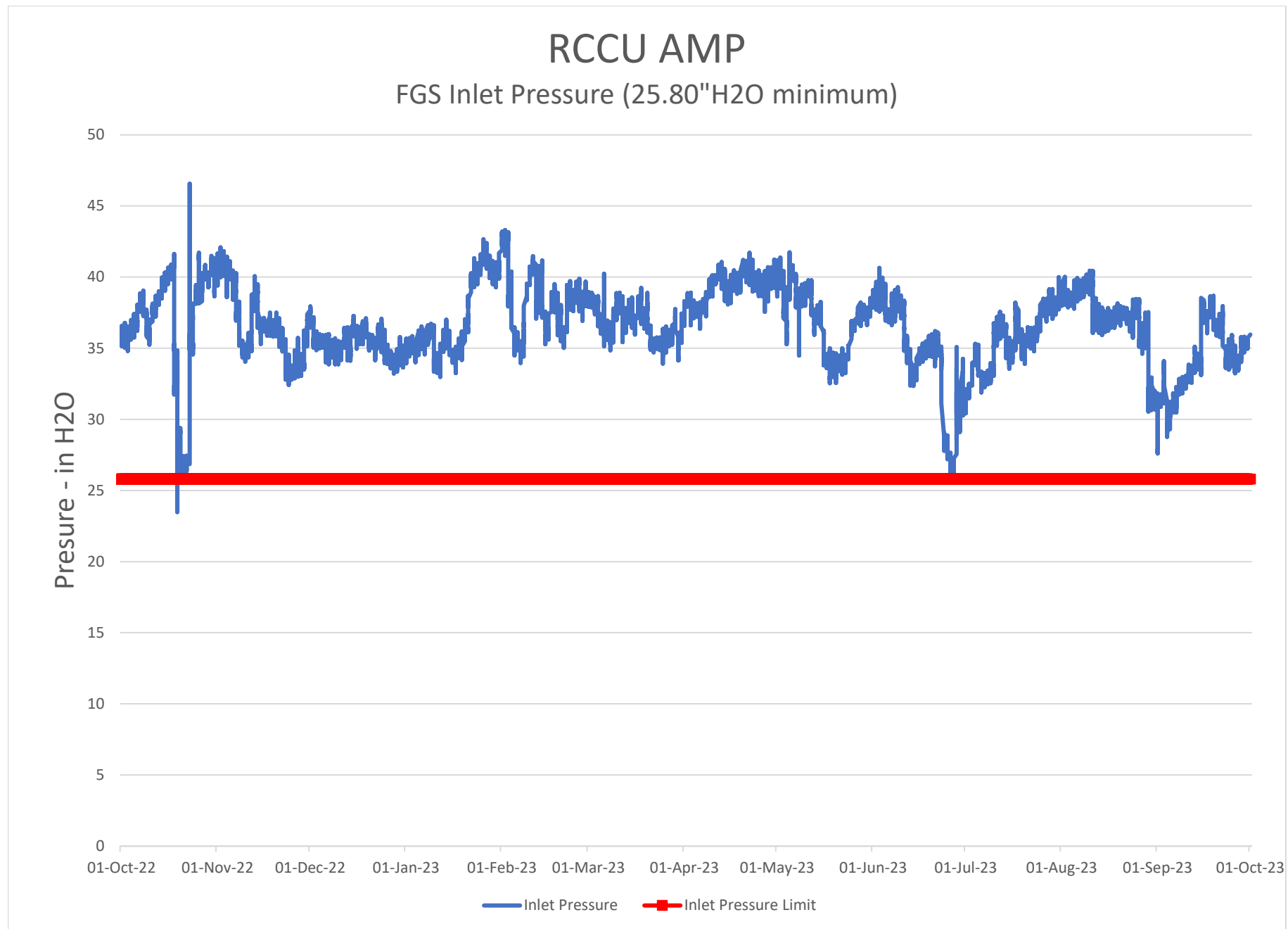
FCCU CO emission trends



Appendix 8

FCCU opacity AMP trends





Appendix 9

Excerpts of DOR and LDAR non-detect reports

Repair Delay - Current List (R323_1)

Report Date: 10/23/2023

Report Parameters

Unit: All Units

**UNIT: ALKY****AREA: LPG TREATERS**

Tag#:	Class	Location	Last Date	Last PPM	Ref. No.	Reason For Delay	Approved By	Date Delayed	Expected Repair	Unrepairable	Delayed for Shutdown
Drawing											
0104493.02	CONECT	T/2 PV-232 NSD PRV- 332 ESD BLK WSD FLG	10/17/2023	47		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Jeff Gribnau	2/4/2023	9/29/2023		Yes

E-01A-0248

Repair Delay - Current List (R323_1)

Report Date: 10/23/2023

Report Parameters

Unit: All Units



UNIT: COKER				AREA: SOUTH							
Tag#:	Class	Location	Last Date	Last PPM	Ref. No.	Reason For Delay	Approved By	Date Delayed	Expected Repair	Unrepairable	Delayed for Shutdown
Drawing											
1700135	VALVE	G/5 PV-904 15FT NE P-3135A SE INLET S BV	8/15/2023	619		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Joel Ortiz for Jeffrey Gribnau	1/27/2021	2/28/2023		Yes
E-05A-0105											

Repair Delay - Current List (R323_1)

Report Date: 10/23/2023

Report Parameters

Unit: All Units

**UNIT: CR2****AREA: CR2 REACTORS**

Tag#:	Class	Location	Last Date	Last PPM	Ref. No.	Reason For Delay	Approved By	Date Delayed	Expected Repair	Unrepairable	Delayed for Shutdown
Drawing											
0702683	VALVE	1P1/0 PV-953 NWSD CV MOV-9532 [A2]	9/11/2023	1		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Kimberly Goff	10/11/2022	3/31/2024		Yes
E-07A-0216											
16-18277	VALVE	6FT SE MOV MOV-E1	9/11/2023	2		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Jeffrey Gribnau	12/16/2020	1/31/2023		Yes

Repair Delay - Current List (R323_1)

Report Date: 10/23/2023

Report Parameters

Unit: All Units



UNIT: NHT

AREA: NHT - A

Tag#:	Class	Location	Last Date	Last PPM	Ref. No.	Reason For Delay	Approved By	Date Delayed	Expected Repair	Unrepairable	Delayed for Shutdown
Drawing											
06N00046	PUMP	G/0 PV-602 S 5FT P-3158	8/14/2023			Equipment is isolated from the process and does not remain in VOC service.	Kimberly Goff	8/29/2023	10/31/2023		
E-06A-0206											
06N00332	COMPR	G/0 PV-602 S 40FT K-1539	8/14/2023	2		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Kimberly Goff	6/28/2022	3/31/2023		Yes
E-06A-0235											

Repair Delay - Current List (R323_1)

Report Date: 10/23/2023

Report Parameters

Unit: All Units

**UNIT: PA REFINERY****AREA: GASZONE**

Tag#: Drawing	Class	Location	Last Date	Last PPM	Ref. No.	Reason For Delay	Approved By	Date Delayed	Expected Repair	Unrepairable	Delayed for Shutdown
RM117521	CONNECT	NSD TK F-457 MANWAY	8/23/2022	243		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Olisa Ojeh	8/18/2015	1/21/2024		Yes
RM55798.2	CONNECT	SLPR SW TK F-443 NSD MARK 44	6/1/2022	6503		Repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occ	Eric Billingsley	6/1/2022	6/30/2023		Yes

Component Tag	Area	Process Unit	Class	Type	Category	Location	Size Of	State
0601491	FVR - D	HCU	VALVE	NDVLV	N	G/1 PV 9227 N 30FT AH-021 SS	0.25	GV
0601492	FVR - D	HCU	VALVE	NDVLV	N	G/1 PV 9227 N 30FT AH-021 SS	0.25	LL
0601493	FVR - D	HCU	VALVE	NDVLV	N	G/1 PV 9227 N 30FT AH-021 SS	0.25	GV
0601494	FVR - D	HCU	VALVE	NDVLV	N	G/1 PV 9227 N 30FT AH-021 SS	0.25	LL
0601501	FVR - D	HCU	VALVE	NDVLV	N	G/3 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0600971	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED S TX-PT2200C	0.5	GV
0600972	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED TOP TX-PT2200C	0.5	GV
0600973	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED S TX-PT2200B	0.5	GV
0601502	FVR - D	HCU	VALVE	NDVLV	N	G/3 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0600974	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED TOP TX-PT2200B	0.5	GV
0600975	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED S TX-PT2200A	0.5	GV
0600976	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED TOP TX-PT2200A	0.5	GV
0601503	FVR - D	HCU	VALVE	NDVLV	N	G/3 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0600977	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED S TX-PT2017	0.5	GV
0600978	FVR - C	HCU	VALVE	NDVLV	N	1/4 PV-9208 PFRM 8FT S BLEED TOP TX-PT2017	0.5	GV
0601504	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601505	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601392	FVR - C	HCU	PUMP	ND	N	G/0 P-9229 SSD PV-9205A	0	LL
0600984	FVR - C	HCU	VALVE	NDVLV	N	G/16 PV-9214 SWSD BLEED W TX-PT2058	0.5	GV
0600985	FVR - C	HCU	VALVE	NDVLV	N	G/16 PV-9214 SWSD BLEED W TX-PT2058	0.5	GV
0600986	FVR - C	HCU	VALVE	NDVLV	N	G/16 PV-9214 SWSD BLEED TOP TX-PT2058	0.5	GV
0600987	FVR - C	HCU	VALVE	NDVLV	N	G/16 PV-9214 SWSD BLEED E TX-PT2058	0.5	GV
0600988	FVR - C	HCU	VALVE	NDVLV	N	G/16 PV-9214 SWSD BLEED E TX-PT2058	0.5	GV
0601402	FVR - C	HCU	PUMP	ND	N	G/0 P-9231 SSD PV-9205A	0	LL
0601506	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601507	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601508	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601509	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601510	FVR - D	HCU	VALVE	NDVLV	N	G/6 PV 9227 N 30FT AH-021 SS PANEL	0.25	GV
0601511	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601512	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601513	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601011	FVR - C	HCU	VALVE	NEA	N	G/2 PV-9214 15FT SESD CHK 5FT SE E-9242	6	GV
0601514	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601515	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601516	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601517	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601518	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601519	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL	0.25	GV
0601520	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL AE-0112B	0.25	GV
0601521	FVR - D	HCU	VALVE	NDVLV	N	G/4 PV 9227 30FT N. AH-021 SS PANEL AE-0112C	0.25	GV
0601550	FVR - D	HCU	VALVE	NDVLV	N	G/10 PV 9232 12FT W PV 9227 15FT SW TX PT-0028 E VLV	0.5	GV
0601551	FVR - D	HCU	VALVE	NDVLV	N	G/10 PV 9232 12FT W PV 9227 15FT SW TX PT-0028 TOP VLV	0.5	GV
0601559	FVR - D	HCU	VALVE	NDVLV	N	G/5 PV 9232 12FT W BLD VLV PV 9227 12FT W. TX PT-0069 W	0.5	GV
0601560	FVR - D	HCU	VALVE	NDVLV	N	G/5 PV 9232 12FT W BLD VLV PV 9227 12FT W. TX PT-0069 TC	0.5	GV
0601666	FVR - D	HCU	VALVE	NDVLV	N	1/3 STRUCT PV-9215 SESD BLD E TX-PT2070	0.5	GV
0601667	FVR - D	HCU	VALVE	NDVLV	N	1/3 STRUCT PV-9215 SESD BLD TOP TX-PT2070	0.5	GV

Component Tag	Area	Process Unit	Class	Type	Category	Location	Size Of	State
0601668	FVR - D	HCU	VALVE	NDVLV	N	1/4 STRUCT PV-9215 SSD BLD E TX-PT1070B	0.5	GV
0601669	FVR - D	HCU	VALVE	NDVLV	N	1/4 STRUCT PV-9215 SSD BLD TOP TX-PT1070B	0.5	GV
0601916	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9227 SE BLEED S TX-PT2074A	0.5	GV
0601917	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9227 SE BLEED TOP TX-PT2074A	0.5	GV
0601918	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9227 E BLEED S TX-PT1074A	0.5	GV
0601919	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9227 E BLEED TOP TX-PT1074A	0.5	GV
0601690	FVR - D	HCU	VALVE	NDVLV	N	1/4 STRUCT PV-9232 NSD BLD W TX-PT1074B	0.5	GV
0601691	FVR - D	HCU	VALVE	NDVLV	N	1/4 STRUCT PV-9232 NSD BLD TOP TX-PT2074B	0.5	GV
0601692	FVR - D	HCU	VALVE	NDVLV	N	1/4 STRUCT PV-9232 BLD W TX-PT2074B	0.5	GV
0601926	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9232 NE NDVLV N BLW TX-PT0070	0.5	GV
0601927	FVR - D	HCU	VALVE	NDVLV	N	T/4 PV-9232 NE NDVLV S BLW TX-PT0070	0.5	GV
0602135	FVR - C	HCU	VALVE	NDVLV	D	PR3/0 K-9210 NSD PV-9210C 8FT W PDT-2028 NV W	0.25	GV
0602136	FVR - C	HCU	VALVE	NDVLV	D	PR3/0 K-9210 NSD PV-9210C 8FT W PDT-2028 NV NW	0.25	GV
0602137	FVR - C	HCU	VALVE	NDVLV	D	PR3/0 K-9210 NSD PV-9210C 8FT W PDT-2028 NV TOP	0.25	GV
0602138	FVR - C	HCU	VALVE	NDVLV	D	PR3/0 K-9210 NSD PV-9210C 8FT W PDT-2028 NV NE	0.25	GV
0602139	FVR - C	HCU	VALVE	NDVLV	D	PR3/0 K-9210 NSD PV-9210C 8FT W PDT-2028 NV E	0.25	GV
0602145	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 SSD PV-9205A 5FT W PDT-1018 NV E	0.5	GV
0602146	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 SSD PV-9205A 5FT W PDT-1018 NV NE	0.5	GV
0602147	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 SSD PV-9205A 5FT W PDT-1018 NV TOP	0.5	GV
0602148	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 SSD PV-9205A 5FT W PDT-1018 NV NW	0.5	GV
0602152	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 NSD PV-9205C 9FT W PDT-1028 NV E	0.25	GV
0602153	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 NSD PV-9205C 9FT W PDT-1028 NV NE	0.25	GV
0602149	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 SSD PV-9205A 5FT W PDT-1018 NV W	0.5	GV
0602154	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 NSD PV-9205C 9FT W PDT-1028 NV TOP	0.25	GV
0602156	FVR - C	HCU	VALVE	NDVLV	N	PR3/0 K-9205 NSD PV-9205C 9FT W PDT-1028 NV W	0.25	GV
0602627	FLARE	HCU	VALVE	NDVLV	D	G/22 PV 3233 E 25FT TX FT-7344 LDAR RK 4 PS20 N 4FT TOP VI	0.5	GV
0602628	FLARE	HCU	VALVE	NDVLV	D	G/22 PV 3233 E 25FT TX FT-7344 LDAR RK 4 PS20 N 4FT N VLV	0.5	GV
0601093	FVR - C	HCU	VALVE	NDVLV	N	1/8 PV-9210E SESD BLD N TX-PDT2085	0.5	GV
0602172	FVR - C	HCU	VALVE	NDVLV	N	G/25 PV-206 8FT N NV	0.25	GV
0602173	FVR - C	HCU	VALVE	NDVLV	N	G/25 PV-206 8FT N NV TOP	0.25	GV
RM132508	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPR2 MARK 3 ESD NV S	0.5	LL
RM132549	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPR2 MARK 3 ESD NV	0.5	LL
RM132528	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPR2 MARK 3 ESD NV N	0.5	LL
RM126784	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPHR2 MARK 3 ESD NV E	0.5	LL
RM132834	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPHR2 MARK 3 ESD NV BTM	0.5	LL
RM132838	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/1 PV-495 E SLPHR2 MARK 3 ESD NV W	0.5	LL
RM132844	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/3 PV-495 E SLPHR2 MARK 2 WSD NV N	0.5	LL
RM132839	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	0/3 PV-495 E SLPHR2 MARK 2 WSD NV S	0.5	LL
RM132610	NORTHEAST EX PROBE	DU5	VALVE	NDVLV	N	7/4 PV-752 E TX PDT-2435 WSD NV S	0.5	HL
H25508	SOUTH PROPERTY EAST	PA SHELL	VALVE	NEA	N	G/3 TK F-434 SWSO CHK	2	HL
17-6027	NHT - D	NHT	VALVE	NDVLV	N	T/4 PV-630 WSD TX LT-1211 SESD NV BTM	0.25	HL
17-4876	NHT - D	NHT	VALVE	NDVLV	N	T/4 PV-630 WSD TX LT-1211 SESD NV MID	0.25	HL
17-4899	NHT - D	NHT	VALVE	NDVLV	N	T/4 PV-630 WSD TX LT-1211 SESD NV TOP	0.5	HL
40-9036	MIDZONE	PA REFINERY	VALVE	NEA	N	G/2 TK F-479 NWSO CHK	6	LL
172206	SOUTH	COKER	VALVE	NDVLV	N	T/1 PV-2915 8FT E PT-2673 N NDL	0.5	GV
40-9365	MIDZONE	PA REFINERY	VALVE	NEA	N	G/1 RK1 ESD PS111 SSD CHK (9TH ST SLPR)	6	LL
17-1759	SOUTH	COKER	VALVE	ND	N	12FT N E-1155 P-3165A DIS CHK	3	LL

Component Tag	Area	Process Unit	Class	Type	Category	Location	Size Of	State
40-9906	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	G/6 P-5652 5FT NE @ S.P. NSD W BLK	0.5 LL	
40-9907	BD/BPS STORAGE	PA SHELL	VALVE	NDVLV	N	G/6 P-5652 5FT NE @ S.P. NSD E BLK	0.5 LL	
42-11342	NORTH PROPERTY	PA REFINERY	VALVE	ND	N	G/5 SW TK F-516 SESD P-4570 CHK	3 LL	
RM132749	SOUTH PROPERTY MVR	PA REFINERY	VALVE	NDVLV	N	AH E-145 AT5736 MVR AREA	0.25 GV	
RM200301	BD/BPS STORAGE	PA SHELL	VALVE	NEA	N	NE PV-495 45FT N P-2548 NESD SKID NSD RVO-1729 CHK	6 LL	
40-9880	GASZONE	PA REFINERY	VALVE	ND	N	G/2 TK F-477 WSD MOV HV-1010 NWSD BLK	2 LL	
41-3380	BD/BPS STORAGE	PA SHELL	VALVE	NEA	N	G/2 PV-495 E P-5652 W 5FT CHK NSD BLD	0.75 LL	
41-3382	BD/BPS STORAGE	PA SHELL	VALVE	NEA	N	G/2 PV-495 E P-5652 NW 5FT BLD	0.75 LL	
1606114	2ND STAGE MID EAST	HCU	VALVE	NDVLV	N	G/4 PV-822 NE 4FT A-3408 [ON PANEL] BV	0.5 LL	
0101236	DEPROPANIZERS	ALKY	VALVE	NDVLV	N	G/3 E-626 NSD CV FCV-128 NESD FT-128 WSD NV N	0.5 LL	
0101237	DEPROPANIZERS	ALKY	VALVE	NDVLV	N	G/3 E-626 NSD CV FCV-128 NESD FT-128 WSD NV TOP	0.5 LL	
0101238	DEPROPANIZERS	ALKY	VALVE	NDVLV	N	G/3 E-626 NSD CV FCV-128 NESD FT-128 WSD NV S	0.5 LL	
RM200000	NORTH PROPERTY	PA REFINERY	VALVE	NEA	N	NSD TK F-484 CHK	3 LL	
06N02736	NHT - D	NHT	VALVE	NDVLV	N	T/2 PV-608 NSD PT-5018 ESD NV	0.5 GV	
42-6152	NORTH PROPERTY	PA REFINERY	VALVE	NEA	N	G/3 TK F-466 N 3FT WATER DRAW LN CHK	4 LL	
H19776	SOUTH PROPERTY EAST	PA REFINERY	VALVE	NEA	N	W TK F-490 WSD P-2807 CHK	6 LL	
H19783	SOUTH PROPERTY EAST	PA REFINERY	VALVE	NEA	N	W TK F-490 WSD P-2808 CHK	6 LL	
H21217	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1A NSD CATWALK ESD VLV BROWN CHK	0.5 LL	
H21225	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1A NSD CATWALK ESD VLV A-6455B CHK	0.5 LL	
H21248	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1A NWSD CATWALK WSD VLV A-6454B CHK	0.5 LL	
H21249	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1A SWSD CATWALK WSD VLV A-6454A CHK	0.75 LL	
H21266	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1A SSD CATWALK ESD VLV A-6455A CHK	0.5 LL	
H21720	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1 SSD CATWALK ESD VLV 6566A CHK	0.5 LL	
H22003	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1 SSD CATWALK ESD VLV 6562B CHK	0.5 LL	
H22006	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1 SSD CATWALK ESD VLV 6562A CHK	0.5 LL	
H22014	DOCKS BERTH-1	PA REFINERY	VALVE	ND	N	DOC1 NSD CATWALK ESD VLV 6562D CHK	0.5 LL	
H22628	DOCKS BERTH-1	PA REFINERY	VALVE	NEA	N	DOC1 SSD CATWALK ESD HGO VLV CHK	0.5 LL	
4000661	GASZONE NEW BLENDER	PA REFINERY	VALVE	NDVLV	N	G/5 NEW BLNDR SSD HDR14	0.5 LL	
4000740	GASZONE NEW BLENDER	PA REFINERY	VALVE	NDVLV	N	G/3 NSD PROVER	0.5 LL	
RM200186	NORTH PROPERTY	PA SHELL	VALVE	NDVLV	N	G/1 TK F-499 SW P-5610 SW 12FT TX FT-5257 WSD NV S	0.5 LL	
RM200185	NORTH PROPERTY	PA SHELL	VALVE	NDVLV	N	G/1 TK F-499 SW P-5610 SW 12FT TX FT-5257 WSD NV MID	0.5 LL	
RM200183	NORTH PROPERTY	PA SHELL	VALVE	NDVLV	N	G/1 TK F-499 SW P-5610 SW 12FT TX FT-5257 WSD NV N	0.5 LL	
5304235	R&R WEST	RCCU	VALVE	NDVLV	N	14P1/4 [RR STRUCT] SESD SE-7000 SE 4FT PDT-1232 NSD NV W	0.25 GV	
5304236	R&R WEST	RCCU	VALVE	NDVLV	N	14P1/4 [RR STRUCT] SESD SE-7000 SE 4FT PDT-1232 NSD NV T	0.25 GV	
5304237	R&R WEST	RCCU	VALVE	NDVLV	N	14P1/4 [RR STRUCT] SESD SE-7000 SE 4FT PDT-1232 NSD NV E	0.25 GV	
0103612	K-1696 COMP	ALKY	COMPR	SSVC	N	1/0 PV-410 S 10FT K-1696	0 GV	
0103949	K-1100 COMP	ALKY	COMPR	SSVC	N	T/0 E-651 NW 8FT K-1100	0 GV	
0102536	K-2960 COMP	ALKY	COMPR	SSVC	N	G/0 FF E-2903C SE 12FT K-2960	0 GV	
1602573	1ST STAGE NORTHWEST	HCU	COMPR	SSVC	N	1/3 K-1928 COMP SEAL	0 GV	
1605797	1ST STAGE NORTHWEST	HCU	COMPR	SSVC	N	1/0 C X-1929	10 GV	
0701907	CR2 COMPRESSORS	CR2	COMPR	SSVC	N	1/0 K-2056	8 GV	
0702579	CR2 COMPRESSORS	CR2	COMPR	SSVC	N	1/0 K-2057	0 GV	
3901375	COMPRESSOR	DHT	COMPR	SSVC	N	1/0 PV-2028 SW 15FT K-5339	0 GV	
3900267	COMPRESSOR	DHT	COMPR	SSVC	N	1/0 PV-1978 N 20FT K-5337	0 GV	
1000607	SOUTHWEST	DU5	COMPR	SSVC	N	G/0 K-1883	0.25 GV	
1000576	SOUTHWEST	DU5	COMPR	SSVC	N	G/0 E-1494 NE 15FT K-1879	0 GV	
41-10467	SOUTH PROPERTY EAST	PA REFINERY	COMPR	SSVC	N	TOP PV-2981 COMP K-4582	0 GV	

