Santa Barbara County
Air Pollution Control District

HEARING BOARD STAFF REPORT

TYPE: **REGULAR VARIANCE**

CASE NO: **2016-43-R**

DATE: **January 04, 2017**

1.0 GENERAL INFORMATION:

1.1 PETITIONER NAME: ExxonMobil Production Company (ExxonMobil)

1.2 EQUIPMENT LOCATION: Petitioner operates the equipment described in the Petition at 12000 Calle Real, Goleta, CA

1.3 PERMIT NUMBER(S): Part 70/Permit to Operate 5651

1.4 FACILITY NAME/ID: Las Flores Canyon, FID 01482

1.5 FACILITY DESCRIPTION: The Las Flores Canyon (LFC) Oil and Gas Processing Plant is part of the *Exxon – Santa Ynez Unit (SYU) Project* stationary source (SSID # 01482). The *Exxon – SYU Project* stationary source consists of five facilities: Platform Harmony (FID 08018), Platform Heritage (FID 08019), Platform Hondo (FID 08009), Las Flores Canyon Oil and Gas Plant (FID 01482), and POPCO Gas Plant (FID 03170). ExxonMobil Production Company (ExxonMobil), an unincorporated division of Exxon Mobil Corporation, owns and operates the facility. The LFC facility currently includes a gas turbine, a heat recovery steam generator, oil storage tanks, a waste gas incinerator, various sumps, pumps and compressors, a pig receiver, a thermal oxidizer, three diesel-fired water pump engines, and fugitive components.

2.0 REASON FOR THE VARIANCE REQUEST: As a result of the Plains All American Pipeline (AAPL) Line 901 failure on May 19, 2015, ExxonMobil experienced facility impacts. Due to these impacts, SYU onshore and offshore facilities are temporarily ceasing operations. On June 16, 2015 incoming platform gas was terminated. Preservation plans for the facility are still in progress. Line 901 remains shutdown and Plains continues to work with local and federal agencies to understand the nature of the failure and repair options. At this time, it is unclear when the restart of the facility may occur. Since the facility is not in operation, the Petitioner is requesting coverage from performing measurement and/or recordkeeping of process parameters that do not exist during this extended shutdown, disconnecting vapor recovery from the drained crude oil tanks, and suspension of certain fugitive inspection and maintenance activities. Emissions related to tank breathing are expected to be within permitted limits.

3.0 BACKGROUND: A Petition for a Regular Variance was submitted on December 12, 2016 by ExxonMobil Production Company. If granted, 2016-43-R would grant enforcement relief from January 04, 2017 through January 03, 2018, or the date the facility resumes processing platform gas, whichever occurs first. A Regular Variance was requested due to the unknown timeline for the AAPL repair.

4.0 PERMITTING HISTORY: The LFC facility was originally permitted under ATC 5651 in November of 1987. Since that time, ATC 5651 was modified numerous times. The District Permit to Operate for LFC was issued in January of 1999.

5.0 **COMPLIANCE HISTORY:** Historically, the conditions described in Section 6.0 have not been violated.

6.0 **REGULATORY ANALYSIS**: The following permit conditions of Part 70 Permit to Operate 5651 and rule requirements are applicable to the variance request:

- **Condition 9.B.12 (Continuous Emissions Monitoring)**
  - *ExxonMobil shall comply with the requirements of Section C, F, G, H and I of Rule 328. Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit as well as on-site inspections. [Re: District Rule 328]*

- **Condition 9.C.1 (Cogeneration Power Plant)**
  - *b. Operational Limits: The following operational limits apply to the CPP:*
    - *xi. Bypass Stack - The damper on the gas turbine bypass stack shall remain in a fully closed position except during the startup and shutdown of the turbine. During start-up, the damper on the bypass stack shall remain open only for the period from when the turbine is down to when it reaches 4 MW. In no case shall the damper on the bypass stack remain open for more than 120 minutes during any startup or shutdown period. If testing or maintenance is performed, the bypass damper may remain open if the load on the turbine does not exceed 4 MW, and the maintenance and testing period does not exceed 240 minutes. Leakage exhaust rate from the bypass stack during the Normal Operations Mode shall be assumed to be 1 percent of the exhaust flow rate from the turbine at all times. ExxonMobil shall implement an operations and maintenance program to ensure that the bypass damper is properly functioning at all times. Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit.*
  - *c. Monitoring: ExxonMobil shall monitor the emission and process parameters listed in Table 10.1 for the life of the project. ExxonMobil shall perform annual source testing of the CPP consistent with the requirements listed in Table 4.5 and the source testing condition of this permit. In addition, ExxonMobil shall:*
    - *i. Monitor the dates and times of Startup and Shutdown operations and Maintenance and Testing operations.*
    - *ii. Continuously monitor the fuel gas using H2S and HHV analyzers.*
  - *d. Recordkeeping: ExxonMobil shall record the emission and process parameters listed in Table 10.1. Further, except where noted, ExxonMobil shall maintain hardcopy records of the following:*
    - *i. For each operating mode, the daily, quarterly and annual heat input in units of million Btu for the gas turbine and HRSG. In addition, the five highest hourly heat input rates per month in units of MMBtu/hr.*
    - *ii. CPP Planned Bypass Mode - Daily, quarterly and annual records identifying the time and duration the CPP is in the Planned Bypass Mode.*
      - *1. Documentation (log) of actions taken by ExxonMobil to minimize emissions during each CPP startup and shutdown event shall be maintained. This documentation shall include a timeline of each event showing: when the bypass stack is opened/closed (including the duration), the turbine and HRSG heat inputs, the exhaust temperature to*

