



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|---------------------------------|-----------------------|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 6: ASPHALT TANK TRUCK LOADING RACK NO. 6 (60/61) | | | | | S1.2 |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 421387 | D192 | C596 | | | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 483327 | C596 | D192 C531 | | | D12.4, E224.1, E336.7 |
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 7: ASPHALT TANK TRUCK LOADING RACK NO. 7 (70/71) | | | | | S1.2 |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE. 4 TOTAL; DIAMETER: 4 IN A/N: 421388 | D196 | C597 | | | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 483334 | C597 | D196 C531 | | | D12.4, E224.1, E336.7 |
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 8: ASPHALT TANK TRUCK LOADING RACK NO. 8 (80/81) | | | | | S1.2 |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 421390 | D200 | C598 | | | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 483338 | C598 | D200 C531 | | | D12.4, E224.1, E336.7 |

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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| Process 8: LOADING/UNLOADING FACILITIES | | | | |
|--|------|-----------|--|-------------------------------|
| System 9: ASPHALT TANK TRUCK LOADING/UNLOADING RACK NO. 11 | | | | |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN; 2 UNLOADING ARMS, DIAMETER: 4 IN, WITH DROP TUBE A/N: 421391 | D179 | C575 | | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM121, 1000 CFM, PRESS DROP 6" W.C., WITH PREFILTER, MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 7 FT 4 IN A/N: 483341 | C575 | D179 C531 | | D12.4, E224.1 |
| Process 8: LOADING/UNLOADING FACILITIES | | | | |
| System 11: ASPHALT TANK TRUCK LOADING/UNLOADING RACK NO. 13 | | | | |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN; 1 UNLOADING ARMS, DIAMETER: 4 IN, WITH DROP TUBE A/N: 421395 | D187 | C576 | | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM121, 1000 CFM, PRESS DROP 6" W.C., WITH PREFILTER, MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 7 FT 4 IN A/N: 483342 | C576 | D187 C531 | | D12.4, E224.1, E336.7 |
| Process 8: LOADING/UNLOADING FACILITIES | | | | |
| System 23: ASPHALT TANK TRUCK UNLOADING RACK NO. 26 | | | | |
| UNLOADING ARM, TANK TRUCK, ASPHALT, 1 UNLOADING ARM, DIAMETER: 4 IN A/N: 423441 | D570 | C852 | | D323.2 |
| CARBON ADSORBER, 1 TOTAL, 55-GALLONS, 200 LBS VAPOR COLLECTION SYSTEM EQUIPPED WITH 100 CFM BLOWER A/N: 423441 | C852 | D570 | | D90.8, E128.1, E153.4, E336.8 |

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

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The operator shall comply with the terms and conditions set forth below:

| Process 10: STORAGE TANKS | | | | | |
|--|------|--|--|---|------------------------------------|
| System 1: FIXED ROOF TANKS | | | | | S13.4 |
| TANK, HEATED, T-20, ASPHALT, POLYMER WETTING, WITH IN-TANK MIXER, HEIGHT: 15 FT; DIAMETER: 10 FT 6 IN A/N: 448913 | D579 | C581 | | | A63.5, C1.9, C6.13, D323.2, H23.14 |
| MIST ELIMINATOR, FIBER MESH FILTER ELEMENT WITH PRE-KNOCKOUT SEPARATOR, HEIGHT: 6 FT; DIAMETER: 1 FT A/N: 448913 | C581 | D579 C531 | | | D12.2, E336.7 |
| Process 15: AIR POLLUTION CONTROL | | | | | |
| System 3: INCINERATION SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | |
| INCINERATOR, H-907, NATURAL GAS, HEAT RECOVERY SECTION, 30 MMBTU/HR WITH BURNER, NORTH AMERICAN, MODEL NO. 4131D AN 435397 | C531 | C81 C86 C88 C90 C566 C575 C576 C577 C581 C596 C597 C598 C761 C763 | NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE ** | CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SO2: 20 PPMV (8) [40CFR60 Subpart J, 10-4-1991] | C1.23, C8.1, D28.4, D82.3, H23.4 |

* (1)(IA)(IB) Denotes RECLAIM emission factor
(3) Denotes RECLAIM concentration limit
(5)(5A)(5B) Denotes command and control emission limit
(7) Denotes NSR applicability limit
(9) See App B for Emission Limits
(2)(2A)(2B) Denotes RECLAIM emission rate
(4) Denotes BACT emission limit
(6) Denotes air toxic control rule limit
(8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
(10) See Section J for NESHAP/MACT requirements