Component Tag	Area	Process Unit	Class	Type	Category	Location	Size Of	State
5308794	GAS PLANT EAST	RCCU	COMPR	SSVC	N	1P1/0 PV-7108 S 20FT K-7130	1 GV	
5701739	EASTSIDE	LSG	COMPR	SSVC	N	1/0 K-8100	0 GV	
1607113	2ND STAGE NORTHEAST	HCU	COMPR	SSVC	N	G/7 PV-859 W 6FT K-1968	0 GV	
1601369	1ST STAGE SOUTHEAST	HCU	COMPR	SSVC	N	G/5 PV-810 NE 15FT K-2515	4 GV	
1700222	SOUTH	COKER	COMPR	SSVC	N	1/4 K-2178	10 GV	
5305590	FLARE	RCCU	COMPR	SSVC	N	G/3 PV-7052 W 20FT K-7072	0.75 GV	
5305591	FLARE	RCCU	COMPR	SSVC	N	G/1 PV-7052 W 20FT K-7071	0 GV	
5305632	FLARE	RCCU	COMPR	SSVC	N	G/0 PV-7052 SW 20FT K-7070	14 GV	
06N00332	NHT - A	NHT	COMPR	SSVC	N	G/0 PV-602 S 40FT K-1539	0 GV	
06N00358	NHT - A	NHT	COMPR	SSVC	N	G/0 K-1536 NSD	0.25 GV	
RM64447	SOUTH PROPERTY MVR	PA REFINERY	COMPR	ND	N	C K-6321 I/B-O/B	0 GV	
RM64457	SOUTH PROPERTY MVR	PA REFINERY	COMPR	ND	N	C K-6320 I/B-O/B	0 GV	
RM64823	SOUTH PROPERTY MVR	PA REFINERY	COMPR	ND	N	C K-6322 I/B-O/B	0 GV	
RM67945	SOUTH PROPERTY MVR	PA REFINERY	COMPR	ND	N	C K-6323 I/B-O/B	0 GV	
06N00421	NHT - A	NHT	COMPR	SSVC	N	G/0 PV-886 N 15FT K-1537	0 GV	
1602771	2ND STAGE EAST	HCU	COMPR	SSVC	N	G/4 PV-946 S 10FT K-1931	8 GV	
0601156	FVR - C	HCU	COMPR	SSVC	N	1/0 K-9210 NESD PV-9210E	0 GV	
0601285	FVR - C	HCU	COMPR	SSVC	N	1/0 K-9205 NESD PV-9205E	0 GV	
1606067	1ST STAGE NORTHEAST	HCU	COMPR	SSVC	N	1/0 PV-801 E 12FT K-1927	2 GV	
1606066	1ST STAGE NORTHEAST	HCU	COMPR	SSVC	N	1/5 PV-803 E 12FT K-1926	2 GV	

Appendix 10

Description of flare gas recovery systems

Shell Norco Refinery – Flare Gas Recovery Systems

The Shell Norco Refinery owns and operates two flare recovery systems:

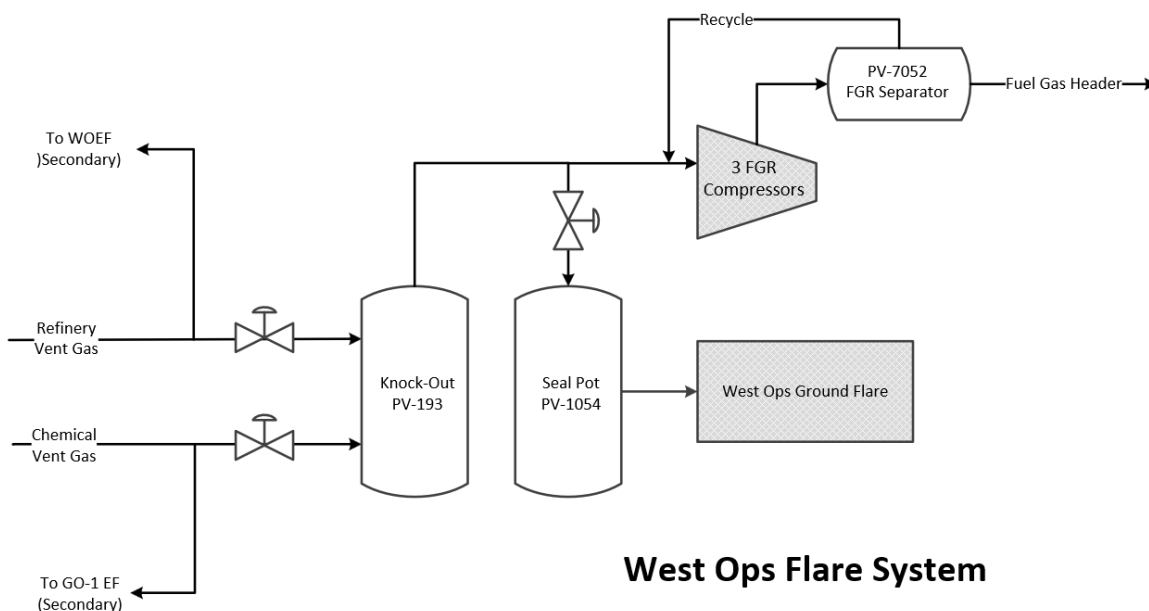
- 1) West Ops Flare Gas Recovery
- 2) Flare Vapor Recovery.

West Ops Flare Gas Recovery

The West Ops (WO) System receives waste gas from the refinery and the Shell Chemical manufacturing units. The refinery vents include gases from Alky and Logistics (spheres/storage, tank car/truck loading), and the chemical vents include gases from two Shell Chemical ethylene manufacturing units. The WO system includes the following equipment:

- 1) Flare gas recovery (FGR) compressors
- 2) West Ops Ground Flare (WOGF)
- 3) West Ops Elevated Flare (WOEF) – Owned/Operated by Shell Chemical
- 4) GO-1 Elevated Flare (GO-1 EF) – Owned/Operated by Shell Chemical

The FGR system consists of three compressors, associated piping, knock-out drums, and seal pots. The FGR compressors are sized to recover 3.6 MMSCFD of vent gas. Typically, all normally produced waste gas is recovered by the FGR and routed to the site's fuel gas system. If the FGR compressors are at capacity, vent gas will be preferentially routed to the WOGF for flaring. During larger flaring or other atypical scenarios, vent gas may be routed to the secondary flaring devices, either the WOEF or GO-1 EF.

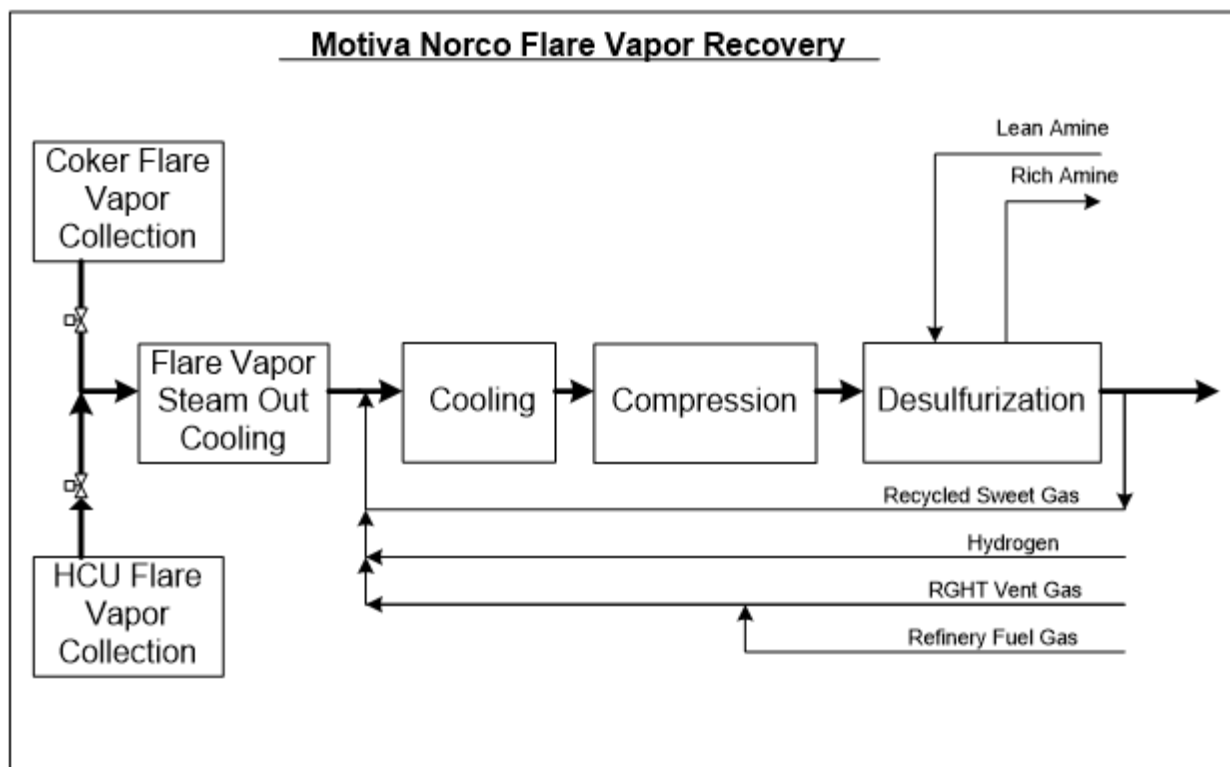


Flare Vapor Recovery System

The Flare Vapor Recovery (FVR) System collects vapors from both the Coker and HCU Flare systems, compress the vapors, remove excess sulfur bearing compounds, and routes the recovered vapor to the site fuel gas system for reuse. The Coker Flare system includes waste gases from the following areas: Coker, S2, DHT, SWS, GHT, and NHT. The HCU Flare header includes waste gases from the following areas: HCU, CR2, and FGT.

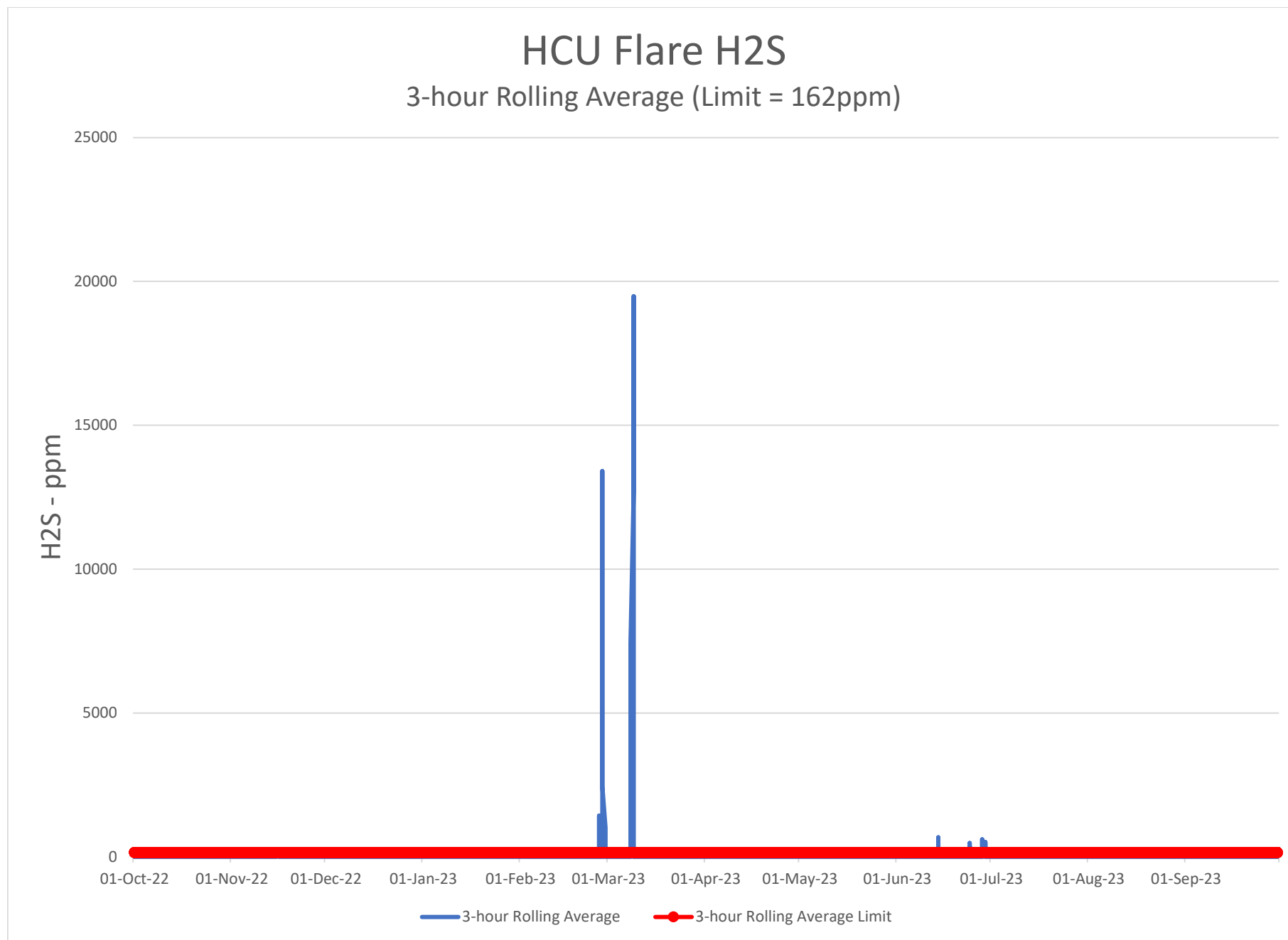
The recovered flare vapor is processed in a dedicated fixed catalyst bed hydrotreater to convert organic sulfur species such as mercaptan to non-sulfur bearing hydrocarbon and H₂S. The vapor then contacts lean amine in an H₂S absorber to remove the H₂S. The vapor then passes through a fixed adsorbent bed to remove residual sulfur bearing compounds prior to being blended into the existing site fuel gas system.

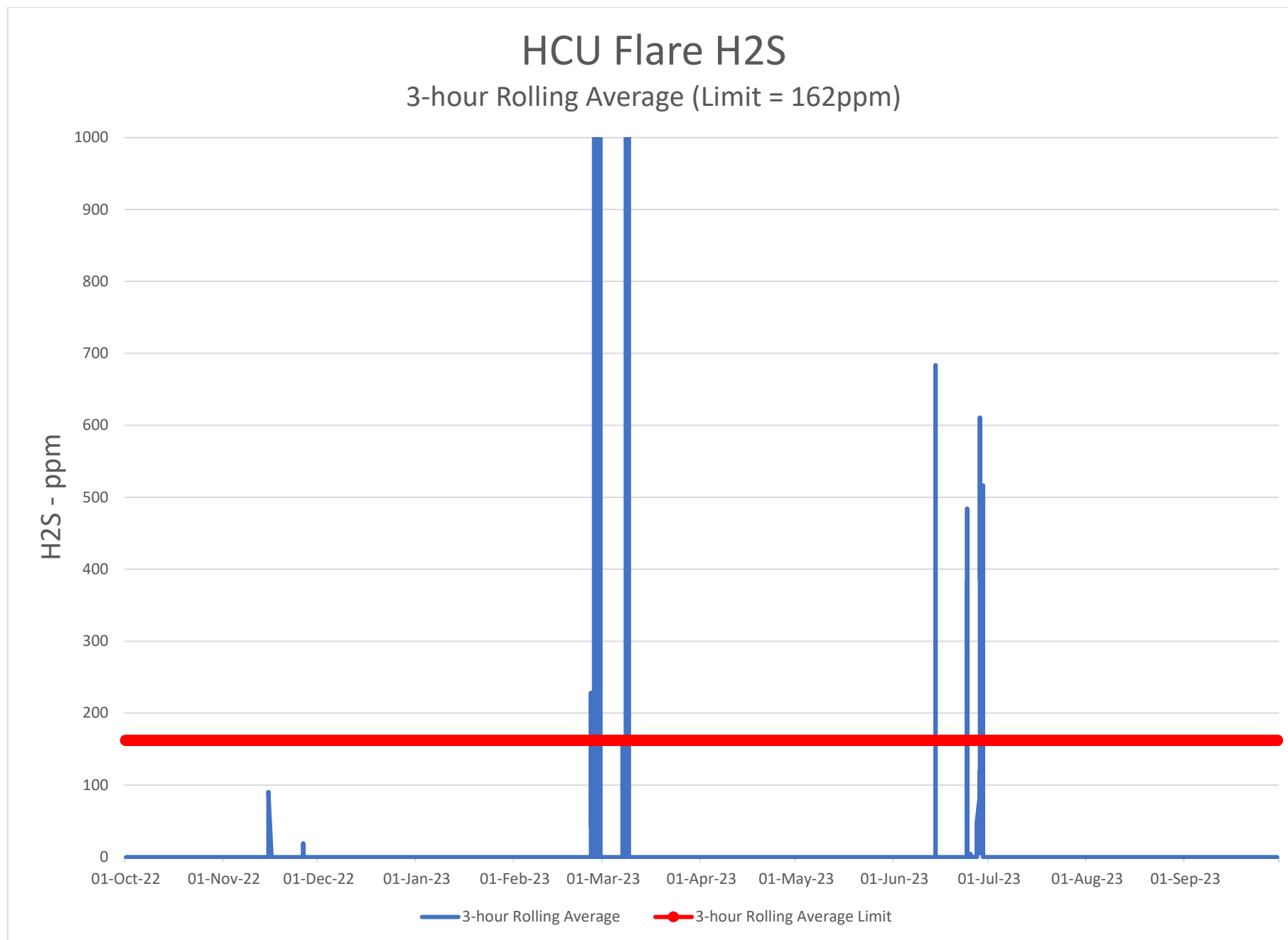
Parallel compressor and hydrotreater trains were designed to handle 6 MMSCFD each. The system may operate in either single train (6 MMSCFD) or dual train (12 MMSCFD) modes. Each piece of major equipment throughout the system is designed to handle 6 MMSCFD. The exception is in the Steam Out Cooler which is designed to handle 50,000 lb/hr steam plus 6 MMSCFD Flare vapor that is saturated with water.