the SCR, when steam injection is turned on/off, when ammonia injection is turned on/off, exhaust flow rates from the bypass and main stacks, MW produced by the gas turbine generator, and the concentration and mass emissions of NOx and CO. The log shall also indicate all times when testing and maintenance operations occur as well as the nature of the testing and maintenance.

- *iii. On a continuous basis, the rate of steam injection to the gas turbine in units of pounds steam per pound fuel, the rate of ammonia injection to the SCR in units of lb-moles ammonia to lb-moles inlet NOx, and the temperature of the flue gas entering the SCR. These records may be maintained in an electronic format.*

- **Condition 9.C.2 (Thermal Oxidizer)**
  - *c. Monitoring: The equipment listed in this section are subject to all the monitoring requirements listed in District Rule 331.G. ExxonMobil shall monitor the emission and process parameters listed in Table 10.3 for the life of the project. In addition, the following monitoring requirements apply to the flare relief system:*
    - *iii. Purge/Pilot Gas - ExxonMobil shall continuously monitor the purge/pilot fuel gas using H2S and HHV analyzers. ExxonMobil shall also perform quarterly total sulfur content measurements of the fuel gas using ASTM or other District-approved methods. ExxonMobil shall utilize District-approved sampling and analysis procedures.*
    - *iv. Flaring Sulfur Content - The hydrogen sulfide content of produced gas and acid gas combusted during flaring events shall be measured on the schedule pursuant to Appendix D.13 of the District-approved CEMS Plan using District-approved ASTM methods. On an annual basis, ExxonMobil shall also measure the non-hydrogen sulfide reduced sulfur compounds and these values shall be added to the hydrogen sulfide measurements to obtain the total sulfur content. ExxonMobil shall perform additional testing of the sulfur content and hydrogen sulfide content, using approved test methods, as requested by the District. The definition of an event as stated in Appendix D.13 shall only be applicable for the sole purpose of determining when ExxonMobil is required collect samples through the automatic flare gas sampling system.*
    - *v. On a monthly basis, ExxonMobil shall sample the low pressure and acid gas flare headers to determine the hydrogen sulfide content using sorbent tubes. To obtain the total sulfur content, ExxonMobil shall add the prior year's non-hydrogen sulfide reduced sulfur compounds analysis result to the absorbent tube readings.*
  - *d. Recordkeeping: The equipment listed in this section are subject to all the recordkeeping requirements listed in District Rule 331.G. ExxonMobil shall record the emission and process parameters listed in Table 10.3. In addition, the following recordkeeping conditions apply to the thermal oxidizer:*
    - *i. Flare Event Logs - All flaring events shall be recorded in a log. The log shall include: date; duration of flaring events (including start and stop times); quantity of gas flared; total sulfur content; hydrogen sulfide content; high heating value; reason for each flaring event, including the processing unit or equipment type involved; the total heat input (MMBtu) per event; and, the type of event (e.g., Planned - Continuous LP, Unplanned - Other). The volumes of gas combusted and resulting mass emissions of all criteria pollutants for each type of event shall also be summarized for a cumulative summary for each day, quarter*

and year. This log shall include any flaring events of ammonia and use of fuel for acid gas enrichment.

