# PERMIT TO OPERATE

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|---|---|
| APPLICANT | Equilon Enterprises, LLC, Co. Id. 117560 |
| MAILING ADDRESS | 20945 S. Wilmington Ave.<br>Carson, CA 90810 |
| EQUIPMENT LOCATION | Berths 167-169,<br>Mormon Island<br>Wilmington, CA 90744 |

**Equipment Description**

STORAGE TANK NO. M-17, DOMED EXTERNAL FLOATING ROOF TYPE, RIVETED SHELL, DOUBLE DECK, 4,455 BARREL CAPACITY, 36'-0" DIA. X 29'-5" H., WITH A SHOE TYPE PRIMARY SEAL AND A WIPER TYPE SECONDARY SEAL.

**Conditions:**

1) OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW. [RULE 204]

2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES. [RULE 204]

3) THIS TANK SHALL NOT BE USED FOR STORING PRODUCTS HAVING VAPOR PRESSURES OF 11 PSIA OR GREATER UNDER ACTUAL STORAGE CONDITIONS. [RULE 463]

4) THE OPERATOR SHALL ONLY USE THE FOLLOWING PRODUCTS(S) FOR STORAGE IN THIS EQUIPMENT:

GASOLINE AND GASOLINE BLEND STOCKS (E.G. ALKYLATE, ISO-OCTANE)
JET FUEL
DIESEL FUEL
ETHANOL/DENATURED ETHANOL
BIO-EQUIVALENTS (E.G., BIO-DIESEL AND BIO-JET)
SYNFUEL EQUIVALENTS (E.G. OIL SHALE, COAL, TAR SAND DERIVED GASOLINE, DIESEL, OR JET)

[RULE 1303(b)(2)-OFFSETS]

5) THROUGHPUT OF PRODUCTS TO THIS TANK SHALL NOT EXCEED 18,250 BARRELS IN ANY ONE CALENDAR MONTH.
[RULE 1303(b)(2)-OFFSETS]

6) THE OPERATOR SHALL COMPLY WITH THE FOLLOWING THROUGHPUT MEASUREMENT PRACTICES:

THE OPERATOR SHALL CALCULATE THE, IN BARRELS, BY THE FOLLOWING EQUATION: 0.14 X D X D X L, WHERE D IS THE DIAMETER OF THE TANK IN FEET BASED ON THE TANK STRAPPING CHART AND L IS THE TOTAL ONE-WAY ROOF TRAVEL IN FEET PER MONTH.

THE OPERATOR SHALL INSTALL AND MAINTAIN AN AUTOMATIC TANK LEVEL GAUGE (ATLG) AND RECORDER TO CONTINUOUSLY RECORD THE VERTICAL MOVEMENT OF THE ROOF. FOR THE PURPOSE OF THIS CONDITION, CONTINUOUS RECORDING IS DEFINED AS ONCE PER 15 MINUTES.

THE OPERATOR SHALL CALCULATE THE TOTAL ONE-WAY ROOF MOVEMENT, IN FEET, ON A DAILY AND MONTHLY BASIS.

THE ATLG INSTALLED SHALL BE VERIFIED ONCE PER QUARTER BY COMPARING AGAINST A MANUAL TANK LEVEL MEASUREMENT, IF THE ATLG DIFFERS FROM THE MANUAL TANK LEVEL MEASUREMENT BY MORE THAN 1.0 INCH OR 0.8% WHICHEVER IS GREATER, THE ATLG SHALL BE REPAIRED AND PUT BACK INTO SERVICE WITHIN 10 DAYS. WHILE THE ATLG IS BEING REPAIRED, THE THROUGHPUT SHALL BE DETERMINED BY THE HOURLY TANK LEVEL DATA AVERAGED FROM THE PREVIOUS 30 DAYS PRIOR TO THE DISCOVERY OF THE DISCREPANCY.

IN THE EVENT OF A FAILURE OR ROUTINE MAINTENANCE OF THE ATLG, THE ATLG SHALL BE REPAIRED (IF NECESSARY) AND PUT BACK INTO SERVICE WITHIN 10 DAYS OF THE TIME THAT THE ATLG FAILED OR WAS REMOVED FROM SERVICE FOR MAINTENANCE. WHILE THE ATLG IS BEING REPAIRED OR MAINTAINED, THE THROUGHPUT SHALL BE DETERMINED BY THE HOURLY TANK LEVEL DATA AVERAGED FROM THE PREVIOUS 30 DAYS PRIOR TO TIME THAT THE ATLG WENT OUT OF SERVICE.