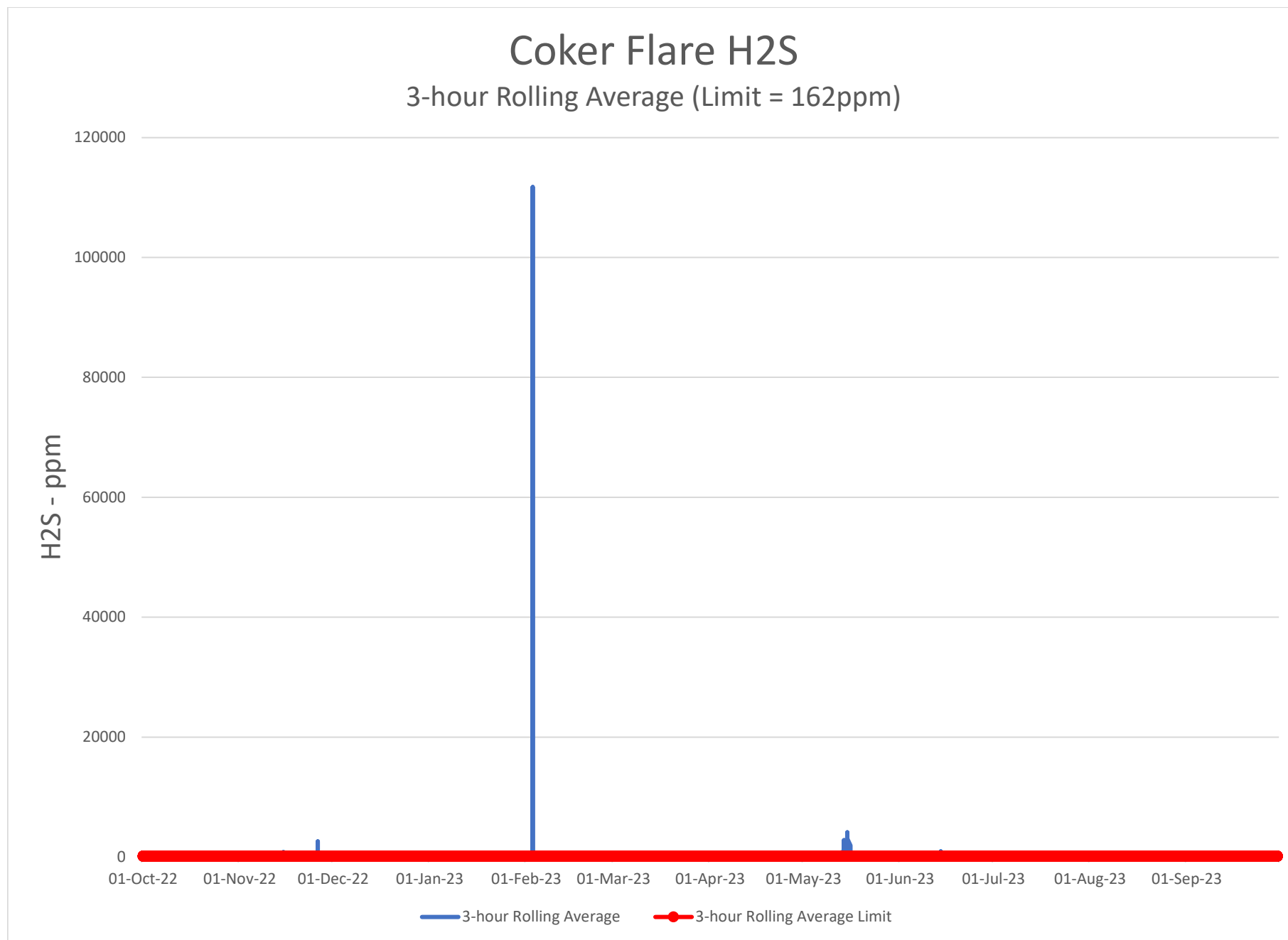


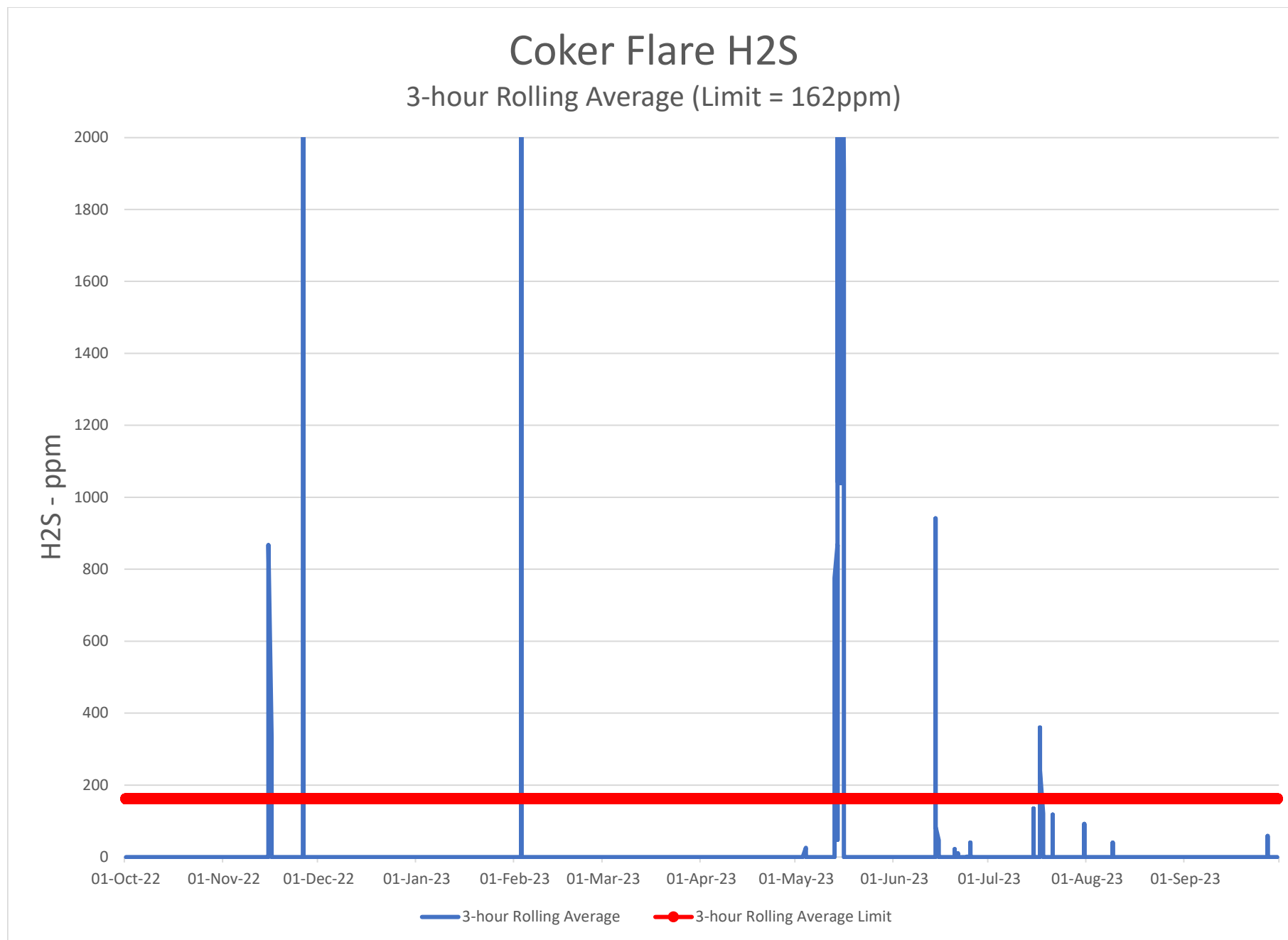
Appendix 11

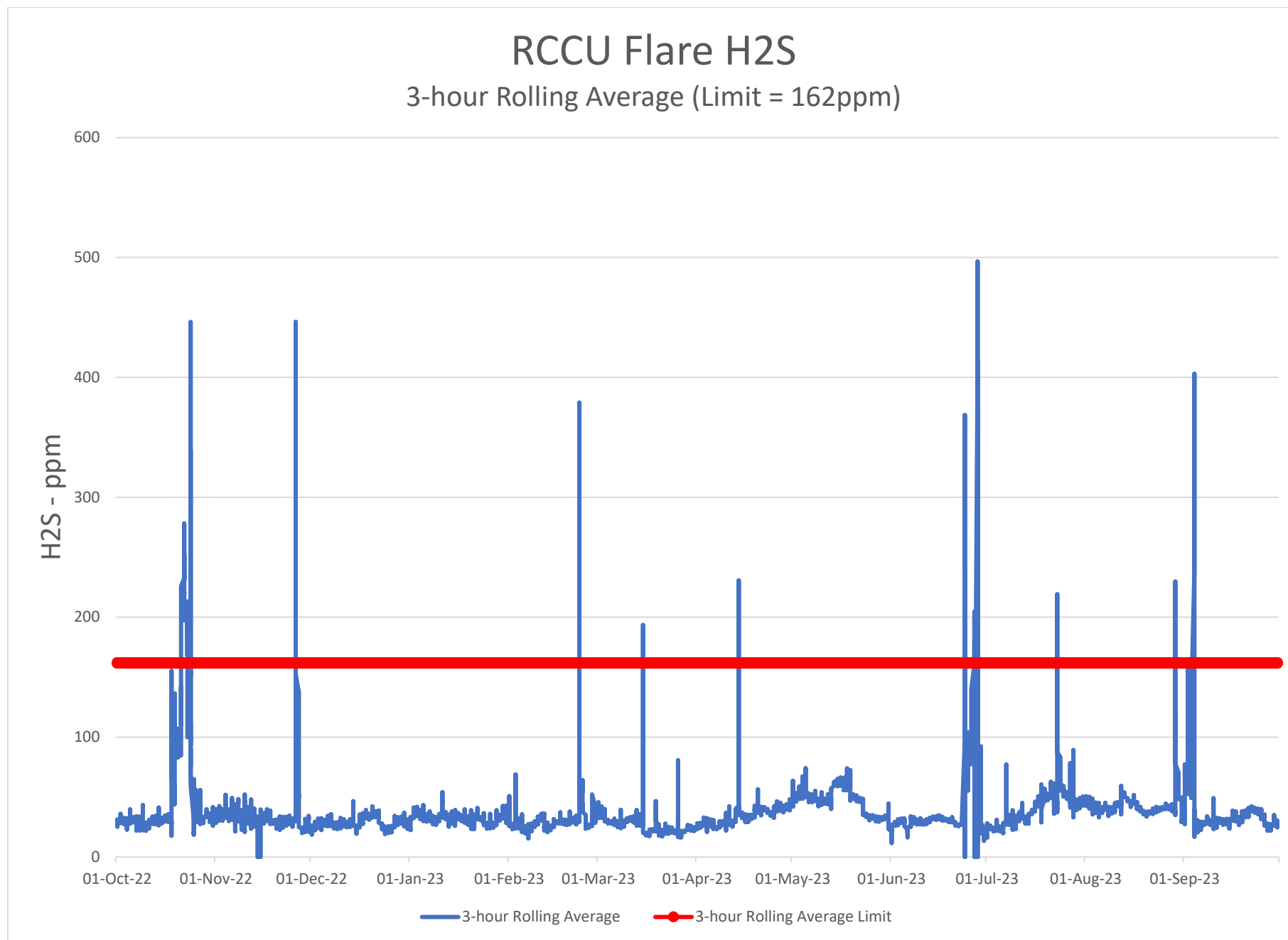
Flare H₂S emission trends

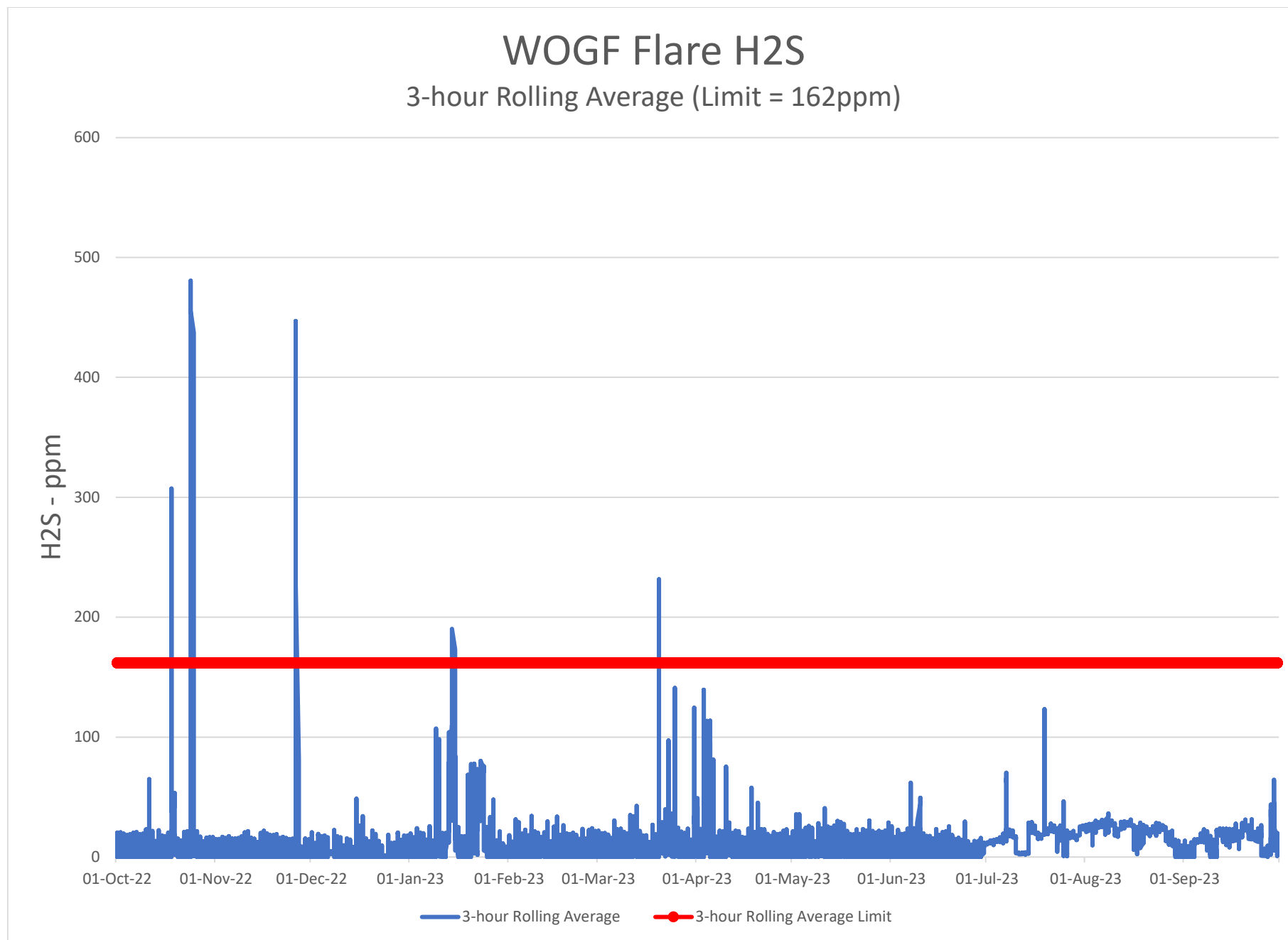












Appendix 12

Excerpts of permits

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, Ph.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL SERVICES

Certified Mail No.

Activity No.: PER20180011
Agency Interest No. 1406

Mr. Brett Woltjen
General Manager – Shell Norco Manufacturing Complex
Equilon Enterprises dba Shell Oil Products US
Norco Refinery
15536 River Road, P.O. Box 10
Norco, LA 70079

RE: Part 70 Operating Permit Renewal with Minor Modification, Residual Catalytic Cracking Unit, Norco Refinery, Equilon Enterprises LLC dba Shell Oil Products US, Norco, St. Charles Parish, Louisiana

Dear Mr. Woltjen:

This is to inform you that the permit renewal with modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 28th of January, 2027, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this 28th day of January, 2022.

Permit No.: 2602-V12

Sincerely,

Bliss M. Higgins
Assistant Secretary

BMH:mat
c: EPA Region VI

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20180011

Permit Number: 2602-V12

Air - Title V Regular Permit Renewal

EQT 0038 11-91 - S-7056, Rail Car/Truck Loading

- 38 [LAC 33:III.1305.A.] Prevent particulate matter from becoming airborne by taking all reasonable precautions including, but not limited to, those specified in LAC 33:III.1305.A.1 through A.7.
- 39 [LAC 33:III.1311.C.] Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.
- 40 [LAC 33:III.5107.A.2] Which Months: All Year Statistical Basis: Six-minute average Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 41 [LAC 33:III.5109.A.1] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. MACT is determined to be the use of a fabric filter having an efficiency of 95% or greater when operating.

EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber

- 42 [40 CFR 60.102(a)(1)] Total suspended particulate <= 1.0 kg/Mg (2.0 lb/ton) of coke burn-off, except as specified in 40 CFR 60.102(b). Subpart J. [40 CFR 60.102(a)(1)]
- 43 [40 CFR 60.102(a)(2)] Which Months: All Year Statistical Basis: None specified Opacity <= 30 percent, except for one six-minute average opacity reading in any one hour period. Subpart J. [40 CFR 60.102(a)(2)]
- 44 [40 CFR 60.103(a)] Which Months: All Year Statistical Basis: Six-minute average Carbon monoxide (CO) <= 500 ppmv (dry basis). Subpart J. [40 CFR 60.103(a)]
- 45 [40 CFR 60.104(b)(1)] Which Months: All Year Statistical Basis: None specified Sulfur dioxide >= 90 % reduction; or Sulfur dioxide <= 50 ppmv, whichever is less stringent and Sulfur dioxide <= 25 ppmvd on a 365-day rolling average. Subpart J. [40 CFR 60.104(b)(1)]
- 46 [40 CFR 60.105(a)(10)] Which Months: All Year Statistical Basis: Seven-day rolling average Continuously monitor and record concentrations of oxygen (O₂) in the gases at both the inlet and outlet of the sulfur dioxide control device (or the outlet only if specifically complying with the 50 ppmv standard) from the RCCU regenerator. The span of this continuous monitoring system shall be set at 10 percent. Subpart J. [40 CFR 60.105(a)(10)]
- 47 [40 CFR 60.105(a)(12)] Evaluate the continuous monitoring systems under paragraphs (a)(8), (a)(9), and (a)(10) of this section using the procedures provided in paragraphs (a)(12)(i) and (a)(12)(ii). Subpart J. [40 CFR 60.105(a)(12)]
- 48 [40 CFR 60.105(a)(1)] Opacity monitored by continuous parameter monitoring system (CPMS) continuously. Refer to AMP dated August 9, 2017. Subpart J. [40 CFR 60.105(a)(1)]
- 49 [40 CFR 60.105(a)(2)] Which Months: All Year Statistical Basis: None specified Carbon monoxide (CO) monitored by continuous emission monitor (CEM) continuously, except as provided in 40 CFR 60.105(a)(2)(ii). Subpart J. [40 CFR 60.105(a)(2)]
- 50 [40 CFR 60.105(a)(9)] Which Months: All Year Statistical Basis: None specified Continuously monitor and record concentrations of SO₂ in the gases discharged into the atmosphere from the RCCU regenerator in accordance with paragraphs 105(a)(9)(i) and (9)(2) to comply specifically with the 50 ppmv emission limit under 40 CFR 60.104(b)(1). Subpart J. [40 CFR 60.105(a)(9)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20180011

Permit Number: 2602-V12

Air - Title V Regular Permit Renewal

EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber

- 51 [40 CFR 60.105(c)] Operating time recordkeeping by electronic or hard copy daily. Record the average coke burn-off rate (Mg (tons) per hour) and hours of operation. Subpart J. [40 CFR 60.105(c)]
- 52 [40 CFR 60.105(e)] Comply with the applicable recordkeeping and reporting requirements of 40 CFR 60.105(e) and 60.107. Subpart J. [40 CFR 60.105(e), 40 CFR 60.107]
- 53 [40 CFR 60.106(a)] Use as reference methods and procedures the test methods in 40 CFR 60 appendix A or other methods and procedures as specified in 40 CFR 60.106, except as provided in 40 CFR 60.8(b), in conducting the performance tests required in 40 CFR 60.8. Subpart J. [40 CFR 60.106(a)]
- 54 [40 CFR 60.106] Determine compliance with standards using the test methods and procedures specified in 40 CFR 60.106(a) through (k). Subpart J.
- 55 [40 CFR 60.107(a)] Submit Notification: Due with the notification of initial startup required by 40 CFR 60.7(a)(3). Notify the Administrator of the specific provisions of 40 CFR 60.104(b) with which the owner or operator seeks to comply. Subpart J. [40 CFR 60.107(a)]
- 56 [40 CFR 60.107(b)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in paragraphs (b)(1) through (b)(4) of this section, as applicable. Subpart J. [40 CFR 60.107(b)]
- 57 [40 CFR 60.107(c)] Submit exceedance report except as provided by paragraph (d) of this section. The report shall contain information specified in paragraphs 107(c)(1) through (c)(6) of this section. Subpart J. [40 CFR 60.107(c)]
- 58 [40 CFR 60.108(d)] After conducting the initial performance test prescribed under 40 CFR 60.8 conduct a performance test for each successive 24-hour period thereafter, according to the appropriate procedures specified under 40 CFR 60.106. Subpart J. [40 CFR 60.108(d)]
- 59 [40 CFR 60.13(i)(1)] The following AMP, approved by EPA on November 5, 2015, are valid for a maximum coke burn rate of 92,000 lb/hr.
1. Outlet SO₂: Alarmed at 50 ppm
 2. Stack Temperature: Alarmed at 160 degree F. This parameter is an indicator of liquid to gas content across the venturis
 3. Venturi Inlet Pressure: Rate of change alarm to trigger at 1 inch H₂O/min. This would indicate loss of slurry flow to one of the venturis and a decrease in pressure drop and/or contacting.