- *ii. Pilot/Purge Gas Volume - The volume of pilot/purge fuel gas combusted in the thermal oxidizer shall be recorded on a weekly, quarterly and annual basis.*
- *iii. Ammonia Tank Operations Log - ExxonMobil shall track and log the date of each ammonia tank loading operation and each ammonia tank level transmitter calibration.*

- **Condition 9.C.3 (Fugitive Hydrocarbon Emissions Components)**
  - *b. Operational Limits: Operation of the equipment listed in this section shall conform to the requirements listed in District Rule 331.D and E. Compliance with these limits shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit. In addition ExxonMobil shall meet the following requirements:*
    - *i. VRS Use - The vapor recovery and gas collection (VR & GC) systems at LFC shall be in operation when equipment connected to these systems are in use. These systems include piping, valves, and flanges associated with the VR & GC systems. The VR & GC systems shall be maintained and operated to minimize the release of emissions from all systems, including pressure relief valves and gauge hatches.*
- **Condition 9.C.5 (Pigging Equipment/Compressor Vents)**
  - *b. Operational Limits: Operation of the equipment listed in this section shall conform to the requirements listed in District Rule 325.E. Compliance with these limits shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit. In addition ExxonMobil shall meet the following requirement:*
    - *iv. VRS Use - The vapor recovery system connected to the compressor seal/distance piece system shall be in operation when the SOV and VR compressors are in use. The VRS system includes piping, valves, and flanges associated with each VRS system. The VRS system shall be maintained and operated to minimize the release of emissions from all systems, including pressure relief valves.*
    - *v. Carbon Canister Control Requirements - The carbon canister units connected to the compressor seal/distance piece system shall be in operation when the SOV and VR compressors are in use. Each carbon canister shall be maintained and operated to minimize the release of emissions of organic compounds and sulfur compounds. Each carbon canister shall achieve a minimum 75 percent (by mass) control efficiency for reactive organic compounds.*
  - *c. Monitoring: ExxonMobil shall monitor the pressure inside the pig receiver with a District-approved pressure gauge, or alternative District-approved method. For the carbon canister control units on each distance piece compressor vent, monitor on a monthly basis the ROC control efficiency across each canister (inlet/outlet) according to District-approved methods. ExxonMobil shall implement the District approved Carbon Canister Monitoring and Maintenance Plan for the life of the project.*
- **Condition 9.C.6 (Tanks/Sumps/Separators)**
  - *b. Operational Limits: All process operations from the Group A and Group B equipment listed in this section shall meet the requirements of District Rule 325, Sections D, E, F and G. All process operations from the Group D equipment listed in this section shall meet the requirements of District Rule 326, Sections D, I, J and K. All process operations from the Group A equipment shall comply with the requirements of NSPS*

Subpart Kb. All process operations from Groups A, B, C and D shall comply with the BACT requirements listed in Tables 4.1 and 4.2. Compliance with these limits shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit. In addition, ExxonMobil shall:

- *i. VRS Use - The vapor recovery systems shall be in operation when the equipment connected to the VRS system at the facility are in use. The VRS system includes piping, valves, and flanges associated with each VRS system. Each VRS system shall be maintained and operated to minimize the release of emissions from all systems, including pressure relief valves and gauge hatches.*

- *c. Monitoring: The equipment listed in this section are subject to all the monitoring requirements of District Rule 325.H (for Group A and B units), NSPS Subpart Kb (for Group A units) and Table 10.3 for the life of the project. The test methods outlined in District Rule 325.G, NSPS Subpart Kb and District Rule 326.K shall be used, as applicable. In addition, ExxonMobil shall:*

  - *vi. On a daily, quarterly and annual basis, monitor the throughput for each of the Group A units using District-approved meters. For Group D units, monitor the throughput on a daily, quarterly and annual basis using a District-approved level gauge or other District-approved alternative method.*

  - *vii. For the Group A Oil Storage tanks, no less than three (3) days per week, measure the Reid vapor pressure and storage temperature of the liquid according to District-approved methods. In addition, for the Group A Oil Storage tanks, measure the vapor pressure and storage temperature of the liquid according to the methods prescribed in Rule 325.G.2. at least once per year. For the Group A Rerun tanks, no less than 24 hours after a PSV event, measure the Reid vapor pressure and storage temperature of the liquid according to District-approved methods. In addition, for the Group A Rerun tanks, measure the vapor pressure and storage temperature of the liquid according to the methods prescribed in Rule 325.G.2. at least once per year. For the Group D units, measure the vapor pressure and storage temperature according to the methods prescribed in Rule 325.G.2. on an annual basis and each time a different demulsifier agent product is used.*

  - *viii. NGL Data - Through use of its DCS system, ExxonMobil shall monitor the ratio at which the NGLs are injected into the treated crude oil prior to storage in the Oil Tanks as well as the amount of NGL injected for each day.*

- *d. Recordkeeping: The equipment listed in this section is subject to all the recordkeeping requirements listed in District Rule 325.F (for Group A and B units), NSPS Subpart Kb (for Group A units) and Table 10.3. ExxonMobil shall maintain hardcopy records for the information listed below:*

  - *vi. For the Group A and D units, log the throughput on a daily, quarterly and annual basis.*

  - *vii. For the Group A and D units, log all Reid vapor pressure and temperature readings of the liquid stored as well the corresponding true vapor pressure values. Log all changes in demulsifier agents used and maintain a copy of the MSDS sheet for the new agent with the log. Vendor RVP and TVP data will be accepted for Group D units.*

  - *viii. For the Oil Storage Tanks, record each day (via the DCS) the minimum and maximum daily ratio at which the NGLs are injected into the treated crude oil*

prior to storage in these tanks as well as the total amount of NGL injected each day.

