| South Coast | |
|-------------|--|

Section I - South Coast AQMD LAER/BACT Determination

| | Γ | Source Type: | | Major/LAER | | | |
|---------|--|---------------------|------------|--------------------|------------------|--|--|
| 9 | | Application No | .: | 477619 | | | |
| so A | uth Coast | Equipment Category: | | Fugitive VOC | Emission Sources | | |
| | | Equipment Sub | category: | Petroleum Ref | ïneries | | |
| | | Date: | | XX.XX.2023 | | | |
| 1. | EQUIP | MENT INFORM | MATION | | | | |
| А. | MANUFAC | CTURER: N/A | | B. MODEL: | N/A | | |
| C. | C. DESCRIPTION: All fugitive components in VOC service (liquid with greater than 10% VOC by weight) in Naphtha Hydrodesulfurization Unit, except for pumps, compressors, and drains. | | | | | | |
| D. | D. FUNCTION: Petroleum refining process unit. | | | | | | |
| E. | SIZE/DIME | ENSIONS/CAPACIT | TY: N/A | | | | |
| CO | MBUSTION | SOURCES | | | | | |
| F. | MAXIMUN | 1 HEAT INPUT: N | [/A | | | | |
| G. | BURNER I | NFORMATION: | | | | | |
| | | ТҮРЕ | INDIV | IDUAL HEAT INPUT | NUMBER | | |
| | | N/A | | N/A | N/A | | |
| H. | PRIMARY | FUEL: N/A | | I. OTHER FUEL: N/A | | | |
| J. | OPERATIN | G SCHEDULE: | 24 HRS/DAY | 7 DAYS/WEEK | 52 WKS/YR | | |
| K. | EQUIPMEN | T COST: N/A | | | | | |
| L. | L. EQUIPMENT INFORMATION COMMENTS: N/A | | | | | | |

2. COMPANY INFORMATION

| A. | COMPANY: Paramount Petroleum Corpo | B. FAC ID: 800183 | |
|----|---|-----------------------------|-----------------------------------|
| C. | ADDRESS: 14700 Downey Ave. CITY: Paramount STATE: CA | ZIP: 90723 | D. NAICS CODE: 325199 |
| E. | CONTACT PERSON: Kathryn Gleeson | | F. TITLE: Manager Env. Compliance |
| G. | PHONE NO.: (562) 748-4613 | L: kgleeson@worldenergy.net | |

| 3. | PERMIT INFORMATION | | | | | |
|----|---|-----------------------------------|--|--|--|--|
| A. | AGENCY: South Coast AQMD | B. APPLICATION TYPE: MODIFICATION | | | | |
| C. | SCAQMD ENGINEER: Connie Yee | | | | | |
| D. | PERMIT INFORMATION: PC ISSUANCE DAT P/O NO.: N/A | B: 7/25/08 PO ISSUANCE DATE: * | | | | |
| E. | START-UP DATE: See Section F. | | | | | |
| F. | OPERATIONAL TIME: +9 years | | | | | |
| | *Permit to Operate, G24624, issued under subsequent A/N 496862 on May 2013. | | | | | |

4. EMISSION INFORMATION

| A. BACT EMI | A. BACT EMISSION LIMITS AND AVERAGING TIMES: - | | | | | | |
|--|---|-----|-----|----|------------------------|-----------|--|
| | VOC | NOX | SOx | СО | PM OR PM ₁₀ | INORGANIC | |
| BACT Limit | 200 ppmv* | | | | | | |
| Averaging Time | | | | | | | |
| Correction | | | | | | | |
| B. OTHER BACT REQUIREMENTS: * This requirement applies to components in gas/vapor and light liquid service, except for pumps, compressors, and drains. | | | | | | | |
| C. BASIS OF | C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology | | | | | | |
| D. EMISSION Condition S Method 21 | D. EMISSION INFORMATION COMMENTS: Condition S4.2) A leak greater than 200 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection [Rule 1173 requirements]. | | | | | | |

| 5. CONTRO | OL TECHNOLOGY | | | | | | | |
|------------------|---|--------------------|---|--|--|--|--|--|
| A. MANUFACT | urer: N/A | | B. MODEL: N/A | | | | | |
| C. DESCRIPTIO | N: | | | | | | | |
| Condition S | Condition S31.3) | | | | | | | |
| All open-o | All open-ended lines shall be equipped with cap, blind flange, plug, or a second valve. | | | | | | | |
| All pressu | All pressure relief valves shall be connected to a closed vent system. | | | | | | | |
| All new li | All new light liquid pumps shall utilize double seals. | | | | | | | |
| All comp | essors shall be equipped wi | th a seal system | m with a higher-pressure barrier fluid. | | | | | |
| All new va | alves in VOC services shall | be bellows sea | al valves, except those specifically | | | | | |
| exempte | ed by Rule 1173. | | | | | | | |
| D. SIZE/DIMEN | SIONS/CAPACITY: N/A | | | | | | | |
| E. CONTROL EC | QUIPMENT PERMIT INFORMA | ATION: N/A | | | | | | |
| APPLICATIO | N NO.: - PC ISSUANCI | E DATE: - | | | | | | |
| PO NO.: - | PO ISSUANC | E DATE: - | | | | | | |
| F. REQUIRED C | ONTROL EFFICIENCIES: N/A | | | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL EFFICIE | ENCY COLLECTION EFFICIENCY | | | | | |
| VOC | % | | %% | | | | | |
| NOx | % | | _%% | | | | | |
| SOx | % | | _%% | | | | | |
| СО | % | | %% | | | | | |
| PM | % | | <u>%</u> % | | | | | |
| PM ₁₀ | % | | %% | | | | | |
| INORGANIC | _% | | %% | | | | | |
| G. CONTROL TE | G. CONTROL TECHNOLOGY COMMENTS: N/A | | | | | | | |

6. DEMONSTRATION OF COMPLIANCE

- A. COMPLIANCE DEMONSTRATED BY: Monthly or quarterly inspection (see Section 6.H).
- B. DATE(S) OF SOURCE TEST: -
- C. COLLECTION EFFICIENCY METHOD: -
- D. COLLECTION EFFICIENCY PARAMETERS: -
- E. SOURCE TEST/PERFORMANCE DATA: Reports of the components inspected in the 3rd and 4th quarter of 2022.
- F. TEST OPERATING PARAMETERS AND CONDITIONS: -
- G. TEST METHODS (SPECIFY AGENCY): EPA Method 21

- H. MONITORING AND TESTING REQUIREMENTS: All new components in VOC services as defined in Rule 1173, except valves and flanges shall be inspected quarterly using EPA reference Method 21. All new valves and flanges in VOC services except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21.
- I. DEMONSTRATION OF COMPLIANCE COMMENTS: Condition S31.3) The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and inspection, in a manner approved by the South Coast AQMD. Records shall be kept and maintained for at least five years and shall be made available to Executive Officer of his authorized representatives upon request.

7. ADDITIONAL SCAQMD REFERENCE DATA

| A. | BCAT: 000528 | B. CCAT: - | C | C. APPLICATIO | ON TYPE CODE: 50 | | |
|-----|--|------------------|------------|---------------------------|------------------|--|--|
| D. | RECLAIM FAC? | E. TITLE V FAC: | F | F. SOURCE TEST ID(S): N/A | | | |
| | Yes \boxtimes No \square | YES 🛛 NO | | | | | |
| G. | G. SCAQMD SOURCE SPECIFIC RULES: Rule 1173 | | | | | | |
| H. | I. HEALTH RISK FOR PERMIT UNIT | | | | | | |
| H1. | MICR: - | H2. MICR DATE: - | H3. CANCI | ER BURDEN: - | H4. CB DATE: - | | |
| H5 | : HIA: - | H6. HIA DATE: - | H7. HIC: - | | H8. HIC DATE: - | | |