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The operator shall comply with the terms and conditions set forth below:

FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant 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 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 subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F14.1 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 – Accidental Release Prevention,5-24-1996]

F25.1 The permit holder of this facility shall not install, alter, or operate a refinery process unit or other non-Rule 219 exempt equipment without a valid RECLAIM/TitleV permit issued by the AQMD pursuant to Rule 201 – Permit to Construct, Rule 203 - Permit to Operate, Rule 2004 - Requirements, and Rule 3002 - Requirements, as applicable.

Notwithstanding the above, the provisions of Rules 201, 203, 2004, and 3002 shall not apply to installations or alterations that involve only the equipment listed in Table 1 below, nor shall they apply to the operation of equipment listed in Table 1, when directly associated with permitted process units or other permitted equipment.

- (1)(1A)(1B)Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B)Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B)Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B)Denotes 40 CFR limits(e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

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Notwithstanding the above, all new equipment listed in Table 1, including associated fugitive components installed with such equipment, shall have Best Available Control Technology installed in conformance with the Best Available Control Technology Guidelines in effect at the time of the installation.

TABLE 1

- (a) Heat Exchanger (including air-cooler, reboiler, cooler, condenser, and shell and tube exchanger)
- (b) In-line Mixer
- (c) Pump
- (d) Knockout Pot - Compressor inlet (immediate inlet) and interstage
- (e) Knockout Pot - Fuel Gas System (downstream of fuel gas mix drums)

This condition applies only to the facility that processes petroleum as defined in the Standard Industrial Classification Manual as Industry No. 2911 - Petroleum Refining, as well as its directly associated sulfur recovery plant which may be located outside of the facility.

[RULE 2004, 5-11-2001; RULE 2004, 4-6-2007]

F34.2 The operator shall not sell refinery gas containing sulfur compounds in excess of 40 ppmv, calculated as hydrogen sulfide, averaged over 4-hour period.

[RULE 431.1, 6-12-1998]

F48.1 The operator shall not use at this facility anhydrous ammonia in SCR or any other air pollution control systems after March 31, 2009. Moreover, no anhydrous ammonia shall be transported to and from or stored at this facility after March 31, 2009, except in pressurized containers no greater than 200 lbs in holding capacity. The operator shall convert all selective catalytic reduction (SCR) systems used at this facility to aqueous ammonia by March 31, 2009.

[CA PRC CEQA, 11-23-1970]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

- 40CFR79
- 40CFR80
- California Code of Regulations, Title 13, Division 3, Chapter 5

| | |
|--|--|
| • (1)(1A)(1B) Denotes RECLAIM emission factor | (2)(2A)(2B) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emission limit |
| (5)(5A)(5B) Denotes command and control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |

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[40CFR 79, 7-1-1999; 40CFR 80, 7-1-1999; CCR Title 13, 9-24-1999]

F52.2 This facility is subject to the applicable requirements of the following rules or regulation(s):

40CFR61, Subpart FF

The operator shall keep records in accordance with 61.356-Recordkeeping requirements

The operator shall comply with the applicable reporting requirements as specified in 61.357

[40CFR 61 Subpart FF, 12-4-2003]

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere from the originating equipment.

SYSTEM CONDITIONS

S1.2 The operator shall limit the throughput to no more than 666,667 barrel(s) in any one calendar month.

To comply with this condition, the operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s): Date and time that a commodity/product is loaded into a tank truck, total quantity (in barrels) of the commodity/product that is loaded into the tank truck, and total quantity (in barrels) of all commodities/products loaded through the loading rack during each calendar month.

[RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition: Process 8, System 6, 7, 8, 11, 25]

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[RULE 463, 3-11-1994; RULE 463, 5-6-2005]

[Systems subject to this condition: Process 10, System 1]

- * (1)(1A)(1B) Denotes RECLAIM emission factor
 - (3) Denotes RECLAIM concentration limit
 - (5)(5A)(5B) Denotes command and control emission limit
 - (7) Denotes NSR applicability limit
 - (9) See App B for Emission Limits
 - (2)(2A)(2B) Denotes RECLAIM emission rate
 - (4) Denotes BACT emission limit
 - (6) Denotes air toxic control rule limit
 - (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
 - (10) See Section J for NESHAP/MACT requirements
- ** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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The operator shall comply with the terms and conditions set forth below:

DEVICE CONDITIONS

A. Emission Limits

A63.5 The operator shall limit emissions from this equipment as follows:

| Contaminant | Emission Limit |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition: D80, D85, D87, D89, D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525, D579]

C. Throughput or Operating Parameter Limits

C1.9 The operator shall limit the throughput to no more than 90,000 barrel(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.