- 60 [40 CFR 60.44b(e)] If the coke burn rate exceeds 92,000 lb/hr, permittee will visually monitor the opacity daily until the average coke burn rate falls below 92,000 lb/hr. Permittee will also record the daily coke burn rate to verify compliance with this AMP. [40 CFR 60.13(i)(1), 40 CFR 63.1563(g)]
- Shall limit the natural gas usage to less than 10 percent of the annual capacity factor of 668 MM BTU/hr for 8760 hours. The permittee shall keep records of the total natural gas usage for every month, as well the total usage for the last twelve months. These records shall be kept on site and available for inspection by the LDEQ personnel. The total usage of natural gas above the maximum listed in this permit condition as referenced above for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division. A report showing the total natural gas usage for the last twelve months shall be submitted to the Office of Environmental Compliance by March 31 for the preceding calendar year. Subpart Db. [40 CFR 60.44b(e)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20180011

Permit Number: 2602-V12

Air - Title V Regular Permit Renewal

EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber

- 98 [LAC 33:III.501.C.6] Nitrogen dioxide $\leq$ 203.1 ppmv @ 0% excess air based on 24-hour rolling average at 0% oxygen (when operating) and 150.8 ppmdv on a 365-day rolling average at 0% oxygen (at all times including during startup, shutdown, and malfunction) approved by EPA pursuant to a letter dated June 1, 2010. [Consent Decree].
Which Months: All Year Statistical Basis: 24-hour rolling average based on a one-hour average
- 99 [LAC 33:III.501.C.6] Operation of the Selective Non-Catalytic Reduction (SNCR) system to control NOx emissions from the Residual Catalytic Cracking Unit (RCCU) in accordance with the requirements of the Consent Decree may be temporarily suspended to perform necessary maintenance activities. During suspended operations of the SNCR, the permittee shall take all precautions to minimize NOx emissions from the CO Heater & Flue Gas Scrubber, Emission Point 2-91 and will continue to comply with all NOx emissions limits applicable to the RCCU CO Heater. [Consent Decree]. Shall install and operate a Selective Non-Catalytic Reduction (SNCR) system to control NOx emissions from the Residual Catalytic Cracking Unit (RCCU) in accordance with the requirements of the Consent Decree. [Consent Decree].
- 100 [LAC 33:III.501.C.6] Sulfur dioxide (SO₂) $\leq$ 50 ppmdv @ 0% excess air based on seven-day rolling average and 25 ppmdv @ 0% excess air based on maximum 365-day rolling average [Consent Decree].
- 101 [LAC 33:III.501.C.6] Which Months: All Year Statistical Basis: None specified
- 102 [LAC 33:III.501.C.6] The permittee shall keep records (date, duration of shutdown, reason, emissions, and the actions performed) of the Continuous Emissions Monitoring System (CEMS) which is located on the Flue Gas Scrubber outlet stack. These records shall be kept on-site and available for inspection by the Office of Environmental Compliance [Consent Decree].
- 103 [LAC 33:III.501.C.6] The permittee shall operate the RCCU Regenerator in full burn mode during the startup, shutdown, malfunction, and maintenance of the CO Heater. The permittee shall continue to comply with all the applicable requirements of 40 CFR 60 Subpart J while operating in full burn mode.

EQT 0046 2006-95 - Cooling Water Tower 12 - RCCU

- 104 [40 CFR 63.654(c)] Strippable VOC, Total monitored by the regulation's specified method(s) monthly. Identify leaks according to the procedures in 40 CFR 63.654(c)(1) through (c)(6), except as specified in 40 CFR 63.654(b). Subpart CC. [40 CFR 63.654(c)]
Which Months: All Year Statistical Basis: None specified
- 105 [40 CFR 63.654(d)] Repair a leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in 40 CFR 63.654(b), (e), and (f). Include in the repair re-monitoring at the monitoring location where the leak was identified according to the method specified in 40 CFR 63.654(c)(3) to verify the measured concentration is below the applicable action level. Subpart CC. [40 CFR 63.654(d)]
- 106 [40 CFR 63.654(g)] Record the information specified in 40 CFR 63.654(g)(1) and (g)(4), if repair of a leak is delayed under 40 CFR 63.654(f). Subpart CC. [40 CFR 63.654(g)]
- 107 [40 CFR 63.655(f)] Submit a Notification of Compliance Status report within 150 days after the compliance dates specified in 40 CFR 63.640(h). The Notification of Compliance Status report shall include the identification of each heat exchange system that is subject to the requirements of this subpart. Subpart CC. [40 CFR 63.655(f)]
- 108 [40 CFR 63.655(g)(9)] Submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the information specified in paragraphs (g)(9)(i) through (v) of this section is collected. Subpart CC. [40 CFR 63.655(g)(9)]
- 109 [40 CFR 63.655(h)(7)] Notify DEQ at least 30 calendar days prior to changing from one of the monitoring options specified in 40 CFR 63.654(c)(4) to the other. Subpart CC. [40 CFR 63.655(h)(7)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20180011

Permit Number: 2602-V12

Air - Title V Regular Permit Renewal

EQT 0049 6-91 - Internal Floating Roof Tank K-7600

- 165 [40 CFR 60.116b(c)] VOL storage data recordkeeping by electronic or hard copy at the approved frequency. Records consist of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. Keep copies of all records for at least two years.
- 166 [40 CFR 60.116b(d)] Subpart Kb. [40 CFR 60.116b(c)] Submit notification: Due within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. Subpart Kb. [40 CFR 60.116b(d)]
- 167 [40 CFR 60.116b(f)(1)] Determine the highest maximum true vapor pressure for the range of anticipated stored liquid compositions prior to the initial filling of the vessel using the methods described in 40 CFR 60.116b(e). Subpart Kb. [40 CFR 60.116b(f)(1)]
- 168 [40 CFR 60.116b(f)(2)] Vapor pressure monitored by physical testing once initially and once every six months using the methods specified in 40 CFR 60.116b(f)(2)(i) through (iii). Subpart Kb. [40 CFR 60.116b(f)(2)]
- 169 [40 CFR 61.342(e)] Which Months: All Year Statistical Basis: None specified
Benzene: Permittee shall comply with all the applicable requirements of the alternative requirements of paragraphs 40 CFR 61.342(c) and (d). The permittee shall manage and treat facility waste with a flow weighted annual average water content of less than 10 percent in accordance with 40 CFR 61.342(c)(1). The benzene quantity for the wastes described in 40 CFR 61.342(e)(2) shall be equal to or less than 6.6 tons per year, as determined in accordance with 40 CFR 61.355(k). Subpart FF. [40 CFR 61.342(e)]
- 170 [40 CFR 63.640(n)] Overlap of NESHAP, 40 CFR 63, Subpart CC: Group 1 or Group 2 vessels that is part of an existing source and is also subject to the requirements of NSPS, 40 CFR 60, Subpart Kb shall comply with NSPS, Subpart Kb requirements, except as provided in 40 CFR 63.640(n)(8). Subpart CC. [40 CFR 63.640(n)]

EQT 0051 8-84 - RCCU Flare (FE-201)

- 171 [40 CFR 60.103a(a)] Develop and implement a written flare management plan no later than the date specified in 40 CFR 60.103a(b), except as provided in 40 CFR 60.103a(g). Include the information described in 40 CFR 60.103a(a)(1) through (a)(7). Subpart Ja. [40 CFR 60.103a(a)]
- 172 [40 CFR 60.103a(b)(2)] Update the flare management plan periodically to account for changes in the operation of the flare. Submit the plan to DEQ if an alternative baseline flow rate is added, if an existing baseline is revised as described in 40 CFR 60.103a(a)(4), if a flare gas recovery system is installed, or if a change to flare designations and monitoring is required as described in 40 CFR 60.107(g). Comply with the updated plan as submitted. Subpart Ja. [40 CFR 60.103a(b)(2)]
- 173 [40 CFR 60.103a(b)(3)] Submit all versions of the plan submitted to DEQ also to the following address: U.S. Environmental Protection Agency, Office of Air Planning and Standards, Sector Policies and Programs, U.S. EPA Mailroom (E143-01), Attention: Refinery Section Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Send electronic copies to refinerynps@epa.gov, if submitting electronic copies in lieu of hard copies. Subpart Ja. [40 CFR 60.103a(b)(3)]
- 174 [40 CFR 60.103a(c)(1)] Conduct a root cause analysis and a corrective action analysis any time the SO₂ emissions exceed 227 kilograms (kg) (500 lb) in any 24-hour period; or for any discharge to the flare in excess of 14,160 standard cubic meters (m³) (500,000 standard cubic feet (scf)) above the baseline, determined in 40 CFR 60.103a(a)(4), in any 24-hour period; or if the monitoring alternative in 40 CFR 60.107a(g) is elected, any period when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in 40 CFR 60.103a(a)(3)(vii)(C), except as provided in 40 CFR 60.103a(f) and (g). Subpart Ja. [40 CFR 60.103a(c)(1)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20180011

Permit Number: 2602-V12

Air - Title V Regular Permit Renewal

EQI 0051 8-84 - RCCU Flare (FE-201)

175 [40 CFR 60.103a(d)]

Conduct the root cause analysis and corrective action analysis as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(3), as specified in 40 CFR 60.103a(d)(1) through (d)(5), except as provided in 40 CFR 60.103a (f) and (g). Subpart Ja. [40 CFR 60.103a(d)]

176 [40 CFR 60.103a(e)]

Implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a(e)(1) through (e)(3), except as provided in 40 CFR 60.103a(f) and (g). Subpart Ja. [40 CFR 60.103a(e)]

177 [40 CFR 60.103a(h)]

Fuel gas: Hydrogen sulfide $\leq$ 162 ppmv. Subpart Ja. [40 CFR 60.103a(h)]

178 [40 CFR 60.104a(a)]

Which Months: All Year Statistical Basis: Three-hour rolling average
Conduct a performance test to demonstrate initial compliance with the H₂S concentration requirement in 40 CFR 60.103a(h) according to the requirements of 40 CFR 60.8. Subpart Ja. [40 CFR 60.104a(a)]

179 [40 CFR 60.104a(c)]

Use the test methods in 40 CFR part 60, Appendices A-1 through A-8 or other methods as specified in 40 CFR 60.104, except as provided in 40 CFR 60.8(b), in conducting the performance tests required by 40 CFR 60 Subpart Ja (or as requested by DEQ). Subpart Ja. [40 CFR 60.104a(c)]

180 [40 CFR 60.104a]

Determine compliance with emission limitations using the test methods and procedures specified in 40 CFR 60.104a(d) through (j), as applicable. Subpart Ja.

181 [40 CFR 60.107a(a)(2)]

Hydrogen sulfide monitored by continuous emission monitor (CEM) continuously. Equip with a continuous recorder and monitor the concentration of H₂S in the fuel gases before being burned. Subpart Ja. [40 CFR 60.107a(a)(2)]

182 [40 CFR 60.107a(e)(3)]

Which Months: All Year Statistical Basis: None specified

183 [40 CFR 60.107a(e)(3)]

Calculate the total sulfur content (as SO₂) in the fuel gas using 40 CFR 60.107a(e) Equation 15. Subpart Ja. [40 CFR 60.107a(e)(3)]

184 [40 CFR 60.107a(e)(3)]

Determine the F factor of the fuel gas at least daily according to the requirements in 40 CFR 60.107a(d)(2) through (d)(4). Subpart Ja. [40 CFR 60.107a(e)(3)]

185 [40 CFR 60.107a(e)(3)]

Determine the higher heating value of the fuel gas at least daily according to the requirements in 40 CFR 60.107a(d)(7). Subpart Ja. [40 CFR 60.107a(e)(3)]

186 [40 CFR 60.107a(f)]

Sulfur dioxide monitored by continuous parameter monitoring system (CPMS) continuously, according to the requirements in 40 CFR 60.107a(a)(1). Equip with a continuous recorder and monitor. Subpart Ja. [40 CFR 60.107a(e)(3)]

Which Months: All Year Statistical Basis: None specified

Flow rate monitored by continuous parameter monitoring system (CPMS) continuously. Equip with a continuous recorder and monitor the flow rate of gas discharged to the flare, except as specified in 40 CFR 60.107a(f)(2) and (h). Locate the monitor in a position that provides a representative measurement of the total gas flow rate. Subpart Ja. [40 CFR 60.107a(f)]

187 [40 CFR 60.108a(b)]

Which Months: All Year Statistical Basis: None specified
Submit notification: Due with the notification of initial startup required by 40 CFR 60.7(a)(3). Notify LDEQ of the specific monitoring provisions of 40 CFR 60.107a to comply with this subpart. Subpart Ja. [40 CFR 60.108a(b)]

188 [40 CFR 60.108a(c)]

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in paragraphs (c)(1) through (c)(7) of this section. Subpart Ja. [40 CFR 60.108a(c)]

189 [40 CFR 60.108a(d)]

Submit excess emissions report: Due semiannually, by March 31st and September 30th Report all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in paragraphs (d)(1) through (7) of this section. Subpart Ja. [40 CFR 60.108a(d)]

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20180011****Permit Number: 2602-V12****Air - Title V Regular Permit Renewal****EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber**

- 61 [40 CFR 60.49b(a)] Submit Notification: Due as provided by 40 CFR 60.7, submit a notification of the date of initial startup including:
 (1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;
 (2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42b(d)(1);
 (3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and
 (4) Notification that an emerging technology will be used for controlling emissions of SO₂. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of 40 CFR 60.42b(a) unless and until this determination is made by the Administrator. Subpart Db. [40 CFR 60.49b(a)]
- 62 [40 CFR 60.49b(d)] Fuel rate recordkeeping by electronic or hard copy daily. Record the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. Determine the annual capacity factor on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. If the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions, the facility may record the amount of each fuel combusted during each calendar month. Subpart Db. [40 CFR 60.49b(d)]
- 63 [40 CFR 60.49b(o)] Maintain all records required under 40 CFR 60.49b for a period of 2 years following the date of such record. Subpart Db. [40 CFR 60.49b(o)]
- 64 [40 CFR 60.660] Shall comply with the alternative monitoring requirements as approved by U.S. EPA by a letter dated August 28, 2003. The letter states that the testing and monitoring requirements are exempt as per the requirements of NSPS, Subpart RRR, 40 CFR 60.703(c)(2) when firing fuel gas containing a vent stream from the OP-1 demethanizer system. Subpart NNN. [40 CFR 60.660, 40 CFR 60.8(b)(4)]
- 65 [40 CFR 60.662(a)] Introduce the vent stream into the flame zone if a process heater or boiler is used to comply. Subpart NNN. [40 CFR 60.662(a)]
- 66 [40 CFR 60.662(a)] Total Organic Compounds (less methane and ethane) $\geq$ 98 % reduction by weight, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. Subpart NNN. [40 CFR 60.662(a)]
 Which Months: All Year Statistical Basis: None specified
- 67 [40 CFR 60.665(b)] For a boiler or process heater submit a report containing the information in 40 CFR 60.665(b)(2)(i). Subpart NNN. [40 CFR 60.665(b)]
- 68 [40 CFR 60.665(l)] Submit report: Due semiannually. Submit initial report within 6 months after the initial start-up date. Include the information outlined in 40 CFR 60.665(l)(1) through (l)(7). Subpart NNN. [40 CFR 60.665(l)]
- 69 [40 CFR 63.1564(a)(1)] Except as provided in paragraph (a)(5) of this section, catalytic cracking units subject to the NSPS for PM in 40 CFR 60.102 or is subject to 40 CFR 60.102a(b)(1) must meet each emission limitation in Table 1 of this subpart. Subpart UUU. [40 CFR 63.1564(a)(1)]
- 70 [40 CFR 63.1564(a)(2)] Ensure flue gas scrubbers are operating properly and controlling opacity by monitoring the following parameters in accordance with the AMP :
 (1) FGS Liquid-to-Gas Ratio set at a minimum hourly average ratio of 13.86, and
 (2) Venturi Inlet Differential Pressure set at a minimum hourly average pressure of 25.80 inches of H₂O. Subpart UUU. [40 CFR 63.1564(a)(2)]
- 71 [40 CFR 63.1564(a)(2)] In lieu of complying with each operating limit in Table 2 of this subpart as applicable, comply with Alternative Monitoring Plan (AMP), in accordance with 40 CFR 63.1573(g), as approved by EPA on May 7, 2018. Subpart UUU. [40 CFR 63.1564(a)(2)]

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20180011****Permit Number: 2602-V12****Air - Title V Regular Permit Renewal****EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber**

- 72 [40 CFR 63.1564(a)(5)] Comply with one of the two options below during periods of startup, shutdown and hot standby:
(i) Comply with the requirements in paragraphs (a)(1) and (2) of this section, except catalytic cracking units controlled using a wet scrubber must maintain only the liquid to gas ratio operating limit (the pressure drop operating limit does not apply); or
(ii) Maintain the inlet velocity to the primary internal cyclones of the catalytic cracking unit catalyst regenerator at or above 20 feet per second. Subpart UUU. [40 CFR 63.1564(a)(5)]
- 73 [40 CFR 63.1564(c)(1)] Demonstrate continuous compliance with each applicable emission limitation in 40 CFR 63 Subpart UUU Tables 1 and 2 according to the methods specified in 40 CFR 63 Subpart UUU Tables 6 and 7, and in 40 CFR 63.1564(c)(3) and (c)(4), as applicable. Subpart UUU. [40 CFR 63.1564(c)(1)]
- 74 [40 CFR 63.1564(c)(2)] Demonstrate continuous compliance with the work practice standard in 40 CFR 63.1564(a)(3) by maintaining records to document conformance with the procedures in the operation, maintenance, and monitoring plan. Subpart UUU. [40 CFR 63.1564(c)(2)]
- 75 [40 CFR 63.1564(c)(5)] If complying with the alternative limit in paragraph (a)(5)(ii) of this section during periods of startup, shutdown and hot standby, demonstrate continuous compliance in accordance with the requirements in paragraphs (c)(5)(i) through (c)(5)(iv) of this section. Subpart UUU. [40 CFR 63.1564(c)(5)]
- 76 [40 CFR 63.1565(a)(1)] Except as provided in paragraph (a)(5) of this section, catalytic cracking units subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103 or is subject to 40 CFR 60.102a(b)(4) must meet each emission limitation in Table 8 of this subpart that applies. Subpart UUU. [40 CFR 63.1565(a)(1)]
- 77 [40 CFR 63.1565(a)(2)] Comply with each site-specific operating limit in Table 9 of this subpart as applicable. Subpart UUU. [40 CFR 63.1565(a)(2)]
- 78 [40 CFR 63.1565(a)(3)] Prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR 63.1574(f) and operate at all times according to the procedures in the plan. Subpart UUU. [40 CFR 63.1564(a)(3), 40 CFR 63.1565(a)(3), 40 CFR 63.1569(a)(3)]
- 79 [40 CFR 63.1565(a)(5)] Comply with one of the two options below during periods of startup, shutdown and hot standby:
(i) Comply with the requirements in paragraphs (a)(1) and (2) of this section; or
(ii) Maintain the oxygen (O₂) concentration in the exhaust gas from the catalyst regenerator at or above 1 volume percent (dry basis) or 1 volume percent (wet basis with no moisture correction). Subpart UUU. [40 CFR 63.1565(a)(5)]
- 80 [40 CFR 63.1565(b)(1)] Install, operate, and maintain a continuous monitoring system according to the requirements in 40 CFR 63.1572 and Table 10 of this subpart, except as provided in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. Subpart UUU. [40 CFR 63.1565(b)(1)]
- 81 [40 CFR 63.1565(c)(1)] Demonstrate continuous compliance with each applicable emission limitation in 40 CFR 63 Subpart UUU Tables 8 and 9 according to the methods specified in 40 CFR 63 Subpart UUU Tables 13 and 14. Subpart UUU. [40 CFR 63.1565(c)(1)]
- 82 [40 CFR 63.1565(c)(2)] Demonstrate continuous compliance with the work practice standard in 40 CFR 63.1565(a)(3) by complying with the procedures in the operation, maintenance, and monitoring plan. Subpart UUU. [40 CFR 63.1565(c)(2)]
- 83 [40 CFR 63.1569(a)(1)] Bypass lines: meet each work practice standard in Table 36 of this subpart by choosing from the four options in paragraphs (a)(1)(i) through (iv) of this section. Subpart UUU. [40 CFR 63.1569(a)(1)]
- 84 [40 CFR 63.1569(c)(1)] Bypass lines: Demonstrate continuous compliance with each applicable work practice standard in 40 CFR 63 Subpart UUU Table 36 according to the requirements in 40 CFR 63 Subpart UUU Table 39. Subpart UUU. [40 CFR 63.1569(c)(1)]
- 85 [40 CFR 63.1569(c)(2)] Demonstrate continuous compliance with the work practice standard in 40 CFR 63.1569(a)(2) by complying with the procedures in the operation, maintenance, and monitoring plan. Subpart UUU. [40 CFR 63.1569(c)(2)]