[RULE 1303(b)(2)-OFFSETS]

7) THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE HYDROCARBON CONCENTRATION BEING MONITORED, AS INDICATED BELOW, DOES NOT EXCEED 30 PERCENT OF THE LOWER EXPLOSIVE LIMIT.

THE OPERATOR SHALL MONITOR THE HYDROCARBON CONCENTRATION IN THE VAPOR SPACE USING AN EXPLOSIMETER OR EQUIVALENT DEVICE ONCE EVERY SIX MONTHS.
[RULE 1178]

8) THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

TANK THROUGHPUT IN BARRELS PER MONTH.
COMMODITY/PRODUCT STORED AND TIME PERIOD OF ITS STORAGE.
TRUE VAPOR PRESSURE, IN PSIA, OF EACH COMMODITY.
HYDROCARBON CONCENTRATION MEASUREMENTS DONE IN THE VAPOR SPACE ABOVE THE FLOATING ROOM OF THE TANK.
OTHER RECORDS THAT MAY BE REQUIRED TO COMPLY WITH THE APPLICABLE REQUIREMENTS OF DISTRICT RULE 463, RULE 1149, RULE 1178 AND 40CFR63, SUBPART R.
[RULE 1149; RULE 1149; RULE 1178; RULE 1303(b) (2)-Offset; RULE 463; 40CFR 63 Subpart R]

**PERIODIC MONITORING: NONE**

**EMISSIONS AND REQUIREMENTS:**

9) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

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| VOC: | RULE 463 |
| VOC: | RULE 1149 |
| VOC: | RULE 1178 |

## BACKGROUND & PROCESS DESCRIPTION

This facility is Title V facility and is primarily a tank storage farm and bulk loading/unloading marine terminal consisting of various size tanks used to store various refinery products and marine loading/unloading.

This application is for an external floating roof tank (Tank no. M-17). This equipment was previously operated under permit no. F16875 and this application was submitted to modify the tank by adding a geodesic dome. This tank was issued a permit to construct on May 14, 2004. There will be no changes to this equipment. For a more detailed background and process description, please see the permit to construct.

This modification has since been completed and the as-built drawings were submitted by the applicant. Based on the as-built information submitted, this equipment was built as described in the permit to construct evaluations, therefore this equipment can now be issued a permit to operate.

A few changes in the equipment description wording and conditions wording to better reflect current practices. None of these changes will relax the requirements for this equipment.

The equipment description was changed by the following.

STORAGE TANK NO. M-17, ~~GASOLINE,~~ RIVETED SHELL, DOUBLE DECK, DOMED EXTERNAL FLOATING ROOF TYPE, 4,455 BARREL CAPACITY, 36'-0" DIA. X 29'-5" H., WITH A SHOE TYPE PRIMARY SEAL AND A WIPER TYPE SECONDARY SEAL.

The word "gasoline" was removed. In the previous permitted application for this equipment permit no. F16875, instead of Gasoline, it stated "Hydrocarbon Liquid". I reviewed this permit to construct evaluation, information submitted by the applicant, and I could not determine why this tank was limited to storing gasoline only.

In the previous permit no. F16875, it had a condition, condition no. 4, which was as follows:

THIS TANK SHALL NOT BE USED FOR STORING PETROLEUM LIQUIDS HAVING VAPOR PRESSURES OF 11 PSIA OR GREATER UNDER ACTUAL STORAGE CONDITIONS.