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, throughput shall be determined by hourly tank level data averaged for the previous 30 days, prior to the discovery of the discrepancy.

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

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The operator shall comply with the terms and conditions set forth below:

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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D579]

C1.23 The operator shall limit the firing rate to no more than 30 MM Btu per hour.

The operator shall also limit the firing rate to no more than 18 MMBtu/hr on an average daily basis.

For the purpose of this condition, firing rate shall be defined as the energy or heat input of the natural gas to the equipment combustion chamber based on the higher heating value (HHV) of the natural gas.

To comply with this condition, the operator shall install and maintain a flow meter to accurately indicate the natural gas usage of the incinerator.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C531]

C6.7 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 350 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1301, 12-7-1995]

[Devices subject to this condition: D92, D285]

C6.13 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 450 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
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The operator shall comply with the terms and conditions set forth below:

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D579]

C8.1 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, is not less than 1400 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the firebox or in the ductwork immediately downstream from the firebox.

The measuring device or gauge shall be accurate to within plus or minus 50 degree F. It shall be calibrated once every 12 months.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 470, 5-7-1976]

[Devices subject to this condition: C531]

D. Monitoring/Testing Requirements

D12.2 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filter. The operator shall determine and record the parameter being monitored once per week.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: D275, D276, C308, C310, D328, C581]

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: C596, C597, C598, C599]

D28.4 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the CO and PM emissions at the outlet.

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

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The operator shall comply with the terms and conditions set forth below:

The test shall be conducted at least once every three years.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]

[Devices subject to this condition: C531]

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

SOX concentration in ppmv

Concentrations shall be corrected to zero percent excess air on a dry basis.

Oxygen concentration in percent volume

The CEMS shall be installed in accordance with the requirements of 40CFR60 Subpart J.

[40CFR 60 Subpart J, 10-4-1991]

[Devices subject to this condition: C531]

D90.8 The operator shall periodically monitor the hydrocarbon concentration at the outlet of the carbon adsorber according to the following specifications:

The operator shall monitor once each week unless the unloading rack did not operate during the week. The monitoring shall be performed during a period that the unloading rack is in operation.

The operator shall monitor the hydrocarbon concentration in accordance with EPA Reference Method 21. The operator shall calibrate the instrument used to monitor the parameter in ppmv hexane.

[Rule 402, 5-7-1976]

Devices subject to this condition: C852]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated

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- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition: D80, D85, D87, D89, D179, D181, D183, D185, D187, D189, D192, D196, D200, D206, D273, D274, D275, D276, D277, D285, D287, D288, D289, D290, D291, D293, D294, D295, D296, D297, D298, D301, D302, D303, D304, D307, D309, D311, D312, D323, D328, D527, D528, D570, D579]

E128.1 The operator shall keep all spent carbon in a tightly covered container which shall remain closed except when it is being transferred into or out of the container.

[RULE 1401, 3-4-2005]

[Devices subject to this condition: C770, C772, C797, C852]

E153.4 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 500 ppmv at the outlet of the carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.8.

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

[Rule 402, 5-7-1976]

[Devices subject to this condition: C852]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: C573, C575, C576, C596, C597, C598, C599]

E336.3 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in series with the SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).

This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 470, 5-7-1976]

[Devices subject to this condition: C81, C86, C88, C90, D181]

E336.7 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in series with the SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).

This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C575, C576, C581, C596, C597, C598]

E336.8 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the carbon adsorber (Device C852 in Process 8, System 23). The blower shall be in operation and the vent hood shall be in place over the tank truck hatch anytime that the hatch is open.

* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements
** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

This equipment shall not be operated unless the carbon adsorber is in full use and has a valid permit to receive vent gases from this equipment.