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20180011****Permit Number: 2602-V12****Air - Title V Regular Permit Renewal****EQT 0045 2-91 - RCCU Regenerator with CO Heater (F-7002) & Flue Gas Scrubber**

- 86 [40 CFR 63.1570(f)] Report each instance in which the applicable emission limitations, operating limits, and work practice standards in 40 CFR 63 Subpart UUU were not met according to the requirements in 40 CFR 63.1575. Subpart UUU. [40 CFR 63.1570(f)]
- 87 [40 CFR 63.1571(a)(5)] Periodic performance testing for PM or Ni: Except as provided in paragraphs (a)(5)(i) and (ii) of this section, conduct a periodic performance test for PM or Ni for each catalytic cracking unit at least once every 5 years according to the requirements in Table 4 of this subpart. Conduct the first periodic performance test no later than August 1, 2017 or within 150 days of startup of a new unit. Subpart UUU. [40 CFR 63.1571(a)(5)]
- 88 [40 CFR 63.1571(a)(6)(ii)] One-time performance testing for Hydrogen Cyanide (HCN): Unless approval has been received to use a previously conducted performance test to fulfill the one-time performance test requirement for HCN for the catalytic cracking unit as provided in 40 CFR 63.1571(a)(6)(i), conduct a performance test for HCN for each catalytic cracking unit no later than August 1, 2017 according to requirements in paragraphs (a)(6)(ii)(A) through (a)(6)(ii)(D) of this section. Subpart UUU. [40 CFR 63.1571(a)(6)(ii)]
- 89 [40 CFR 63.1573(g)] Owners or operators of a catalytic cracking unit equipped with a wet scrubber that have approved alternative monitoring requirements under the new source performance standards for petroleum refineries, and meet each of the conditions in paragraphs (g)(1)(i) through (iii) of this section, may request alternative monitoring requirements according to the procedures in paragraphs (g)(2) through (g)(4) of this section. Subpart UUU. [40 CFR 63.1573(g)]
- 90 [40 CFR 63.1574(a)] Submit all of the applicable notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h) by the dates specified, except as allowed in 40 CFR 63.1574(a)(1) through (a)(3). Subpart UUU. [40 CFR 63.1574(a)]
- 91 [40 CFR 63.1574(d)] Include the information in 40 CFR 63 Subpart UUU Table 42 in the notification of compliance status report. Subpart UUU. [40 CFR 63.1574(d)]
- 92 [40 CFR 63.1574(f)] Prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. In the plan, detail the operation, maintenance, and monitoring procedures for the facility. Submit the plan to DEQ for review and approval along with the notification of compliance status. Submit any changes to DEQ for review and approval and comply with the plan until the change is approved. Include in each plan, at a minimum, the information specified in 40 CFR 63.1574(f)(2)(i) through (f)(2)(xii). Subpart UUU. [40 CFR 63.1574(f)]
- 93 [40 CFR 63.1575] Submit compliance status report: Due semiannually, by the 31st of January and July. Include the information specified in 40 CFR 63.1575(c) through (j), as applicable. Subpart UUU.
- 94 [40 CFR 63.1576] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.1576(a) through (f). Keep records in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1). Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The remaining 3 years may be kept off site. Subpart UUU.
- 95 [LAC 33:III.1311.D] Opacity $\leq$ 30 percent, except for one six-minute average opacity reading in any one hour period.
Which Months: All Year Statistical Basis: Six-minute average
- 96 [LAC 33:III.1313.C] Total suspended particulate $\leq$ 0.6 lb/MMBTU of heat input.
Which Months: All Year Statistical Basis: None specified
- 97 [LAC 33:III.1503.C] Compliance with the requirements of NSPS, 40 CFR 60, Subpart J has been determined to be compliance with the requirements of LAC 33:III.Chapter 13 and Chapter 15. [LAC 33:III.1503.C, LAC 33:III.1311.D, LAC 33:III.1513]

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No. 7020 3160 0000 9229 7413

Activity No.: PER20190003
Agency Interest No. 1406

Mr. Brett Woltjen
General Manager- Norco Manufacturing Complex
Equilon Enterprises LLC dba Shell Oil Products US
15536 River Rd, P.O. Box 10
Norco, LA 70079

RE: Part 70 Operating Permit Renewal and Modification
Equilon Enterprises LLC dba Shell Oil Products US, Norco Refinery-Sulfur Plants Nos. 2&3
Norco, St. Charles Parish, Louisiana

Dear Mr. Woltjen:

This is to inform you that the permit renewal/modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

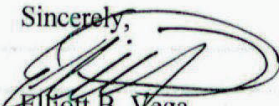
Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 2nd of November, 2026, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this 2nd day of November, 2021.

Permit No.: 2902-V5

Sincerely,


Elliott B. Vega
Assistant Secretary
EBV: dmf
c: EPA Region VI

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Norco Refinery- Sulfur Plant Nos. 2&3
 Agency Interest No.: 1406
 Equilon Enterprises LLC dba Shell Oil Products US
 Norco, St. Charles Parish, Louisiana

Table 1. Applicable Louisiana and Federal Air Quality Requirements																			
ID No.:	Description	LAC 33:III.Chapter																	
		5 ^A	9	11	13	15	2103	2111	2113	2121	2115	2141	17	2301	29	51*	53*	56	59*
UNF0013	Sulfur Plant S-2 & S-3	1	1	1	1				1						1	1		1	1
ARE0018	S-2 Plant Process Wastewater Emissions									1									
ARE0020	S-3 Plant Process Wastewater Emissions									1									
EQT0070	Fixed Roof Tank (K-564)						3												
EQT0071	Fixed Roof Tank (K-503)						3												
EQT0072	Fixed Roof Tank (K-459)						3												
EQT0073	Fixed Roof Tank (K-521)						3								1				
EQT0074	S-2 Plant Tail Gas Incinerator		1	1	1	1													
EQT0075	S-2 Plant Tank Car Loading				1										1				
EQT0076	1013-95, Fixed Roof Tank (K-549) – Diethanolamine 35%						3												
EQT0077	1015-95, Fixed Roof Tank (K-548) – Diethanolamine 85%						3												
EQT0078	S-3 Plant Tail Gas Incinerator		1	1	1	1													
EQT0350	S-2 Plant Tank Truck Loading				1											1			
EQT0351	S-3 Plant Tank Truck Loading				1											1			
EQT0352	Fixed Roof Tank (TM-5956) – Aqueous NH ₃ 19%						3												

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Norco Refinery- Sulfur Plant Nos. 2&3

Agency Interest No.: 1406

Equilon Enterprises LLC dba Shell Oil Products US

Norco, St. Charles Parish, Louisiana

Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	LAC 33:III. Chapter													
		5 [▲]	9	11	13	15	2103	2111	2113	2121	2115	2141	17	2301	29
EQT0353	Fixed Roof Tank (TM-5956) – Aqueous NH ₃ 19%						3								
EQT0358	S-2 Super Surge Vent					1					1				
EQT0359	S-2 Flash Skim Vent					1					1				
EQT0360	S-2 SW Degassing Drum Vent					1					1				
EQT0432	S-2 Sulfur Plant Pit														
EQT0630	SRU Cooling Water Tower				3										
EQT0653	S-3 Sulfur Plant Pit														
FUG0010	S-2 Plant Fugitive Emissions							1		2					
FUG0011	S-3 Plant Fugitive Emissions							1		2					

* The regulations indicated above are State Only regulations.

▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Norco Refinery- Sulfur Plant Nos. 2&3
 Agency Interest No.: 1406
 Equilon Enterprises LLC dba Shell Oil Products US
 Norco, St. Charles Parish, Louisiana

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements																											
ID No.:	Description	40 CFR 60 NSPS										40 CFR 61					40 CFR 63 NESHAP					40 CFR					
		A	Db	Dc	J	Kb	XX	3Ga	NNN	QQQ	A	J	M	V	FF	A	H	Q	CC	UUU	5D	5G	64	68	82		
UNF0013	Sulfur Plant S-2 & S-3	1								1		1		1	1	1			1	1							
ARE0018	S-2 Process Wastewater Emissions									3									1						1		
ARE0020	S-3 Plant Process Wastewater Emissions									1									1								
EQT0070	Fixed Roof Tank (K-564)					3													1								
EQT0071	Fixed Roof Tank (K-503)					3													1								
EQT0072	Fixed Roof Tank (K-459)					3													3								
EQT0073	Fixed Roof Tank (K-521)					3													3								
EQT0074	Tail Gas Incinerator				1														3	1							
EQT0075	Loading TT/TC Uncontrolled																		3								
EQT0076	Fixed Roof Tank (K.549) – Diethanolamine 35%					3													1								
EQT0077	Fixed Roof Tank (K-548) – Diethanolamine 85%					3													1								
EQT0078	S-3 Plant Tail Gas Incinerator				1														3	1							
EQT0350	S-2 Plant Tank Truck Loading																		3								
EQT0351	S-3 Plant Tank Truck Loading																		3								
EQT0352	Fixed Roof Tank (TM-5956) – Aqueous NH ₃ 19%					3													3								
EQT0353	Fixed Roof Tank (TM-5956) – Aqueous NH ₃ 19%					3													3								
EQT0358	S-2 Super Surge Vent																										
EQT0359	S-2 Flash Skim Vent																										
EQT0360	S-2 SW Degassing Drum Vent																							1			
EQT0432	S-2 Sulfur Plant Pit																							1			

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Norco Refinery- Sulfur Plant Nos. 2&3
 Agency Interest No.: 1406
 Equilon Enterprises LLC dba Shell Oil Products US
 Norco, St. Charles Parish, Louisiana

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	40 CFR 60 NSPS						40 CFR 61					40 CFR 63 NESHAP					40 CFR							
		A	Db	Dc	J	Kb	XX	3Ga	NNN	QQQ	A	J	M	V	FF	A	H	Q	CC	UUU	5D	5G	64	68	82
EQT0630	SRU Cooling Water Tower																								
EQT0653	S-3 Sulfur Plant Pit																								
FUG0010	S-2 Fugitive Emissions							1			3		3				1		1						
FUG0011	S-3 Plant Fugitive Emissions							1			3		3				1		1						

KEY TO MATRIX

- 1 -The regulations have applicable requirements that apply to this particular emission source.
- 2 -The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 3 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.

Blank - The regulations clearly do not apply to this type of emission source.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Norco Refinery- Sulfur Plant Nos. 2&3
 Agency Interest No.: 1406
 Equilon Enterprises LLC dba Shell Oil Products US
 Norco, St. Charles Parish, Louisiana

XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source			
ID No:	Description	Requirement	Notes
EQT0072	Fixed Roof Tank	40 CFR 60 Subpart Kb- Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	DOES NOT APPLY. Tank has a storage capacity less than 75 cubic meters. [40 CFR 60.110b(a)]
		40 CFR 63 Subpart CC- HAPs from Petroleum Refineries	DOES NOT APPLY. Does not emit HAPs listed in Table 1. [40 CFR 63.640(a)(2)]
		LAC 33:III.2103- Storage of VOCs	DOES NOT APPLY. True vapor pressure of stored material is less than 1.5 psia. [LAC 33:III.2103.A]
EQT0073	Fixed Roof Tank	40 CFR 60 Subpart Kb- Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	DOES NOT APPLY. Does not store VOL. [40 CFR 60.110b(a)]
		40 CFR 63 Subpart CC- HAPs from Petroleum Refineries	DOES NOT APPLY. Does not store organic liquids. [40 CFR 63.640(a)(2)]
		LAC 33:III.2103- Storage of VOCs	DOES NOT APPLY. Does not store VOL [LAC 33:III.2103.B]
EQT0074	S-2 Tail Gas Incinerator	40 CFR 63 Subpart CC- HAPs from Petroleum Refineries	DOES NOT APPLY. Not an affected sources. [40 CFR 63.640(d)(4)]
EQT0078	S-3 Tail Gas Incinerator		

INVENTORIES**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****Subject Item Inventory:**

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Comments	Operating Time
Sulfur Plant No. 2 and No. 3						
ARE 0018	3214-95 - S-2 Plant Process Wastewater Emissions					8760 hr/yr
ARE 0020	3215-95 - S-3 Plant Process Wastewater Emissions					8760 hr/yr
EQT 0070	1011-95 - Fixed Roof Tank K-564 (Diethanolamine, 35%)	56408 gallons		5.7 MM gallons/yr	Fixed Roof	8760 hr/yr
EQT 0071	1014-95 - Fixed Roof Tank K-503 (Diethanolamine, 85%)	14689 gallons		500000 gallons/yr	Fixed Roof	8760 hr/yr
EQT 0072	1053-95 - Fixed Roof Tank K-459 (Methyldiethanolamine 85%)	11916 gallons		109000 gallons/yr	Fixed Roof	8760 hr/yr
EQT 0073	1107-95 - Fixed Roof Tank K-521 (Molten Sulfur)	329032 gallons		120.1 MM gallons/yr	Fixed Roof	8760 hr/yr
EQT 0074	23-76 - S-2 Plant Tail Gas Incinerator		28.31 MM BTU/hr	26.28 MM BTU/hr		8760 hr/yr
EQT 0075	3303-95 - S-2 Plant Tank Car Loading		50000 gallons/hr	2.314 MM gallons/yr		200 hr/yr
EQT 0076	1013-95 - Fixed Roof Tank K-549 (Diethanolamine, 35%)	56408 gallons		6.6 MM gallons/yr	Fixed Roof	8760 hr/yr
EQT 0077	1015-95 - Fixed Roof Tank K-548 (Diethanolamine, 85%)	14689 gallons		500000 gallons/yr	Fixed Roof	8760 hr/yr
EQT 0078	2-90 - S-3 Plant Tail Gas Incinerator		24.51 MM BTU/hr	21.38 MM BTU/hr		8760 hr/yr
EQT 0350	3304-95A - S-2 Plant Tank Truck Loading		50000 gallons/hr	8.475 MM gallons/yr		8760 hr/yr
EQT 0351	3304-95B - S-3 Plant Tank Truck Loading		25000 gallons/hr	12.718 MM gallons/yr		530 hr/yr
EQT 0352	5064-09 - Fixed Roof Tank T-M5956 (Aqueous Ammonia, 19%)	6016.21 gallons		69120 gallons/yr	Fixed Roof	794 hr/yr
EQT 0353	5065-09 - Fixed Roof Tank T-M6515 (Aqueous Ammonia, 19%)	6016.21 gallons		69120 gallons/yr	Fixed Roof	8760 hr/yr
EQT 0358	CNTLVENT 691 - S-2 Super Surge Vent					8760 hr/yr
EQT 0359	CNTLVENT 692 - S-2 Flash Skim Vent					8760 hr/yr
EQT 0360	CNTLVENT 693 - S-2 SW Degassing Drum Vent					8760 hr/yr
EQT 0432	34-99A - S-2 Sulfur Pit					8760 hr/yr
EQT 0630	5-18 - SRU Cooling Water Tower			10000 gallons/min		8760 hr/yr
EQT 0653	34-99B - S-3 Sulfur Pit					8760 hr/yr
FUG 0010	3008-95 - S-2 Plant Fugitive Emissions					8760 hr/yr
FUG 0011	6-90 - S-3 Plant Fugitive Emissions					8760 hr/yr

Stack Information:

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
Sulfur Plant No. 2 and No. 3							
ARE 0018	3214-95 - S-2 Plant Process Wastewater Emissions						
ARE 0020	3215-95 - S-3 Plant Process Wastewater Emissions						
EQT 0070	1011-95 - Fixed Roof Tank K-564 (Diethanolamine, 35%)	0	.02	.33		24	70
EQT 0071	1014-95 - Fixed Roof Tank K-503 (Diethanolamine, 85%)	0	.02	.33		16	70
EQT 0072	1053-95 - Fixed Roof Tank K-459 (Methyldiethanolamine 85%)	0	.02	.33		12	70
EQT 0073	1107-95 - Fixed Roof Tank K-521 (Molten Sulfur)	0	.02	.33		35	280
EQT 0074	23-76 - S-2 Plant Tail Gas Incinerator	53.4	62900	5		199	1200

INVENTORIES**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****Stack Information:**

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
Sulfur Plant No. 2 and No. 3							
EQT 0075	3303-95 - S-2 Plant Tank Car Loading	13.18	585	.97		15	300
EQT 0076	1013-95 - Fixed Roof Tank K-549 (Diethanolamine, 35%)	0	.02	.33		24	70
EQT 0077	1015-95 - Fixed Roof Tank K-548 (Diethanolamine, 85%)	0	.02	.33		16	70
EQT 0078	2-90 - S-3 Plant Tail Gas Incinerator	112.6	58944	3		200	1200
EQT 0350	3304-95A - S-2 Plant Tank Truck Loading	13.18	585	.97		15	300
EQT 0351	3304-95B - S-3 Plant Tank Truck Loading	8.69	385	.97		15	300
EQT 0352	5064-09 - Fixed Roof Tank T-M5956 (Aqueous Ammonia, 19%)	0	.02	.33		16	77
EQT 0353	5065-09 - Fixed Roof Tank T-M6515 (Aqueous Ammonia, 19%)	0	.02	.33		16	77
FUG 0010	3008-95 - S-2 Plant Fugitive Emissions						
FUG 0011	6-90 - S-3 Plant Fugitive Emissions						

Relationships:

ID	Description	Relationship	ID	Description
EQT 0074	23-76 - S-2 Plant Tail Gas Incinerator	Controls emissions from	EQT 0432	34-99A - S-2 Sulfur Pit
EQT 0078	2-90 - S-3 Plant Tail Gas Incinerator	Controls emissions from	EQT 0653	34-99B - S-3 Sulfur Pit
EQT 0242	2-84 - Coker Flare FE-401	Controls emissions from	EQT 0358	CNTLVENT 691 - S-2 Super Surge Vent
EQT 0242	2-84 - Coker Flare FE-401	Controls emissions from	EQT 0359	CNTLVENT 692 - S-2 Flash Skim Vent
EQT 0242	2-84 - Coker Flare FE-401	Controls emissions from	EQT 0360	CNTLVENT 693 - S-2 SW Degassing Drum Vent

Subject Item Groups:

ID	Group Type	Group Description
GRP 0048	Equipment Group	3304-95CAP - S-2 and S-3 Plants Tank Truck Loading CAP
UNF 0013	Unit or Facility Wide	S-2&3 - Sulfur Plant No. 2 and No. 3

Group Membership:

ID	Description	Member of Groups
EQT 0350	3304-95A - S-2 Plant Tank Truck Loading	GRP00000000048
EQT 0351	3304-95B - S-3 Plant Tank Truck Loading	GRP00000000048

NOTE: The UNF group relationship is not printed in this table. Every subject item is a member of the UNF group**Annual Maintenance Fee:**

Fee Number	Air Contaminant Source	Multiplier	Units Of Measure
0720	0720 Petroleum Refining (Rated Capacity)	1	M bbl/day

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****EQT 0070 1011-95 - Fixed Roof Tank K-564 (Diethanolamine, 35%)**

- 42 [40 CFR 63.646] Keep readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, and any data, assumptions, and procedures used to make the determination for the tank to be Group 2. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart CC. [40 CFR 63.646, 40 CFR 63.655(i)(1)(iv)]
- 43 [40 CFR 63.655(i)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep copies of all applicable reports and records required by 40 CFR 63 Subpart CC for at least 5 years, except as otherwise specified in 40 CFR 63.655(i)(1) through (i)(12). Maintain all applicable records in such a manner that they can be readily accessed within 24 hours. Maintain records in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, flash drive, floppy disk, magnetic tape, or microfiche. Subpart CC. [40 CFR 63.655(i)]

EQT 0071 1014-95 - Fixed Roof Tank K-503 (Diethanolamine, 85%)

- 44 [40 CFR 63.646] Keep readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, and any data, assumptions, and procedures used to make the determination for the tank to be Group 2. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart CC. [40 CFR 63.646, 40 CFR 63.655(i)(1)(iv)]
- 45 [40 CFR 63.655(i)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep copies of all applicable reports and records required by 40 CFR 63 Subpart CC for at least 5 years, except as otherwise specified in 40 CFR 63.655(i)(1) through (i)(12). Maintain all applicable records in such a manner that they can be readily accessed within 24 hours. Maintain records in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, flash drive, floppy disk, magnetic tape, or microfiche. Subpart CC. [40 CFR 63.655(i)]

EQT 0074 23-76 - S-2 Plant Tail Gas Incinerator

- 46 [40 CFR 60.104(a)(2)(i)] Sulfur dioxide (SO₂) ≤ 250 ppmv @ 0% excess air (dry basis). Subpart J. [40 CFR 60.104(a)(2)(i), 40 CFR 63.1568(a)(1), LAC 33:III.1503.B]
- 47 [40 CFR 60.105(a)(5)] Which Months: All Year Statistical Basis: 12-hour rolling average
Sulfur dioxide (SO₂) monitored by continuous emission monitor (CEM) continuously. Include an oxygen monitor for correcting the data for excess air. Subpart J. [40 CFR 60.105(a)(5)]
- 48 [40 CFR 60.105(a)(5)] Which Months: All Year Statistical Basis: None specified
- 49 [40 CFR 60.105(e)(4)(i)] Sulfur dioxide (SO₂) recordkeeping by CMS continuously. [40 CFR 60.105(a)(5)]
- 50 [40 CFR 60.106(a)] Shall report excess emissions of sulfur dioxide which exceeds 250 ppm (dry basis, zero percent excess air) average concentration on a 12-hour basis. [40 CFR 60.105(e)(4)(i)]
- 51 [40 CFR 60.106] Use as reference methods and procedures the test methods in 40 CFR 60 appendix A or other methods and procedures as specified in 40 CFR 60.106, except as provided in 40 CFR 60.8(b), in conducting the performance tests required in 40 CFR 60.8. Subpart J. [40 CFR 60.106(a)]
Determine compliance with standards using the test methods and procedures specified in 40 CFR 60.106(a) through (k). Subpart J.