Section I – South Coast AQMD BACT Determination

| (| Source Type: | Major/I | LAER | | | |
|--------------|--|-----------------------|-----------|-------------------------------|--|--|
| 5 | Application No.: | 617290 | | | | |
| Sοι Α | th Coast Equipment Category: | Heater | | | | |
| | Equipment Subcategory: | Other P | rocess | | | |
| | Date: | XX.XX. | 2023 | | | |
| 1. | EQUIPMENT INFORMATION | | | | | |
| A. | MANUFACTURER: Callidus | B. N | 10DEL: Ì | N/A | | |
| C. | DESCRIPTION: Callidus Technologies He | eater, with inter | nal flue | gas recirculation. Equipped | | |
| | with three ClearSign Core Ultra Low NO | Ox Burners, nat | ural draf | t (rated at 12.5 MMBtu/hr | | |
| | total). | | | | | |
| D. | FUNCTION: SFPP Colton functions as but | ulk loading/unlo | bading a | nd pipeline transfer station. | | |
| | Within the transmit processing plant th | e, a gasonne/die | sel blen | d (transmix) is produced. | | |
| | that separates the transmix blends to rec | over the individ | ual fract | ions | | |
| F | SIZE/DIMENSIONS/CAPACITY: 12.5 MM | Rtu/hr | uai maci | 10115. | | |
| ∟. | Size Diviersions/era herr 1. 12.3 Wivi | | | | | |
| C O 2 | MBUSTION SOURCES | | | | | |
| Ξ. | MAXIMUM HEAT INPUT: 3 burners for a | total of 12.5 M | MBtu/h | r | | |
| G. | BURNER INFORMATION | | | | | |
| | TYPE INDIV | VIDUAL HEAT IN | IPUT | NUMBER | | |
| | Ultra Low NOx 4.1 | 67 MMBtu/hr | | 3 | | |
| H. | PRIMARY FUEL: Natural gas | I. OTHER FUEI | L: Proce | ss gas | | |
| J. | OPERATING SCHEDULE: 24 HRS/DAY | 7 DAYS/WEE | ек 52 | 2 WKS/YR | | |
| K. | EQUIPMENT COST: N/A | | | | | |
| Ĺ. | . EQUIPMENT INFORMATION COMMENTS: The transmix system typically operates about two weeks per month at 24 hours per day of operation with a non-operating week in between | | | | | |
| • | | - F | r | | | |
| 2. | COMPANY INFORMATION | | | | | |
| A. | COMPANY: SFPP, L.P. Colton Terminal | | B. FAC | ID: 800129 | | |
| C. | ADDRESS: 2359 Riverside Ave | 02216 | D. NAI | CS CODE: 486910 | | |
| | CITT: DIOOIIIIIgioii STATE: CA ZIP | . 92310 | | | | |
| E. | CONTACT PERSON: Nina McAfee | F. TITLE: EHS Manager | | E: EHS Manager | | |
| G. | G. PHONE NO.: (713) 420-5610 H. EMAIL: N | | | Afee@kindermorgan.com | | |

| 3. | PERMIT INFORMATION | | | | | | |
|----|-------------------------------------|-----------------------------------|--|--|--|--|--|
| A. | AGENCY: South Coast AQMD | B. APPLICATION TYPE: MODIFICATION | | | | | |
| C. | 2. SCAQMD ENGINEER: Linda Dejbakhsh | | | | | | |
| D. | PERMIT INFORMATION: PC ISSUANCE | DATE: 11/18/20 | | | | | |
| | PO NO.: G714 | PO ISSUANCE DATE: 4/4/2023 | | | | | |
| E. | START-UP DATE: 3/5/2021 | | | | | | |
| F. | OPERATIONAL TIME: Over 2 years | | | | | | |
| | | | | | | | |
| 1 | EMISSION INFORMATION | | | | | | |

4. EMISSION INFORMATION

| 4. EM | IISSION INFORMA | TION | | | | | |
|-------------------------------|--|-------------------|-----|-------------------|------------------------|-----------|--|
| A. BACT that aff as met | BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O ₂ , %CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable. | | | | | | |
| | VOC | NOX | SOx | СО | PM OR PM ₁₀ | INORGANIC | |
| BACT Limit | | 7 ppm | | 100 ррм | | | |
| Averaging Time | | 15 minutes | | 15 minutes | | | |
| Correction | | 3% O ₂ | | 3% O ₂ | | | |
| B. OTHER BACT REQUIREMENTS: - | | | | | | | |
| C. BASIS | C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology | | | | | | |
| D. EMISS | SION INFORMATION C | OMMENTS: - | | | | | |

| 5. CONTRO | DL TECHNOLOGY | | | | | | | |
|----------------|--|------------------------------|-----------------------|--|--|--|--|--|
| A. MANUFACTU | A. MANUFACTURER: ClearSign B. MODEL: CL-CPB-1-050X | | | | | | | |
| C. DESCRIPTIO | C. DESCRIPTION: 3 ClearSign Core Ultra Low NOx Burners, Natural Draft | | | | | | | |
| D. SIZE/DIMENS | D. SIZE/DIMENSIONS/CAPACITY: Three 4.167 MMBtu/hr burners for a total of 12.5 MMBtu/hr | | | | | | | |
| E. CONTROL EQ | E. CONTROL EQUIPMENT PERMIT INFORMATION: | | | | | | | |
| APPLICATION | N NO. 617290 PC ISSU | ANCE DATE: 11/18/20 | | | | | | |
| PO NO.: G71 | 481 PO ISSU | JANCE DATE: 4/4/2023 | | | | | | |
| | | | | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY | | | | | |
| VOC | % | % | % | | | | | |
| NOx | % | % | % | | | | | |
| SOx | % | % | % | | | | | |
| СО | % | % | % | | | | | |
| РМ | % | % | % | | | | | |
| PM_{10} | % | % | % | | | | | |
| INORGANIC | % | % | % | | | | | |
| G. CONTROL TEC | CHNOLOGY COMMENTS: - | | | | | | | |

6. DEMONSTRATION OF COMPLIANCE

- A. COMPLIANCE DEMONSTRATED BY: Source Test
- B. DATE(S) OF SOURCE TEST: 4/28/2021
- C. COLLECTION EFFICIENCY METHOD: N/A

D. COLLECTION EFFICIENCY PARAMETERS: N/A

E. SOURCE TEST/PERFORMANCE DATA:

| Pollutant | Test Result | Emission Limit |
|-------------------|-------------|-----------------------|
| NOx, ppmv @ 3% O2 | 6.25 | 7 |
| CO, ppmv @ 3% O2 | < 2.00 | 100 |

| F. 7 | TEST OPERATING PARAMETERS AND CONDITIONS: N/A |
|------|---|
|------|---|

G. TEST METHODS (SPECIFY AGENCY): South Coast AQMD Method 100.1

- H. MONITORING AND TESTING REQUIREMENTS: The source test shall be conducted at least every three years.
- I. DEMONSTRATION OF COMPLIANCE COMMENTS: -

| 7. | ADDITIONAL | SCAQMD REFEREN | 4 | | |
|-----|--------------------------------------|------------------|----------|---------------|-------------------|
| A. | BCAT: 19603 | B. CCAT: - | | C. APPLICATIO | ON TYPE CODE: 50 |
| D. | RECLAIM FAC? | E. TITLE V FAC: | | F. SOURCE TES | ST ID(S): PR20335 |
| | YES 🛛 NO 🗆 | YES 🛛 NO 🗆 | | | |
| G. | . SCAQMD SOURCE SPECIFIC RULES: 1146 | | | | |
| Н. | HEALTH RISK FOR | PERMIT UNIT | | | |
| H1. | MICR: - | H2. MICR DATE: - | H3. CANO | CER BURDEN: - | H4. CB DATE: - |
| H5: | : HIA: - | H6. HIA DATE: - | H7. HIC: | - | H8. HIC DATE: - |

