

ARCO TERMINAL SERVICES CORP., TERMINAL 2

DRAFT PERMIT TO OPERATE

Permit No. TBD
A/N 543960

Equipment Description:

MARINE TERMINAL VAPOR CONTROL SYSTEM (THERMAL OXIDIZER SERVING BERTHS 76, 77, & 78)
CONSISTING OF:

1. THERMAL OXIDIZER UNIT, CALLIDUS, 12'-0" DIA. X 5'-8" H. FIREBOX, 180 MMBTU/HR MAXIMUM RATING WITH THREE NATURAL GAS BURNERS, A 12" DIA. DETONATION ARRESTOR, AND A 12'-0" DIA. X 68'-0" H. EXHAUST STACK.
2. NITROGEN GENERATOR, 50 SCFM.
3. HYDROCARBON VAPOR COLLECTION ARMS (3), EQUIPPED WITH 6" DIA. VAPOR HOSES, TWO 10" DIA. AND ONE 8" DIA. DETONATION ARRESTORS.
4. BLOWER KNOCKOUT DRUM, 3'-0" DIA. X 8'-6" H., 250 GALLON CAPACITY.
5. BLOWER KNOCKOUT DRUM PUMP.
6. HYDROCARBON VAPOR BLOWERS (3), 976 ACFM, 100 HP EACH.
7. LIQUID SEAL DRUM, 4'-0" DIA. X 10'-0" H., 400 GALLON CAPACITY
8. LIQUID SEAL DRUM PUMP.
9. OXYGEN ANALYZERS (6).

Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED 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) THE OPERATOR SHALL CONDUCT SOURCE TESTS OF THE THERMAL OXIDIZER AS FOLLOWS:
 - A. A TEST PROTOCOL SHALL BE SUBMITTED TO THE AQMD REFINERY AND WASTE MANAGEMENT PERMITTING TEAM NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY THE EXECUTIVE OFFICER OF THE DISTRICT BEFORE THE TEST COMMENCES. AN APPROPRIATE PROTOCOL THAT HAS BEEN PREVIOUSLY APPROVED BY THE DISTRICT MAY BE USED.

- B. THE TEST SHALL BE CONDUCTED AFTER ACHIEVING 80% OF THE MAXIMUM LIQUID LOADING RATE INTO A MARINE TANK VESSEL AND DURING THE TRANSFER OF THE LAST 50% OF THE TOTAL LIQUID CARGO LOADED.
- C. SAMPLE PORTS SHALL BE LOCATED AT THE INLET AND EXHAUST OF THE AFTERBURNER AND SHALL COMPLY WITH DISTRICT RULE 217.
- D. THE DISTRICT SHALL BE NOTIFIED OF THE DATE AND TIME OF THE TEST AT LEAST 10 DAYS PRIOR TO THE TEST.
- E. THE TEST SHALL DETERMINE AND THE TEST REPORT SHALL INCLUDE THE FOLLOWING:
1. THE TOTAL VOC IN PPM AND MASS FLOW RATE AT THE INLET OF THE AFTERBURNER.
 2. THE MASS EMISSION RATE OF VOC AT THE EXHAUST OF THE AFTERBURNER.
 3. THE CONTROL EFFICIENCY OF THE AFTERBURNER AND THE TOTAL VOC EMISSIONS RATE IN POUNDS PER 1000 BBL. LOADED.
 4. THE LIQUID CARGO LOADING RATE IN BARRELS PER HOUR DURING THE SOURCE TEST.
- F. A TEST REPORT SHALL BE SUBMITTED TO THE AQMD NO LATER THAN 180 DAYS AFTER THE TEST DATE. THE TEST REPORT SHALL INCLUDE INFORMATION REGARDING THE PRIOR CARGO CARRIED BY THE RECEIVING MARINE TANK VESSELS AND THE CONDITION OF THE TANKS PRIOR TO BEING LOADED, I.E., CLEANED, CRUDE OIL WASHED, GAS FREED, ETC.
[RULE 1142, RULE 204]
- 4) FOR ANY LOW VAPOR PRESSURE ORGANIC LIQUID CARGO LOADING, LIGHTERING, BALLASTING, AND HOUSEKEEPING EVENTS, VOC EMISSION LIMITS SPECIFIED IN RULE 1142 SHALL BE MEASURED IN ACCORDANCE WITH TEST METHODS SPECIFIED IN RULE 1142. AFTER THE COMPLIANCE OF A SPECIFIC LOW VAPOR PRESSURE ORGANIC LIQUID HAS BEEN DETERMINED BY THE APPROVED SOURCE TEST, THE DISTRICT MAY ALLOW SUCH LOADING EVENT WITHOUT VENTING TO THE AFTERBURNER, BUT WITH CONDITIONS IMPOSED SUCH AS VAPOR PRESSURE, LOADING TEMPERATURE, AND THE CONDITION FOR THE RECEIVING MARINE TANKS.
[RULE 1142]
- 5) THE OPERATOR SHALL COMPLY WITH THE REQUIREMENTS OF RULE 480 REGARDING NATURAL GAS FIRED CONTROL EQUIPMENT.
[RULE 480]
- 6) ON OR BEFORE JULY 1, 2013, THE OPERATOR SHALL PERFORM SOURCE TEST(S) TO DEMONSTRATE COMPLIANCE WITH THE APPLICABLE REQUIREMENTS FOR NOX EMISSIONS AS SPECIFIED BY RULE 1147. THE SOURCE TESTING SHALL MEET THE REQUIREMENTS SPECIFIED IN RULE 1147 AND THE SOURCE TEST REPORT(S) SHALL BE KEPT ON FILE AT THE FACILITY AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1147]
- 7) ON OR BEFORE JANUARY 1, 2011, THE OPERATOR SHALL INSTALL AND MAINTAIN IN SERVICE NON-RESETTABLE, TOTALIZING, FUEL AND TIME METER TO MEASURE FUEL CONSUMPTION AND OPERATING TIME FOR THERMAL OXIDIZER.
[RULE 1147]