[RULE 1401, 3-4-2005]

[Devices subject to this condition: C852]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, Subpart | J |

[40CFR 60 Subpart J, 10-4-1991]

[Devices subject to this condition: C531]

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, Subpart | UU |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition: D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525, D579]

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|---------------------------------------|------------------------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| System 25 : ORGANIC TANK/RAIL CAR LOADING/UNLOADING FACILITY | | | | | S1.2 |
| LOADING ARM, TANK CAR, ASPHALT, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, 12 TOTAL, DIAMETER: 4 IN. A/N: 482509 | D206 | C599 | | | D323.2, E17.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM 161, 1500 CFM. PRESS. DROP 6 IN. W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 477241 | C599 | D206 C531 | | | D12.4., E224.1, E336.7 |
| LOADING ARM, TANK CAR, FUEL OIL, DISTILLATE, SWIVEL TYPE WITH LOADING VALVE AND DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 482509 | D210 | | | | |
| LOADING ARM, TANK CAR, SPENT CAUSTIC, SWIVEL WITH LOADING VALVE AND DROP TUBE, 1 TOTAL; DIAMETER: 4 IN A/N: 482509 | D253 | | | SOX: 500 PPMV (5) [RULE407, 4-2-1982] | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 482509 | D706 | | | | |
| Process 10: STORAGE TANKS | | | | | |
| System 1: FIXED ROOF TANKS | | | | | S13.4 |
| STORAGE TANK, NO.T-1012, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 479420 | D273 | C769 | | | C1.31, C6.11, D323.2, H23.18 |
| STORAGE TANK, NO.T-1013, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; | D274 | C769 | | | C1.31, C6.11, D323.2, H23.18 |

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|---|--|---|--|
| DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 477240 | | | | | |
| STORAGE TANK, HEATED, NO. T-509, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 500 BBL.; DIAMETER: 15 FT 6 IN; HEIGHT: 16 FT A/N: 479418 | D523 | C769 | | | A63.5, C1.30, C6.11, D323.3, H23.9, H23.14 |
| STORAGE TANK, HEATED, NO. T-777, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 834 BBL.; DIAMETER: 15 FT 6 IN; HEIGHT: 24 FT 6 IN A/N: 479419 | D525 | C769 | | | A63.5, C1.30, C6.11, D323.3, H23.9, H23.14 |
| STORAGE TANK, HEATED, NO. T-141, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 477239 | D527 | C769 | | | C1.11, C6.11, D323.2 |
| STORAGE TANK, HEATED, NO. T-142, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 479413 | D528 | C769 | | | C1.11, C6.11, D323.2 |
| MIST ELIMINATOR, D-936, FIBER MESH FILTER ELEMENT, WITH A PRESSURE VALVE, COMMON TO TANKS T-141, T-142, T-509, T-777, T-1012 & T-1013 A/N: 479421 | C769 | D273 D274 D523 D525 D527 D528 C770 C531 | | | D12.10, E336.9 |
| CARBON ADSORBER, 3 TOTAL, BACKUP, CONNECTED IN PARALLEL, 180 LBS EACH A/N: 479421 | C770 | C769 | | | D90.9, E128.1, E153.5 |
| Process 15: AIR POLLUTION CONTROL | | | | | |
| System 3: INCINERATION SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | |
| INCINERATOR, H-907, NATURAL GAS, HEAT RECOVERY SECTION, 30 MMBTU/HR WITH BURNER, NORTH AMERICAN, | C531 | C81 C86 C88 C90 C566 C575 C576 C577 C581 C596 C597 C598 | NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE ** | CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SO2: 20 PPMV (8) [40CFR60 Subpart J, | C1.23, C8.1, D28.4, D82.3, H23.4 |

- | | |
|--|--|
| * (1)(1A)(1B) Denotes RECLAIM emission factor | (2)(2A)(2B) Denotes RECLAIM emission rate |
| (3) Denotes RECLAIM concentration limit | (4) Denotes BACT emission limit |
| (5)(5A)(5B) Denotes command and control emission limit | (6) Denotes air toxic control rule limit |
| (7) Denotes NSR applicability limit | (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.) |
| (9) See App B for Emission Limits | (10) See Section J for NESHAP/MACT requirements |

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|------------------------------|--------|------------------------|---|---------------------------------|------------|
| MODEL NO. 4131D AN 435397 | | C599 C761 C763 C769 | | [0-4-1991] | |