Section I – South Coast AQMD BACT Determination



| | $\langle \rangle$ | Source Type: | | Major/LAER | | |
|---------|---|------------------------------------|---------------------|------------------------------|----------------------------------|--|
| S | | Application No | .: | 625886 - 62588 | 89 | |
| So A | uth Coast | Equipment Cate | Equipment Category: | | tor | |
| | GIND | Equipment Sub | category: | Non-Emergen Generator, Na | cy Electrical tural Gas Fired | |
| | | Date: | | XX.XX.2023 | | |
| 1. | EQUIP | MENT INFOR | MATION | | | |
| A. | MANUFAC | TURER: Mainspr | ing Energy | B. MODEL: | MSE-230-NG | |
| C. | C. DESCRIPTION: Each linear generator system consists of two identical cores. Each core is vented to an oxidation catalyst. | | | | | |
| D. | FUNCTION electricity | Mainspring lin | ear generator | uses a low-temperatur | re reaction to produce | |
| E. | SIZE/DIME | INSIONS/CAPACIT | TY: Each core | is120 kWe | | |
| CO | MBUSTION | SOURCES | | | | |
| F. | MAXIMUM | 1 HEAT INPUT: | | | | |
| G. | BURNER I | NFORMATION | | | | |
| | | ТҮРЕ | INDIV | VIDUAL HEAT INPUT | NUMBER | |
| | | N/A | | N/A | N/A | |
| H. | PRIMARY | FUEL: Natural ga | as | I. OTHER FUEL: N/A | | |
| J. | OPERATIN | G SCHEDULE: | 24 HRS/DAY | Y 7 DAYS/WEEK | 52 WKS/YR | |
| K. | EQUIPMEN | T COST: N/A | | | | |
| L. | EQUIPMEN | T INFORMATION | COMMENTS: - | | | |
| 2. | COMP | ANY INFORMA | ATION | | | |
| A. | COMPANY | : Mainspring Ene | ergy, Incorpor | ated B. FAC ID: 1935 | 35 | |
| 0 | ADDDEGG | 2062 Minuel Du | - 4 4 - D1 | D NAICS CODE: | 493120 | |

| A. | COMPANY: Mainspring Energy, Incorporated | B. FAC ID: 193535 |
|----|---|--|
| C. | ADDRESS: 2063 Miguel Bustamante Pkwy CITY: Colton STATE: CA ZIP: 92324 | D. NAICS CODE: 493120 |
| E. | CONTACT PERSON: Adam Simpson | F. TITLE: Co-Founder and CPO |
| G. | PHONE NO.: (650) 330-1051 | H. EMAIL: Adam.Simpson@mainspringenergy.com |

| 3. | PERMIT INFORMATION | | | |
|----|-------------------------------------|----------------|-----------------------------|--|
| A. | AGENCY: South Coast AQMD | B. APPLICATION | TYPE: NEW CONSTRUCTION | |
| C. | SCAQMD ENGINEER: Kate Kim | | | |
| D. | PERMIT INFORMATION: PC ISSUANCE DAT | E: 6/15/21 | | |
| | P/O NO.: G68437- | J68440 | PO ISSUANCE DATE: 4/20/2022 | |
| E. | START-UP DATE: 2022 | | | |
| F. | OPERATIONAL TIME: + one year | | | |
| | | | | |

4. EMISSION INFORMATION

| A. BACT that aff as meth | BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O ₂ , %CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable. | | | | | | | |
|--|---|-------------------------|-----|--------------------|------------------------|-----------|--|--|
| | VOC | NOX | SOx | СО | PM OR PM ₁₀ | INORGANIC | | |
| BACT Limit | 25 ppmvd | 2.5 ppmvd | | 12 ppmvd | | | | |
| Averaging Time | * | * | | * | | | | |
| Correction | 15% O ₂ | 15% O ₂ | | 15% O ₂ | | | | |
| B. OTHER | R BACT REQUIREMEN | TS: * see section (6)(C | G) | | | | | |
| C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology | | | | | | | | |
| D. EMISS | D. EMISSION INFORMATION COMMENTS: N/A | | | | | | | |

| 5. CONTRO |)L TECHNOLOGY | | | | | | |
|--|---|---|-----------------------|--|--|--|--|
| A. MANUFACT | URER: Johnson Matthey | B. MODE | L: MC6T-6F-2 | | | | |
| C. DESCRIPTIO | N: Oxidation catalyst | | | | | | |
| D. SIZE/DIMEN | SIONS/CAPACITY: N/A | | | | | | |
| E. CONTROL EQ | UIPMENT PERMIT INFORM | ATION: N/A | | | | | |
| APPLICATIO PO NO.: | APPLICATION NO.PC ISSUANCE DATE: Click here to enter a date.PO NO.:PO ISSUANCE DATE: Click here to enter a date. | | | | | | |
| F. REQUIRED CO | F. REQUIRED CONTROL EFFICIENCIES: N/A | | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY | | | | |
| VOC | % | % | % | | | | |
| NOx | % | % | % | | | | |
| SOx | % | % | % | | | | |
| СО | % | % | % | | | | |
| РМ | % | % | % | | | | |
| PM ₁₀ | % | % | % | | | | |
| INORGANIC | _% | % | % | | | | |
| G. CONTROL TEC Condition 9) Aft catalyst and d Condition 10) Th 12,000 hours | CHNOLOGY COMMENTS: er every six months of oper etermine if it needs to be cl ne operator shall wash the c of operation. | ration, the operator shall ir leaned or washed. catalyst or replace the catal | spect the oxidation | | | | |
| 6. DEMONS | STRATION OF COMPLI | IANCE | | | | | |
| A. COMPLIANCE DEMONSTRATED BY: Source Test | | | | | | | |
| B. DATE(S) OF SOURCE TEST: 1/18/2022 | | | | | | | |
| C. COLLECTION | EFFICIENCY METHOD: N/A | A | | | | | |
| D. COLLECTION | EFFICIENCY PARAMETERS | S: N/A | | | | | |

E. SOURCE TEST/PERFORMANCE DATA:

NO_X, PPM @ 15% O₂

VOC, PPM @ 15% O₂

| | | Core 1 | | | Core 2 | | |
|--|-------|--------|------|-------|--------|------|--------|
| Parameter | Norm. | Max. | Min. | Norm. | Max. | Min. | Permit |
| | Load | Load | Load | Load | Load | Load | Limit |
| CO, PPM @ 15% O ₂ | 1.80 | 1.82 | 2.35 | 2.17 | 1.92 | 2.34 | 12.00 |
| NO _X , PPM @ 15% O ₂ | 1.66 | 1.76 | 1.07 | 1.91 | 1.82 | 0.90 | 2.50 |
| VOC, PPM @ 15% O ₂ | 4.35 | - | - | 4.03 | - | - | 25.00 |
| | - | | | - | | | |
| | | Core 3 | | | Core 4 | | |
| Parameter | Norm. | Max. | Min. | Norm. | Max. | Min. | Permit |
| | Load | Load | Load | Load | Load | Load | Limit |
| CO, PPM @ 15% O ₂ | 1.80 | 1.80 | 2.40 | 1.90 | 1.90 | 2.10 | 12.00 |

. TEST OPERATING PARAMETERS AND CONDITIONS: Condition 15) the owner/operator shall conduct source test in accordance with the periodic source testing requirements of Rule 1110.2. Condition 16.a) the test shall measure NOx, VOC, CO, oxygen content, moisture content, temperature, and exhaust flow rate at the exhaust of the equipment.

1.19

1.13

4.01

1.12

2.50

25.00

1.12

G. TEST METHODS (SPECIFY AGENCY): South Coast AQMD Method 100.1 for NOx, O₂, CO₂, and CO (3 runs, 24-36 mins each) South Coast AQMD Method 2.3 for velocity (3 runs, 24 mins each) South Coast AQMD Method 4.1 for moisture (3 runs, 24 mins each) South Coast AQMD Method 25.3 for VOC (1 run, 30 mins)

H. MONITORING AND TESTING REQUIREMENTS: Condition 19) the operator shall conduct a source test annually on the equipment within 365 calendar days of previous source test.

I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

1.94

2.64

1.70

| A. | BCAT: 040005 | B. CCAT: - | | C. APPLICATION TYPE CODE: - | | |
|-----|--|---------------------|-------------|-----------------------------|-----------------------|--|
| D. | RECLAIM FAC? | E. TITLE V FAC: | | F. SOURCE TES | ST ID(S): PR22000 and | |
| | YES \Box NO \boxtimes | $YES \ \square NO$ | \boxtimes | PR22000A | | |
| G. | G. SCAQMD SOURCE SPECIFIC RULES: Rule 1110.2 | | | | | |
| H. | H. HEALTH RISK FOR PERMIT UNIT | | | | | |
| H1. | MICR: - | H2. MICR DATE: - | H3. CAN | CER BURDEN: - | H4. CB DATE: - | |
| H5: | HIA: - | H6. HIA DATE: - | H7. HIC: | - | H8. HIC DATE: - | |

Section I – South Coast AQMD LAER/BACT Determination



Source Type:Major/LAERApplication No.:470738, 470739, 555856, and 555857Equipment Category:Sulfur Recovery UnitEquipment Subcategory:Claus Unit and Tail Gas
Treatment Unit

