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EQUIPMENT OWNER:

ExxonMobil Production Company

200216

EQUIPMENT OPERATOR:

ExxonMobil Production Company

EQUIPMENT LOCATION:

12000 Calle Real, Goleta

STATIONARY SOURCE/FACILITY:

Exxon - SYU Project
Las Flores Canyon

SSID: 01482
FID: 01482

AUTHORIZED MODIFICATION:

Incorporate maintenance and testing operations of the Cogeneration Power Plant (CPP) as part of the Planned Bypass Mode operations. This project triggers BACT and offsets for NO_x and ROC and AQIA modeling for CO. Table A shows the emissions increases for the project.

EQUIPMENT DESCRIPTION:

The equipment subject to this permit is listed in the table at the end of this permit.

PROJECT/PROCESS DESCRIPTION:

The 49 MW Cogeneration Power Plant consists of a natural gas fueled GE Frame 6 Gas Turbine Generator with a rated output of 39 MW and a non-condensing steam turbine rated at 10 MW. The CPP generates electric power to supply both the onshore facilities and the offshore platforms.

Heat from the gas turbine exhaust is recovered in a waste Heat Recovery Steam Generator ("HRSG") to generate steam to supply the LFC process heat requirements. This system is also supplementary fired with fuel gas to provide heat to maintain operations when the turbine is down.

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The SYU power plant operates in parallel with the SCE utility system. SCE provides emergency backup and supplemental power during peak demand periods. This tie-in also provides the flexibility to sell power to SCE when the plant generating capacity exceeds the SYU power demand.

Table A - Emissions Increases for the Project

Pounds per Hour

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
Pre-Project	89.87	29.43	182.82	1.04	8.62	6.89
Post-Project	36.00	14.20	164.05	0.51	4.16	3.32
Increase	-53.87	-15.23	-18.77	-0.54	-4.46	-3.57

Pre-Project emissions are based on Startup/Shutdown operations and Post-Project emissions are based on Maintenance and Testing operations. This project does not change the worst case operating scenario on an hourly basis.

Pounds per Day

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
Pre-Project	541.85	132.08	711.78	47.09	227.58	182.06
Post-Project	620.00	175.57	1305.05	40.93	205.96	164.76
Increase	78.15	43.49	593.26	-6.16	-21.62	-17.31

Pre-Project Emissions are based on 22 hours of Normal Operations and 2 hours of Startup/Shutdown Operations. Post-Project Emissions are based on 18 hours of Normal Operations, 2 hours of Startup/Shutdown operations, and 4 hours of Maintenance and Testing Operations.

Tons per Quarter

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
Pre-Project	18.244	3.723	17.730	2.237	10.467	8.373
Post-Project	18.322	3.766	18.323	2.231	10.445	8.356
Increase	0.078	0.043	0.593	-0.006	-0.022	-0.017

Pre-Project Emissions are based on 2,184 hours of Normal Operations and 6 hours of Startup/Shutdown Operations.

Post-Project Emissions are based on 2,176 hours of Normal Operations, 6 hours of Startup/Shutdown operations, and 8 hours of Maintenance and Testing Operations.

Tons per Year

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
Pre-Project	72.755	14.813	70.417	8.950	41.870	33.496
Post-Project	73.067	14.989	72.790	8.925	41.783	33.426
Increase	0.313	0.174	2.373	-0.025	-0.086	-0.069

Pre-Project Emissions are based on 8,742 hours of Normal Operations and 18 hours of Startup/Shutdown Operations.

Post-Project Emissions are based on 8,710 hours of Normal Operations, 18 hours of Startup/Shutdown operations, and 32 hours of Maintenance and Testing Operations.

Note: Negative increases represent pollutants for which pre-project emissions remain the worst case operating scenario.

CONDITIONS:

9.A Standard Administrative Conditions

- A.1 **Condition Acceptance.** Acceptance of this operating permit by ExxonMobil shall be considered as acceptance of all terms, conditions, and limits of this permit. [Re: ATC 5651, PTO 5651]
- A.2 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for revocation pursuant to California Health & Safety Code Section 42307 *et seq.* [Re: ATC 5651, PTO 5651]
- A.3 **Defense of Permit.** ExxonMobil agrees, as a condition of the issuance and use of this permit, to defend at its sole expense any action brought against the District because of issuance of this permit. ExxonMobil shall reimburse the District for any and all costs including, but not limited to, court costs and attorney's fees which the District may be required by a court to pay as a result of such action. The District may, at its sole discretion, participate in the defense of any such action, but such participation shall not relieve ExxonMobil of its obligation under this condition. The District shall bear its own expenses for its participation in the action. [Re: ATC 5651, PTO 5651]
- A.4 **Reimbursement of Costs.** All reasonable expenses, as defined in District Rule 210, incurred by the District, District contractors, and legal counsel for all activities that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by ExxonMobil as required by Rule 210. [Re: ATC 5651, PTO 5651]
- A.5 **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, ExxonMobil shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A. [Re: ATC 5651, PTO 5651]
- A.6 **Conflicts Between Conditions.** In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. [Re: ATC 5651, PTO 5651]
- A.7 **Compliance.** Nothing contained within this permit shall be construed to allow the violation of any local, State or Federal rule, regulation, ambient air quality standard or air quality increment. [Re: ATC 5651, PTO 5651]
- A.8 **Consistency with Analysis.** Operation under this permit shall be conducted consistent with all data, specifications and assumptions included with the application and supplements thereof (as documented in the District's project file) and the District's analyses under which this permit is issued as documented in the Permit Analyses prepared for and issued with the permit. [Re: ATC 5651, PTO 5651]

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A.9 **Consistency with State and Local Permits.** Nothing in this permit shall relax any air pollution control requirement imposed on the Santa Ynez Unit Project by:

- (a) the County of Santa Barbara in Final Development Plan Permit 87-DP-32cz and any subsequent modifications; and,
- (b) the California Coastal Commission in the consistency determination for the Project with the California Coastal Act.

[Re: ATC 5651, PTO 5651]

A.10 **Compliance with Permit Conditions.**

- (a) The permittee shall comply with all permit conditions in Sections 9.A, 9.B and 9.C.
- (b) This permit does not convey property rights or exclusive privilege of any sort.
- (c) Any permit noncompliance with sections 9.A, 9.B, or 9.C constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.
- (d) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (e) A pending permit action or notification of anticipated noncompliance does not stay any permit condition.
- (f) Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:
 - (i) compliance with the permit, or
 - (ii) whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action.
- (g) In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible.

[Re: 40 CFR Part 70.6.(a)(6), District Rules 1303.D.1]

A.11 **Emergency Provisions.** The permittee shall comply with the requirements of the District, Rule 505 (Upset/Breakdown rule) and/or District Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the District, in writing, a “notice of emergency” within two (2) working

days of the emergency. The “notice of emergency” shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. [*Re: 40 CFR 70.6(g), District Rule 1303.F*]

A.12 Compliance Plans.

- (a) The permittee shall comply with all federally enforceable requirements that become applicable during the permit term in a timely manner.
- (b) For all applicable equipment, the permittee shall implement and comply with any specific compliance plan required under any federally-enforceable rules or standards.

[*Re: District Rule 1302.D.2*]

A.13 Right of Entry. The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a Part 70 Source is located or where records must be kept:

- (a) To inspect the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity;
- (b) To inspect and duplicate, at reasonable times, records required by this Permit to Operate;
- (c) To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. Monitoring of emissions can include source testing.

[*Re: District Rule 1303.D.2*]

A.14 Severability. The provisions of this Permit to Operate are severable and if any provision of this Permit to Operate is held invalid, the remainder of this Permit to Operate shall not be affected thereby. [*Re: District Rules 103 and 1303.D.1*]

A.15 Permit Life. The Part 70 permit shall become invalid three years from the date of issuance unless a timely and complete renewal application is submitted to the District. Any operation of the source to which this Part 70 permit is issued beyond the expiration date of this Part 70 permit and without a valid Part 70 operating permit (or a complete Part 70 permit renewal application) shall be a violation of the CAAA, § 502(a) and 503(d) and of the District rules.

The permittee shall apply for renewal of the Part 70 permit no later than 6 months before the date of the permit expiration. Upon submittal of a timely and complete renewal application, the Part 70 permit shall remain in effect until the Control Officer issues or denies the renewal application.

[*Re: District Rule 1304.D.1*]

A.16 Payment of Fees. The permittee shall reimburse the District for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to

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potential enforcement action by the District and the USEPA pursuant to section 502(a) of the Clean Air Act. [*Re: District Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6(a)(7)*]

- A.17 **Prompt Reporting of Deviations.** The permittee shall submit a written report to the District documenting each and every deviation from the requirements of this permit or any applicable federal requirements within seven (7) days after discovery of the violation, but not later than 6 months after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to District in accordance with Rule 505. Breakdown Conditions, or Rule 1303.F Emergency Provisions. [*District Rule 1303.D.1, 40 CFR 70.6(a)(3)*]
- A.18 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. These reports shall be submitted on District approved forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the occurrence and correction of any deviations from permit requirement. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1st and March 1st, respectively, each year. Supporting monitoring data shall be submitted in accordance with the "Semi-Annual Compliance Verification Report" condition in Section 9.C. The permittee shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. [*Re: District Rules 1303.D.1, 1302.D.3, 1303.2.c*]
- A.19 **Federally Enforceable Conditions.** Each federally enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the District-only enforceable section of this permit are federally enforceable or subject to the public/USEPA review. [*Re: CAAA § 502(b)(6), 40 CFR 70.6(b)*]
- A.20 **Recordkeeping Requirements.** The permittee shall maintain records of required monitoring information that include the following:
- (a) The date, place as defined in the permit, and time of sampling or measurements;
 - (b) The date(s) analyses were performed;
 - (c) The company or entity that performed the analyses;
 - (d) The analytical techniques or methods used;
 - (e) The results of such analyses; and
 - (f) The operating conditions as existing at the time of sampling or measurement;
- The records (electronic or hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the District upon request. [*Re: District Rule 1303.D.1.f, 40 CFR 70.6(a)(3)*]
- A.21 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:

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- (a) Additional Requirements: If additional applicable requirements (e.g., NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30 day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.
- (b) Inaccurate Permit Provisions: If the District or the USEPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.
- (c) Applicable Requirement: If the District or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

Administrative procedures to reopen a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists.