This condition was also in the previous permit and conflicts with using "gasoline" in the equipment description. After discussing this with the applicant, it was agreed to remove "gasoline" from the equipment description, have the above condition remain, and add a new condition as shown below indicating the types of products that can be stored:

THE OPERATOR SHALL ONLY USE THE FOLLOWING PRODUCTS(S) FOR STORAGE IN THIS EQUIPMENT:

GASOLINE AND GASOLINE BLEND STOCKS (E.G. ALKYLATE, ISO-OCTANE)
JET FUEL
DIESEL FUEL
ETHANOL/DENATURED ETHANOL
BIO-EQUIVALENTS (E.G., BIO-DIESEL AND BIO-JET)
SYNFUEL EQUIVALENTS (E.G. OIL SHALE, COAL, TAR SAND DERIVED GASOLINE, DIESEL, OR JET)

In addition condition nos. 3 and 5 for the throughput and Automatic Tank Level Gauge (ATLG) have been changed to the current language used by the District. These conditions have been changed (they are now condition nos. 5 and 6) as follows:

Previous conditions

3. THROUGHPUT OF ORGANIC LIQUIDS TO THIS TANK SHALL NOT EXCEED 18,250 BARRELS PER CALENDAR MONTH.

AUTOMATIC TANK LEVEL GAUGE (ATLG) SHALL BE USED TO CONTINUOUSLY MEASURE THE LIQUID SURFACE LEVEL MOVEMENT. TANK LIQUID SURFACE LEVEL DATA SHALL BE RECORDED EVERY 15 MINUTES AND THESE 15 MINUTE LEVELS WILL BE USED TO CALCULATE LEVEL CHANGES. THE 15 MINUTE LEVEL READINGS SHALL BE USED TO CALCULATE THE TOTAL ONE-WAY ROOF MOVEMENT, IN FEET, ON A MONTHLY BASIS.

THE OPERATOR SHALL CALCULATE MONTHLY THROUGHPUT BY FOLLOWING EQUATION: 0.14 X D X D X L, WHERE D IS THE DIAMETER OF THE TANK IN FEET AND L, IS THE TOTAL ONE-WAY ROOF TRAVEL IN FEET PER MONTH AS DETERMINED BY THE 15-MINUTE LEVEL READINGS.

THE ATLG SHALL BE VERIFIED ONCE PER QUARTER BY COMPARING AGAINST A MANUAL TANK LEVEL MEASUREMENT. IF THE ATLG IS BEING REPAIRED, THROUGHPUT SHALL BE DETERMINED BY 15-MINUTE TANK LEVEL DATA AVERAGED FOR THE PREVIOUS 30 DAYS, PRIOR TO THE DISCOVERY OF THE DISCREPANCY.

THE OPERATOR SHALL KEEP MONTHLY RECORDS OF THE THROUGHPUT AND THE VAPOR PRESSURE FOR EACH TYPE OF STORED PRODUCT.

5) IN CASE OF FAILURE OR SHUTDOWN OF THE MEASURING DEVICE AND/OR RECORDER, EXCLUDING ROUTINE MAINTENANCE, THE REQUIREMENTS OF THIS CONDITION SHALL NOT APPLY FOR A PERIOD NOT TO EXCEED 24 CONSECUTIVE HOURS FROM THE TIME OF ITS OCCURRENCE DURING THE PERIOD OF FAILURE OR SHUTDOWN, THROUGHPUT SHALL BE DETERMINED BY 15 MINUTE TANK LEVEL DATA AVERAGED FOR THE PREVIOUS 30 CALENDAR DAYS.

IN THE CASE OF ROUTINE MAINTENANCE, THE REQUIREMENTS OF THIS CONDITION SHALL NOT APPLY FOR A PERIOD NOT TO EXCEED 4 HOURS IN ANY CALENDAR DAY. DURING THE PERIOD OF ROUTINE MAINTENANCE, THROUGHPUT SHALL BE DETERMINED BY 15 MINUTE TANK LEVEL DATA AVERAGED FOR THE PREVIOUS 30 CALENDAR DAYS.

The replacement conditions no. 5 and 6 are as follows.

5) THROUGHPUT OF PRODUCTS TO THIS TANK SHALL NOT EXCEED 18,250 BARRELS IN ANY ONE CALENDAR MONTH.

6) THE OPERATOR SHALL COMPLY WITH THE FOLLOWING THROUGHPUT MEASUREMENT PRACTICES:

THE OPERATOR SHALL CALCULATE THE, IN BARRELS, BY THE FOLLOWING EQUATION: 0.14 X D X D X L, WHERE D IS THE DIAMETER OF THE TANK IN FEET BASED ON THE TANK STRAPPING CHART AND L IS THE TOTAL ONE-WAY ROOF TRAVEL IN FEET PER MONTH.