Date: XX.XX.2023 **EOUIPMENT INFORMATION** 1. MANUFACTURER: B. MODEL: A. C. DESCRIPTION: Sulfur Recovery Unit (SRU) which consists of Claus Unit and Tail Gas Treatment Unit (TGTU) followed by a Tail Gas Incinerator and Caustic Scrubber. FUNCTION: The acid gas feeds to the SRU to recover elemental sulfur. Sulfur not recovered D. in the Claus unit (front portion of SRU) will process in an amine-based tail gas treatment unit (rear portion of SRU). The TGTU is vented to a tail gas incinerator, followed by a caustic scrubber for removal of remaining H₂S and SOx, respectively. SIZE/DIMENSIONS/CAPACITY: Sulfur production capacity is 235 long tons per day when E. processing amine acid gas only. COMBUSTION SOURCES MAXIMUM HEAT INPUT: 50.1 MMBTU/Hr (HHV) F. G. **BURNER INFORMATION** TYPE INDIVIDUAL HEAT INPUT NUMBER 1 Ultra Low NO_X 50.1 MMBTU/HR H. PRIMARY FUEL: Natural gas I. OTHER FUEL: N/A 24 HRS/DAY 7 DAYS/WEEK J. **OPERATING SCHEDULE:** 52 WKS/YR K. EQUIPMENT COST: N/A L. EQUIPMENT INFORMATION COMMENTS:

2. COMPANY INFORMATION

| A. | COMPANY: Chevron Products Company | B. FAC ID: 800030 | |
|----|---|-------------------|-----------------------------------|
| C. | ADDRESS: 324 W El Segundo Blvd. CITY: El Segundo STATE: CA | ZIP: 90245 | D. NAICS CODE: |
| E. | CONTACT PERSON: Sara Antunez | | F. TITLE: Air Permitting Engineer |
| G. | PHONE NO.: (310) 615 - 2957 | H. EMAIL: Sa | ara.Antunez@chevron.com |

| 3. | PERMIT INFORMATION | |
|----|--------------------------------------|--|
| A. | AGENCY: South Coast AQMD | B. APPLICATION TYPE: NEW CONSTRUCTION |
| C. | SCAQMD ENGINEER: Bob Sanford | |
| D. | PERMIT INFORMATION: PC ISSUANCE DATE | E: 5/13/10 and 8/11/2015 for 555856 and 555857 |
| | P/O NO.: | PO ISSUANCE DATE: 5/31/2017 |
| E. | START-UP DATE: 2012 | |
| F. | OPERATIONAL TIME: +10 years | |
| | | |

4. EMISSION INFORMATION A. BACT EMISSION LIMITS AND AVERAGING TIMES: .

| | VOC | NOX | SOX | СО | PM or PM ₁₀ | INORGANIC |
|-------------------|-----|---------------|-------------------|---------------|------------------------|-----------|
| BACT | | 0.05 lb/mmbtu | | 0.03 lb/mmbtu | | |
| Limit | | NATURAL GAS* | 12 PPNIVD | NATURAL GAS* | | |
| Averaging Time | | 24 hours | 72 hours | 24 hours | | |
| Correction | | | 0% O ₂ | - | | |

B. OTHER BACT REQUIREMENTS: * Incinerator is equipped with ultra-low NOx burner and emission limits are based on the lower heating value (LHV) of natural gas.

C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology

D. EMISSION INFORMATION COMMENTS: H₂S emission limit from Sulfur Recovery Unit is 2.5 ppmv averaged over 24 hours, 0% oxygen, dry basis.

| 5. CONTRO | DL TECHNOLOGY | | | | | |
|--|---|--|----------------------------|--|--|--|
| A. MANUFACTU | URER: N/A | B. MODE | L: N/A | | | |
| C. DESCRIPTIO Mix Burner | N: Tail gas incinerator (UI (RMB) and SO ₂ scrubber (| tra Low-NOx burner, Coe tail gas polishing). | n/Todd combustion Rapid | | | |
| D. SIZE/DIMENS no more that | SIONS/CAPACITY: C1.146. n 50.1 MMBTU per hour. | The operator shall limit th | e firing rate of burner to | | | |
| E. CONTROL EQ | UIPMENT PERMIT INFORM | ATION: | | | | |
| APPLICATION PO NO.: | APPLICATION NOs.: 555856 and 555857PC ISSUANCE DATE: See Section (3)(D)PO NO.:PO ISSUANCE DATE: 5/31/2017 | | | | | |
| F. REQUIRED CONTROL EFFICIENCIES: N/A | | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY | | | |
| VOC | % | % | % | | | |
| NOx | % | % | % | | | |
| SOx | % | % | % | | | |
| СО | % | % | % | | | |
| PM | % | % | % | | | |
| PM ₁₀ | % | % | % | | | |
| INORGANIC | % | % | % | | | |
| G. CONTROL TECHNOLOGY COMMENTS: The John Zink designed tail gas incinerator utilizes natural gas as the primary fuel to combust the tail gas from the TGTU to reduce the tail gas H₂S concentration below 2.5 ppmvd. The 1450°F temperature is required to meet the BACT CO limit of 0.03 lb/MMBtu at the stack and the H₂S limit of 2.5 ppmv (averaged over 24 hours, 0%). | | | | | | |

6. DEMONSTRATION OF COMPLIANCE

- A. COMPLIANCE DEMONSTRATED BY: Source tests and continuous emission monitoring system (CEMS)
- B. DATE(S) OF SOURCE TEST: 9/29/2015 10/2/2015
- C. COLLECTION EFFICIENCY METHOD: N/A
- D. COLLECTION EFFICIENCY PARAMETERS: N/A
- E. SOURCE TEST/PERFORMANCE DATA:

| | Test Date | 12/27/2012 - 2/6/2013 | 9/29/2015 - 10/2/2015 | |
|------------|----------------------------|-----------------------|-----------------------|-------------------|
| Pollutant | | Average Test Results | Average Test Result | Emission Limit |
| NOx | lbs/MMBTU | 0.01 | 0.04 | 0.05 |
| CO | lbs/MMBTU | < 0.01 | 0 | 0.03 |
| H_2S | ppmvd (0% O ₂) | 0.12 | 0.13 | 2.5 |
| SOx | ppmvd (0% O ₂) | 0.16 | 0.02 | 12 |
| The result | s are based on a 1-hou | ur average. | | |

F. TEST OPERATING PARAMETERS AND CONDITIONS: Condition D29.11) The test shall be conducted when this equipment is operating at 80 percent or greater of the maximum design capacity.

| G. TEST METHODS (SPECIFY AGENCY): | | | | | | |
|-----------------------------------|----------------------------------|----------------------------------|--------------------|--|--|--|
| Pollutant(s) to be | Required Test Method(s) | Averaging Time | Test Location | | | |
| tested | | | | | | |
| NOX emissions | District Method 100.1 | 1 hour | Outlet of Scrubber | | | |
| SOX emissions | District Method 100.1 or 6.1 | 1 hour | Outlet of Scrubber | | | |
| CO emissions | District Method 100.1 or 10.1 | 1 hour | Outlet of Scrubber | | | |
| VOC emissions | District Method 25.1 or 25.3 | 1 hour | Outlet of Scrubber | | | |
| PM emissions | District Method 5.1, 5.2, or 5.3 | District-approved averaging time | Outlet of Scrubber | | | |
| PM ₁₀ emissions | EPA Method 201A | District-approved averaging time | Outlet of Scrubber | | | |
| NH ₃ emissions | Approved District method | District-approved averaging time | Outlet of Scrubber | | | |

The operator shall also conduct a source test for COS, CS₂, and H₂S using District Method 307-91.

H. MONITORING AND TESTING REQUIREMENTS:

D82.11 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

Oxygen concentration in percent volume

The CEMS shall be approved, operated, and maintained in accordance with the requirements of R 218. To determine compliance with the CO emission limit, the CEMS data shall be converted rom CO concentrations to mass emission rates (lbs/MMBtu of natural gas combusted) on a continuous basis. The natural gas firing rate shall be determined using a fuel meter that is calibrated according to manufacturer's recommendations and a low heating value (LHV) of 914 btu/scf for natural gas. [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-

1997; RULE 407, 4-2-1982]

[Devices subject to this condition: C4344]

D82.12 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

SOX concentration in ppmv

Oxygen concentration in percent volume

To determine compliance with the NOx emission limit, the CEMS data shall be onverted from NOx concentrations to mass emission rates (lbs/MMBtu of natural gas combusted) on a continuous basis. The natural gas firing shall be determined using a fuel meter that is calibrated according to manufacturer's recommendations and a low heating value (LHV) of 914 btu/scf for natural gas.