If a permit is reopened, the expiration date does not change. Thus, if the permit is reopened, and revised, then it will be reissued with the expiration date applicable to the re-opened permit.
[Re: 40 CFR 70.7(f), 40 CFR 70.6(a)]

- A.22 **Permit Shield.** The rules and regulations listed in Table 1.1 of PT-70/PTO 5651-R4 have been specifically identified as non-applicable to the Las Flores Canyon facility. This shield shall remain in effect until expiration of PT-70/PTO 5651-R4 or re-opening and re-issuance of PT-70/PTO 5651-R4.
[Re: 40 CFR 70.6(f), District Rule 1303.E.4]
- A.23 **Credible Evidence.** Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding. [Re: 40 CFR 52.12(c)]
- A.24 **Risk Management Plan – Section 112r.** ExxonMobil shall comply with the requirements of 40 CFR 68 on chemical accident prevention provisions. The annual compliance certification must include a statement regarding compliance with this part, including the registration and submission of the risk management plan (RMP). [Re: 40 CFR 68]

- A.25 **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42 or District P&P emission factors at the next permit modification or permit reevaluation to account for USEPA and/or District revisions to the underlying emission factors. Further, ExxonMobil shall modify its permit via an ATC application if compliance data shows that an emission factor used to develop the permit's potential to emit is lower than that documented in the field. The ATC permit shall, at a minimum, adjust the emission factor to that documented by the compliance data consistent with applicable rules, regulations and requirements. [*Re: ATC 5651, PTO 5651*]

9.B Generic Conditions

The generic conditions listed below apply to all emission units, regardless of their category or emission rates. These conditions are federally enforceable. These rules apply to the equipment and operations at the Las Flores Canyon facility as they currently exist. Compliance with these requirements is discussed in Section 3.4.2. In the case of a discrepancy between the wording of a condition and the applicable District rule, the wording of the rule shall control.

- B.1 **Circumvention (Rule 301).** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of District Rule 303. [*Re: District Rule 301*]
- B.2 **Visible Emissions (Rule 302).** ExxonMobil shall not discharge into the atmosphere from any single source of emission any air contaminants for a period or periods aggregating more than three minutes in any one hour which is:
- (a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
 - (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B.2.(a) above.
 - (c) ExxonMobil shall determine compliance with the requirements of this Condition/Rule and Condition C.44. [*Re: District Rule 302*]
- B.3 **Nuisance (Rule 303).** No pollutant emissions from any source at ExxonMobil shall create nuisance conditions. No operations shall endanger health, safety or comfort, nor shall they damage any property or business. [*Re: District Rule 303*]
- B.4 **PM Concentration - South Zone (Rule 305).** ExxonMobil shall not discharge into the atmosphere, from any source, particulate matter in excess of the concentrations listed in Table 305(a) of Rule 305. [*Re: District Rule 305*]

- B.5 **Specific Contaminants (Rule 309).** ExxonMobil shall not discharge into the atmosphere from any single source sulfur compounds, hydrogen sulfide, combustion contaminants and carbon monoxide in excess of the standards listed in Sections A, B and G of Rule 309. ExxonMobil shall not discharge into the atmosphere from any fuel burning equipment unit, sulfur compounds, nitrogen oxides or combustion contaminants in excess of the standards listed in Section E and F of Rule 309. [*Re: District Rule 309*]
- B.6 **Sulfur Content of Fuels (Rule 311).** ExxonMobil shall not burn fuels with a sulfur content in excess of 0.5% (by weight) for liquid fuels and 239 ppmvd or 15 gr/100scf (calculated as H₂S) for gaseous fuels. Compliance with this condition shall be based on continuous monitoring of the fuel gas with H₂S and HHV analyzers, quarterly total sulfur content measurements of the fuel gas using ASTM or other District-approved methods and diesel fuel billing records or other data showing the certified sulfur content for each shipment. [*Re: District Rule 311*]
- B.7 **Organic Solvents (Rule 317).** ExxonMobil shall comply with the emission standards listed in Section B of Rule 317. Compliance with this condition shall be based on ExxonMobil's compliance with Condition C.7 (*Solvent Usage*) of PT-70/PTO 5651-R4. [*Re: District Rule 317*]
- B.8 **Solvent Cleaning Operations (Rule 321).** ExxonMobil shall comply with the operating requirement, equipment requirements and emission control requirements for all solvent cleaners subject to this Rule. Compliance shall be based on District inspection of the existing cold solvent cleaner and a thorough ATC application review for future solvent cleaners (if any). [*Re: District Rule 321*]
- B.9 **Metal Surface Coating Thinner and Reducer (Rule 322).** The use of photochemically reactive solvents as thinners or reducers in metal surface coatings is prohibited. Compliance with this condition shall be based on ExxonMobil's compliance with Condition C.7 (*Solvent Usage*) of PT-70/PTO 5651-R4, and facility inspections. [*Re: District Rule 322*]
- B.10 **Architectural Coatings (Rule 323).** ExxonMobil shall comply with the emission standards listed in Section D of Rule 323 as well as the Administrative requirements listed in Section F of Rule 323. Compliance with this condition shall be based on ExxonMobil's compliance with Condition C.7 (*Solvent Usage*) of PT-70/PTO 5651-R4 and facility inspections. [*Re: District Rule 323*]

- B.11 **Disposal and Evaporation of Solvents (Rule 324).** ExxonMobil shall not dispose through atmospheric evaporation more than one and a half gallons of any photochemically reactive solvent per day. Compliance with this condition shall be based on ExxonMobil's compliance with Condition C.7 (*Solvent Usage*) of PT-70/PTO 5651-R4, and facility inspections. [*Re: District Rule 324*]
- B.12 **Continuous Emissions Monitoring (Rule 328).** 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 PT-70/PTO 5651-R4 as well as on-site inspections. [*Re: District Rule 328*]
- B.13 **Adhesives and Sealants (Rule 353).** The permittee shall not use adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers, unless the permittee complies with the following:
- (a) Such materials used are purchased or supplied by the manufacturer or suppliers in containers of 16 fluid ounces or less; or alternately
 - (b) When the permittee uses such materials from containers larger than 16 fluid ounces and the materials are not exempt by Rule 353, Section B.1, the total reactive organic compound emissions from the use of such material shall not exceed 200 pounds per year unless the substances used and the operational methods comply with Sections D, E, F, G, and H of Rule 353. Compliance shall be demonstrated by recordkeeping in accordance with Section B.2 and/or Section O of Rule 353. [*Re: District Rule 353*]
- B.14 **Emergency Episode Plan.** During emergency episodes, ExxonMobil shall implement the District approved Emergency Episode Plan for the Las Flores Canyon facility. The content of the plan shall be in accordance with the provisions of Rule 603. [*Re: District Rule 1303, 40 CFR 70.6*]

9.C Requirements and Equipment Specific Conditions

Federally-enforceable conditions, including emissions and operations limits, monitoring, recordkeeping and reporting are included in this section for each specific group of equipment as well as other non-generic requirements.

C.1 **Cogeneration Power Plant.** The following equipment are included in this emissions unit category:

Device Name	ExxonMobil ID	APCD DeviceNo
<i>Cogeneration Power Plant</i>		
Gas Turbine	CPP/ZAN-2501	6585
Heat Recovery Steam Generator	CPP/EAL-2601	7865
Turbine Bypass Stack	CPP/ZAN-2501	7864
Combustion - Cogen Power Plant: Planned Bypass Mode		
Startup and Shutdown 22 MW	ZAN-2501/ EAI	7866
Maintenance and Testing 4 MW	ZAN-2501	7864

- (a) Emission Limits: Except as noted below, mass emissions from the Cogeneration Power Plant (“CPP”) shall not exceed the limits listed in Tables 5.3 and 5.4. The *Normal Operation Mode/Heat Recovery Steam Generator* line item in Tables 5.3 and 5.4 shall not be enforced. Compliance shall be based on sliding one-hour average values comprised of 15-minute average data points through the use of process monitors (e.g., fuel use meters) and CEMS; and the monitoring, recordkeeping and reporting conditions of this permit. For pollutants without CEMS monitors, the permitted emission factors in Table 5.2 shall be used for determining compliance with the mass emission rates. In addition, the following specific emission limits apply:
 - (i) *BACT* – Except during the Planned Bypass Mode, the emissions, after control from the CPP shall not exceed the BACT limits listed in Table 4.2 (*BACT Performance Standards*). Compliance shall be based on annual source testing for all pollutants. In addition, CEMs shall be used to determine compliance with the NO_x and CO, emission concentrations limits in Table 9.1 below (parts per million volume dry at 3 percent oxygen). Compliance shall be based on 15-minute clock average values.
 - (ii) The BACT concentration limits in Table 9.1 apply only during Normal Operations and the HRSG Only modes as defined in Section 4.2.2 of Pt70/Reeval 5651 R4.