THE OPERATOR SHALL INSTALL AND MAINTAIN AN AUTOMATIC TANK LEVEL GAUGE (ATLG) AND RECORDER TO CONTINUOUSLY RECORD THE VERTICAL MOVEMENT OF THE ROOF. FOR THE PURPOSE OF THIS CONDITION, CONTINUOUS RECORDING IS DEFINED AS ONCE PER 15 MINUTES.

THE OPERATOR SHALL CALCULATE THE TOTAL ONE-WAY ROOF MOVEMENT, IN FEET, ON A DAILY AND MONTHLY BASIS.

THE ATLG INSTALLED SHALL BE VERIFIED ONCE PER QUARTER BY COMPARING AGAINST A MANUAL TANK LEVEL MEASUREMENT, IF THE

ATLG DIFFERS FROM THE MANUAL TANK LEVEL MEASUREMENT BY MORE THAN 1.0 INCH OR 0.8% WHICHEVER IS GREATER, THE ATLG SHALL BE REPAIRED AND PUT BACK INTO SERVICE WITHIN 10 DAYS. WHILE THE ATLG IS BEING REPAIRED, THE THROUGHPUT SHALL BE DETERMINED BY THE HOURLY TANK LEVEL DATA AVERAGED FROM THE PREVIOUS 30 DAYS PRIOR TO THE DISCOVERY OF THE DISCREPANCY.

IN THE EVENT OF A FAILURE OR ROUTINE MAINTENANCE OF THE ATLG, THE ATLG SHALL BE REPAIRED (IF NECESSARY) AND PUT BACK INTO SERVICE WITHIN 10 DAYS OF THE TIME THAT THE ATLG FAILED OR WAS REMOVED FROM SERVICE FOR MAINTENANCE. WHILE THE ATLG IS BEING REPAIRED OR MAINTAINED, THE THROUGHPUT SHALL BE DETERMINED BY THE HOURLY TANK LEVEL DATA AVERAGED FROM THE PREVIOUS 30 DAYS PRIOR TO TIME THAT THE ATLG WENT OUT OF SERVICE.

Condition no. 7 was added to insure hydrocarbons are measured in the vapor space and is as follows:

7) THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE HYDROCARBON CONCENTRATION BEING MONITORED, AS INDICATED BELOW, DOES NOT EXCEED 30 PERCENT OF THE LOWER EXPLOSIVE LIMIT.

THE OPERATOR SHALL MONITOR THE HYDROCARBON CONCENTRATION IN THE VAPOR SPACE USING AN EXPLOSIMETER OR EQUIVALENT DEVICE ONCE EVERY SIX MONTHS.

Previous Condition

6) THE OPERATOR SHALL KEEP RECORDS IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETERS OR ITEMS:

A. THROUGHPUT AND VAPOR PRESSURE OF STORED LIQUID.

B. HYDROCARBON CONCENTRATION MEASUREMENT DONE IN THE VAPOR SPACE ABOVE THE FLOATING ROOF OF THE TANK.

New Condition

8) THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

TANK THROUGHPUT IN BARRELS PER MONTH.
COMMODITY/PRODUCT STORED AND TIME PERIOD OF ITS STORAGE.
TRUE VAPOR PRESSURE, IN PSIA, OF EACH COMMODITY.
HYDROCARBON CONCENTRATION MEASUREMENTS DONE IN THE VAPOR SPACE ABOVE THE FLOATING ROOM OF THE TANK.
OTHER RECORDS THAT MAY BE REQUIRED TO COMPLY WITH THE APPLICABLE REQUIREMENTS OF DISTRICT RULE 463, RULE 1149, RULE 1178 AND 40CFR63, SUBPART R.

These changes will not cause an increase in emissions or make this permit less stringent, however, the changes are considered to be substantial enough to warrant EPA review and this application be processed as a minor permit revision under Regulation XXX.

EMISSION CALCULATIONS

The emissions will continue to be the same as calculated in permit to construct and below is a summary of those calculations. There will be an overall net reduction emissions due to the installation of the geodesic dome.

Given
18,250 barrel(s)/mo.
24 hrs/day
7 days/week

| VOC R2 emissions | Annual | Daily 30 day/ave | hourly |
|---|---|---|---|
| | lbs/year | lbs/day | lbs/hr |
| Pre-modification | 5,007.37 | 13.72 | 0.57 |
| Post-modification | 1,233.73 | 3.38 | 0.14 |
| Difference | -3,774.07 | -10.34 | -0.43 |

Rule 1401

The modification to this tank results in a reduction in VOC emissions and corresponding TAC emissions and health risk; therefore, no 1401 risk assessments are required.