[RULE 2005, 5-6-2005]

[Devices subject to this condition: C4344]

I. DEMONSTRATION OF COMPLIANCE COMMENTS: N/A

BCAT: 289620 CCAT: 91,96 and 4B C. APPLICATION TYPE CODE: -A. Β. D. RECLAIM FAC? E. TITLE V FAC: F. SOURCE TEST ID(S): PR 12091 and R 16048 NO \Box YES 🛛 YES 🖂 NO \square G. SCAQMD SOURCE SPECIFIC RULES: -H. HEALTH RISK FOR PERMIT UNIT H1. MICR: -H2. MICR DATE: -H3. CANCER BURDEN: -H4. CB DATE: -H7. HIC: -H8. HIC DATE: -H5: HIA: -H6. HIA DATE: -

7. ADDITIONAL SCAQMD REFERENCE DATA

Section I- South Coast AQMD BACT Determination



| | $\mathcal{I}\mathcal{L}$ | Source Type: | | Major/LAER | |
|---------|---------------------------------|-------------------|--------------------------------------|-----------------------------------|------------------------------|
| 9 | | Application No |).: | 509018 | |
| so A | South Coast Equipment Category: | | Tanker Truck Fuel Loading Racks | | |
| | | Equipment Sub | ocategory: | Afterburner (T | hermal Oxidizer) |
| | | Date: | | XX.XX.2023 | |
| 1. | EQUI | PMENT INFOR | MATION | | |
| А. | MANUFA | CTURER: John Zii | ık | B. MODEL: | |
| C. | DESCRIPT | TION: Thermal oxi | idizer controls th | ne VOC laden vapors | from the loading racks. |
| D. | FUNCTIO | N: Vapor recovery | y/collection and nks degassing/re | disposal system, con efilling. | trols vapor displaced due to |
| E. | SIZE/DIMI Capacity | ENSIONS/CAPACI | ГҮ: Diameter – 9 | 9ft, Height – 50ft/125 | 0 CFM Waste Gas |
| CO | MBUSTION | SOURCES | | | |
| F. | MAXIMU | M HEAT INPUT: 7 | 8 MMBtu/hr | | |
| G. | BURNER I | INFORMATION: | | | |
| | | ТҮРЕ | INDIVII | DUAL HEAT INPUT | NUMBER |
| | | - | | Β | 8 |
| | | | | | |
| H. | PRIMARY | FUEL: Natural C | fas I | OTHER FUEL: - | |
| J. | OPERATIN | IG SCHEDULE: | 24 HRS/DAY | 7 DAYS/WEEK | 52 WKS/YR |
| K. | EQUIPMEN | NT COST: N/A | | | |
| L. | EQUIPMEN | NT INFORMATION | COMMENTS: | | |
| 2. | COMP | ANY INFORM | ATION | | |

| A. | COMPANY: SFPP, L.P. | B. FAC ID: 800129 |
|----|---|--------------------------|
| C. | ADDRESS: 2359 Riverside Ave CITY: Bloomington STATE: CA ZIP: 92316 | D. NAICS CODE: 49319 |
| E. | CONTACT PERSON: Bill Toepher | F. TITLE: Area Manager |
| G. | PHONE NO.: (909) 873-5152 H. EMAIL: b | ill_toepher@KinderMorgan |

| 3. | PERMIT INFORMATION | | | | |
|----|------------------------------------|---|--|--|--|
| A. | AGENCY: South Coast AQMD | B. APPLICATION TYPE: CHANGE OF CONDITIONS | | | |
| C. | SCAQMD ENGINEER: Linda Dejbakhsh | | | | |
| D. | PERMIT INFORMATION: PC ISSUANCE DA | TE: 4/23/09 | | | |
| | P/O NO.: G37437 | PO ISSUANCE DATE: 9/29/2015 | | | |
| E. | START-UP DATE: - | | | | |
| F. | OPERATIONAL TIME: 6+ years | | | | |

4. EMISSION INFORMATION

| A. BACT | A. BACT EMISSION LIMITS AND AVERAGING TIMES | | | | | | | |
|--|---|-----|-----|----|------------------------|-----------|--|--|
| | VOC | NOX | SOx | СО | PM or PM ₁₀ | INORGANIC | | |
| BACT Limit | 0.02 lbs/1000 gallons | | | | | | | |
| Averaging Time | | | | | | | | |
| Correction | | | | | | | | |
| B. OTHE | B. OTHER BACT REQUIREMENTS: - | | | | | | | |
| C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology | | | | | | | | |
| D. EMISS | EMISSION INFORMATION COMMENTS: - | | | | | | | |

_

| 5. CONTRO | OL TECHNOL | OGY | | | | |
|-------------------------|---------------------------------------|---------------|--------------------|----------------|----------------------------|--|
| A. MANUFACT | URER: John Zin | K | | B. MODE | L: - | |
| C. DESCRIPTIC | N: Thermal oxid | lizer for loa | ading rack, dire | ect flame | | |
| D. SIZE/DIMEN | SIONS/CAPACITY | : Diamete | er – 9ft. Height | – 50ft. 125 | 0 CFM Waste Gas | |
| Capacity, 7 | 8 MMBtu/hr | | | | | |
| E. CONTROL E | QUIPMENT PERM | IT INFORM | ATION: | | | |
| APPLICATIO | N NO.: 509018 | PC IS | SUANCE DATE | : 4/23/09 | | |
| PO NO.: G37 | 437 ontrol feficie | PO IS | SSUANCE DATE | : 9/29/2015 |) | |
| T. REQUIRED C | | NCILS | | | 1 | |
| CONTAMINANT | OVERALL CO EFFICIEI | ONTROL NCY | CONTROL EFFICIE | DEVICE ENCY | COLLECTION EFFICIEN | |
| VOC | 99% | | | % | % | |
| NOx | % | | | % | % | |
| SOx | % | | | % | % | |
| СО | % | | | % | % | |
| PM | % | | | % | % | |
| PM ₁₀ | % | | % | | % | |
| INORGANIC | % | | | % | % | |
| G. CONTROL TE | CHNOLOGY COM | MENTS: | | | 4 | |
| flow doe | S not exceed 125 | The operat | or shall use the | s equipmen | it in such a manner that t | |
| Permit C | Condition C8.6) | The operato | or shall use this | equipment | in such a manner that the | |
| temperat | ure being monito | ored is not 1 | less than 1225 | °F; this doe | s not apply during period | |
| of startu | p or shutdown, w | which are no | ot to exceed 30 | minutes. | | |
| 6. DEMON | STRATION OF | COMPL | IANCE | | | |
| A. COMPLIANC | E DEMONSTRATI | ED BY: SOU | urce test | | | |
| B. DATE(S) OF | SOURCE TEST: 6 | 5/25/2010 | | | | |
| C. COLLECTION | N EFFICIENCY ME | ETHOD: - | | | | |
| D. COLLECTIO | N EFFICIENCY PA | RAMETERS | 5: - | | | |
| E. SOURCE TES | T/PERFORMANC | E DATA: | | | | |
| Test perfe | ormed @1225 D | egrees Fahi | renheit | | | |
| The syste loaded du | m was tested for | at least six | hours, with m | ore than 80 | .000 gallons of gasoline | |
| | Source Test Results Permit Conditions | | | | | |
| VOC Mass Er | nission Rate | 0.01 lbs/100 | 00 gal | ≤ 0.02 | lbs/1000 gal | |
| VOC Remova | l Efficiency | 99.85% | | ≥99% | | |
| Outlet VOC | | 48.90 ppm | | ≤ 500 | ppm | |
| L L | | | | ' | | |

F. TEST OPERATING PARAMETERS AND CONDITIONS:

- CO emissions must not exceed 1138lbs in any one month
- Flow rate must be monitored so that it does not exceed 1250 CFM
- Temperature must be monitored so that it does drop below 1225 degrees Fahrenheit while equipment is operating (except during periods of startup or shutdown)

G. TEST METHODS (SPECIFY AGENCY): South Coast AQMD Method 25.1 and 25.3

- H. MONITORING AND TESTING REQUIREMENTS:
 - The source test shall be conducted at least once every 5 years to
 - Determine VOC emission rate in pound per 1000 gallons loaded
 - Demonstrate a 99% overall control efficiency for the vapor recovery and disposal system
 - Determine the bulk loading rate in gallons per hour

I. DEMONSTRATION OF COMPLIANCE COMMENTS:

• Tested for VOC Control Efficiency @1500 °F, @1225 °F, and @1000 °F

7. ADDITIONAL SCAQMD REFERENCE DATA

| А. | BCAT: - | B. CCAT: 05 | C. APPLICATION TYPE CODE: - |
|----|--------------|-----------------|-------------------------------|
| D. | RECLAIM FAC? | E. TITLE V FAC: | F. SOURCE TEST ID(S): PR10087 |
| | YES 🛛 NO 🗆 | YES 🛛 NO 🗆 | |