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery

Activity Number: PER20190003

Permit Number: 2902-V5

Air - Title V Regular Permit Renewal

EQT 0074 23-76 - S-2 Plant Tail Gas Incinerator

- 52 [40 CFR 60.107(d)] Any periods for which sulfur dioxide or oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability. [40 CFR 60.107(d)]
- 53 [40 CFR 60.107(f)] Submit the reports required to the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. [40 CFR 60.107(f)]
- 54 [40 CFR 60.107(g)] Submit a signed statement certifying the accuracy and completeness of the information contained in the report. [40 CFR 60.107(g)]
- 55 [40 CFR 63.1568(a)(3)] Prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR 63.1574(f) and operate at all times according to the procedures in the plan. [40 CFR 63.1568(a)(3)]
- 56 [40 CFR 63.1568(a)(4)(i)] Comply with the requirements in paragraphs (a)(1) and (2) of this section. [40 CFR 63.1568(a)(4)(i)]
- 57 [40 CFR 63.1568(c)(1)] Collect the hourly average SO₂ monitoring data (dry basis, percent excess air) and, if using Equation 1 of 40 CFR 60.102a(f)(1)(i), collect the hourly O₂ concentration or flow monitoring data according to 40 CFR 63.1572; determine and record each 12-hour rolling average concentration of SO₂; maintain each 12-hour rolling average concentration of SO₂ at or below the applicable emission limitation; and report any 12-hour rolling average concentration of SO₂ greater than the applicable emission limitation in the semiannual compliance report required by 40 CFR 63.1575. Subpart UUU. [40 CFR 63.1568(c)(1)]
- 58 [40 CFR 63.1568(c)(2)] Demonstrate continuous compliance with the work practice standard in 40 CFR 63.1568(a)(3) by complying with the procedures in the operation, maintenance and monitoring plan. Subpart UUU. [40 CFR 63.1568(c)(2)]
- 59 [40 CFR 63.1572(a)(1)] Install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40. [40 CFR 63.1572(a)(1)]
- 60 [40 CFR 63.1572(a)(2)] If a CEMS is used to meet the NSPS CO or SO₂ limit, conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 40 CFR 63.8 and Table 40. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification. [40 CFR 63.1572(a)(2)]
- 61 [40 CFR 63.1572(a)(3)] Continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [40 CFR 63.1572(a)(3)]
- 62 [40 CFR 63.1572(a)(4)] Data must be reduced as specified in 40 CFR 63.8(g)(2). [40 CFR 63.1572(a)(4)]
- 63 [40 CFR 63.1572(a)] Install, operate, and maintain each continuous emission monitoring system according to the requirements in paragraphs (a)(1) through (4). [40 CFR 63.1572(a)]
- 64 [40 CFR 63.1572(d)(1)] Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating. [40 CFR 63.1572(d)(1)]
- 65 [40 CFR 63.1572(d)(2)] Data recorded during required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments) for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement may not be used, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. [40 CFR 63.1572(d)(2)]
- 66 [40 CFR 63.1572(d)] Monitor and collect data according to the requirements in paragraphs (d)(1) and (2). [40 CFR 63.1572(d)]

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****EQT 0074 23-76 - S-2 Plant Tail Gas Incinerator**

67 [40 CFR 63.1574(a)]

68 [40 CFR 63.1574(b)]

69 [40 CFR 63.1574(f)]

Except as allowed in paragraphs (a)(1) through (3) of this section, submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h) that apply by specified dates. [40 CFR 63.1574(a)]

Submit the initial notification no later than August 9, 2002, or no later than 120 days after the source becomes subject to this subpart, whichever is later. [40 CFR 63.1574(b)]

Prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. In the plan, detail the operation, maintenance, and monitoring procedures for the facility. Submit the plan to DEQ for review and approval along with the notification of compliance status. Submit any changes to DEQ for review and approval and comply with the plan until the change is approved. Include in each plan, at a minimum, the information specified in 40 CFR 63.1574(f)(2)(i) through (f)(2)(xii). Subpart UUU. [40 CFR 63.1574(f)]

70 [40 CFR 63.1575]

Submit compliance status report : Due semiannually, by the 31st of January and July. Include the information specified in 40 CFR 63.1575(c), (e), and (f), as applicable. Subpart UUU.

71 [40 CFR 63.1576(a)]

Keep the records specified in paragraphs (a)(1) through (3). [40 CFR 63.1576(a)]

Continuous emission monitoring system and continuous opacity monitoring system, keep the records required in paragraphs (b)(1) through (5). [40 CFR 63.1576(b)]

72 [40 CFR 63.1576(b)]

73 [40 CFR 63.1576(e)]

Keep a current copy of your operation, maintenance, and monitoring plan onsite and available for inspection. You also must keep records to show continuous compliance with the procedures in your operation, maintenance, and monitoring plan. [40 CFR 63.1576(e)]

74 [40 CFR 63.1576(f)]

Keep records of any changes that affect emission control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater. [40 CFR 63.1576(f)]

75 [40 CFR 63.1576(g)]

Records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.1576(g)]

76 [40 CFR 63.1576(h)]

Keep record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.1576(h)]

77 [40 CFR 63.1576(i)]

Keep records on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). You can keep the records offsite for the remaining 3 years. [40 CFR 63.1576(i)]

78 [40 CFR 63.1576]

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.1576(a) through (f). Keep records in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1). Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The remaining 3 years may be kept off site. Subpart UUU.

79 [LAC 33:III.1101.B]

Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Determine opacity by using Method 9 of 40 CFR Part 60, Appendix A or by using a continuous opacity monitoring system (COMS) meeting the requirements outlined in 40 CFR 60.13(c) and (d).

Which Months: All Year Statistical Basis: None specified

80 [LAC 33:III.1311.C]

Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.

Which Months: All Year Statistical Basis: Six-minute average

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery

Activity Number: PER20190003

Permit Number: 2902-V5

Air - Title V Regular Permit Renewal

EQT 0074 23-76 - S-2 Plant Tail Gas Incinerator

81 [LAC 33:III.1503.B]

82 [LAC 33:III.1513.E]

83 [LAC 33:III.501.C.6]

Compliance with all the applicable requirements of NSPS, 40 CFR 60 Subpart J has been determined to be compliance in accordance with all the applicable requirements of LAC 33:III.1503.B.

Submit report: Due annually, by the 30th of April, in accordance with LAC 33:III.919. Report data required to demonstrate compliance with the provisions of LAC 33:III.Chapter 15.

Conduct a performance/emission test: Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shutdown period, whichever is earliest. The stack test's purpose is to determine compliance with the emission limits of this permit. In lieu of the stack test on the Tail Gas Incinerator, Emission Point 2-90, the permittee shall install continuous emission monitoring system (CEMS) to show compliance with the maximum SO₂ concentration of 250 ppmvd determined as per the requirements of NSPS, 40 CFR 60.104(a)(2). Permittee shall maintain and operate the CEMS in accordance with the quality assurance and quality control measures as per NSPS, 40 CFR 60, Appendix F - Quality Assurance Procedures.

EQT 0075 3303-95 - S-2 Plant Tank Car Loading

84 [LAC 33:III.1311.B]

85 [LAC 33:III.1311.C]

Total suspended particulate ≤ 5.14 lb/hr. The rate of emission shall be the total of all emission points from the source.

Which Months: All Year Statistical Basis: None specified

Opacity ≤ 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.

Which Months: All Year Statistical Basis: Six-minute average

EQT 0076 1013-95 - Fixed Roof Tank K-549 (Diethanolamine, 35%)

86 [40 CFR 63.641]

Equipment/operational data recordkeeping by electronic or hard copy as needed. Keep readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, and any data, assumptions, and procedures used to make the determination for the tank to be Group 2. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart CC. [40 CFR 63.641, 40 CFR 63.655(i)(1)(iv)]

EQT 0077 1015-95 - Fixed Roof Tank K-548 (Diethanolamine, 85%)

87 [40 CFR 63.641]

Equipment/operational data recordkeeping by electronic or hard copy as needed. Keep readily accessible records showing the dimensions of the storage vessel, an analysis showing the capacity of the storage vessel, and any data, assumptions, and procedures used to make the determination for the tank to be Group 2. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart CC. [40 CFR 63.641, 40 CFR 61.655(i)(1)(iv)]

EQT 0078 2-90 - S-3 Plant Tail Gas Incinerator

88 [40 CFR 60.104(a)(2)(i)]

Sulfur dioxide (SO₂) ≤ 250 ppmv @ 0% excess air (dry basis). Subpart J. [40 CFR 60.104(a)(2)(i), 40 CFR 63.1568(a)(1), LAC 33:III.1503.B]

Which Months: All Year Statistical Basis: 12-hour rolling average

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****EQT 0078 2-90 - S-3 Plant Tail Gas Incinerator**

- 89 [40 CFR 60.105(a)(5)] Sulfur dioxide (SO₂) monitored by continuous emission monitor (CEM) continuously. Include an oxygen monitor for correcting the data for excess air. Subpart J. [40 CFR 60.105(a)(5)]
- 90 [40 CFR 60.105(a)(5)] Which Months: All Year Statistical Basis: None specified
- 91 [40 CFR 60.105(e)(4)(i)] Sulfur dioxide (SO₂) recordkeeping by CEMS continuously. [40 CFR 60.105(a)(5)]
- 92 [40 CFR 60.106(a)] Shall report excess emissions of sulfur dioxide which exceeds 250 ppm (dry basis, zero percent excess air) average concentration on a 12-hour basis. [40 CFR 60.105(e)(4)(i)]
- 93 [40 CFR 60.106] Use as reference methods and procedures the test methods in 40 CFR 60 appendix A or other methods and procedures as specified in 40 CFR 60.106, except as provided in 40 CFR 60.8(b), in conducting the performance tests required in 40 CFR 60.8. Subpart J. [40 CFR 60.106(a)]
- 94 [40 CFR 60.107(d)] Determine compliance with standards using the test methods and procedures specified in 40 CFR 60.106(a) through (k). Subpart J. Any periods for which sulfur dioxide or oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability. [40 CFR 60.107(d)]
- 95 [40 CFR 60.107(f)] Submit the reports required to the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. [40 CFR 60.107(f)]
- 96 [40 CFR 60.107(g)] Submit a signed statement certifying the accuracy and completeness of the information contained in the report. [40 CFR 60.107(g)]
- 97 [40 CFR 63.1568(a)(3)] Prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR 63.1574(f) and operate at all times according to the procedures in the plan. [40 CFR 63.1568(a)(3)]
- 98 [40 CFR 63.1568(a)(4)(i)] Comply with the requirements in paragraphs (a)(1) and (2) of this section. [40 CFR 63.1568(a)(4)(i)]
- 99 [40 CFR 63.1568(c)(1)] Collect the hourly average SO₂ monitoring data (dry basis, percent excess air) and, if using Equation 1 of 40 CFR 60.102a(f)(1)(i), collect the hourly O₂ concentration or flow monitoring data according to 40 CFR 63.1572; determine and record each 12-hour rolling average concentration of SO₂; maintain each 12-hour rolling average concentration of SO₂ at or below the applicable emission limitation; and report any 12-hour rolling average concentration of SO₂ greater than the applicable emission limitation in the semiannual compliance report required by 40 CFR 63.1575. Subpart UUU. [40 CFR 63.1568(c)(1)]
- 100 [40 CFR 63.1568(c)(2)] Demonstrate continuous compliance with the work practice standard in 40 CFR 63.1568(a)(3) by complying with the procedures in the operation, maintenance and monitoring plan. Subpart UUU. [40 CFR 63.1568(c)(2)]
- 101 [40 CFR 63.1572(a)(1)] Install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40. [40 CFR 63.1572(a)(1)]
- 102 [40 CFR 63.1572(a)(2)] If a CEMS is used to meet the NSPS CO or SO₂ limit, conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 40 CFR 63.8 and Table 40. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification. [40 CFR 63.1572(a)(2)]
- 103 [40 CFR 63.1572(a)(3)] Continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [40 CFR 63.1572(a)(3)]
- 104 [40 CFR 63.1572(a)(4)] Data must be reduced as specified in 40 CFR 63.8(g)(2). [40 CFR 63.1572(a)(4)]
- 105 [40 CFR 63.1572(a)] Install, operate, and maintain each continuous emission monitoring system according to the requirements in paragraphs (a)(1) through (4). [40 CFR 63.1572(a)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery

Activity Number: PER20190003

Permit Number: 2902-V5

Air - Title V Regular Permit Renewal

EQT 0078 2-90 - S-3 Plant Tail Gas Incinerator

106 [40 CFR 63.1572(d)(1)]

Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating. [40 CFR 63.1572(d)(1)]

107 [40 CFR 63.1572(d)(2)]

Data recorded during required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments) for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement may not be used, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. [40 CFR 63.1572(d)(2)]

108 [40 CFR 63.1572(d)]

Monitor and collect data according to the requirements in paragraphs (d)(1) and (2). [40 CFR 63.1572(d)]

109 [40 CFR 63.1574(a)]

Except as allowed in paragraphs (a)(1) through (3) of this section, submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h) that apply by specified dates. [40 CFR 63.1574(a)]

110 [40 CFR 63.1574(b)]

Submit the initial notification no later than August 9, 2002, or no later than 120 days after the source becomes subject to this subpart, whichever is later. [40 CFR 63.1574(b)]

111 [40 CFR 63.1574(f)]

Prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. In the plan, detail the operation, maintenance, and monitoring procedures for the facility. Submit the plan to DEQ for review and approval along with the notification of compliance status. Submit any changes to DEQ for review and approval and comply with the plan until the change is approved. Include in each plan, at a minimum, the information specified in 40 CFR 63.1574(f)(2)(i) through (f)(2)(xii). Subpart UUU. [40 CFR 63.1574(f)]

112 [40 CFR 63.1575]

Submit compliance status report : Due semiannually, by the 31st of January and July. Include the information specified in 40 CFR 63.1575(c), (e), and (f), as applicable. Subpart UUU.

113 [40 CFR 63.1576(a)]

Keep the records specified in paragraphs (a)(1) through (3). [40 CFR 63.1576(a)]

114 [40 CFR 63.1576(b)]

Continuous emission monitoring system and continuous opacity monitoring system, keep the records required in paragraphs (b)(1) through (5). [40 CFR 63.1576(b)]

115 [40 CFR 63.1576(e)]

Keep a current copy of your operation, maintenance, and monitoring plan onsite and available for inspection. You also must keep records to show continuous compliance with the procedures in your operation, maintenance, and monitoring plan. [40 CFR 63.1576(e)]

116 [40 CFR 63.1576(f)]

Keep records of any changes that affect emission control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater. [40 CFR 63.1576(f)]

117 [40 CFR 63.1576(g)]

Records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.1576(g)]

118 [40 CFR 63.1576(h)]

Keep record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.1576(h)]

119 [40 CFR 63.1576(i)]

Keep records on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). You can keep the records offsite for the remaining 3 years. [40 CFR 63.1576(i)]

120 [40 CFR 63.1576]

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.1576(a) through (f). Keep records in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1). Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The remaining 3 years may be kept off site. Subpart UUU.

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Shell Oil Products US Norco Refinery****Activity Number: PER20190003****Permit Number: 2902-V5****Air - Title V Regular Permit Renewal****EQT 0078 2-90 - S-3 Plant Tail Gas Incinerator**

121 [LAC 33:III.1101.B]

Opacity $\leq$ 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Determine opacity by using Method 9 of 40 CFR Part 60, Appendix A or by using a continuous opacity monitoring system (COMS) meeting the requirements outlined in 40 CFR 60.13(c) and (d).

Which Months: All Year Statistical Basis: None specified

122 [LAC 33:III.1311.C]

Opacity $\leq$ 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.

Which Months: All Year Statistical Basis: Six-minute average

123 [LAC 33:III.1513.E]

Submit report: Due annually, by the 30th of April, in accordance with LAC 33:III.919. Report data required to demonstrate compliance with the provisions of LAC 33:III Chapter 15.

124 [LAC 33:III.501.C.6]

Conduct a performance/emission test: Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shutdown period, whichever is earliest. The stack test's purpose is to determine compliance with the emission limits of this permit. In lieu of the stack test on the Tail Gas Incinerator, Emission Point 2-90, the permittee shall install continuous emission monitoring system (CEMS) to show compliance with the maximum SO₂ concentration of 250 ppmvmd determined as per the requirements of NSPS, 40 CFR 60.104(a)(2). Permittee shall maintain and operate the CEMS in accordance with the quality assurance and quality control measures as per NSPS, 40 CFR 60, Appendix F - Quality Assurance Procedures.

EQT 0350 3304-95A - S-2 Plant Tank Truck Loading

125 [LAC 33:III.1311.B]

Total suspended particulate $\leq$ 5.14 lb/hr. The rate of emission shall be the total of all emission points from the source.

Which Months: All Year Statistical Basis: None specified

126 [LAC 33:III.1311.C]

Opacity $\leq$ 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.

Which Months: All Year Statistical Basis: Six-minute average

EQT 0351 3304-95B - S-3 Plant Tank Truck Loading

127 [LAC 33:III.1311.B]

Total suspended particulate $\leq$ 2.57 lb/hr. The rate of emission shall be the total of all emission points from the source.

Which Months: All Year Statistical Basis: None specified

128 [LAC 33:III.1311.C]

Opacity $\leq$ 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.

Which Months: All Year Statistical Basis: Six-minute average

EQT 0358 CNTLVENT 691 - S-2 Super Surge Vent

129 [LAC 33:III.2115.B]

Nonhalogenated hydrocarbon burning: Temperature $\geq$ 1300 F (704 degrees C) for 0.3 second or greater in a direct-flame afterburner or an equally effective device which achieves a removal efficiency of 95 percent or greater, as determined in accordance with LAC 33:III.2115.K.1, or if emissions are reduced to 50 ppm by volume, whichever is less stringent.

Which Months: All Year Statistical Basis: None specified

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No. 7021 1970 0001 4416 9129

Activity No.: PER20220009
Agency Interest No. 1406

Ms. Tammy Little
General Manager – Norco Manufacturing Complex
Equilon Enterprises LLC dba Shell Oil Products US
PO Box 10
Norco, LA 70079-0010

RE: Part 70 Operating Permit Modification
Equilon Enterprises LLC d/b/a Shell Oil Products US – Norco Refinery, Logistics Unit
Norco, St. Charles Parish, Louisiana

Dear Ms. Little:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 26th of June 2024, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this 15th day of March, 2023.

Permit No.: 2913-V11

Sincerely,

A handwritten signature in cursive script, appearing to read "Bliss M. Higgins".