Further, in addition to the concentration limits, CO mass emissions shall not exceed 17.0 lb/hr.

Table 9.1 BACT Concentration Limits

Operating Mode	NO _x (as NO ₂)	CO
Gas Turbine Only Operations	24.6	29.1
Gas Turbine/HRSG Tandem Operations	22.3	35.0
HRSG Only Operations	24.6	400.0

- (iii) *Ammonia Slip* – Except during the Planned Bypass Mode, the concentration of ammonia from the CPP stack shall not exceed 20 ppmv. Compliance shall be based on source tests and during inspections using absorbent tubes or bag samples.
- (iv) *NSPS Subpart GG* – Per 40 CFR 60.333, ExxonMobil shall comply with the following sulfur dioxide standards:
 - (1) 0.015 percent by volume (at 15% O₂);
 - (2) Fuel gas must not have a sulfur content in excess of 0.8 percent by weight.
- (b) Operational Limits: The following operational limits apply to the CPP:
 - (i) *Fuel Gas Sulfur Limit* – ExxonMobil shall only use pipeline quality natural gas as fuel for the CPP. The natural gas shall contain total sulfur in concentrations not to exceed 24 ppmvd. Compliance with this condition shall be based on monitoring, recordkeeping and reporting requirements of this permit.
 - (ii) *Operating Mode Limits* – ExxonMobil may only operate the CPP in one of the three modes (Normal Operations Mode, HRSG Mode and Planned Bypass Mode) as defined in Section 4.2.2 of PT70/Reeval 5651 R4. Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit.
 - (iii) *Usage Limits – Normal Operations Mode* – ExxonMobil shall comply with the following usage limits:
 - (1) Combined Gas Turbine and HRSG Heat Input: 605.140 MMBtu/hr; 14,523 MMBtu/day; 1,321,626 MMBtu/quarter; 5,290,134 MMBtu/year
 - (2) Bypass Stack Flow Rate: The exhaust flow rate from the gas turbine bypass stack shall not exceed 386 dscfm.
 - (3) Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit.

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- (iv) *Usage Limits – HRSG Mode* – ExxonMobil shall comply with the following usage limits:
- (1) Gas Turbine Heat Input: no fuel input is allowed to the gas turbine.
 - (2) HRSG Heat Input: 345,000 MMBtu/hr; 8,280 MMBtu/day; 753,480 MMBtu/quarter; 3,015,990 MMBtu/year.
 - (3) Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit.
- (v) *Usage Limits – Planned Bypass Mode* – ExxonMobil shall comply with the following usage limits:
- (1) Gas Turbine/HRSG Heat Input – Startup and Shutdown: 309 MMBtu/hr; 618 MMBtu/day; 1,853 MMBtu/quarter; 5,559 MMBtu/year
 - (2) Operating Hours – Startup and Shutdown: 2 hours/day; 6 hours/quarter; 18 hours/year
 - (3) Gas Turbine/HRSG Heat Input – Maintenance and Testing: 149 MMBtu/hr; 596 MMBtu/day; 1192 MMBtu/quarter; 4768 MMBtu/year
 - (4) Operating Hours – Maintenance and Testing: 4 hours/day; 8 hours/quarter; 32 hours/year
 - (5) Compliance shall be based on the monitoring, recordkeeping and reporting requirements of this permit.
- (vi) *Emission Controls – Gas Turbine* - ExxonMobil shall use steam injection and selective catalytic reduction (SCR) emission controls at all times when operating the gas turbine during the Normal Operations Mode and shall achieve a minimum of 90 percent (by mass) overall reduction and a minimum of 80 percent (by mass) NO_x reduction across the SCR. Except during planned bypass operations, the steam-to-fuel injection ratio to the gas turbine shall be maintained at a minimum ratio of 0.6 lb H₂O/1.0 lb fuel and the ammonia injection ratio to the SCR reactor shall be maintained at a minimum ratio of 1.0 lb-mole NH₃/1.0 lb-mole NO_x (inlet). The steam and ammonia injection ratios shall be based on a 15-minute clock average (or less). Compliance shall be based on the monitoring and recordkeeping requirements of this permit.
- (vii) *Emission Controls – HRSG* - ExxonMobil shall use low-NO_x burners and selective catalytic reduction (SCR) emission controls at all times when operating the HRSG during the Normal Operations Mode and HRSG Only Mode and shall achieve a minimum of 80 percent (by mass) NO_x reduction across the SCR. Except during planned bypass operations, the ammonia injection ratio to the SCR reactor shall be

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maintained at a minimum ratio of 1.0 lb-mole NH₃/1.0 lb-mole NO_x (inlet). The ammonia injection ratio shall be based on a 15-minute clock average (or less). Compliance shall be based on the monitoring and recordkeeping requirements of this permit.

- (viii) *Emission Controls – SCR Unit* - ExxonMobil shall operate and maintain the SCR unit according to the manufacturer's instructions and operations manuals. These instructions and manuals shall be kept onsite. The flue gas entering the SCR unit shall be maintained (during Normal Operations Mode and HRSG Only Mode) between 500 °F and 750 °F. Compliance shall be based on the monitoring and recordkeeping requirements of this permit. ExxonMobil shall use grid power during periods when the SCR catalyst is no longer capable of achieving the NO_x BACT standards and during catalyst replacements.
- (ix) *Planned Bypass Operations* – ExxonMobil shall minimize pollutant emissions during all CPP planned bypass operating periods. During gas turbine shutdown, ExxonMobil shall operate the steam injection system until the point of flame instability. During gas turbine startup, ExxonMobil shall initiate steam injection once a stable flame can be maintained and shall inject ammonia at a minimum ratio of 1.0 lb-mole NH₃/1.0 lb-mole NO_x (inlet) to the SCR once a minimum operating temperature of 500 °F is reached (this requirement does not limit ExxonMobil from introducing ammonia at temperatures lower than 500 °F). The ammonia injection ratio shall be based on a 15-minute clock average (or less). Compliance shall be based on the monitoring and recordkeeping requirements of this permit and District inspections. To eliminate projected 1-hr NO_x ambient air quality standard violation due to Planned Bypass Operations, ExxonMobil shall not initiate CPP startup or shutdown operations or maintenance or testing operations while the POPCO facility thermal oxidizer is flaring during a gas plant startup. ExxonMobil shall implement District-approved procedures to ensure that this restriction is met.
- (x) *SCR Replacement* - With prior written notification to the District, ExxonMobil may replace the existing catalyst with a new unit consistent with the requirements of this permit and as long as no emission or permit exceedances occur.
- (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 maintenance or testing 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

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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 of Pt70/Reeval 5651 R4 for the life of the project. ExxonMobil shall perform annual source testing of the CPP consistent with the requirements listed in Table 4.5 of Pt70/Reeval 5651 R4 and the source testing condition of PT70/Reeval 5651 R4. 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.
 - (iii) 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.
- (d) Recordkeeping: ExxonMobil shall record the emission and process parameters listed in Table 10.1 of PT70/Reeval 5651 R4. 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 and each maintenance and testing 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 NO_x and CO. The log shall also indicate the nature of any testing and maintenance conducted.
 - (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 NO_x, and the temperature of the flue gas entering the SCR. These records may be maintained in an electronic format.

- (e) **Reporting:** On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of PT70/Reeval 5651 R4. [*Re: ATC 5651, PTO 5651, ATC/PTO 5651-01, ATC/PTO 10172, ATC/PTO 11459*]
- C.2 **BACT.** ExxonMobil shall apply emission control and plant design measures which represent Best Available Control Technology (BACT) to the operation of the Las Flores Canyon facilities as described in Section 4.10 and Tables 4.1, 4.2 and 4.3 of PT 70-Reeval 5651-R4. BACT measures shall be in place and in operation at all times for the life of the project. [*Re: ATC 5651, PTO 5651*]
- C.3 **Offsets and Consistency with the AQAP.** ExxonMobil shall comply with all the procedures and requirements specified in Section 7 of PT 70-Reeval 5651-R4 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 PT 70-Reeval 5651-R4.
- (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 PT 70-Reeval 5651-R4. Through the implementation of the procedures specified above, the APCD 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*]
- C.4 **Source Compliance Demonstration Period (SCDP).** Once this permit has been issued, maintenance and testing operations shall be allowed for 60 days (subject to the requirements of this condition). This time period is termed the "Source Compliance Demonstration Period" (SCDP). During the SCDP, the permit holder is not considered in violation of this permit if the emission limits stated in this permit are exceeded due to testing requirements and/or process debugging operations. However, enforcement action may be taken against operations that result in a violation of any emission limit stipulated by a prohibitory rule in the District's Rules and Regulations unless ExxonMobil has been granted a variance from the limit.

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The permit holder is responsible for ensuring the following actions are taken during the SCDP:

- a. Submit a completed Permit to Operate application (Form APCD-01) with the appropriate filing fee to the District within 30 days of permit issuance. Facility operations beyond the SCDP without a complete PTO application are considered a violation of District Rule 201.

If a completed Permit to Operate application is not submitted, the SCDP shall terminate and the maintenance and testing operations will be considered a violation of District rules and regulations. If the District has determined that the application for the Permit to Operate is complete, the SCDP shall remain valid until the District issues (or denies) the Permit to Operate. The SCDP may be extended at the District's discretion.

AIR POLLUTION CONTROL OFFICER

DATE

Attachments:

- Facility Emissions Tables
- Facility NEI Table
- Offsets Tables
- Permit Equipment List(s)
- Permit Evaluation for Authority to Construct 13545

Notes:

- This permit is valid for one year from the date stamped above if unused.