G. SCAQMD SOURCE SPECIFIC RULES:

- **Rule 462:** This is a Class A facility required to meet a VOC emissions rate of 0.08 lbs/1000 gallons loaded. Source tests show that the emissions are below 0.08 lbs/1000 gallons, compliance expected.
 - Class A Facility is defined as any facility that loads 20,000 gallons of organic liquid or more into any tank truck, trailer, or railroad tank car in any one day
- **Rule 1149:** This afterburner is subject to the 500 ppm VOC limitation during degassing operations, expected to comply.
- H. HEALTH RISK FOR PERMIT UNIT

| H1. MICR: - | H2. MICR DATE: - | H3. CANCER BURDEN: - | H4. CB DATE: - |
|-------------|------------------|----------------------|-----------------|
| H5: HIA: - | H6. HIA DATE: - | Н7. НІС: - | H8. HIC DATE: - |

Section II – Other LAER/BACT Determination



2. COMPANY INFORMATION

| A. | COMPANY: Pacific Southwest Container, LLC | | B. FAC ID: |
|----|---|--------------------------|--------------|
| C. | ADDRESS: 671 Mariposa Rd. CITY: Modesto STATE: CA ZIP: | D. NAICS CODE: 322211 | |
| E. | C. CONTACT PERSON: Mac McCullough | | F. TITLE: |
| G. | A. PHONE NO.: (209) 604-6815 H. EMAIL: macm | | @teampsc.com |

| 3. PE | RMIT INFORMAT | ION | | | | |
|---|---------------------|---------------------------|---------------------|------------------------|------------------------|--------------------|
| A. AGEN | CY: San Joaquin Va | lley Air Pollution Contro | l District | B. APPLICATION TYP | PE: NEW CONSTRU | JCTION |
| C. SCAQ | MD ENGINEER: | SJVAPCD Engineer: Jam | es Harader | | | |
| D. PERM | IT INFORMATION: PC | ISSUANCE DATE: | | | | |
| | P/C | NO.: N-8044-4-2 | | | PO ISSUAN | CE DATE: 9/21/2018 |
| E. STAR | Г-UP DATE: 5/7/2019 | | | | | |
| F. OPERA | ATIONAL TIME: Over | 3 years | | | | |
| 4 EM | USSION INFORMA | TION | | | | |
| A. BACT | EMISSION LIMITS AN | D AVERAGING TIMES: - | | | | |
| | VOC | NOX | SOX | СО | PM or PM ₁₀ | INORGANIC |
| BACT | | 2.5 ppmv | | 50 ppmv | | |
| Limit | | 0.0030 lb/MMBtu | | 0.037 lb/MMBtu | | |
| Averaging Time | | 15 minutes | | 15 minutes | | |
| Correction | | 3% O ₂ | | 3% O ₂ | | |
| B. OTHER BACT REQUIREMENTS: There is a 10 ppmv ammonia slip limit, the source test shows the ammonia slip limit is 2.8 ppm. The current South Coast AQMD ammonia slip BACT is 5 ppmv. | | | | | | |
| C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology | | | | | | |
| D. EMISS permit: | SION INFORMATION C | OMMENTS: Although not | t a part of this BA | ACT determination, the | following limits are | included in the |

SOx – 0.00285 lb/MMBtu

PM₁₀ – 0.003 lb/MMBtu

VOC – 0.0055 lb/MMBtu

NH₃ – 10 PPMVD @ 3% O₂

| 5. CONTRO | DL TECHNOLOGY | | | | | | | | |
|------------------|--|------------------------------|--------------------------|--|--|--|--|--|--|
| A. MANUFACTU | URER: UMICORE | B. MODE | L: DNX-1029 | | | | | | |
| C. DESCRIPTIO | N: Selective Catalytic Red | luction (SCR) system. The | DNX® catalyst is a fiber | | | | | | |
| reinforced V | anadium-Tungsten-Titania | catalyst. | - | | | | | | |
| D. SIZE/DIMENS | D. SIZE/DIMENSIONS/CAPACITY: - | | | | | | | | |
| E. CONTROL EQ | E. CONTROL EQUIPMENT PERMIT INFORMATION: | | | | | | | | |
| APPLICATIO | N NO. N-8044-4-0 P | C ISSUANCE DATE: | | | | | | | |
| PO NO.: N-8 | 8044-4-2 Р | O ISSUANCE DATE: 9/21/2 | .018 | | | | | | |
| F. REQUIRED CO | ONTROL EFFICIENCIES: N/A | | | | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY | | | | | | |
| VOC | % | % | % | | | | | | |
| NOx | % | % | % | | | | | | |
| SOx | % | % | % | | | | | | |
| СО | % | % | % | | | | | | |
| РМ | % | % | % | | | | | | |
| PM ₁₀ | % | % | % | | | | | | |
| INORGANIC | % | _% | % | | | | | | |
| G. CONTROL TEC | G. CONTROL TECHNOLOGY COMMENTS: - | | | | | | | | |
| 6. DEMONS | STRATION OF COMPLI | IANCE | | | | | | | |
| | | | | | | | | | |

| A. | COMPLIANCE DEMO | NSTRATED | BY: Source | Test |
|----|-----------------|----------|-------------------|------|

- B. DATE(S) OF SOURCE TEST: 7/6/2020
- C. COLLECTION EFFICIENCY METHOD: N/A
- D. COLLECTION EFFICIENCY PARAMETERS: N/A

E. SOURCE TEST/PERFORMANCE DATA:

| Pollutant | Average Test Result | Emission Limit |
|--|---------------------|----------------|
| NOx, ppmv @ 3% O ₂ | 1.4 | 2.5 |
| CO, ppmv @ 3% O ₂ | <0.1 | 50 |
| NH ₃ , ppmv @ 3% O ₂ | 2.8 | 10 |
| | | |

F. TEST OPERATING PARAMETERS AND CONDITIONS: Condition 24 - All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. List any important operating conditions maintained during the source test or normal operations. Examples include, but may not be limited to, pressure differentials across control devices, feed rates, firing rates, temperatures, flow rates, or other parameters used to evaluate the level of operation of the equipment during the test or operations that may affect emissions from the equipment.

| G. TEST METHODS (SPECIFY AGENCY): | | | | | |
|-----------------------------------|---------------------------------|--|--|--|--|
| Pollutant Test Method | | | | | |
| NOx | EPA Method 7E or ARB Method 100 | | | | |
| СО | EPA Method 10 or ARB Method 100 | | | | |

- H. MONITORING AND TESTING REQUIREMENTS: Monthly testing for NOx, CO, and O_2 using a portable analyzer and for NH_3 using Draeger tubes or a District approved method during each month in which source testing is not performed.
- I. DEMONSTRATION OF COMPLIANCE COMMENTS: Permit Condition 18) Source testing to measure NOx, CO, and NH₃ emissions during steady state operation from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

| 7. | ADDITIONAL SCAQMD REFERENCE DATA | | | | | Ά | | |
|-----|----------------------------------|-------|------------|--------|----------|------|------------|---------------|
| A. | BCAT: | | B. CCAT: | | | C. | APPLICATIC | ON TYPE CODE: |
| D. | RECLAIM FAC? | | E. TITLE | V FAC: | | F. | SOURCE TES | ST ID(S): |
| | YES D NO D | | YES [|] NO | | | | |
| G. | SCAQMD SOURCE | SPEC | IFIC RULES | : | | | | |
| H. | HEALTH RISK FOR | PERN | AIT UNIT | | | | | |
| H1. | MICR: | H2. 1 | MICR DATE | : | H3. CAN | ICEF | R BURDEN: | H4. CB DATE: |
| H5: | HIA: | H6. I | HIA DATE: | | H7. HIC: | | | H8. HIC DATE: |