- **Condition 9.C.8 (Sulfur Recovery Unit/Waste Gas Incinerator)**
  - *a. Emission Limits: Mass emissions from the SRU TGCU Waste Gas Incinerator (WGI) shall not exceed the limits listed in Tables 5.3 and 5.4. Compliance shall be based on sliding-one hour readings of 15-minute averages (or less) through the use of process monitors (e.g., fuel use meters) and CEMS; and the monitoring, recordkeeping and reporting condition of this permit. For pollutants without CEMS monitors, the permitted emission factors in Table 5.2 shall be used. In addition, the following specific emission limits apply:*
    - *i. BACT – Except during the startup, shutdown or maintenance modes (as defined herein), the emissions, after control, from the WGI shall not exceed the BACT limits listed below and in Table 4.2 (BACT Performance Standards). Compliance shall be based on annual source testing for all pollutants. For NOx and SOx only, compliance with the emission concentrations listed in Table 4.2 shall be determined on a continuous basis using CEMS (based on a 60-minute clock average). Compliance for the SOx shall also be based on the District-approved Sulfur Removal Efficiency Plan.*
  - *c. Monitoring: ExxonMobil shall monitor the emission and process parameters listed in Table 10.2 for the life of the project. ExxonMobil shall perform annual source testing of the WGI consistent with the requirements listed in Table 4.6 and the source testing permit condition below. In addition, ExxonMobil shall:*
    - *i. Continuously monitor the fuel gas using H2S and HHV analyzers.*
    - *ii. Perform quarterly total sulfur content measurements of the fuel gas using ASTM or other District-approved methods. ExxonMobil shall utilize District-approved sampling and analysis procedures.*
    - *iii. ExxonMobil shall implement the District-approved Sulfur Removal Efficiency Plan which describes the monitoring and sampling procedures for determining sulfur removal efficiency for the SRU as defined in NSPS Subpart LLL and in the BACT Performance Standards (Tables 4.1 and 4.2).*
  - *d. Recordkeeping: ExxonMobil shall record the emission and process parameters listed in Table 10.2. In addition, ExxonMobil shall maintain hardcopy records of the following:*
    - *i. The daily, quarterly and annual heat input in units of million Btu for the fuel gas to the WGI. In addition, the five highest hourly heat input rates per month in units of MMBtu/hr.*
    - *ii. The daily, quarterly and annual Inlet Tail Gas Flow Rate from the TGCU Amine Contactor in units of standard cubic feet to the incinerator. In addition, the five highest hourly flow rates per month in units of standard cubic feet per hour.*
    - *iii. The daily, quarterly and annual Inlet Flow Rate from Merox Vent in units of standard cubic feet to the incinerator. In addition, the five highest hourly flow rates per month in units of standard cubic feet per hour.*
    - *iv. Startup, Shutdown, and Maintenance Logs - Documentation (Log) of the actions taken by ExxonMobil to minimize emissions during each WGI startup, shutdown and maintenance activity (as defined herein) shall be maintained. This documentation (Log) shall include a timeline of each activity showing: the*

activity start and stop time (including duration); the type of activity; the fuel gas heat input; the temperature, the hourly concentrations of NOx and SOx; and the mass emissions of all criteria pollutants for the entire activity duration.

- *1. The log shall also include the date, duration, and emissions for each SGTP startup, shutdown, and maintenance activity, and the cumulative for all activities associated with the SGTP.*

- *v. Sulfur Removal Efficiency– On a daily basis ExxonMobil shall maintain in a log or electronic file:*
  - *1. The percent H2S reduction across the SRU;*
  - *2. The maximum H2S mass flow rate (lb/hr) in the Tail Gas;*
  - *3. The maximum Tail Gas H2S concentration;*
  - *4. The percent total sulfur reduction across the SRU;*
  - *5. The maximum peak SO2 emission rate (lb/hr) from the WGI;*
  - *6. The total SO2 emissions (in lb/day) from the WGI.*