Table 5.1-1: Operating Equipment Description
 ExxonMobil Las Flores Canyon Oil and Gas Plant
 ATC 13545

Equipment Item	Description		APCD DeviceNo	Device Specifications			Usage Data			Maximum Operating Schedule				
	Exxon ID #			Fuel	HHV	%S	Size	Units	Capacity	Units	Load	hr	day	qtr
Combustion - Cogen Power Plant: Normal Operations Mode														
Gas Turbine 38.63 MW	ZAN-2501		6585	24	ppmv S	465,000	MMBtu/hr	460,350	MMBtu/hr	0.99	1	24	2,184	8,742
Heat Recovery Steam Generator	EAL-2601		7865	24	ppmv S	345,000	MMBtu/hr	140,140	MMBtu/hr	0.41	1	24	2,184	8,742
Turbine Bypass Stack	ZAN-2501		7864	24	ppmv S	1.0%	of Turb Exh	4,650	MMBtu/hr	0.01	1	24	2,184	8,742
Combustion - Cogen Power Plant: HRSG Only Mode														
Heat Recovery Steam Generator	EAL-2601		7865	24	ppmv S	345,000	MMBtu/hr	345,000	MMBtu/hr	1.000	1	24	2,184	8,742
Combustion - Cogen Power Plant: Planned Bypass Mode														
Startup and Shutdown 22 MW	ZAN-2501/ EAL-2601		7866	24	ppmv S	100%	of Turb Exh	308,821	MMBtu/hr	0.66	1	2	6	18
Maintenance and Testing 4 MW	ZAN-2501		7864	24	ppmv S	100%	of Turb Exh	149	MMBtu/hr	0.32	1	4	8	32
SGTP - Incinerator														
TGCC/Merox Vent Incinerator	EAL-4602		7867	-	-	12,320	MMBtu/hr	134,05	kscf	-	1	24	2,190	8,760
TGCC Incinerator (w/out Merox vent)	EAL-4603		7868	-	-	12,020	MMBtu/hr	133,68	kscf	-	1	24	2,190	8,760
Planned Startup/Shutdown/Maintenance	EAL-4603		7869	-	-	12,320	MMBtu/hr	-	-	-	1	24	84	84
Combustion - Thermal Oxidizer														
Purge and Pilot	EA W-1601		102738	24	ppmv S	1,200	Btu/scf	4,00	kscf	-	1	24	2,190	8,760
Planned - Continuous LP	EA W-1601		102739	500	ppmv S	1,200	Btu/scf	1,414	kscf	-	1	24	2,190	8,760
Planned - Continuous AG	EA W-1601		102740	239	ppmv S	1,153	Btu/scf	0,245	kscf	-	1	24	2,190	8,760
Planned - Other	EA W-1601		102741	varies	ppmv S	36' x 115'	Dia x Ht	-	-	-	varies	varies	varies	varies
Unplanned - Other	EA W-1601		102742	varies	ppmv S	36' x 115'	Dia x Ht	-	-	-	varies	varies	varies	varies
Combustion - Internal Combustion Engine														
Floodwater Pump	LFC-07		8122	D2	wt% S	230,000	bhp	1,633	MMBtu/hr	0.5	0.5	0.5	6.5	20
Firewater Pump A	PBE-1396 A		1085	D2	wt% S	238,000	bhp	1,690	MMBtu/hr	0.5	0.5	0.5	6.5	26
Firewater Pump B	PBE-1396 B		1086	D2	wt% S	238,000	bhp	1,690	MMBtu/hr	0.5	0.5	0.5	6.5	26
Crew Boat - Harmony/Heritage														
Main Engine - DPV	Offshore (w/in 3-miles)		6515	D2	wt % S	3,860	bhp-total	0,055	gal/bhp-hr	0.85	1	6	44	177
Main Engine - DPV Broadbill	Offshore (w/in 3-miles)		107946	D2	wt % S	2,400	bhp-total	0,055	gal/bhp-hr	0.85	1	6	47	189
Main Engine - Spot Charter	Offshore (w/in 3-miles)		6564	D2	wt % S	3,860	bhp-total	0,055	gal/bhp-hr	0.85	1	6	7	29
Auxiliary Engine - DPV	Offshore (w/in 3-miles)		6516	D2	wt % S	262	bhp-total	0,055	gal/bhp-hr	0.50	1	6	208	833
Auxiliary Engine - DPV Broadbill	Offshore (w/in 3-miles)		107947	D2	wt % S	124	bhp-total	0,055	gal/bhp-hr	0.50	1	6	293	1,174

Table 5.1-2: Equipment Emission Factors
 ExxonMobil Las Flores Canyon Oil and Gas Plant
 ATC 13545

Equipment Item	Description	Exxon ID #	APCD DeviceNo	Emission Factors							Units
				NOx	ROC	CO	SOx	PM	PM10		
Combustion - Cogen Power Plant: Normal Operations Mode Gas Turbine 38.63 MW Heat Recovery Steam Generator Turbine Bypass Stack	CPP/ZAN-2501		6585	0.0272	0.0055	0.0260	0.0034	0.0158	0.0126	lb/MMBtu	
	CPP/EAL-2601		7865	0.0272	0.0055	0.0260	0.0034	0.0158	0.0126	lb/MMBtu	
	CPP/ZAN-2501		7864	0.0272	0.0055	0.0260	0.0034	0.0158	0.0126	lb/MMBtu	
Combustion - Cogen Power Plant: HRSO Only Mode Heat Recovery Steam Generator	CPP/EAL-2601		7865	0.0300	0.0095	0.2970	0.0034	0.0050	0.0040	lb/MMBtu	
	CPP/EAL-2601		7865	0.0300	0.0095	0.2970	0.0034	0.0050	0.0040	lb/MMBtu	
Combustion - Cogen Power Plant: Planned Bypass Mode Startup and Shutdown 22 MW Maintenance and Testing 4 MW	CPP/ZAN-2501/EAL-2601		7866	0.2910	0.0953	0.5920	0.0034	0.0279	0.0223	lb/MMBtu	
	CPP/ZAN-2501		7864	0.2416	0.0953	1.1010	0.0034	0.0279	0.0223	lb/MMBtu	
SGTP - Incinerator	TGCU/Merox Vent Incinerator	SGTP/EAL-4603	7867	0.114	0.0038	0.092	See Table 10.14	0.078	0.0624	lb/MMBtu	
	TGCU Incinerator (w/out Merox vent)	SGTP/EAL-4603	7868	0.114	0.0038	0.092	See Table 10.14	0.078	0.0624	lb/MMBtu	
	Planned Startup/Shutdown/Maintenance	SGTP/EAL-4603	7869	0.114	0.0038	0.092	See Table 10.14	0.078	0.0624	lb/MMBtu	
Combustion - Thermal Oxidizer	Purge and Pilot	OTP/EAW-1601	102738							lb/MMBtu	
	Planned - Continuous LP	OTP/EAW-1601	102739							lb/MMBtu	
	Planned - Continuous AG	OTP/EAW-1601	102740							lb/MMBtu	
	Planned - Other	OTP/EAW-1601	102741							lb/MMBtu	
	Unplanned - Other	OTP/EAW-1601	102742							lb/MMBtu	
											lb/MMBtu
Combustion - Internal Combustion Engine Floodwater Pump Firewater Pump A Firewater Pump B	LFC-07		8122	14.061	1.120	3.030	0.006	1.000	1.000	g/bhp-hr	
	PBE-1396 A		1085	14.061	1.120	3.030	0.006	1.000	1.000	g/bhp-hr	
	PBE-1396 B		1086	14.061	1.120	3.030	0.006	1.000	1.000	g/bhp-hr	
Crew Boat - Harmony/Heritage Main Engine - DPV Main Engine - DPV Broadbill Main Engine - Spot Charter Auxiliary Engine - DPV Auxiliary Engine - DPV Broadbill	Offshore (w/in 3-miles)		6515	337.00	17.10	80.90	0.21	33.00	31.68	lb/1000 gal	
	Offshore (w/in 3-miles)		107946	218.98	17.10	80.90	0.21	5.93	5.93	lb/1000 gal	
	Offshore (w/in 3-miles)		6564	561.00	17.10	80.90	0.21	33.00	31.68	lb/1000 gal	
	Offshore (w/in 3-miles)		6516	600.00	49.00	129.30	0.21	42.20	40.51	lb/1000 gal	
	Offshore (w/in 3-miles)		107947	217.87	48.98	129.26	0.21	5.93	5.93	lb/1000 gal	

Table 5.1-3: Short-Term Emissions
ExxonMobil Las Flores Canyon Oil and Gas Plant
ATC 13545