Section II - Other LAER/BACT Determination

| | Source Applie |
|-------------|------------------|
| South Coast | Equip |
| | Equip |

| | Sour | rce Type: | Major/l | LAER | | | |
|----------|--|-------------------------------------|-----------------|----------------|-----------------------|--|--|
| 9 | App | lication No.: | 29170 | | | | |
| Sou A | uth Coast Equi | pment Category: | Gas Tu | rbine | | | |
| | Equi | pment Subcategory: | Simple | Cycle, Natur | ral Gas | | |
| | Date | : | XX.XX | .2023 | | | |
| 1. | EQUIPMEN | T INFORMATION | | | | | |
| A. | MANUFACTURE | R: Siemens | B. 1 | MODEL: SGT | `6-5000F | | |
| C. | DESCRIPTION: S | imple cycle natural gas fire | ed turbine ge | nerator with S | Selective Catalytic | | |
| | Reduction (SCF NOx (DLN) cor | t) system and Oxidation Canbustors. | atalyst. The t | urbines are ec | juipped with dry low- | | |
| D. | FUNCTION: The | Marsh Landing Generating | g Station is a | merchant pov | wer plant with a | | |
| | nominal generating capacity of 760 MW. The plant uses four natural-gas-fired Siemens | | | | | | |
| | power. | moustion turome generator | is that built h | latural gas to | generate electrical | | |
| E. | SIZE/DIMENSION | JS/CAPACITY: 190 MW eac | h (nominal) | | | | |
| со | MBUSTION SOUR | CES | | | | | |
| F. | MAXIMUM HEA | FINPUT: 2202 MMBtu/hor | ur (HHV) ead | ch | | | |
| G. | BURNER INFORM | MATION | | | | | |
| | TYPE | INDIVIE | DUAL HEAT IN | NPUT | NUMBER | | |
| | - | | Θ | | E | | |
| | | | | | | | |
| H. | PRIMARY FUEL: | PUC-regulated Natural G | as I. OTHEI | R FUEL: N/A | | | |
| J. | OPERATING SCH | EDULE: See section (1)(L) | HRS/DAY | DAYS/WEEK | WKS/YR | | |
| K. | EQUIPMENT COS | T: N/A | | | | | |
| L. | L. EQUIPMENT INFORMATION COMMENTS: Under the BAAQMD permit, the combined hours for all four units shall not exceed 7,008 hours per year (with exceptions for maintenance, tuning, testing, and commissioning). | | | | | | |
| 2. | COMPANY | INFORMATION | | | | | |
| А. | COMPANY: Mai | sh Landing Generating Sta | tion | B. FAC ID: I | 39169 | | |
| | | | | | 221112 | | |

| A. | COMPANY: Marsh Landing Generating St | B. FAC ID: B9169 | |
|----|--------------------------------------|-----------------------|---------------------------------|
| C. | ADDRESS: 3201-C Wilbur Avenue | D. NAICS CODE: 221112 | |
| | CITY: Antioch STATE: CA ZIP: 9 | 4509 | |
| E. | CONTACT PERSON: Scott Seipel | | F. TITLE: Environmental Manager |
| G. | PHONE NO.: (909) 648-5008 | H. EMAIL: sc | ott.seipel@nrg.com |

| 3. | PERMIT IN | FORMATI | ON | | | | |
|----------|--|-------------|---------------------|---------------|-----------------|------------------------|-----------|
| A. | AGENCY: Bay | Area Air Qu | ality Management Di | strict | B. APPLICATION | TYPE: NEW CONSTRUC | CTION |
| C. | C. SCAQMD ENGINEER: BAAQMD Engineer – Xuna Cai | | | | | | |
| D. | D. PERMIT INFORMATION: PC ISSUANCE DATE: 2013 | | | | | | |
| | | P/O | NO.: | PO ISSUANCE E | DATE: 11/3/2015 | | |
| E. | START-UP DATE | : - | | | | | |
| F. | OPERATIONAL 1 | IME: over 7 | years | | | | |
| 4. | EMISSION | NFORMA' | ΓΙΟΝ | | | | |
| А. | A. BACT EMISSION LIMITS AND AVERAGING TIMES: . | | | | | | |
| | V | OC | NOX | SOX | СО | PM or PM ₁₀ | INORGANIC |
| BA Li | ACT | | 2.5 ppmv | | 2.0 ppmv | | |

| A. BACT | BACT EMISSION LIMITS AND AVERAGING TIMES: . | | | | | | |
|---|---|----------------------|-----|----------------------|------------------------|-----------|--|
| | VOC | NOX | SOX | СО | PM or PM ₁₀ | INORGANIC | |
| BACT Limit | | 2.5 ppmv | | 2.0 ppmv | | | |
| Averaging Time | | 1 Hour | | 1 Hour | | | |
| Correction | | @ 15% O ₂ | | @ 15% O ₂ | | | |
| B. OTHER BACT REQUIREMENTS: The emission limits shall not apply during gas turbine start-ups, combustor tuning operations, shutdowns, commissioning activities and readiness testing for black start capability, or black start emergency operations. | | | | | | | |

C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology

D. EMISSION INFORMATION COMMENTS: N/A

| 5. CONTRO | DL TECHNOLOGY | | |
|--|--|--|---|
| A. MANUFACTU | JRER: N/A | B. MODE | L: N/A |
| C. DESCRIPTIO Catalyst and requirement | N: Each unit is equipped wi a Selective Catalytic Reduces. | ith dry low-NOx (DLN) c ction (SCR) system contro | ombustors, an Oxidation ol to meet the emission |
| D. SIZE/DIMENS | SIONS/CAPACITY: N/A | | |
| E. CONTROL EQ APPLICATION PO NO.: - | UIPMENT PERMIT INFORMA N NO.: - PC ISSUANCI PO ISSUANC | ATION: E DATE: See (3)(D) E DATE: See (3)(D) | |
| F. REQUIRED CO | ONTROL EFFICIENCIES: N/A | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY |
| VOC (POC) | % | % | % |
| NOx | % | % | % |
| SOx | % | % | % |
| СО | % | % | % |
| РМ | % | % | % |
| PM ₁₀ | % | % | % |
| INORGANIC | % | % | % |
| G. CONTROL TEC (NH ₃) emission averaged over emissions (as lb/MMBtu of | CHNOLOGY COMMENTS: The on concentrations at each ex- any rolling 3-hour period. I CH ₄) at each exhaust point natural gas fired. | e permit has a limit of 10 haust point corrected to 1 Precursor Organic Compo shall not exceed 2.9 poun | ppmvd for ammonia 5% O ₂ , on a dry basis, ounds (POC) mass ids per hour or 0.00132 |
| 6. DEMONS | STRATION OF COMPLI | ANCE | |
| A. COMPLIANCE Annual Sour | DEMONSTRATED BY: Cont ce Test | inuous emission monitori | ing system (CEMS) and |
| B. DATE(S) OF S CEMS DATE: . | OURCE TEST: November 2 August 2022 (NOx and CO) | 0-21, 2019 | |
| C. COLLECTION | EFFICIENCY METHOD: N/A | A | |

D. COLLECTION EFFICIENCY PARAMETERS: N/A

| E. SOURCE TEST/PERFORMANCE DATA: | | | | | | |
|----------------------------------|----------------|---------------------|----------------------------|----------|--|--|
| | Test Date | 11/20/2019 | 11/15/2021 | | | |
| Dollutont | | Unit A | Unit B | Emission | | |
| Pollutant | | Average Test Result | Average Test Result | Limit | | |
| NOx | ppmvd @ 15% O2 | 2.2 | 2.25 | 2.5 | | |
| СО | ppmvd @ 15% O2 | 0.2 | 0.34 | 2 | | |
| NH ₃ | ppmvd @ 15% O2 | 1.66 | 1 | 10 | | |
| | | | | | | |

F. TEST OPERATING PARAMETERS AND CONDITIONS: Emission tests were performed while the units and air pollution control devices were operating. The source tests consisted of 3 separate runs. The emission concentrations of NOx, CO, and NH₃ must be corrected to 15% O₂. Continuous emission monitoring for NOx and CO emission concentrations are averaged over any 1-hour period. NH₃ emission concentrations are averaged over any rolling 3-hour period.

| G. TEST METHODS |): | |
|--|-----------------|---------------------|
| Pollutant | No. of Runs | Test Methods |
| NOx | 3 Tests Average | EPA 7E |
| СО | 3 Tests Average | EPA 10 |
| NH ₃ | 3 Tests Average | BAAQMD ST-1B |
| POC as CH ₄ methane, ethane | 3 Tests Average | EPA 18/TO-12 |

H. MONITORING AND TESTING REQUIREMENTS: Source Testing required annually for pollutants listed in source test data above. Continuous emission monitoring is required for NOx and CO. The ammonia emission concentration is verified by the continuous recording of the ammonia injection rate to each SCR system.