Bliss M. Higgins
Assistant Secretary
BMH:fjh

c: EPA Region VI

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20220009

Permit Number: 2913-V11

Air - Title V Regular Permit Minor Mod

EQT 0180 9-84 - West Ops Ground Flare (FG-201)**102 [40 CFR 60.103a(a-f)]**

Shall comply with all the applicable requirement of NSPS, 40 CFR 60 Subpart Ja for flares as required. Shall develop and implement a flare management plan. Conduct a root cause analysis and corrective action analysis any time SO₂ emissions exceed 500 lbs or discharge to the flare exceeds 500,000 scf above baseline flow in any 24-hour period. Subpart Ja. [40 CFR 60.103a(a-f)]

103 [40 CFR 60.103a(a)]

Shall develop and implement a written flare management plan as per the requirements of NSPS, 40 CFR 60.103a (a) and shall be in compliance by November 11, 2015 - Work Practice Standards. Subpart Ja. [40 CFR 60.103a(a)]

104 [40 CFR 60.103a(h)]

Fuel gas: Hydrogen sulfide ≤ 162 ppmv. Subpart Ja. [40 CFR 60.103a(h)]

105 [40 CFR 60.104a(j)]

Which Months: All Year Statistical Basis: Three-hour rolling average
The owner or operator shall determine compliance with the applicable H₂S emissions limit in 40 CFR 60.102a(g)(1) for a fuel gas combustion device or the concentration requirement in 40 CFR 60.103a(h) for a flare according to EPA Method 11, 15 or 15A of appendix A-5 to part 60 or EPA Method 16 of appendix A-6 to part 60 for determining the H₂S concentration for affected facilities using an H₂S monitor as specified in 40 CFR 60.107a(2). The method ANSI/ASME PTC 19.10-1981 (incorporated by reference - see 40 CFR 60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60. The owner or operator may demonstrate compliance based on the mixture used in the fuel gas combustion device or flare for each individual fuel gas stream used in the fuel gas combustion device or flare. [40 CFR 60.104a(j)]

106 [40 CFR 60.107a(a)(2)]

Hydrogen sulfide monitored by continuous emission monitor (CEM) continuously. Equip with a continuous recorder and monitor the concentration of H₂S in the fuel gases before being burned. Subpart Ja. [40 CFR 60.107a(a)(2)]

107 [40 CFR 60.107a(e)(1)]

Which Months: All Year Statistical Basis: None specified
Reduced Sulfur monitored by continuous parameter monitoring system (CPMS) continuously. Equip with a continuous recorder and monitor the concentration of total reduced sulfur in gases discharged to the flare. Subpart Ja. [40 CFR 60.107a(e)(1)]

108 [40 CFR 60.107a(f)]

Which Months: All Year Statistical Basis: None specified
Flow rate monitored by continuous parameter monitoring system (CPMS) continuously. Equip with a continuous recorder and monitor the flow rate of gas discharged to the flare, except as specified in 40 CFR 60.107a(f)(2) and (h). Locate the monitor in a position that provides a representative measurement of the total gas flow rate. Subpart Ja. [40 CFR 60.107a(f)]

109 [40 CFR 60.108a(c)]

Which Months: All Year Statistical Basis: None specified
Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain the records specified in 40 CFR 60.108a(c)(1) through (c)(7), as applicable. Subpart Ja. [40 CFR 60.108a(c)]

110 [40 CFR 60.108a(d)]

Submit excess emissions report: Due for all periods of excess emissions, according to the requirements of 40 CFR 60.7(c). Include the information specified in 40 CFR 60.108a(d)(1) through (d)(7). Subpart Ja. [40 CFR 60.108a(d)]

111 [40 CFR 63.1103(e)(4)(vii) (A)]

While the flare is being used as a control device for an emission point subject to the requirements in Table 7 of 40 CFR 63 Subpart YY, then the owner or operator is not required to comply with the flare tip velocity requirements in 40 CFR 63.670(d) and (k) of 40 CFR 63 Subpart CC. Subpart YY. [40 CFR 63.1103(e)(4)(vii)(A)]

112 [40 CFR 63.1103(e)(4)(vii) (B)]

While the flare is being used as a control device for an emission point subject to the requirements in Table 7 of 40 CFR 63 Subpart YY, then the owner or operator is required to maintain the net heating value of flare combustion zone gas (NHV_{cz}) at or above 800 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. The owner or operator shall monitor and calculate NHV_{cz} as specified in 40 CFR 63.670(m). Subpart YY. [40 CFR 63.1103(e)(4)(vii)(B)]

113 [40 CFR 63.562(b)(2)]

HAP ≥ 97 % reduction by weight from marine tank vessel loading operations, as determined using methods in 40 CFR 63.565 (d) and (l). Subpart Y. [40 CFR 63.562(b)(2)]
Which Months: All Year Statistical Basis: None specified

JOHN BEL EDWARDS
GOVERNOR



CHUCK CARR BROWN, Ph.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No. 7020 1810 0000 3665 9455

Activity No.: PER20200013
Agency Interest No. 1406

Mr. Jack Holden
Production Manager – Norco Manufacturing Complex
Equilon Enterprises LLC d/b/a Shell Oil Products US
15536 River Rd, P.O. Box 10
Norco, LA 70079

RE: Part 70 Operating Permit Modification
Equilon Enterprises LLC dba Shell Oil Products US - Norco Refinery, Refining East Production Area
Norco, St. Charles Parish, Louisiana

Dear Mr. Holden:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 27th of April, 2025, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this 2nd day of February, 2021.

Permit No.: 2502-V12

Sincerely,

A handwritten signature in black ink, appearing to read "Elfron B. Vega".

Elfron B. Vega
Assistant Secretary
EBV: dmf
c: EPA Region VI

INVENTORIES

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20200013

Permit Number: 2502-V12

Air - Title V Regular Permit Minor Mod

Relationships:		Description		Relationship	ID	Description
ID						
TRT 0015		NHT SA - NHT Stripper Accumulator		Controlled by , FVR or	GRP 0045	1105, 1311)-8760 hours/year, 85 MMBtu/hr 7-02 - Flare Cap and Regulatory Group (Subject to Ja, UUU, CC, 1105, 1311)-8760 hours/year, 85 MMBtu/hr
Subject Item Groups:						
ID	Group Type		Group Description			
CRG 0019	Common Requirements Group		Reboilers and Reactors (CND and HCU) - Subject to NSPS J (no AMP), NSPS NNN (AMP), Part 63 5D			
CRG 0020	Common Requirements Group		HCU Gas Purge and Feed Surge Vents - Subject to LAC 33:III.2115 Exemption and LAC 33:III.501.C.6			
CRG 0021	Common Requirements Group		Fixed Roof Storage Tanks - Subject to Part 63 Subpart 4E			
CRG 0022	Common Requirements Group		Flare Recovery Compressors - Subject to LAC 33:III.2111			
CRG 0026	Common Requirements Group		Process Fugitives - Consolidated under SOCMH HON			
CRG 0027	Common Requirements Group		HCU, Coker, CR-1, CR-2, H2, and NHT VWV - Subject to Part 61 Subpart FF and Part 63 Subpart CC			
CRG 0029	Common Requirements Group		Coker, H2 Plant Product, and NHT Stripper Vents - Subject to LAC 33:III.2115 B and LAC 33:III.501.C.6			
CRG 0030	Common Requirements Group		Coke Drum Vents - Subject to Part 63 Subpart CC and LAC 33:III.2115 Exemption			
CRG 0032	Common Requirements Group		HCU Pump Seal Pots - Subject to NSPS Subpart GGGa			
CRG 0033	Common Requirements Group		Subpart CC Control Vents - Subject to 40 CFR 63 Subpart CC			
CRG 0034	Common Requirements Group		Vents Routed to HCU Flare -			
CRG 0036	Common Requirements Group		Coker Blowdown, HCU Analyzer, HCU SIU & NHT Vents - Subject to LAC 33:III.2115 Exemption			
CRG 0037	Common Requirements Group		HCU Fractionator and HCU Project Stream Vents - Subject to LAC 33:III.1509			
GRP 0022	Equipment Group		30-71 CAP - CR-2 Heater Stacks N/S (Heaters F-53, F-54, F-55, F-57)-8760 hours/year, 352.50 MMBtu/hr			
GRP 0045	Equipment Group		7-02 - Flare Cap and Regulatory Group (Subject to Ja, UUU, CC, 1105, 1311)-8760 hours/year, 85 MMBtu/hr			
UNF 0001	Unit or Facility Wide		Facility-Wide - Refining East Production Area			
Group Memberships:						
ID	Description		Member of Groups			
ARE 0013	3216-95 - CR-1 UNIT PROCESS WASTEWATER EMISSIONS		CRG00000000027			
ARE 0014	3217-95 - CR-2 UNIT PROCESS WASTEWATER EMISSIONS		CRG00000000027			
ARE 0015	3218-95 - NHT UNIT PROCESS WASTEWATER EMISSIONS		CRG00000000027			
ARE 0021	3210-95 - HCU Wastewater Emissions		CRG00000000027			
EQT 0058	13-71 - DESULFURIZATION HEATER, F-21, (NHT)		CRG00000000019			
EQT 0061	21-76 - DHT HEATER F-156		CRG00000000019			
EQT 0062	30-71A - CR-2 Heater F-53		GRP00000000022			
EQT 0063	30-71B - CR-2 Heater F-54		GRP00000000022			
EQT 0064	30-71C - CR-2 Heater F-55		GRP00000000022			
EQT 0065	30-71D - CR-2 Heater F-57		GRP00000000022			
EQT 0080	22-71 - 1st Stage Reaction Heater (F-41)		CRG00000000019			
EQT 0081	23-71 - 1st Stage Fractionation Reboiler (F-42)		CRG00000000019			

INVENTORIES

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20200013

Permit Number: 2502-V12

Air - Title V Regular Permit Minor Mod

Group Membership		Description	Member of Groups
ID			
EQT 0082	24-71 - 2nd Stage Reaction Heater (F-43)		CRG00000000019
EQT 0083	25-71 - Main Fractionation Reboiler (F-44)		CRG00000000019
EQT 0107	1-81 - Coker Charge Heater F-125		CRG00000000019
EQT 0116	54-71 - Coker Blowdown Vent		CRG00000000036
EQT 0117	8-95 - Coke Drum Vent No. 1		CRG00000000030
EQT 0118	9-95 - Coke Drum Vent No. 2		CRG00000000030
EQT 0122	3211-95 - Coker Unit Wastewater Emissions		CRG00000000027
EQT 0126	CNTLVENT 687 - Coker Blow Down		CRG00000000029
EQT 0127	CNTLVENT 686 - Level Purge Coker		CRG00000000029
EQT 0151	29-71 - Coker Feed Heater F-51		CRG00000000019
EQT 0242	2-84 - Coker Flare FE-401		GRP00000000045
EQT 0244	4-84 - HCU Flare FE-301		GRP00000000045
EQT 0311	CNTRLVENT 820 - HCU Seal Oil Traps		CRG00000000034
EQT 0312	CNTRLVENT 819 - HCU Seal Oil Traps		CRG00000000034
EQT 0313	CNTRLVENT 825 - HCU Feed Surge Vent		CRG00000000034
EQT 0314	CNTRLVENT 828 - HCU Level Gas Purge		CRG00000000020
EQT 0315	CNTRLVENT 829 - HCU 1st Stage Fractionator Vent		CRG00000000037
EQT 0316	CNTRLVENT 830 - HCU 2nd Stage Fractionator Vent		CRG00000000037
EQT 0317	CNTRLVENT 767 - HCU T/A Enviro Project Stream		CRG00000000037
EQT 0318	CNTRLVENT 871 - HCU Pump Seal Pot		CRG00000000032
EQT 0319	CNTRLVENT 872 - HCU Pump Seal Pot		CRG00000000032
EQT 0324	CNTRLVENT 831 - PV-801/844, HCU Plant Product		CRG00000000029
EQT 0325	CNTRLVENT 832 - PV-802/844, HCU Plant Product		CRG00000000029
EQT 0326	CNTRLVENT 833 - PV-803/844, HCU Plant Product		CRG00000000029
EQT 0327	CNTRLVENT 834 - PV-897/844, HCU Plant Product		CRG00000000029
EQT 0328	CNTRLVENT 835 - PV-898/844, HCU Plant Product		CRG00000000029
EQT 0329	CNTRLVENT 836 - PV-899/844, HCU Plant Product		CRG00000000029
EQT 0330	CNTRLVENT 837 - PV-900/844, HCU Plant Product		CRG00000000029
EQT 0348	5062-09 - Fixed Roof Perc Tank No. 1		CRG00000000021
EQT 0349	5063-09 - Fixed Roof Perc Tank No. 2		CRG00000000021
EQT 0372	FVR 1 - Flare Recovery Compressor No. 1 (Electric)		CRG00000000022
EQT 0373	FVR 2 - Flare Recovery Compressor No. 2 (Electric)		CRG00000000022
EQT 0433	2-03 - H2 Plant Process Wastewater Emissions		CRG00000000027
EQT 0624	CNTLVENT 840 - Coker SU/SD Venting		CRG00000000033
EQT 0632	1-19 - A3020-H2 Extractor Specific Gravity		CRG00000000033
EQT 0633	2-19 - A3410-1st Stage/2nd Stage Recycle H2		CRG00000000033
EQT 0634	3-19 - CR-2 Unit A1509-Ranarex Recycle Gas Specific Gravity		CRG00000000033
EQT 0635	4-19 - CR-2 Unit A1510-DuPont Recycle Gas Moisture		CRG00000000033
EQT 0636	5-19 - CR-2 Unit A1779-MSA Regen System Combustible		CRG00000000033
EQT 0637	6-19 - CR-2 Unit A2330-Applied Stabilizer Bottoms		CRG00000000033
EQT 0638	CNTRLVENT 853 - CR-2 Hydrogen Cool Down		CRG00000000033

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20200013

Permit Number: 2502-V12

Air - Title V Regular Permit Minor Mod

GRP 0022 30-71 CAP - CR-2 Heater Stacks N/S (Heaters F-53, F-54, F-55, F-57)-8760 hours/year, 352.50 MMBtu/hr

334 [LAC 33:III.501.C.6]

The total heat input to all the heaters shall not exceed 352.50 MM BTU/hr (High Heating Value annual average) and the total calculated emissions from all the heaters shall not exceed PM10, 11.50 tons per year (TPY); SO2, 42.63 TPY; NOx, 61.76 TPY; CO, 127.15 TPY; and VOC, 8.33 TPY. Total heat input or the calculated emissions from all the heaters above the maximum listed in this specific condition for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division.

335 [LAC 33:III.501.C.6]

Total heat input <= 352.5 MM BTU/hr (based on high heating value) [Consent Decree].

Which Months: All Year Statistical Basis: 365-day rolling average

336 [LAC 33:III.507.H.1.a]

A report showing the heat input of each heater and the overall total heat input and the total emissions from the all the heaters shall be submitted to the Office of Environmental Compliance, Enforcement Division by April 30 for the preceding calendar year.

337 [LAC 33:III.507.H.1.a]

Total heat input monitored by technically sound method continuously.

Which Months: All Year Statistical Basis: None specified

338 [LAC 33:III.507.H.1.a]

Total heat input recordkeeping by electronic or hard copy monthly. The total heat input and the calculated emissions of the individual heaters shall be recorded each month, as well as the heat input and the total calculated emissions for all the heaters for the last twelve months. These records shall be kept on site and available for inspection by LDEQ personnel.

339 [LAC 33:III.507]

Nitrogen oxides monitored by continuous emission monitor (CEM) continuously. Include an oxygen monitor for correcting the data for excess air.

Which Months: All Year Statistical Basis: None specified

GRP 0045 7-02 - Flare Cap and Regulatory Group (Subject to Ja, UUU, CC, 1105, 1311)-8760 hours/year, 85 MMBtu/hr

Group Members: EQT 0242 EQT 0244

340 [40 CFR 60.103a(a)]

Develop and implement a written flare management plan no later than the date specified in 40 CFR 60.103a(b), except as provided in 40 CFR 60.103a(g). Include the information described in 40 CFR 60.103a(a)(1) through (a)(7). Subpart Ja. [40 CFR 60.103a(a)]

341 [40 CFR 60.103a(c)(1)]

Conduct a root cause analysis and a corrective action analysis any time the SO2 emissions exceed 227 kilograms (kg) (500 lb) in any 24-hour period; or for any discharge to the flare in excess of 14,160 standard cubic meters (m3) (500,000 standard cubic feet (scf)) above the baseline, determined in 40 CFR 60.103a(a)(4), in any 24-hour period; or if the monitoring alternative in 40 CFR 60.107a(g) is elected, any period when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in 40 CFR 60.103a(a)(3)(vii)(C), except as provided in 40 CFR 60.103a(f) and (g). Subpart Ja. [40 CFR 60.103a(c)(1)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20200013

Permit Number: 2502-V12

Air - Title V Regular Permit Minor Mod

GRP 0045 7-02 - Flare Cap and Regulatory Group (Subject to Ja, UUU, CC, 1105, 1311)-8760 hours/year, 85 MMBtu/hr

342 [40 CFR 60.103a(d)]

Conduct the root cause analysis and corrective action analysis as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(3), except as provided in 40 CFR 60.103a(f) and (g). If a single continuous discharge meets any of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(3) for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted. If a single discharge from a flare triggers a root cause analysis based on more than one of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(3)(iii) of this section, a single root cause analysis and corrective action analysis may be conducted. If the discharge from a flare is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare and the procedures in 40 CFR 60.103a(a)(5) were followed, a root cause analysis and corrective action analysis is not required; however, record the discharge as described in 40 CFR 60.108a(c)(6) and report as described in 40 CFR 60.108a(d)(5). If both the primary and secondary flare in a cascaded flare system meet any of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(1)(iii) in the same 24-hour period, a single root cause analysis and corrective action analysis may be conducted. If discharges occur that meet any of the conditions specified in 40 CFR 60.103a(c)(1) through (c)(3) for more than one affected facility in the same 24-hour period, conduct initial root cause analyses for each affected facility, except as provided in 40 CFR 60.103a(d)(4). If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted. Subpart Ja. [40 CFR 60.103a(d)]

Implement all corrective action(s) within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable, except as provided in 40 CFR 60.103a(f) and (g). If corrective action should not be conducted, record and explain the basis for that conclusion no later than 45 days following the discharge as specified in 40 CFR 60.108a(c)(6)(ix). Develop an implementation schedule to complete the corrective action(s) as soon as practicable, for corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required. Record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in 40 CFR 60.108a(c)(6)(x), no later than 45 days following the discharge for which a root cause and corrective action analyses were required. Subpart Ja. [40 CFR 60.103a(e)]

343 [40 CFR 60.103a(e)]

344 [40 CFR 60.103a(f)]

345 [40 CFR 60.103a(h)]

346 [40 CFR 60.107a(e)(2)(ii)]

347 [40 CFR 60.107a(e)(3)]

348 [40 CFR 60.107a(e)(3)]

349 [40 CFR 60.107a(e)(3)]

350 [40 CFR 60.107a(e)(3)]

Modified flares shall comply with the requirements of paragraphs (c) through (e) of this section by November 11, 2015 or at startup of the modified flare, whichever is later. Subpart Ja. [40 CFR 60.103a(f)]

Fuel gas: Hydrogen sulfide $\leq$ 162 ppmv. [40 CFR 60.103a(h)]

Which Months: All Year Statistical Basis: Three-hour rolling average

Conduct performance evaluations of each H2S monitor according to the requirements in 40 CFR 60.13(c) and 40 CFR 60, Appendix B, Performance Specification 7. Use 40 CFR 60, Appendix A-5, EPA Method 11, 15 or 15A for conducting the relative accuracy evaluations, for flares that routinely have flow. Subpart Ja. [40 CFR 60.107a(e)(2)(ii)]

Calculate the total sulfur content (as SO₂) in the fuel gas using 40 CFR 60.107a(e) Equation 12. Subpart Ja. [40 CFR 60.107a(e)(3)]

Determine the F factor of the fuel gas at least daily according to the requirements in 40 CFR 60.107a(d)(2) through (d)(4). Subpart Ja. [40 CFR 60.107a(e)(3)]

Determine the higher heating value of the fuel gas at least daily according to the requirements in 40 CFR 60.107a(d)(7). Subpart Ja. [40 CFR 60.107a(e)(3)]

Sulfur dioxide (SO₂) monitored by continuous parameter monitoring system (CPMS) continuously, according to the requirements in 40 CFR 60.107a(a)(1). Equip with a continuous recorder. Subpart Ja. [40 CFR 60.107a(e)(3)]

Which Months: All Year Statistical Basis: None specified

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TPO0147

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20200013

Permit Number: 2502-V12

Air - Title V Regular Permit Minor Mod

GRP 0045 7-02 - Flare Cap and Regulatory Group (Subject to Ja, UUU, CC, 1105, 1311)-8760 hours/year, 85 MMBtu/hr

Equipment/operational data monitored by visual inspection/determination quarterly. Inspect all components of the monitor for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion if the flow monitor is not equipped with a redundant flow sensor. Subpart Ja. [40 CFR 60.107a(f)(1)(iv)]

Which Months: All Year Statistical Basis: None specified

Recalibrate the flow monitor in accordance with the manufacturer's procedures and specifications biennially (every two years) or at the frequency specified by the manufacturer. Subpart Ja. [40 CFR 60.107a(f)(1)(v)]

Flow rate monitored by continuous parameter monitoring system (CPMS) continuously. Equip with a continuous recorder and monitor the flow rate of gas discharged to the flare, except as specified in 40 CFR 60.107a(f)(2) and (h). Locate the monitor in a position that provides a representative measurement of the total gas flow rate. Subpart Ja. [40 CFR 60.107a(f)]

Which Months: All Year Statistical Basis: None specified

Flares that are subject to the provisions of 40 CFR 60.18 or 63.11 and subject to Subpart CC are required to comply only with the provisions specified in Subpart CC. [40 CFR 63.1566(a)(1)]

Install, operate, and maintain a continuous monitoring system(s) according to the requirements in 40 CFR 63.1572 and Table 17 of this subpart, as applicable. Subpart UUU. [40 CFR 63.1566(b)(1)]

Shall conduct performance test for the catalytic reforming unit in accordance with the applicable requirements of NESHAP, 40 CFR 63.1571 and the conditions specified in Table 18. Subpart UUU. [40 CFR 63.1566(b)(2)]

Demonstrate continuous compliance with each emission limitation in 40 CFR 63 Subpart UUU Tables 15 and 16 according to the methods specified in 40 CFR 63 Subpart UUU Tables 20 and 21. Subpart UUU. [40 CFR 63.1566(c)(1)]

Demonstrate continuous compliance with the work practice standards in paragraph (a)(3) of this section by complying with the procedures in your operation, maintenance, and monitoring plan. Subpart UUU. [40 CFR 63.1566(c)(2)]

Submit each report in Table 43 of this subpart, as applicable, and according to the requirements in paragraphs (b)(1) through (5) of this section. Subpart UUU.