Equipment Item	Description	Exxon ID #	APCD Device No	NOx		ROC		CO		SOx		PM		PM10		Federal Enforcement
				lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
Combustion - Cogen Power Plant: Normal Operations Mode																
	Gas Turbine 38.63 MW		6585	12.52	300.52	2.53	60.77	11.97	287.26	1.56	37.34	7.27	174.56	5.82	139.65	FE
	Heat Recovery Steam Generator		7865	3.81	91.48	0.77	18.50	3.64	87.45	0.47	11.37	2.21	53.14	1.77	42.51	NE
	Turbine Bypass Stack		7864	0.13	3.04	0.03	0.61	0.12	2.90	0.02	0.38	0.07	1.76	0.06	1.41	FE
				16.46	395.04	3.33	79.88	15.73	377.61	2.05	49.09	9.56	229.47	7.65	183.58	FE
Combustion - Cogen Power Plant: HRS Only Mode																
	Heat Recovery Steam Generator		7865	10.35	248.40	3.28	78.66	17.00	408.00	1.17	27.99	1.73	41.40	1.38	33.12	FE
Combustion - Cogen Power Plant: Planned Bypass Mode																
	Startup and Shutdown 22 MW		7866	89.87	179.73	29.43	58.86	182.82	365.64	1.04	2.09	8.62	17.23	6.89	13.79	FE
	Maintenance and Testing 4 MW		7864	36.00	143.99	14.20	56.80	164.05	656.20	0.51	2.03	4.16	16.63	3.32	13.29	FE
Combustion-Cogen Power Plant: Totals																
	Normal + SU/SD + M&T			89.87	620.00	29.43	175.57	182.82	1305.05	2.05	40.93	9.56	205.96	7.65	164.76	FE
SGTP - Incinerator																
	TCCU/Mercox Vent Incinerator		7867	1.40	33.71	0.05	1.12	1.13	27.20	4.50	107.93	0.96	23.06	0.77	18.45	FE
	TCCU Incinerator (w/out Mercox vent)		7868	1.37	32.89	0.05	1.10	1.11	26.54	4.12	98.83	0.94	22.50	0.75	18.00	FE
	Planned Startup/Shutdown/Maintenance		7869	1.40	33.71	0.05	1.12	1.13	27.20	6.20	148.80	0.96	23.06	0.77	18.45	FE
Combustion - Thermal Oxidizer																
	Purge and Pilot		102738	0.47	11.29	0.03	0.62	0.40	9.49	0.02	0.39	0.04	0.86	0.04	0.86	FE
	Planned - Continuous LP		102739	0.17	3.99	0.01	0.22	0.14	3.36	0.12	2.87	0.01	0.31	0.01	0.31	FE
	Planned - Continuous AG		102740	0.03	0.69	0.00	0.04	0.02	0.58	0.01	0.25	0.00	0.05	0.00	0.05	FE
	Planned - Other		102741	33.18	111.39	1.83	6.14	27.90	6.14	175.64	190.28	2.54	8.52	2.54	8.52	FE
	Unplanned - Other		102742	300.15	300.15	14.16	14.16	216.02	14.16	4.976.97	4.976.97	19.66	19.66	19.66	19.66	FE
Combustion - Internal Combustion Engine																
	Floodwater Pump		8122	3.57	3.57	0.28	0.28	0.77	0.77	0.00	0.00	0.25	0.25	0.25	0.25	A
	Firewater Pump A		1085	3.69	3.69	0.29	0.29	0.79	0.79	0.00	0.00	0.26	0.26	0.26	0.26	A
	Firewater Pump B		1086	3.69	3.69	0.29	0.29	0.79	0.79	0.00	0.00	0.26	0.26	0.26	0.26	A
Crew Boat - Harmony/Heritage																
	Main Engine - DPV		6515	60.81	364.88	3.09	18.51	14.60	87.59	0.04	0.23	5.96	35.73	5.72	34.30	FE
	Main Engine - DPV Broadbill		107946	24.57	147.42	1.92	11.51	9.08	54.46	0.02	0.14	0.67	3.99	0.67	3.99	FE
	Main Engine - Spot Charter		6564	101.24	607.41	3.09	18.51	14.60	87.59	0.04	0.23	5.96	35.73	5.72	34.30	FE
	Auxiliary Engine - DPV		6516	4.32	25.94	0.35	2.12	0.93	5.59	0.00	0.01	0.30	1.82	0.29	1.75	FE
	Auxiliary Engine - DPV Broadbill		107947	0.74	4.46	0.17	1.00	0.44	2.64	0.00	0.00	0.02	0.12	0.02	0.12	FE

Table 5.1-4: Long-Term Emissions
ExxonMobil Las Flores Canyon Oil and Gas Plant
ATC 13545

Equipment Item	Description	Exon ID #	AFCD Device No	NOx			CO			SOx			PM			PM10		Federal Enforceability
				TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	
Combustion - Cogen Power Plant: Normal Operations Mode Gas Turbine 38.63 MW Heat Recovery Steam Generator Turbine Bypass Stack	CPP/ZAN-2501	6585		13.67	54.73	2.76	11.07	13.07	52.32	1.70	6.80	7.94	31.79	6.35	25.43	FE		
	CPP/EAL-2601	7865		4.16	16.66	0.84	3.37	3.98	15.93	0.52	2.07	2.42	9.68	1.93	7.74	NE		
	CPP/ZAN-2501	7864		0.14	0.55	0.03	0.11	0.13	0.53	0.02	0.07	0.08	0.32	0.06	0.26	FE		
				17.97	71.95	3.63	14.55	17.18	68.77	2.23	8.94	10.44	41.79	8.35	33.43	FE		
Combustion - Cogen Power Plant: HRSG Only Mode Heat Recovery Steam Generator	CPP/EAL-2601	7865		11.30	45.24	3.58	14.33	17.18	68.77	1.27	5.10	1.88	7.54	1.51	6.03	FE		
Combustion - Cogen Power Plant: Planned Bypass Mode Startup and Shutdown 22 MW Maintenance and Testing 4 MW	CPP/ZAN-2501/EAL-2601	7866		0.27	0.81	0.09	0.26	0.55	1.65	0.00	0.01	0.03	0.08	0.02	0.06	FE		
	CPP/ZAN-2501	7864		0.144	0.576	0.057	0.227	0.656	2.625	0.002	0.008	0.017	0.067	0.013	0.053	FE		
Combustion-Cogen Power Plant: Totals Normal +/- SUSD + M&T				18.3219	73.0672	3.7662	14.9867	18.3229	72.7902	2.2305	8.9251	10.4451	41.78	8.556	33.4265	FE		
SGTP - Incinerator	TGCCU/Mercox Vent Incinerator	7867		1.54	6.15	0.05	0.21	1.24	4.96	4.92	19.70	1.05	4.21	0.84	3.37	FE		
	TGCCU Incinerator (w/out Mercox vent)	7868		1.50	6.00	0.05	0.20	1.21	4.84	4.51	18.04	1.03	4.11	0.82	3.29	FE		
	Planned Startup/Shutdown/Maintenance	7869		0.06	0.06	0.00	0.00	0.05	0.05	0.26	1.04	0.04	0.04	0.03	0.03	FE		
Combustion - Thermal Oxidizer Purge and Pilot Planned - Continuous LP Planned - Continuous AG Planned - Other Unplanned - Other	OTP/EAW-1601	102738		0.52	2.06	0.03	0.11	0.43	1.73	0.02	0.07	0.04	0.16	0.04	0.16	FE		
	OTP/EAW-1601	102739		0.18	0.73	0.01	0.04	0.15	0.61	0.13	0.52	0.01	0.06	0.01	0.06	FE		
	OTP/EAW-1601	102740		0.03	0.12	0.00	0.01	0.03	0.10	0.01	0.04	0.00	0.01	0.00	0.01	FE		
	OTP/EAW-1601	102741		0.70	1.47	0.04	0.08	0.59	1.24	0.97	1.89	0.05	0.11	0.05	0.11	FE		
	OTP/EAW-1601	102742		0.31	0.86	0.02	0.05	0.24	0.70	2.99	8.33	0.02	0.06	0.02	0.06	FE		
Combustion - Internal Combustion Engine Floodwater Pump Firewater Pump A Firewater Pump B	LFC-07	8122		0.023	0.071	0.002	0.006	0.005	0.015	0.0000	0.000	0.002	0.005	0.002	0.005	A		
	PBE-1396 A	1085		0.024	0.096	0.002	0.008	0.005	0.021	0.0000	0.000	0.002	0.007	0.002	0.007	A		
	PBE-1396 B	1086		0.024	0.096	0.002	0.008	0.005	0.021	0.0000	0.000	0.002	0.007	0.002	0.007	A		
Crew Boat - Harmony/Heritage Main Engine - DPV Main Engine - DPV Broadbill Main Engine - Spot Charter	Offshore (w/in 3-miles)	6515		1.34	5.37	0.07	0.27	0.32	1.29	0.00	0.00	0.13	0.53	0.13	0.51	FE		
	Offshore (w/in 3-miles)	107946		0.58	2.33	0.05	0.18	0.21	0.86	0.00	0.00	0.02	0.06	0.02	0.06	FE		
	Offshore (w/in 3-miles)	6564		0.37	1.49	0.01	0.05	0.05	0.21	0.00	0.00	0.02	0.09	0.02	0.08	FE		
	sub-total =			2.30	9.19	0.12	0.50	0.59	2.36	0.00	0.01	0.17	0.68	0.16	0.65	FE		
Auxiliary Engine - DPV Auxiliary Engine - DPV/Broadbill	Offshore (w/in 3-miles)	6516		0.45	1.80	0.04	0.15	0.10	0.39	0.00	0.00	0.03	0.13	0.03	0.12	FE		
	Offshore (w/in 3-miles)	107947		0.11	0.44	0.02	0.10	0.06	0.26	0.00	0.00	0.00	0.01	0.00	0.01	FE		
	sub-total =			0.56	2.24	0.06	0.25	0.16	0.65	0.00	0.00	0.03	0.14	0.03	0.13	FE		

Table 5.2: Total Permitted Facility Emissions
ExxonMobil Las Flores Canyon Oil and Gas Plant
ATC 13545