I. DEMONSTRATION OF COMPLIANCE COMMENTS: .

7. ADDITIONAL SCAQMD REFERENCE DATA

| A. | BCAT: - | В. | CCAT: - | | C. APPLICATIO | ON TYPE CODE: - |
|-----|------------------------------------|---------|-----------------|---------|-----------------|-----------------|
| D. | RECLAIM FAC? | E. | E. TITLE V FAC: | | F. SOURCE TES | ST ID(S): |
| | YES D NO D | | YES 🛛 🗈 | NO 🗆 | | |
| G. | G. SCAQMD SOURCE SPECIFIC RULES: - | | | | | |
| H. | H. HEALTH RISK FOR PERMIT UNIT | | | | | |
| H1. | MICR: - | H2. MIC | R DATE: - | H3. CAN | ICER BURDEN: - | H4. CB DATE: - |
| H5 | H5: HIA: - H6. HIA DATE: - | | H7. HIC | : - | H8. HIC DATE: - | |
| | | | | | | |

Section II - Other LAER/BACT Determination

| | Section II - Other LAER/BACT Determination | | | | | | | |
|---------|---|---------------------------------------|---------------------------------|--|--|--|--|--|
| (| \sum | Source Type: | | Major/LAER | | | | |
| 9 | | Application No.: | | 1153979 | | | | |
| So A | South Coast Equipment Category: | | Heater | | | | | |
| | | Equipment Subo | category: | Other Process | | | | |
| | | Date: | | XX.XX.2023 | | | | |
| 1. | EQUIP | MENT INFORM | MATION | | | | | |
| A. | MANUFAC | CTURER: | | B. MODEL: | | | | |
| C. | DESCRIPT | ION: 15 MMBtu/h | nr heater (Hea | ter # 21) | | | | |
| D. | FUNCTION heat from Plant. | N: Standby heater the cogeneration | #21 provides unit is not ava | process heat for the f ailable. Heater is locat | ractionator in the event that ted at Lube Oil Finishing | | | |
| E. | SIZE/DIME | ENSIONS/CAPACIT | Y: 15 MMBt | u/hr Heater | | | | |
| CO | MBUSTION | SOURCES | | | | | | |
| F. | MAXIMUN | A HEAT INPUT: | | | | | | |
| G. | BURNER I | NFORMATION | | | | | | |
| | | ТҮРЕ | INDIV | IDUAL HEAT INPUT | NUMBER | | | |
| | ClearS | Sign Burner | 15 | MMBtu/hr | 1 | | | |
| | | | | | | | | |
| H. | H. PRIMARY FUEL: PUC natural gas I. OTHER FUEL: N/A | | | | | | | |
| J. | OPERATIN | G SCHEDULE: | Hours HRS/D | AY DAYS/WEEK | WKS/YR | | | |
| K. | K. EQUIPMENT COST: Enter sum of all Cost Factors in Table 6 of SCAQMD BACT Guidelines | | | | | | | |
| L. | EQUIPMEN | T INFORMATION | COMMENTS: | | | | | |
| 2. | COMP | ANY INFORMA | TION | | | | | |

| A. | COMPANY: Tricor Refining, LLC | | B. FAC ID: S-44 |
|----|---|-------------|---------------------------------|
| C. | ADDRESS: 1134 Manor St CITY: Bakersfield STATE: CA | ZIP: 93388 | D. NAICS CODE: 2951 |
| E. | CONTACT PERSON: Jeff Beecher | | F. TITLE: Environmental Manager |
| G. | PHONE NO.: (661) 393-7110 | H. EMAIL: j | effb@sjr.com |

| 3. | PERMIT INFORMATION | |
|----|--|-----------------------------|
| A. | AGENCY: San Joaquin Valley Air Pollution Control District | B. APPLICATION TYPE: OTHER |
| C. | SCAQMD ENGINEER: - | |
| D. | PERMIT INFORMATION: PC ISSUANCE DATE: 6/1/16 P/O NO.: S-44-4-20 | PO ISSUANCE DATE: 9/13/2017 |
| E. | START-UP DATE: 7/10/17 | |
| F. | OPERATIONAL TIME: Over 5 years | |

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O₂, %CO₂, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

| | VOC | NOX | SOx | СО | PM OR PM ₁₀ | INORGANIC |
|-------------------|-----|---------------------------|-----|----------------------------|------------------------|-----------|
| BACT Limit | | 6 PPMV 0.007 LB /MMBTU | | 50 ррмv 0.037 LB /MMBTU | | |
| Averaging Time | | 30 min | | 30 min | | |
| Correction | | 3% O ₂ | | 3% O ₂ | | |

B. OTHER BACT REQUIREMENTS: N/A

C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology

D. EMISSION INFORMATION COMMENTS: Condition 11) Emissions from heater shall not exceed any of the following limits: 0.0055 lb-VOC/MMBtu, 0.0076 lb PM10/MMBtu, or 0.00285 lb-SOx/MMBtu.

| 5. CONTRO | DL TECHNOLOGY | | | | | | |
|--------------------------|-------------------------------------|------------------------------|-----------------------|--|--|--|--|
| A. MANUFACTU | URER: ClearSign | B. MODE | L: | | | | |
| C. DESCRIPTIO | C. DESCRIPTION: Low-NOx Burner | | | | | | |
| D. SIZE/DIMENS | SIONS/CAPACITY: 15 MME | 3tu/hr | | | | | |
| E. CONTROL EQ | UIPMENT PERMIT INFORM | ATION: | | | | | |
| APPLICATION PO NO.: - | N NO.: - PC ISSUANO PO ISSUANO | CE DATE: - CE DATE: - | | | | | |
| F. REQUIRED CO | ONTROL EFFICIENCIES: N/A | 1 | | | | | |
| CONTAMINANT | OVERALL CONTROL EFFICIENCY | CONTROL DEVICE EFFICIENCY | COLLECTION EFFICIENCY | | | | |
| VOC | % | % | % | | | | |
| NOx | % | % | % | | | | |
| SOx | % | % | % | | | | |
| СО | % | % | % | | | | |
| РМ | % | % | % | | | | |
| PM ₁₀ | % | % | % | | | | |
| INORGANIC%% | | | | | | | |
| G. CONTROL TEC | G. CONTROL TECHNOLOGY COMMENTS: N/A | | | | | | |
| | | | | | | | |

6. DEMONSTRATION OF COMPLIANCE

- A. COMPLIANCE DEMONSTRATED BY: Source Test
- B. DATE(S) OF SOURCE TEST: 9/15/2017 and 9/1/2020
- C. COLLECTION EFFICIENCY METHOD: N/A
- D. COLLECTION EFFICIENCY PARAMETERS: N/A

E. SOURCE TEST/PERFORMANCE DATA:

| | Pollutant | 9/15/2017 Test Result | 9/1/2020 Test Result | Emission Limit | Test Method |
|----|--------------------------|--------------------------|-------------------------|-------------------|-----------------|
| NO | ppmv @ 3% O ₂ | 5.34 | 5.61 | 6 | CARB Method 100 |
| CO | ppmv @ 3% O ₂ | 37.5 | 39.9 | 50 | CARB Method 100 |

| F. | TEST OPERATING PARAMETERS AND CONDITIONS: The unit was tested under normal |
|----|--|
| | operation conditions. |

G. TEST METHODS (SPECIFY AGENCY): See table above. EPA Method 7E, 10, and CARB Method 100.

- H. MONITORING AND TESTING REQUIREMENTS: Source Test for NOx and CO once per 12 months or 36 months, depending on performance. The permittee shall monitor and record the Heater #21 stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications.
- I. DEMONSTRATION OF COMPLIANCE COMMENTS: $N\!/\!A$

7. ADDITIONAL SCAQMD REFERENCE DATA

| A. | BCAT: N/A | | B. CCAT: N/A | | C. APPLICATION TYPE CODE: - | | |
|-----|------------------------------------|-------|-----------------|------------|-----------------------------|----------------|-----------------|
| D. | RECLAIM FAC? | | E. TITLE V FAC: | | F. SOURCE TEST ID(S): | | |
| | YES D NO D Y | | YES 🖂 | YES 🛛 NO 🗆 | | | |
| G. | G. SCAQMD SOURCE SPECIFIC RULES: - | | | | | | |
| H. | H. HEALTH RISK FOR PERMIT UNIT | | | | | | |
| H1. | . MICR: - | H2. N | MICR DATE: - | | H3. CAN | ICER BURDEN: - | H4. CB DATE: - |
| Н5 | : HIA: - | H6. I | HIA DATE: - | | H7. HIC: | - | H8. HIC DATE: - |