- **Condition 9.C.10 (Compliance Verification Reports)**
  - *Twice a year, ExxonMobil shall submit a compliance verification report to the District. Each report shall document compliance with all permit, rule or other statutory requirements during the prior two calendar quarters. The first report shall cover calendar quarters 1 and 2 (January through June) and the second report shall cover calendar quarters 3 and 4 (July through December). The reports shall be submitted by March 1st and September 1st each year. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit and shall document compliance separately for each calendar quarter. These reports shall be in a format approved by the District. Compliance with all limitations shall be documented in the submittals. All logs and other basic source data not included in the report shall be made available to the District upon request. The second report shall also include an annual report for the prior four quarters. Pursuant to Rule 212, a completed District Annual Emissions Inventory questionnaire should be included in the annual report or submitted electronically via the District website. ExxonMobil may use the Compliance Verification Report in lieu of the Emissions Inventory questionnaire if the format of the CVR is acceptable to the District's Emissions Inventory Group and if ExxonMobil submits a statement signed by a responsible official stating that the information and calculations of quantifies of emissions of air pollutants presented in the CVR are accurate and complete to best knowledge of the individual certifying the statement. The report shall include the following information:*

    - *a. Cogeneration Power Plant.*
      - *i. By operating mode, the daily, quarterly and annual heat input in units of million Btu for the gas turbine and HRSG. In addition, the five highest hourly heat input rates per month in units of million Btu/hr for the gas turbine and HRSG.*
      - *ii. The length of time (in hours) that the CPP was operated in the Planned Bypass mode by day, quarter and year. A copy of CPP Planned Bypass Documentation log for the reporting period.*

    - *b. Thermal Oxidizer.*
      - *i. The volumes of gas combusted and resultant mass emissions for each flare category (i.e., Purge/Pilot; Continuous – LP; Continuous – AG;*

Planned Other; Unplanned - Other), shall be presented as a cumulative summary for each day, quarter and year.

- *ii. The highest total sulfur content and hydrogen sulfide content observed each week in the LP header, HP header, Acid Gas header and Fuel Gas header combusted during all flaring events. This reporting requirement is inclusive of flaring events triggering automatic sampling and flaring events not triggering automatic sampling as defined in condition 9.C.2.c.v.*
- *iii. The estimated amount of ammonia combusted in the thermal oxidizer listed by each Ammonia Tank Loading event for the reporting period.*
- *iv. A copy of Flare Event Log for the reporting period. Include a separate listing of all planned infrequent events that occurred more than four times per year from the same cause from the same processing unit or equipment type.*
- *v. Any other information required by District Rule 359.H.*

- *d. Crew and Supply Boats.*
  - *i. Daily, quarterly and annual fuel use for the crew boat main engines and auxiliary engines and supply boat main and auxiliary engines (including the bow thruster engine) shall be reported in the CVR's for Platforms Hondo, Heritage, and Harmony. (Part 70 PTO's 9100, 9101, and 9102)*

- *e. Pigging. The number of pigging events per day, quarter and year.*

- *h. Sulfur Recovery Unit/Waste Gas Incinerator.*
  - *i. The daily, quarterly and annual heat input in units of million Btu for the fuel gas to the incinerator. In addition, the five highest hourly heat input rate per month in units of million Btu/hr.*
  - *ii. The daily, quarterly and annual Inlet Tail Gas Flow Rate from the TGCU Amine Contactor to the WGI in units of standard cubic feet. In addition, the five highest hourly flow rates per month in units of standard cubic feet per hour.*
  - *iii. The daily, quarterly and annual Inlet Flow Rate from Merox Vent to the WGI in units of standard cubic feet. In addition, the five highest hourly flow rates per month in units of standard cubic feet per hour.*
  - *iv. Summary of all SGTP startup, shutdown and maintenance activities including the date, duration and emissions for each activity and the cumulative for all activities. The summary shall also include the WGI Documentation Log for WGI Startup/Shutdown/Maintenance Activity.*

- *j. Facility Throughput Data.*
  - *i. The amount of wet oil (oil/water emulsion) treated and dry oil produced from the Oil Treating Plant per day in units of barrels.*
  - *ii. The amount of sweet gas produced in the stripping gas treating plant per day in units of million standard cubic feet.*
  - *iii. The amount of oil exported from the Transportation Terminal for each calendar quarter.*

- *k. Backup Gas Sweetening Unit (BUGSU). A summary of each use of the BUGSU including the date of use and the reason for its use. In addition, a copy of the Daily BUGSU Log for the reporting period.*