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	89.87	29.43	182.82	2.05	9.56	7.65
SGTP - Incinerator	1.40	0.05	1.13	6.20	0.96	0.77
Thermal Oxidizer	0.66	0.04	0.56	0.15	0.05	0.05
Internal Combustion Engine	10.94	0.87	2.36	0.00	0.78	0.78
Crew Boats	105.56	3.44	15.53	0.04	6.26	6.01
Supply Boats	116.82	5.39	19.08	0.04	7.29	7.00
Pigging Equipment/Compressor Vents	-	0.59	-	-	-	-
Tanks/Sumps/Separators	-	20.86	-	-	-	-
Fugitive Components	-	9.55	-	-	-	-
Solvent Usage	-	0.69	-	-	-	-
Totals (lb/hr)	325.26	70.91	221.49	8.48	24.90	22.26

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	620.00	175.57	1,305.05	49.09	229.47	183.58
SGTP - Incinerator	33.71	1.12	27.20	148.80	23.06	18.45
Thermal Oxidizer	15.97	0.88	13.43	3.50	1.22	1.22
Internal Combustion Engine	10.94	0.87	2.36	0.00	0.78	0.78
Crew Boats	633.35	20.63	93.18	0.24	37.55	36.05
Supply Boats	298.62	20.24	58.26	0.11	20.08	19.28
Pigging Equipment/Compressor Vents	-	2.38	-	-	-	-
Tanks/Sumps/Separators	-	500.69	-	-	-	-
Fugitive Components	-	229.28	-	-	-	-
Solvent Usage	-	5.52	-	-	-	-
Totals (lb/day)	1,612.59	957.18	1,499.48	201.74	312.17	259.35

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	18.32	3.77	18.32	2.24	10.47	8.37
SGTP - Incinerator	1.54	0.05	1.24	4.92	1.05	0.84
Thermal Oxidizer	1.74	0.09	1.44	4.13	0.13	0.13
Internal Combustion Engine	0.07	0.01	0.02	0.00	0.01	0.01
Crew Boats	2.86	0.19	0.75	0.00	0.20	0.20
Supply Boats	1.79	0.10	0.39	0.00	0.15	0.15
Pigging Equipment/Compressor Vents	-	0.01	-	-	-	-
Tanks/Sumps/Separators	-	1.65	-	-	-	-
Fugitive Components	-	10.46	-	-	-	-
Solvent Usage	-	0.25	-	-	-	-
Totals (TPQ)	26.31	16.58	22.16	11.29	12.01	9.69

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	73.07	14.99	72.79	8.95	41.87	33.50
SGTP - Incinerator	6.15	0.21	4.96	19.70	4.21	3.37
Thermal Oxidizer	5.24	0.29	4.39	10.85	0.40	0.40
Internal Combustion Engine	0.26	0.02	0.06	0.00	0.02	0.02
Crew Boats	11.43	0.74	3.01	0.01	0.82	0.79
Supply Boats	1.79	0.10	0.39	0.00	0.15	0.15
Pigging Equipment/Compressor Vents	-	0.03	-	-	-	-
Tanks/Sumps/Separators	-	6.30	-	-	-	-
Fugitive Components	-	41.84	-	-	-	-
Solvent Usage	-	1.00	-	-	-	-
Totals (TPY)	97.94	65.53	85.60	39.51	47.46	38.21

Table 5.3: Federal Potential To Emit
ExxonMobil Las Flores Canyon Oil and Gas Plant
ATC 13545

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	89.87	29.43	182.82	2.05	9.56	7.65
SGTP - Incinerator	1.40	0.05	1.13	6.20	0.96	0.77
Thermal Oxidizer	0.66	0.04	0.56	0.15	0.05	0.05
Crew Boats	105.56	3.44	15.53	0.04	6.26	6.01
Supply Boats	116.82	5.39	19.08	0.04	7.29	7.00
Pigging Equipment/Compressor Vents	-	0.59	-	-	-	-
Tanks/Sumps/Separators	-	20.86	-	-	-	-
Fugitive Components	-	9.55	-	-	-	-
Solvent Usage	-	0.69	-	-	-	-
Totals (lb/hr)	314.31	70.04	219.13	8.47	24.13	21.48

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	620.00	175.57	1,305.05	49.09	229.47	183.58
SGTP - Incinerator	33.71	1.12	27.20	148.80	23.06	18.45
Thermal Oxidizer	15.97	0.88	13.43	3.50	1.22	1.22
Crew Boats	633.35	20.63	93.18	0.24	37.55	36.05
Supply Boats	298.62	20.24	58.26	0.11	20.08	19.28
Pigging Equipment/Compressor Vents	-	2.38	-	-	-	-
Tanks/Sumps/Separators	-	500.69	-	-	-	-
Fugitive Components	-	229.28	-	-	-	-
Solvent Usage	-	5.52	-	-	-	-
Totals (lb/day)	1,601.65	956.31	1,497.12	201.74	311.39	258.58

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	18.32	3.77	18.32	2.24	10.47	8.37
SGTP - Incinerator	1.54	0.05	1.24	4.92	1.05	0.84
Thermal Oxidizer	1.74	0.09	1.44	4.13	0.13	0.13
Crew Boats	2.86	0.19	0.75	0.00	0.20	0.20
Supply Boats	1.79	0.10	0.39	0.00	0.15	0.15
Pigging Equipment/Compressor Vents	-	0.01	-	-	-	-
Tanks/Sumps/Separators	-	1.65	-	-	-	-
Fugitive Components	-	10.46	-	-	-	-
Solvent Usage	-	0.25	-	-	-	-
Totals (TPQ)	26.24	16.57	22.15	11.29	12.01	9.69

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Cogeneration Power Plant	73.07	14.99	72.79	8.95	41.87	33.50
SGTP - Incinerator	6.15	0.21	4.96	19.70	4.21	3.37
Thermal Oxidizer	5.24	0.29	4.39	10.85	0.40	0.40
Crew Boats	11.43	0.74	3.01	0.01	0.82	0.79
Supply Boats	1.79	0.10	0.39	0.00	0.15	0.15
Pigging Equipment/Compressor Vents	-	0.03	-	-	-	-
Tanks/Sumps/Separators	-	6.30	-	-	-	-
Fugitive Components	-	41.84	-	-	-	-
Solvent Usage	-	1.00	-	-	-	-
Totals (TPY)	97.68	65.51	85.54	39.51	47.45	38.19

TABLE A.1 - Facility Emissions Summary
ExxonMobil Las Flores Canyon Oil and Gas Plant
ATC 13545

I. This Projects "I" NEI-90													
Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
ATC/PTO 13545		78.15	0.31	43.49	0.17	593.26	2.37	0.00	0.00	0.00	0.00	0.00	0.00
II. This Facility's "P1s"													
Enter all facility "P1" NEI-90s below:													
Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
PTO 5651	1/11/2000	1,003.14	98.56	877.74	68.83	546.68	87.00	228.92	40.67	288.75	47.78	236.82	38.52
ATC/PTO 10990	5/1/2003			3.07	3.80								
ATC/PTO 11322	1/4/2005	5.79	1.06	0.32	0.06	4.87	0.89	20.39	3.72	0.44	0.08	0.44	0.08
ATC/PTO 13039	6/11/2009	0.00	0.00	0.31	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		1008.93	99.62	881.44	72.75	551.55	87.89	249.31	44.39	289.19	47.86	237.26	38.60
Notes: (1) Facility NEI from IDS. (2) Totals only apply to permits for this facility ID. Totals may not appear correct due to rounding. (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.													
III. This Facility's "P2" NEI-90 Decreases													
Enter all facility "P2" NEI-90s below:													
Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
ATC/PTO 11410	3/7/2005			4.335	0.791								
ATC/PTO 11170	4/2/2004			10.703	1.953								
Part 70 PTO 5651-01	12/1/2003		1.041		0.00		0.252		0.130		0.129		0.124
Totals		0.00	1.04	15.04	2.74	0.00	0.25	0.00	0.13	0.00	0.13	0.00	0.12
Notes: (1) Facility NEI from IDS. (2) Totals only apply to permits for this facility ID. Totals may not appear correct due to rounding. (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.													
IV. This Facility's Pre-90 "D" Decreases													
Enter all facility "D" decreases below:													
Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
Totals		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Notes: (1) Facility "D" from IDS. (2) Totals only apply to permits for this facility ID. Totals may not appear correct due to rounding. (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.													
V. Calculated This Facility's NEI-90													
Table below summarizes facility NEI-90 as equal to: I+ (P1-P2) -D													
Term	NOx		ROC		CO		SOx		PM		PM10		
	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	
Project "I"	78.15	0.31	43.49	0.17	593.26	2.37	0.00	0.00	0.00	0.00	0.00	0.00	
P1	1008.93	99.62	881.44	72.75	551.55	87.89	249.31	44.39	289.19	47.86	237.26	38.60	
P2	0.00	1.04	15.04	2.74	0.00	0.25	0.00	0.13	0.00	0.13	0.00	0.12	
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FNEI-90	1087.08	98.89	909.89	70.18	1144.81	90.01	249.31	44.26	289.19	47.73	237.26	38.48	
Notes: (1) Resultant FNEI-90 from above Section I thru IV data. (2) Totals only apply to permits for this facility ID. Totals may not appear correct due to rounding. (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.													