Shall keep all the records as per the applicable requirements of 40 CFR 63.1576.

Shall comply with all the applicable requirements of NESHAP, 40 CFR 63.670 and reporting and recordkeeping requirements of 40 CFR 63.655 . Subpart CC. [40 CFR 63.640(s)]

Shall remove liquids during startup/shutdown from the equipment as much as practical and depressurize the equipment to the existing HCU/Coker Flare. Currently these emissions are routed to and reported under Emission Point 7-02 SU/SD, permitted under Permit No. 2913-V3 or current permit. Subpart CC. [40 CFR 63.643(c)(1-3)]

For flares subject to 40 CFR 63.670, submit Periodic Reports that must include the information specified in paragraphs (g)(1)(i) through (iv) of this section. Subpart CC. [40 CFR 63.655(g)(1)]

Keep copies of all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in paragraphs (i)(9)(i) through (xii) of this section. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, flash drive, floppy disk, magnetic tape, or microfiche. Subpart CC. [40 CFR 63.655(i)]

Operate each flare with a pilot flame present at all times when regulated material is routed to the flare. Each 15-minute block during which there is at least one minute where no pilot flame is present when regulated material is routed to the flare is a deviation of the standard. Deviations in different 15-minute blocks from the same event are considered separate deviations. Subpart CC. [40 CFR 63.670(b)]

JOHN BEL EDWARDS
GOVERNOR



ROGER W. GINGLES
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No. 9589 0710 5270 0644 2644 07

Activity No.: PER20220012
Agency Interest No. 1406

Mr. Jack Holden
Production Manager – Norco Manufacturing Complex
Equilon Enterprises LLC d/b/a Shell Oil Products US
P.O. Box 10
Norco, LA 70079

RE: Part 70 Operating Permit Renewal with Minor Modification
Equilon Enterprises LLC - Norco Refinery, Alkylolation Unit
Norco, St. Charles Parish, Louisiana

Dear Mr. Holden:

This is to inform you that the permit renewal with minor modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 4th of October, 2028, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this 4th day of October, 2023.

Permit No.: 2600-V5

Sincerely,

Bliss M. Higgins
Assistant Secretary
BMH:mat
c: EPA Region VI

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20220012****Permit Number: 2600-V5****Air - Title V Regular Permit Renewal/Minor Mod****EQT 0391 LPG - LPG Drier Desiccant Change at Alky (PV-232, 233, 234, 293)**

- 88 [LAC 33:III.2115.L] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain the records specified in LAC 33:III.2115.L.1 through L.3. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.
- 89 [LAC 33:III.501.C.6] Emissions are routed to the West Ops Ground Flare, Emission Point 9-84 and the West Ops Elevated Flare, Emission Point 5-84, as an alternative control device. These flares are permitted under Permit No. 2913-V11 and Permit No. 2520-V10 [AI 26336], or the more current versions, respectively.

EQT 0392 Vent - Miscellaneous Maintenance Vent

- 90 [LAC 33:III.2115.B] Nonhalogenated hydrocarbon burning: Temperature $\geq$ 1300 F (704 degrees C) for 0.3 second or greater in a direct-flame afterburner or an equally effective device which achieves a removal efficiency of 95 percent or greater, as determined in accordance with LAC 33:III.2115.K.1, or if emissions are reduced to 50 ppm by volume, whichever is less stringent.
- 91 [LAC 33:III.2115.J] Which Months: All Year Statistical Basis: None specified
Determine compliance with LAC 33:III.2115.B through H by applying the test methods specified in LAC 33:III.2115.J.1 through J.5, as appropriate.
- 92 [LAC 33:III.2115.K.1] Demonstrate compliance with LAC 33:III.2115 as requested by DEQ.
- 93 [LAC 33:III.2115.L] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain the records specified in LAC 33:III.2115.L.1 through L.3. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.
- 94 [LAC 33:III.501.C.6] Emissions are routed to the West Ops Ground Flare, Emission Point 9-84 and the West Ops Elevated Flare, Emission Point 5-84, as an alternative control device. These flares are permitted under Permit No. 2913-V11 and Permit No. 2520-V10 [AI 26336], or the more current versions, respectively.

FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit

- 95 [40 CFR 63.162(c)] Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]
- 96 [40 CFR 63.162(f)] Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(i)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]
- 97 [40 CFR 63.163(b)(1)] Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (j). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]
- Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20220012****Permit Number: 2600-V5****Air - Title V Regular Permit Renewal/Minor Mod****FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit**

- 98 [40 CFR 63.163(b)(3)] Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]
Which Months: All Year Statistical Basis: None specified
- 99 [40 CFR 63.163(c)] Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)]
- 100 [40 CFR 63.163(d)(2)] Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]
- 101 [40 CFR 63.163(d)(4)] Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]
- 102 [40 CFR 63.163(e)(1)] Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]
- 103 [40 CFR 63.163(e)(2)] Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]
- 104 [40 CFR 63.163(e)(3)] Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]
- 105 [40 CFR 63.163(e)(4)] Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]
Which Months: All Year Statistical Basis: None specified
- 106 [40 CFR 63.163(e)(6)(i)] Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]
- 107 [40 CFR 63.163(e)(6)] Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20220012****Permit Number: 2600-V5****Air - Title V Regular Permit Renewal/Minor Mod****FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit**

- 108 [40 CFR 63.163(e)] Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]
Which Months: All Year Statistical Basis: None specified
- 109 [40 CFR 63.163(j)(1)] Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]
- 110 [40 CFR 63.163(j)(2)] Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]
Which Months: All Year Statistical Basis: None specified
- 111 [40 CFR 63.164(a)] Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]
- 112 [40 CFR 63.164(b)] Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]
- 113 [40 CFR 63.164(c)] Compressors: Ensure that the barrier fluid is not in light liquid service. Subpart H. [40 CFR 63.164(c)]
- 114 [40 CFR 63.164(d)] Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]
- 115 [40 CFR 63.164(e)(2)] Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]
- 116 [40 CFR 63.164(g)] Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]
- 117 [40 CFR 63.164(i)(2)] Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]
Which Months: All Year Statistical Basis: None specified
- 118 [40 CFR 63.164] Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H.
Which Months: All Year Statistical Basis: None specified
- 119 [40 CFR 63.165(a)] Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]
Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS**AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery****Activity Number: PER20220012****Permit Number: 2600-V5****Air - Title V Regular Permit Renewal/Minor Mod****FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit**

- 120 [40 CFR 63.165(b)(1)] Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]
- 121 [40 CFR 63.165(b)(2)] Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]
Which Months: All Year Statistical Basis: None specified
- 122 [40 CFR 63.165(d)(2)] Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]
- 123 [40 CFR 63.166] Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H.
- 124 [40 CFR 63.167] Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H.
- 125 [40 CFR 63.168(c)] Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
Which Months: All Year Statistical Basis: None specified
- 126 [40 CFR 63.168(c)] Valves in gas/vapor service or light liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
Which Months: All Year Statistical Basis: None specified
- 127 [40 CFR 63.168(d)(1)] Valves in gas/vapor service or light liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]
Which Months: All Year Statistical Basis: None specified
- 128 [40 CFR 63.168(d)(2)] Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
Which Months: All Year Statistical Basis: None specified
- 129 [40 CFR 63.168(e)(1)] Valves in gas/vapor service or light liquid service: Determine percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]
- 130 [40 CFR 63.168(f)(3)] Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]
Which Months: All Year Statistical Basis: None specified

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- 131 [40 CFR 63.168(f)] Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]
- 132 [40 CFR 63.168(h)(1)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(1)]
- 133 [40 CFR 63.168(h)(2)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(2)]
Which Months: All Year Statistical Basis: None specified
- 134 [40 CFR 63.168(i)(1)] Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(1)]
- 135 [40 CFR 63.168(i)(3)] Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
Which Months: All Year Statistical Basis: None specified
- 136 [40 CFR 63.169(a)] Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
Which Months: All Year Statistical Basis: None specified
- 137 [40 CFR 63.169(c)] Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 138 [40 CFR 63.170] Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63 Subpart H Table 2 or Table 3. Subpart H.
- 139 [40 CFR 63.172(f)(1)(i)] Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]
Which Months: All Year Statistical Basis: None specified
- 140 [40 CFR 63.172(f)(1)(ii)] Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]
Which Months: All Year Statistical Basis: None specified

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- 141 [40 CFR 63.172(f)(2)(i)] Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]
Which Months: All Year Statistical Basis: None specified
- 142 [40 CFR 63.172(f)(2)(ii)] Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(ii)]
Which Months: All Year Statistical Basis: None specified
- 143 [40 CFR 63.172(h)] Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]
- 144 [40 CFR 63.172(j)(1)] Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]
Which Months: All Year Statistical Basis: None specified
- 145 [40 CFR 63.172(j)(1)] Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]
- 146 [40 CFR 63.172(j)(2)] Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]
Which Months: All Year Statistical Basis: None specified
- 147 [40 CFR 63.172(j)(2)] Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
- 148 [40 CFR 63.172(k)(1)] Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
- 149 [40 CFR 63.172(k)(2)] Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]
Which Months: All Year Statistical Basis: None specified
- 150 [40 CFR 63.172(l)(1)] Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(1)]
- 151 [40 CFR 63.172(l)(2)] Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]
Which Months: All Year Statistical Basis: None specified
- 152 [40 CFR 63.172(m)] Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]

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- 153 [40 CFR 63.173(a)] Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]
Which Months: All Year Statistical Basis: None specified
- 154 [40 CFR 63.173(b)] Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]
Which Months: All Year Statistical Basis: None specified
- 155 [40 CFR 63.173(c)] Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]
- 156 [40 CFR 63.173(d)(1)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]
- 157 [40 CFR 63.173(d)(2)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]
- 158 [40 CFR 63.173(d)(3)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]
- 159 [40 CFR 63.173(d)(4)] Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]
Which Months: All Year Statistical Basis: None specified
- 160 [40 CFR 63.173(d)(6)(i)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]
- 161 [40 CFR 63.173(d)(6)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)]
- 162 [40 CFR 63.173(d)] Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]
Which Months: All Year Statistical Basis: None specified

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- 163 [40 CFR 63.173(h)(1)] Agitators in gas/vapor service or light liquid service (difficult to monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]
- 164 [40 CFR 63.173(h)(3)] Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]
Which Months: All Year Statistical Basis: None specified
- 165 [40 CFR 63.173(j)(1)] Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]
- 166 [40 CFR 63.173(j)(2)] Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]
Which Months: All Year Statistical Basis: None specified
- 167 [40 CFR 63.174(b)(1)] Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]
Which Months: All Year Statistical Basis: None specified
- 168 [40 CFR 63.174(b)(2)] Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]
Which Months: All Year Statistical Basis: None specified
- 169 [40 CFR 63.174(b)(3)(i)] Connectors in gas/vapor service or light liquid service (0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]
Which Months: All Year Statistical Basis: None specified
- 170 [40 CFR 63.174(b)(3)(ii)] Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]
Which Months: All Year Statistical Basis: None specified
- 171 [40 CFR 63.174(c)(1)(i)] Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]
Which Months: All Year Statistical Basis: None specified
- 172 [40 CFR 63.174(c)(2)(i)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169. Subpart H. [40 CFR 63.174(c)(2)(i)]

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- 173 [40 CFR 63.174(c)(2)(ii)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]
Which Months: All Year Statistical Basis: None specified
- 174 [40 CFR 63.174(d)] Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174 (g). Subpart H. [40 CFR 63.174(d)]
- 175 [40 CFR 63.174(f)(1)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]
- 176 [40 CFR 63.174(f)(2)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to monitor times, but not more frequently than the periodic schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(2)]
Which Months: All Year Statistical Basis: None specified
- 177 [40 CFR 63.174(g)] Connectors in gas/vapor service or light liquid service (unsafe-to-repair): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]
- 178 [40 CFR 63.174(h)(2)] Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(a) and (c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182. Subpart H. [40 CFR 63.174 (h)(2)]
- 179 [40 CFR 63.174(i)] Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]
- 180 [40 CFR 63.180] Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H.
- 181 [40 CFR 63.181] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k). Subpart H.
- 182 [40 CFR 63.182(b)] Submit Initial Notification: Due within 120 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 183 [40 CFR 63.182(b)] Submit Initial Notification: Due within 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 184 [40 CFR 63.182(b)] Submit application: Due as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H). Submit application for approval of construction or reconstruction required by 40 CFR 63.5(d) in lieu of the Initial Notification. Subpart H. [40 CFR 63.182(b)]
- 185 [40 CFR 63.182(c)] Submit Notification of Compliance Status: Due within 90 days of the compliance dates specified in the 40 CFR 63 subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(c)(1) through (c)(3). Subpart H. [40 CFR 63.182(c)]
- 186 [40 CFR 63.182(d)] Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182 (c). Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20220012

Permit Number: 2600-V5

Air - Title V Regular Permit Renewal/Minor Mod

FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit

- 187 [40 CFR 63.648(j)(3)(iii)] Calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in 40 CFR 63.655(g)(10)(iii). Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge. Subpart CC. [40 CFR 63.648(j)(3)(iii)]
- 188 [40 CFR 63.648(j)(4)] If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is not required to comply with paragraph (j)(1), (2), or (3) (if applicable) of this section. Both the closed vent system and control device (if applicable) must meet the requirements of §63.644. When complying with this paragraph (j)(4), all references to "Group 1 miscellaneous process vent" in §63.644 mean "pressure relief device." If a pressure relief device complying with this paragraph (j)(4) is routed to the fuel gas system, then on and after January 30, 2019, any flares receiving gas from that fuel gas system must be in compliance with §63.670. Subpart CC. [40 CFR 63.648(j)(4)]
- 189 [40 CFR 63.648(j)(6)] A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (j)(6)(i) through (iv) of this section. Subpart CC. [40 CFR 63.648(j)(6)]
- 190 [40 CFR 63.648(j)(7)] Each owner or operator required to conduct a root cause analysis and corrective action analysis as specified in paragraphs (j)(3)(iii) and (j)(6) of this section shall implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in paragraphs (j)(7)(i) through (iii) of this section. Subpart CC. [40 CFR 63.648(j)(7)]
- 191 [LAC 33:III.2111] Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment.
- 192 [LAC 33:III.2199.B] Comply with LAC 33:III.2121; NSPS 40 CFR 60 Subpart GGGa; and NESHAP 40 CFR 63 Subparts CC and H by implementing the Louisiana Consolidated Fugitive Emission Program Guidelines. Compliance is achieved through compliance with 40 CFR 63 Subpart H.
- 193 [LAC 33:III.2199.B] Permittee shall comply with a streamlined equipment leaks monitoring program. Compliance with the streamlined program in accordance with this specific condition shall serve to comply with each of the fugitive emission monitoring programs being streamlined, as indicated in the following table. Noncompliance with the streamlined program in accordance with this specific condition may subject the permittee to enforcement action for one of the applicable fugitive emissions programs.
- (a) Streamlined program shall be applicable to the combined universe of components subject to any of the programs being streamlined. Any component type which does not require periodic monitoring under the overall most stringent program shall be monitored as required by the most stringent requirements of any other program being streamlined and will not be exempted. The streamlined program will include any exemptions based on size or component available in any of the programs being streamlined.
- (b) Leak definitions and monitoring frequency shall be used based on the overall most stringent program. Percent leaker performance shall be calculated using the provisions of the overall most stringent program. Annual monitoring shall define as once every four quarters. Some allowance may be made in the first year on the streamlined program in order to allow for transition from existing monitoring schedules.
- (c) Permittee shall comply with recordkeeping and reporting requirements of the overall most stringent program. Semiannual reports shall be submitted by March 31 for the preceding period encompassing July through December, and by September 30 for the preceding period encompassing January through June. The semiannual reports shall include any monitoring performed within the reporting period.

SPECIFIC REQUIREMENTS

AI ID: 1406 - Equilon Enterprises LLC - Norco Refinery

Activity Number: PER20220012

Permit Number: 2600-V5

Air - Title V Regular Permit Renewal/Minor Mod

FUG 0016 3000-95 - Fugitive Emissions-Alkylation Unit

- 194 [LAC 33:III.501.C.6] The number of each type of components required to be monitored for each monitoring period under applicable leak detection and repair programs shall be reported to the LDEQ by inclusion with each periodic monitoring report. Fugitive emission piping components may be added to or removed from the permitted units, without triggering the need to apply for a permit modification, provided: A) Changes in components involve routine maintenance or are undertaken to address safety concerns or involve small piping revisions with no associated emissions increases except from the fugitive emission components themselves; B) The changes do not involve any associated increase in the production rate or capacity, or tie in of new or modified process equipment other than the piping components; C) Actual emissions following the changes will not exceed the emission limits contained in this permit; and D) The components are promptly incorporated into any applicable leak detection and repair program.

UNF 0003 ALKY - Alkylation Unit

- 195 [40 CFR 60.7(a)] Provide written or electronic notification to the Administrator the information specified in 40 CFR 60.7(a)(1) through (a)(7). Subpart A. [40 CFR 60.7(a)]
- 196 [40 CFR 60.7(b)] Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. Subpart A. [40 CFR 60.7(b)]
- 197 [40 CFR 60.7(c)] Submit excess emissions and monitoring systems performance report and/or summary report form (see 40 CFR 60.7(d)): Due semiannually. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the information specified in 40 CFR 60.7(c)(1) through (c)(4). Subpart A. [40 CFR 60.7(c)]
- 198 [40 CFR 60.7(d)] A summary report form shall contain the information and be in the format shown in Figure 1 of this paragraph unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility. Subpart A. [40 CFR 60.7(d)]
- 199 [40 CFR 60.] All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.
- 200 [40 CFR 61.145(b)(1)] Provide DEQ with written notice of intention to demolish or renovate prior to performing activities to which 40 CFR 61 Subpart M applies. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. Subpart M. [40 CFR 61.145(b)(1)]
- 201 [40 CFR 61.148] Do not install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. Subpart M.
- 202 [40 CFR 61.342(e)(1)] Benzene: As an alternative to the requirements specified in 40 CFR 61.342(c) and (d), the permittee shall manage and treat facility waste with a flow-weighted annual average water content of less than 10 percent as per 40 CFR 61.342(c)(1). Subpart FF. [40 CFR 61.342(e)(1)]
- 203 [40 CFR 61.342(e)(2)] Benzene: As an alternative to the requirements specified in paragraphs (c) and (d) of this section, the permittee shall manage and treat facility waste (including remediation and process unit turnaround waste) with a flow-weighted annual average water content of 10 percent or greater, on a volume basis as total water, and each waste stream that is mixed with water or wastes at any time such that the resulting mixture has an annual water content greater than 10 percent and the benzene quantity for the wastes must be equal to or less than 6.0 Mg/yr (6.6 ton/yr), as determined in 40 CFR 61.355(k). [40 CFR 61.342(e)(2)]
- 204 [40 CFR 61.355(k)] Determine compliance with 40 CFR 61 Subpart FF using the test methods and procedures specified in 40 CFR 61.355(k) as applicable. Subpart FF. [40 CFR 61.355(k)]
- 205 [40 CFR 61.356(b)(4)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency Maintain records as specified in 40 CFR 61.356(b)(4). Maintain each record in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified. Subpart FF. [40 CFR 61.356(b)(4)]