- *m. General Reporting Requirements.*
  - *iii. ExxonMobil shall submit with each required semi-annual report two quarterly CEMS Reports. The CEMS Reports shall follow the format and provide the information detailed in Section 7 of the District-approved CEMS Plan.*
  - *v. The amount, in units of gallons, and source (by monthly reports summarized quarterly) of LNG, NGL, liquid hydrocarbons or combinations thereof, shipped from the Las Flores Canyon facility and the number and size of trucks used.*
  - *vi. The amount, in units of long tons, and source (by monthly reports summarized quarterly) of sulfur shipped from the Las Flores Canyon facility and the number and size of trucks used.*
  - *xi. Quarterly analysis of the total sulfur content of the fuel gas used by the CPP and WGI.*
  - *xii. The five highest quarterly recorded values of the hydrogen sulfide content and the five highest quarterly recorded higher heating values of the fuel gas used in the CPP and WGI.*

- **Condition 9.C.13 (Process Stream Sampling and Analysis)**
  - *ExxonMobil shall sample and analyze the process streams listed in this Section 9.0 according to the specified methods and frequency detailed therein. All process stream samples shall be taken according to District-approved ASTM methods and must follow traceable chain of custody procedures. In addition, the following process streams are required to be sampled and analyzed. Duplicate samples are required:*

    - *a. Produced Gas: Sample taken at a District-approved location. Analysis for: HHV, total sulfur, hydrogen sulfide, composition. Samples to be taken on an annual basis.*

    - *b. Produced Oil: Sample taken at a District-approved location. Analysis for: API gravity; true vapor pressure (per Rule 325 methods). Samples to be taken on an annual basis.*

    - *c. Fuel Gas: For SGTP provided gas, samples will be taken at the Fuel Gas Scrubber (MBF-2102) and analyzed for HHV, total sulfur, H2S, and composition on a quarterly basis. Additionally, SGTP provided gas will be continuously monitored for HHV and H2S.*
      - *i. Utility supplied gas shall be sampled for HHV, H2S, total sulfur and composition on a quarterly basis. For the purposes of compliance with this permit, ExxonMobil may utilize the results of samples taken by POPCO (reference POPCO Part 70/PTO No. 8092 Section 9.C.1(c)(vi)). During periods when the POPCO facility is off-line and the LFC facility is on-line and purchasing utility supplied gas, ExxonMobil shall sample the utility supplied gas adjacent to FCV-40616, or other District-approved location, if POPCO remains off-line for more than 14 days.*
      - *ii. On a continuous basis, the fuel gas produced by the SGTP and used in the CPP and WGI shall be sampled for the higher heating value and the hydrogen sulfide content (as determined by District-approved ASTM methods). These records may be maintained in an electronic format. On a quarterly basis, sample the fuel gas used in the CPP and WGI for the total sulfur content (as determined by District-approved ASTM methods).*

- **Condition 9.C.14 (Offsets and Consistency with the AQAP)**
  - *ExxonMobil shall comply with all the procedures and requirements specified in Section 7 of this document including all requirements for offsets, source testing and reporting. ExxonMobil shall provide the following offsets:*
    - *a. ExxonMobil shall offset the net emission increase (NEI) resulting from operation of the Las Flores Canyon facility as detailed in Chapter 7 and Tables 7.1, 7.2, 7.3 and 7.4.*
    - *b. In order to mitigate potential ozone impacts from the Santa Ynez Unit Expansion Project and for consistency with reasonable further progress for attainment of the federal ozone standard and FDP Condition XII-3.b, ExxonMobil shall mitigate all operation phase emissions, which are shown in Table 7.5, and as specified in Section 7.0 of this permit. Through the implementation of the procedures specified above, the District is able to make the finding that the project will result in a net air quality benefit and is consistent with the AQAP, as necessary for the issuance of this permit.*
    - *c. Notwithstanding any force majeure, termination, or transfer provision contained in the agreements referenced above, ExxonMobil will offset all SYU project emissions at the ratios specified in Chapter 7. If offsets are not in place as required by this permit, ExxonMobil shall provide replacement offsets and shall obtain variance relief. [Re: ATC 5651, PTO 5651]*

- **Condition 9.C.15 (Continuous Emission Monitoring CEM)**
  - *a. On quarterly basis, ExxonMobil shall submit data for CEM downtime and CEM detected excess emissions in a format approved by the District. This report shall be submitted each quarter in accordance with the requirements of Rule 328. [Re: ATC 5651, PTO 5651]*

- **Condition 9.C.21 (Emissions Reduction Credits Dedicated to Specific Projects – ATC 9651)**
  - *The ERCs created under ATC and PTO 9651 are for use as offsets by ExxonMobil at Platforms Heritage and Harmony to satisfy the offsets requirements for emissions created by the compressor skid emission units permitted under PTO 9634 (Heritage) and PTO 9640 (Harmony) only. ExxonMobil shall meet the requirements of those permits in applying these ERCs. Emission reduction measures implemented to create the required emission reduction credits, monthly monitoring of the valves specified in ATC 5651-17/PTO 5651 (1/27/99), shall be in place and maintained for the life of each project. This permit does not authorize the dedication of these emission reductions to any other project. [Re: ATC 5651, PTO 5651]*