Table 7.1 NOx Emission Offset Requirements
 ExxonMobil Las Flores Canyon Oil and Gas Plant
 Part 70/ APCD PTO 5651 R3

Oxides of Nitrogen (NOx)^(a)

NEI EMISSIONS FROM PROJECT	Oxides of Nitrogen	
	TPQ	TPY
Las Flores Canyon ^(b)	26.39	98.56
Cogen Power Plant M&T	0.078	0.313
Total NEI:	26.468	98.873

EMISSION REDUCTION SOURCES (NEI)	Emission Reductions		Distance Factor ^(c)	Offset Credit	
	TPQ	TPY		TPQ	TPY
1. OS&T Shutdown	7.00	28	1.2	5.83	23.33
2. Carpinteria Gas Plant ^(d)					
Cooper/Ingersoll Rand Compressors					
- Exxon's Portion (IR)	7.25	29	2.6	2.79	11.15
- ARCO's Portion (Cooper)	24.00	96	2.6	9.23	36.92
3. Platform Hope Cooper Compressor (partial)	8.00	32	2.6	3.08	12.31
4. Hondo Crew Boat Reductions	6.50	26	1.2	5.42	21.67
5. Shell Molino Waukesha/White Compressors	5.00	20	1.2	4.17	16.67
6. Utility Displacement Credit	4.00	16.00	1.0	4.00	16.00
7. ERC Certificate 0235-0811 M/V Broadbill repower	0.094	0.375	1.2	0.078	0.313
Total Offsets:^(e)	61.750	247.000		34.591	138.364

Notes:

^(a) NOx as NO2

^(b) See Section 5 for a detailed listing of SYU Project emissions due to operation.

^(c) Ratios set according to District Guidelines and based on source distance from the SYU project. The discounted offset values shown are the undiscounted offset values divided by the discount ratio.

^(d) Exxon and ARCO are all shareholders in the Carpinteria Gas Plant. Both partners have committed their listed shares of emission reduction credits from controls of this gas plant to the SYU project.

^(e) Amount of NEI ERCs provided exceed NEI liability. Excess may not be used for new or modified projects. New or modified projects require ERCs from the Source Register per Regulation VIII.

Table 7.2 ROC Emission Offset Requirements
ExxonMobil Las Flores Canyon Oil and Gas Plant
Part 70/ APCD PTO 5651 R3

Reactive Organic Compounds (ROC)

NEI EMISSIONS FROM PROJECT	Reactive Organic Compounds	
	TPQ	TPY
Las Flores Canyon ^(a)	17.38	68.83
Phase III Oil	0.44	1.75
Phase III Wastewater	0.09	0.34
De Minimis Transfer	0.140	0.560
De Minimis Transfer - ATC 13039	0.014	0.056
Cogen Power Plant M&T	0.043	0.174
Total NEI:	18.10	71.71

EMISSION REDUCTION SOURCES (NEI)	Emission Reductions		Distance Factor ^(b)	Offset Credit	
	TPQ	TPY		TPQ	TPY
1. OS&T Shutdown ^(c)	1.25	5.00	1.2	1.04	4.17
2. Carpinteria Gas Plant Fugitive I&M	12.25	49.00	2.6	4.71	18.85
3. Platform Hilda Fugitive I&M	8.75	35.00	2.2	3.98	15.91
4. Platform Heidi Fugitive I&M	3.25	13.00	2.6	1.25	5.00
5. Platform Hazel Fugitive I&M	7.75	31.00	2.2	3.52	14.09
6. Hondo Crew Boat Reductions	0.75	3.00	1.2	0.63	2.50
7. ARCO Seep Containment Project (partial)	3.75	15.00	1.2	3.13	12.50
8. Utility Displacement Credit	0.25	1.00	1.0	0.25	1.00
9. ERC Certificates: McGhan Shutdowns ^(d)	0.6090	2.4360	1.5	0.4060	1.6240
10. ERC Certificates: Bioenterics Shutdowns ^(e)	0.6570	2.6280	1.5	0.4380	1.7520
11. ERC Certificate: Greco Shutdown ^(f)	0.6400	2.5600	6.0	0.1067	0.4267
12. ERC Certificate 0128-1009: LFC Fugitive I&M	0.0170	0.0680	1.2	0.0142	0.0567
13. ERC Certificate 0235-0811 M/V Broadbill repower ^(h)	0.052	0.209	1.2	0.044	0.174
Total Offsets: ^(g)	39.98	159.90		19.51	78.05

Notes:

^(a) See Section 5 for a detailed listing of SYU Project emissions due to operation.

^(b) Ratios set according to District Guidelines and based on source distance from the SYU project. The discounted offset values shown are the undiscounted offset values divided by the discount ratio.

^(c) OS&T shutdown emissions to be used to offset crew boat emissions within the District only (remaining ERCs may only be applied to non-NEI OCS liability). Total of 2.93 tpy used for Hondo Topsides Integration Project (Ref: PTO 9100).

^(d) ERCs generated due the shutdown of McGhan Medical Corporation's Carpinteria and Lompoc facilities: #0079 and #0080.

^(e) ERC Certificate #0081 is for ERCs generated due the shutdown of BioEnterics Corporation facility at 1035 Cindy Lane in Carpinteria.

^(f) ERC Certificate #0083 is for ERCs generated due the shutdown of Greco's Lompoc diatomaceous earth processing plant.

^(g) Amount of NEI ERCs provided exceed NEI liability. Excess may not be used for new or modified projects. New or modified projects require ERCs from the Source Register per Regulation VIII.

^(h) Nox ERCs used as ROC offsets at a one-to-one ratio.

Equipment List for Authority to Construct 13545

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PERMIT EQUIPMENT LIST - TABLE B

ATC 13545 / FID: 01482 Las Flores Canyon / SSID: 01482

A PERMITTED EQUIPMENT

1 Turbine Bypass Stack

<i>Device ID #</i>	007864	<i>Device Name</i>	Turbine Bypass Stack
<i>Rated Heat Input</i>	4.630 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ZAN-2501
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>	Cogeneration Power Plant		
<i>Device</i>	Normal Operations Mode. 1% of gas turbine exhaust.		
<i>Description</i>			



**PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT 13545**

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1.0 BACKGROUND

1.1 General: The Cogeneration Power Plant (CPP) at Exxon Mobil's Las Flores Canyon facility provides electrical power for the LFC facility, the POPCO Gas Plant, as well as ExxonMobil's three offshore platforms (Harmony, Heritage, and Hondo). ExxonMobil also provides additional power to the local grid. The CPP consists of a gas turbine and generator, a heat recovery steam generator (HRSG), a steam turbine driving a generator, and a steam distribution system. During normal operations exhaust from the gas turbine is routed through the HRSG to generate steam for the steam turbine and steam distribution system. A selective catalytic reduction (SCR) system is located downstream of the HRSG to control NO_x emissions. During startups and shutdowns, exhaust from the gas turbine is sent through a bypass stack located upstream of the HRSG and SCR system.

This ATC authorizes additional maintenance and testing operations at loads no greater than 4 MW electrical output. During these periods exhaust will primarily be routed through the bypass stack, although exhaust may also be directed through the HRSG. At these low loads, the exhaust temperature will not be high enough for the SCR system to be effective. Hourly NO_x, ROC, and CO emissions will be greater than during normal operations. This project triggers BACT for NO_x, CO, and ROC, offsets for NO_x and ROC and requires an AQIA for CO.

1.2 Permit History:

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
PT-70/Reeval 05651 R4	06/12/2009	Triennial reevaluation of Part 70 PTO 5651 and consolidation of active permits.
Exempt 13228	06/27/2009	Use of temporary equipment for LFC - Hondo Water Injection Project (HOWI)
ATC/PTO 13487	Not yet final	Incorporate de minimis fugitive hydrocarbon component emissions into the facility permit

PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT 13545

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1.3 Compliance History:

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	9370	03/18/2009	Exceeding the permitted 22.3 ppm NOx and 35.0 ppm CO emissions limits for the gas turbine generator. The excess emissions for CO equaled 15.69 pounds.
NOV	9391	06/24/2009	Failing to inject ammonia into the SCR during the startup of the CPP duct burners.
MIN	9402	10/13/2009	Violation of Rule 206, Conditions 9.C.1 and 9.C.8 of APCD/Part 70 PTO 5651 by exceeding numerous separately enforceable emissions and operational limits for the CPP duct burners, SCR and the SGTP waste gas incinerator.
MIN	9414	01/20/2010	Failing to initiate NOx steam injection once stable flame conditions are established following the startup of the GTG. A GE Technician failed to reinstall the NOx steam control relay switch following the replacement of the GE Mark IV circuit board. This violation was due to human error but did not result in excess emissions as the 22.3 NOx emission limit was not exceeded.
NOV	9591	01/26/2010	Violations of Rule 206 and Conditions 9.C1 and 9.C.8 of PTO 5651 by exceeding the permitted mass emissions limits of NOx and CO for the CPP GTG and the permitted NOx and SOx limits for the SGTP WGI. Excess emissions equaled 102.6 pounds NOx, 300.5 pounds CO and 14.69 pounds SOx.

2.0 ENGINEERING ANALYSIS

2.1 Equipment/Processes: The additional maintenance and testing hours under the Planned Bypass Mode include, but are not limited to, the following activities:

- Major Overhaul – Inspect and replace combustion cans, fuel nozzles, turbine blades, etc. as necessary.
- Hot Gas Path Inspection – Inspect and replace combustion cans and fuel nozzles as necessary.
- Timing adjustment of circuit breakers connecting GTG to SCE grid.
- Adjustment and troubleshooting of excitation equipment troubleshooting.
- GTG control system troubleshooting.
- GTG excitation system upgrade.
- GTG control system upgrade.
- Mechanical and electrical over-speed shutdown test.

PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT 13545

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- 2.2 Emission Controls: During maintenance and testing operations, emissions will be controlled through the use of pipeline quality natural gas, proper combustor operation, and good work practices to minimize emissions and the time necessary to complete maintenance and testing.