- 8) THE OPERATOR SHALL PERFORM COMBUSTION SYSTEM MAINTENANCE IN ACCORDANCE WITH THE MANUFACTURER'S SCHEDULE AS SPECIFICATIONS AS IDENTIFIED IN THE MANUAL AND/OR OTHER WRITTEN MATERIALS SUPPLIED BY THE MANUFACTURER OR DISTRIBUTOR. THE OPERATOR SHALL MAINTAIN ON SITE A COPY OF THESE WRITTEN MAINTENANCE INSTRUCTIONS AND RETAIN A WRITTEN RECORD OF THE MAINTENANCE ACTIVITY FOR A PERIOD OF NOT LESS THAN 5 YEARS.
[RULE 1147]

Periodic Monitoring:

- 9) THE OPERATOR SHALL CONDUCT A SOURCE TEST ONCE EVERY FIVE YEARS PURSUANT TO THE REQUIREMENTS OF CONDITION NO. 3.
[RULE 1142, RULE 3004(a)(4) PERIODIC MONITORING]
- 10) WHENEVER THE THERMAL OXIDIZER IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400°F (ON A 15-MINUTE AVERAGE) SHALL BE MAINTAINED IN THE COMBUSTION CHAMBER EXCEPT FOR PERIODS OF START-UP AND SHUTDOWN. START-UP IS DEFINED AS THE PERIOD WHEN THE VAPOR VALVE BEGINS TO OPEN TO THE TIME WHEN 1400 DEGREES FAHRENHEIT IS ACHIEVED, NOT TO EXCEED 30 MINUTES. SHUTDOWN IS DEFINED AS THE PERIOD FROM WHEN THE VAPOR VALVE BEGINS TO SHUT AND IS COMPLETELY CLOSED SHUT, NOT TO EXCEED 30 MINUTES.
[RULE 1142, RULE 3004(a)(4) PERIODIC MONITORING]
- 11) THE OPERATOR SHALL INSTALL, OPERATE, AND MAINTAIN DEVICES FOR MEASURING AND CONTINUOUSLY RECORDING THE COMBUSTION CHAMBER TEMPERATURE IN DEGREES FAHRENHEIT AS FOLLOWS:
- A. A DIGITAL READOUT OF THE TEMPERATURE SHALL BE IN A LOCATION ACCESSIBLE TO DISTRICT PERSONNEL.
 - B. THE TEMPERATURE MEASURING AND RECORDING DEVICES SHALL BE CALIBRATED ONCE A YEAR IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, SUCH THAT THE OVERALL ACCURACY IS IN WITHIN +/- 1% OF THE ACTUAL VALUE.
 - C. DATA SHALL BE ARCHIVED ELECTRONICALLY TO NONVOLATILE DATA STORAGE. INSTANTANEOUS READINGS SHALL BE RECORDED AT A FREQUENCY OF NOT LESS THAN ONCE PER MINUTE. THE ELECTRONIC DATA STORAGE SYSTEM SHALL BE CAPABLE OF DISPLAYING AND PRINTING THE COMBUSTION CHAMBER TEMPERATURE WITHIN 3 HOURS OF A REQUEST.

Emissions and Requirements:

- 12) THIS EQUIPMENT SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
- CO: 2000 PPMV, RULE 407
 - NOx: RULE 1147
 - PM: RULE 404 (SEE APPENDIX B FOR EMISSION LIMITS)
 - PM: 0.1 GR/SCF, RULE 409
 - VOC: 2 LBS/1000 BARRELS OF ORGANIC LIQUID LOADED, OR 95% DESTRUCTION EFFICIENCY, RULE 1142