- **Condition 9.C.25 (Facility Throughput Limitations)**
  - *ExxonMobil shall process no more than 140,000 barrels per day of dry oil. The stripping gas treating plant shall not process more than 15 million standard cubic feet of platform gas, nor more than 21 million standard cubic feet of sour stripping gas and platform gas, combined. The oil and gas processed under this permit shall be produced only from the Hondo, Harmony, and Heritage platforms within the boundaries of the SYU area described in the project EIS/R and supplemental EIRs. The transportation terminal shall be used only for the export of a maximum of 125 thousand barrels of oil per day (averaged over a calendar quarter). Oil storage facilities shall be limited to a maximum*

working capacity of 509 thousand barrels of oil. If ExxonMobil wishes to process oil from platforms other than those listed above, ExxonMobil must modify, as appropriate, this permit.

- *a. On a daily basis, ExxonMobil shall record in a log the volume of dry oil processed, the volume of platform gas processed and the volume of sour stripping gas processed. In addition, ExxonMobil shall log the volume of oil exported from the transportation terminal each day, summarized on a calendar quarter basis. [Re: ATC 5651, PTO 5651]*

- **Condition 9.C.36 (Documents Incorporated by Reference)**
  - *The documents listed below, including any District-approved updates thereof, are incorporated herein and shall have the full force and effect of a permit condition for this operating permit. These documents shall be implemented for the life of the SYU Project and shall be made available to District inspection staff upon request.*
    - *c. CEM (CGA) Plan (approved 3/29/2002)*
    - *i. Rule 343 Purging/Degassing Plan (approved 5/20/1999)*
    - *o. Sulfur Removal Efficiency Plan (approved 9/8/2004)*

- **Condition 9.C.43 (Visible Emissions)**
  - *b. Waste Gas Incinerator: No visible emissions shall occur from the Waste Gas Incinerator. Once per calendar quarter, ExxonMobil shall perform a visible emissions inspection for a one-minute period from the Waste Gas Incinerator. The start-time and end-time of each visible emissions inspection shall be recorded in a log, along with a notation identifying whether visible emissions were detected. ExxonMobil shall obtain District approval of the Visible Emissions Log required by this condition. All records shall be maintained consistent with the recordkeeping condition of this permit.*

- **Rule 325 (Crude Oil Production and Separation)**
  - *D (Requirements for Storage Tanks)*
    - *1. No person shall place, hold or store any crude oil in any tank battery unless all storage tanks in the tank battery, including wash tanks, produced water tanks and wastewater separators, are equipped with a leak-free, properly installed, maintained, and operated vapor recovery system. The vapor disposal portion of the vapor recovery system shall consist of one of the following:*
      - *b. Any other system which processes all vapors and has a reactive organic compound vapor removal efficiency of at least 90% by weight.*
  - *E (Requirements for Produced Gas)*
    - *1. The emissions of produced gas shall be controlled at all times using a properly maintained and operated system that directs all produced gas, except gas used in a tank battery vapor recovery system, to one of the following:*
      - *b. A flare that combusts reactive organic compounds.*
  - *F (Requirements – Recordkeeping)*
    - *4. The operator shall maintain the following records annually:*
      - *b. The maximum vapor pressure of the liquid*

- **Rule 328 (Continuous Emission Monitoring)**
  - *F (Records Maintenance)*
    - *Owners or operators subject to this Rule shall maintain, for a period of at least two years:*
      - *2. Records produced from monitoring equipment.*

  - *G. (Reporting Requirements)*
    - *Owners or operators subject to this Rule shall:*
      - *3. Submit a quarterly written report during the first week of each calendar quarter, to include:*

        a. Monitoring system failures for periods when the continuous monitoring system was inoperative except:

        1) Zero/Span checks.

        2) Monitoring system repair and adjustments.

        b. The date, time interval, magnitude and nature of excess emissions, reported in the units of the applicable emission standard. The cause of the violation, corrective actions taken and preventive measures adopted shall be provided.

        c. Reports on opacity violations shall provide:

        1) The number of (3) three minute periods during which the average opacity exceeded the standard for each hour of operation.

        2) Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements each minute. Any time period exempted shall be considered before determining the excess averages of opacity.