The two main emission control measures for NO_x emissions from the gas turbine during normal operations are steam injection and SCR. During maintenance and testing operations, the gas turbine will be operating at a low firing rate and these two measures will not be feasible. Injecting steam at low firing rates could result in an unstable flame and possibly the loss of the flame. Exhaust temperatures at low firing rates are not high enough to allow the SCR to operate.

- 2.3 Emission Factors: Emission factors during maintenance and testing are documented in Table 5.2. NO_x and CO emission factors are based on interpolated results of vendor testing at multiple firing rates. The ROC emission factor is based on the startup/shutdown emission factor currently in the permit. The vendor test data included “unburned hydrocarbon” emission rates, but these data did not include ROC to TOC ratios, which are necessary to determine an ROC emission factor. Therefore the existing startup/shutdown ROC emission factor was the best available information.

- 2.4 Reasonable Worst Case Emission Scenario: Table 5.1-1 of the permit defines the reasonable worst case-operating scenario for this permit. The operating scenario is summarized as follows:

On a daily basis:

4 hours Maintenance and Testing + 2 hours Startup and Shutdown + 18 hours Normal Operations

On an annual basis:

32 hours Maintenance and Testing + 18 hours Startup and Shutdown + 8710 hours Normal Operations

- 2.5 Emission Calculations: Detailed emission calculation spreadsheets may be found in the facility Emissions Tables. These emissions define the Potential to Emit for the permitted equipment.

Table A documents the emissions increases for this project.

- 2.6 Special Calculations: There are no special calculations.

- 2.7 BACT Analyses: Best Available Control Technology was required for this project for NO_x, CO and ROC emissions. See Table A for the calculated daily emissions increases for the project. BACT for normal operations of the CPP consists of steam injection and SCR for NO_x, proper combustor operation for CO, and the use of pipeline quality natural gas and proper combustor tuning for ROC. Due to the low exhaust temperature, the SCR system is not effective during maintenance and testing operations. Also, steam injection at low firing rates can result in an unstable flame.

A search of existing BACT determinations did not find add-on controls achieved in practice for non-standard maintenance and testing operations of gas-fired turbines. Therefore, for this project

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BACT for NO_x, CO, and ROC has been determined to be the use of pipeline quality natural gas and proper combustor tuning. Emissions from maintenance and testing operations are limited by operating no more than four hours per day and 32 hours per year.

- 2.8 Enforceable Operational Limits: The permit has enforceable operating conditions that ensure the equipment is operated properly.
- 2.9 Monitoring Requirements: Monitoring of the equipment's operational limits are required to ensure that these are enforceable.
- 2.10 Recordkeeping and Reporting Requirements: The permit requires that the data which is monitored be recorded and reported to the District.

3.0 REEVALUATION REVIEW (not applicable)

4.0 REGULATORY REVIEW

- 4.1 Partial List of Applicable Rules: This project is anticipated to operate in compliance with the following rules:

- Rule 101. Compliance of Existing Facilities
- Rule 201. Permits Required
- Rule 202. Exemptions to Rule 201
- Rule 205. Standards for Granting Permits
- Rule 302. Visible Emissions
- Rule 303. Nuisance
- Rule 309. Specific Contaminants
- Rule 310. Odorous Organic Sulfides
- Rule 311. Sulfur Content of Fuels
- Rule 324. Disposal and Evaporation of Solvents
- Rule 353. Adhesives and Sealants
- Rule 505. Breakdown Procedures
- Rule 801. New Source Review
- Rule 802. Nonattainment Review
- Rule 803. Prevention of Significant Deterioration

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4.2 Rules Requiring Review:

4.2.1 *Rule 802 - Nonattainment Review:* The District is currently designated nonattainment for the state ozone and PM₁₀ standards. The provisions of this rule apply to ozone precursor pollutants (NO_x and ROC), PM₁₀ and PM₁₀ precursor pollutants (NO_x, ROC and SO_x).

BACT - The BACT threshold is exceeded for NO_x and ROC. See Section 2.7 for a complete discussion regarding BACT.

The Air Quality Impact Analysis (AQIA) requirements under this rule (§D) are triggered for CO. See Section 5.0 for a complete discussion regarding the AQIA.

Emission offsets (§E) are triggered for NO_x and ROC. Emission reductions are required to offset the potential quarterly emissions per the offset ratios detailed in Table 4 of the rule. See Section 6.0 for a complete discussion regarding the offsets.

4.2.2 *Rule 803 – Prevention of Significant Deterioration:* The District is currently designated attainment for federal and state CO standards.

BACT - The BACT threshold is exceeded for CO. See Section 2.7 for a complete discussion regarding BACT.

Emission offsets (§E) are not required for CO emission increases.

The Air Quality Impact Analysis (AQIA) requirements under this rule (§F) are triggered for CO. See Section 5.0 for a complete discussion regarding the AQIA.

The Ambient Air Quality Monitoring requirements under this rule (§G) are triggered for CO. ExxonMobil operates existing monitoring stations as required by PTO 5651 R4.

Modeled impacts are below the maximum allowable increment increase (§I).

4.3 NEI Calculations: The net emission increase calculation is used to determine whether certain requirements must be applied to a project (e.g., offsets, AQIA, PSD BACT). The NEI for this project is equal to the difference in emissions between eight hours of maintenance and testing operations versus eight hours of normal operations each quarter and 32 hours of maintenance and testing operations versus 32 hours of normal operations each year.

The NEI values for the project are calculated in Table A. The NEI values for the facility are documented in Table A.1.

5.0 **AQIA**

The project is subject to the Air Quality Impact Analysis requirements of Regulation VIII. CO emissions from the facility were modeled for the CPP maintenance and testing scenario. Total

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concentrations were below the eight hour and one hour ambient standards. The modeling protocol and results can be found in the administrative file for this permit.

Pollutant	Averaging Period	Modeled Impact ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total ($\mu\text{g}/\text{m}^3$)	California AAQS ($\mu\text{g}/\text{m}^3$)
CO	1 Hour	2,851	2,207	5,058	23,000
	8 Hour	742	2,207	2,949	10,000

6.0 OFFSETS/ERCs

6.1 Offsets: This project exceeded the offset thresholds of Rule 802. Based on the NEI, emission offsets are triggered for ROC and NO_x . Emission Reduction Credit 0235-0811 was used to provide reductions at a 1.2 to 1 offset ratio, as documented in Tables 7.1 and 7.2. NO_x reductions were used to offset ROC increases at a 1 to 1 interpollutant ratio.

6.2 ERCs: This project does not generate emission reduction credits.

7.0 AIR TOXICS

An air toxics health risk assessment was not performed for this permitting action.

8.0 CEQA / LEAD AGENCY

The District was the lead agency for CEQA for this project. This project is a minor modification of an existing facility involving no expansion of use beyond that previously existing, therefore this project is exempt from CEQA pursuant to Appendix A of the District's CEQA guidelines.

9.0 SCHOOL NOTIFICATION

A school notice pursuant to the requirements of H&SC §42301.6 was not required.

10.0 PUBLIC and AGENCY NOTIFICATION PROCESS/COMMENTS ON DRAFT PERMIT

10.1 This permit was subject to the public notice requirements of Rule 802 and 803.

10.2 The permittee had only minor comments on the draft permit. The permittee's comments and the District's responses are attached.

11.0 FEE DETERMINATION

Fees for this permit are assessed under the cost reimbursement provisions of Rule 210.

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12.0 RECOMMENDATION

It is recommended that this permit be granted with the conditions as specified in the permit.

AQ Engineer/Technician	Date	Supervisor	Date
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13.0 ATTACHMENT(S)

- IDS Tables (facility/source)
- Comments on Draft Permit

**ATTACHMENT
IDS Tables**

PERMIT POTENTIAL TO EMIT

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
lb/day	143.99	56.80	656.20	2.03	16.63	13.29
lb/hr	36.00	14.20	164.05	0.51	4.16	3.32
TPQ	0.14	0.06	0.66	0.01	0.02	0.01
TPY	0.58	0.23	2.63	0.01	0.07	0.05

FACILITY POTENTIAL TO EMIT

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
lb/day	1,612.59	957.18	1,499.48	201.74	312.17	259.35
lb/hr	325.26	70.91	221.49	8.48	24.90	22.26
TPQ	26.31	16.58	22.16	11.29	12.01	9.69
TPY	97.94	65.53	85.60	39.51	47.46	38.21

FACILITY NEI90

	NO _x	ROC	CO	SO _x	PM	PM ₁₀
lb/day	1,087.08	909.89	1144.81	249.31	289.19	237.26
lb/hr						
TPQ						
TPY	98.89	70.18	90.01	44.26	47.73	38.48

Notes:

- (1) Emissions in these tables are from IDS.
- (2) Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.

ATTACHMENT
Comments on Draft Permit

1. Table A – Hourly Emission Change. We do not understand why the comparison was made between the Startup/Shutdown emissions and the maintenance and testing emissions. There is no change in the worst case/PTE emissions on the hourly basis since SU/SD still defines the maximum for the CPP.

The hourly totals were displayed to document that this project doesn't result in an increase in the worst case hourly emissions. A note was added to the table to clarify this.

2. Section 9.B Conditions - It looks like all of the section 9.B conditions were imported from the main permit. However, B.14 - B.16 do not apply to this project. We would like these conditions to be removed from this permit.

The requested change was made.

3. Engineering Evaluation - Section 4 - Similar comment to #2, there are many rules listed which do not apply to this project, although they apply to the facility in general.

The requested change was made.