## EVALUATION

**Rule 212** The proposed modifications meet all criteria Rule 212 for approval. The modified equipment is designed so it can be expected to operate without emitting air contaminants in violation of sections 417, 41701 and 44300 of the State Health and Safety Code or in Violation of AQMD's Rules and Regulations. This project resulted in an emissions decrease, therefore it does not exceed the daily maximum specified in subdivision (g) or Rule 212, and the new and modified permit unit does not have an increased cancer risk cancer risk. There is no school within 1000 ft. of this project.

**Rule 401** **Visible Emissions**

Visible emissions are not expected under normal operating conditions of the tanks.

**Rule 402** **Nuisance**

No nuisance complaints are expected provided that the operation is conducted according to design. Compliance with 402 is expected.

**Rule 463** **Organic Liquid Storage**

This rule applies to any above ground tank with a capacity of 19,815 gallons or greater for storing organic liquids. Domed external floating roof tanks are subject to the requirement of Rule 463 (d) – Other Performance Requirements. Compliance with Rule 463 is expected with proper record keeping and inspections.

**Regulation IX – NEW SOURCE PERFORMANCE STANDARDS**

**Subpart K** **Standards of Performance for Storage Vessels for Petroleum Liquids.**
The modification of this storage tank results in no emission increase and Subpart $K_b$ is not applicable.

**40 CFR 63 Subpart R National Emission Standards for Gasoline Distribution Facilities**
This domed external floating roof tank will meet the requirements for this rule.

**Rule 1149** **Storage Tank Cleaning and Degassing**
This rule has requirements for tank cleaning and degassing operations. Emissions from above ground tanks are required to be controlled by one of the following

methods: liquid balance, negative pressure displacement and subsequent incinerations, vapor condensation with a refrigeration system, or any other method which controls VOC such that the gaseous VOC concentration within the tank is reduced to less than 5,000 ppmv, measured as methane, for at least one hour after degassing operations have ceased. A permit condition requires continued compliance with this rule.

**Rule 1173** **Fugitive Emissions of Volatile Organic Compounds**
This Rule specifies leak control, identification, operator inspection, maintenance, and recordkeeping requirements for valves pumps, compressors, pressure relief valves, and other components from which fugitive VOC emissions may emanate. Since this project does not involve a change to any component outside of the storage tanks, no change in fugitive VOC emissions is expected.

**Rule 1178** **Further reductions of VOC from Storage Tanks at Petroleum Refineries**
This Rule applies to facilities with VOC emissions that exceed 20 tons per year. After reviewing the 2006 AER emissions, the emissions exceeded 20 tons per year therefore this tank is required to comply with this rule. This tank will meet all of the requirements of this Rule.

**Rule 1303: Requirements**

**Rule 1303(a) – Best Available Control Technology**
This modification results in a reduction in VOC emissions, therefore BACT requirements do not apply.

**Rule 1303(b)(1) - Modeling**
VOC emissions are not required to be modeled.

**Rule 1303 (b)(2) – Emissions Offsets**
This modification results in a reduction in VOC emissions, therefore offsets are not required.

**Rule 1303 (b)(4) – Facility Compliance**
The subject facility complies with all applicable rules and regulations of the District.

**Rule 1401** **New Source Review of Carcinogenic Air Contaminants**
This modification results in a reduction in VOC emissions and corresponding TAC emissions, therefore, it is exempt from Rule 1401 health risk assessment.

**Regulation XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)**

This facility is not a RECLAIM facility. Therefore, it is not subject to Reg. XX. This modification does not emit RECLAIM pollutants.

***Reg XXX:*** ***Title V Permits***

The Title V permit has been issued for this facility, and the changes to the applicable sections will be proposed to the EPA as a minor permit revision prior to final permit issuance.

**CEQA – California Environment Quality Act.**

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document. The expected impacts of the project on the environmental are not significant. Therefore a CEQA analysis is not required.

## RECOMMENDATIONS

Based the information submitted and this evaluation, it is recommended that this equipment be issued a conditional Permit to Operate following EPA review and concurrence.