- **Rule 331 (Fugitive Emissions Inspection and Maintenance)**
  - *F. (Requirements – Inspection)*
    - *1. Except as provided in F.2 and F.4, each accessible component subject to this Rule shall be inspected by the owner or operator of the facility in accordance with EPA Reference Method 21 at least once each calendar quarter.*
    - *2. The inspection frequency for accessible components, except pump seals, compressor seals and pressure relief devices, may be conducted annually, provided all of the following conditions are met:*
      - *a. All components at that facility have been successfully operated and maintained with no major gas or liquid leaks in excess of the leak thresholds specified in Table 1 for five consecutive quarters, and*
      - *b. The above is substantiated by documentation and submitted to and approved by the Control Officer.*
      - *c. The annual inspection frequency for all accessible components shall revert to quarterly inspections should the annual inspection or District inspection show major gas or liquid leaks in excess of the leak threshold for any category of components listed in Table 1. The maximum number of leaks in Table 1 shall be rounded upwards to the nearest integer, where required.*
    - *3. All inaccessible components shall be inspected annually by the owner or operator according to EPA Reference Method 21. Unsafe to monitor components shall be inspected when this can be done safely.*

- *4. All threaded and flanged connections shall be inspected by the owner or operator according to EPA Reference Method 21 immediately after assembly and annually thereafter.*
- *5. Pressure relief devices shall be inspected by the owner or operator according to EPA Reference Method 21 quarterly and within 3 calendar days after every pressure relief event.*
- *6. Each component subject to this Rule shall be reinspected by the owner or operator according to EPA Reference Method 21 within 30 calendar days after leak minimization or leak repair.*
- *7. Each pump seal, compressor seal, or pressure relief device shall be inspected for leaks once during every eight-hour operating period, except for components at oil or gas production fields and pipeline transfer stations where inspection shall be daily. For purposes of this inspection, a leak shall include any liquid leak, a visual vapor leak, or the presence of bubbles using soap solutions, or the use of a vapor analyzer. If a leak is identified, that pump seal, compressor seal, or pressure relief device shall be inspected with a vapor analyzer within two calendar days of initial leak detection according to EPA Reference Method 21.*

- **Rule 342 (Control of Oxides of Nitrogen (NOx) from Boilers, Steam Generators, and Process Heaters)**
  - *I. (Recordkeeping)*
    - *1. The owners or operators of units subject to Section D of this rule shall monitor and record for each unit the Higher Heating Value and cumulative annual usage of each fuel.*

- **Rule 359 (Flares and Thermal Oxidizers)**
  - *F. (Source Testing)*
    - *2. Measure (a) the purge gas fuel sulfur content, if such gas is not a PUC quality gas or an inert gas, and (b) the gaseous fuel sulfur content and the net heating value for all gaseous fuel which constitute planned flaring. Measurement shall be performed triennially, except for sources which require federal Part 70 operating permits, in which case annual or more frequent testing shall be performed as required by applicable Part 64 Rules.*

  - *G. (Monitoring and Recordkeeping)*
    - *Any owner or operator of a source subject to this Rule shall perform the following, as applicable:*
      - *1. Monitor the volume (in scf/month) of all gaseous fuel flared as part of planned/unplanned flaring, if subject to Section D.3. A flare volume monitoring plan shall be submitted to the Control Officer for approval as part of the flare minimization plan. A record of monitored volumes shall be kept by the owner or operator in a format prescribed and approved by the Control Officer, and shall be available for inspection upon request by the District.*

  - *H. (Reporting)*
    - *Any owner or operator of a source subject to this Rule shall provide the following reports, as applicable:*
      - *2. The result of each test report for (a) purge gas S content (if applicable), (b) gaseous fuel S content and (c) gaseous fuel net heating value, obtained pursuant to Section F.2, shall be submitted to the Control*

Officer by March 1st of the year following the calendar year on which the testing occurred.

- *3. Data for the monthly volumes (in scf/month) of gas flared per (i) planned continuous and (ii) planned intermittent flaring categories, obtained pursuant to Section G.1, shall be submitted annually to the Control Officer. Each calendar year data report shall be submitted by March 1st of the following calendar year.*

7.0 **EMISSIONS ANALYSIS**: Emissions related to the granting of this variance are expected to be within permitted limits. The Petitioner gives the following estimates:

	lb./day ROC	TPY ROC
Estimated Tank A & B Emissions	66.85 (worst case)	0.53
Permitted Tank A & B Emissions	893.78	6.52

8.0 ***RESERVED***

9.0 **OTHER FACTORS**: none

10.0 **DISTRICT RECOMMENDATION**: The APCD supports the Petitioner's request and recommends the granting of a Regular Variance for ExxonMobil as listed in the attached draft variance order.

11.0 **ATTACHMENTS**:

- Attachment 1 – Draft Regular Variance Order 2016-43-R

Mike McKay, Inspector
Compliance Division

12/23/16
Date