* (1)(1A)(1B) Denotes RECLAIM emission factor
 (3) Denotes RECLAIM concentration limit
 (5)(5A)(5B) Denotes command and control emission limit
 (7) Denotes NSR applicability limit
 (9) See App B for Emission Limits
 (2)(2A)(2B) Denotes RECLAIM emission rate
 (4) Denotes BACT emission limit
 (6) Denotes air toxic control rule limit
 (8)(8A)(8B) Denotes 40 CFR limits (e.g. NSPS, NESHAPS, etc.)
 (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

† This permit to construct was issued to the previous operator at a prior date. The equipment was constructed and the permit was subsequently transferred to this operator



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant 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 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 subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F14.1 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 - Accidental Release Prevention, 5-24-1996]

F25.1 The permit holder of this facility shall not install, alter, or operate a refinery process unit or other non-Rule 219 exempt equipment without a valid RECLAIM/TitleV permit issued by the AQMD pursuant to Rule 201 - Permit to Construct, Rule 203 - Permit to Operate, Rule 2004 - Requirements, and Rule 3002 - Requirements, as applicable.

Notwithstanding the above, the provisions of Rules 201, 203, 2004, and 3002 shall not apply to installations or alterations that involve only the equipment listed in Table 1 below, nor shall they apply to the operation of



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

equipment listed in Table 1, when directly associated with permitted process units or other permitted equipment.

Notwithstanding the above, all new equipment listed in Table 1, including associated fugitive components installed with such equipment, shall have Best Available Control Technology installed in conformance with the Best Available Control Technology Guidelines in effect at the time of the installation.

TABLE 1

- (a) Heat Exchanger (including air-cooler, reboiler, cooler, condenser, and shell and tube exchanger)
- (b) In-line Mixer
- (c) Pump
- (d) Knockout Pot - Compressor inlet (immediate inlet) and interstage
- (e) Knockout Pot - Fuel Gas System (downstream of fuel gas mix drums)

This condition applies only to the facility that processes petroleum as defined in the Standard Industrial Classification Manual as Industry No. 2911 - Petroleum Refining, as well as its directly associated sulfur recovery plant which may be located outside of the facility.

[RULE 2004, 5-11-2001; RULE 2004, 4-6-2007]

- F34.2 The operator shall not sell refinery gas containing sulfur compounds in excess of 40 ppmv, calculated as hydrogen sulfide, averaged over 4-hour period.

[RULE 431.1, 6-12-1998]

- F48.1 The operator shall not use at this facility anhydrous ammonia in SCR or any other air pollution control systems after March 31, 2009. Moreover, no anhydrous ammonia shall be transported to and from or stored at this facility after March 31, 2009, except in pressurized containers no greater than 200 lbs in holding capacity. The operator shall convert all selective catalytic reduction (SCR) systems used at this facility to aqueous ammonia by March 31, 2009.

[CA PRC CEQA, 11-23-1970]

- F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

40CFR79



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

40CFR80
California Code of Regulations, Title 13, Division 3, Chapter 5

[40CFR 79, 7-1-1999; 40CFR 80, 7-1-1999; CCR Title 13, 9-24-1999]

F52.2 This facility is subject to the applicable requirements of the following rules or regulation(s):

40CFR61, Subpart FF

The operator shall keep records in accordance with 61.356-Recordkeeping requirements

The operator shall comply with the applicable reporting requirements as specified in 61.357

[40CFR 61 Subpart FF, 12-4-2003]

F60.1 The emission limits identified in Section D and H of the permit shall be defined as emissions discharged to the atmosphere from the originating equipment.

SYSTEM CONDITIONS

S1.2 The operator shall limit the throughput to no more than 666,667 barrel(s) in any one calendar month.

To comply with this condition, the operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s): Date and time that a commodity/product is loaded into a tank truck, total quantity (in barrels) of the commodity/product that is loaded into the tank truck, and total quantity (in barrels) of all commodities/products loaded through the loading rack during each calendar month.

[RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition: Process 8, System 6, 7, 8, 11, 25]

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[RULE 463, 3-11-1994; RULE 463, 5-6-2005]

[Systems subject to this condition: Process 10, System 1]



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 462 |

[RULE 462, 5-14-1999]

[Systems subject to this condition: Process 8, System 6, 7, 8, 9, 11, 13, 18, 22, 23, 24]

DEVICE CONDITIONS

A. Emission Limits

A63.5 The operator shall limit emissions from this equipment as follows:

| Contaminant | Emission Limit |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition: D80, D85, D87, D89, D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525]

C. Throughput or Operating Parameter Limits

C1.11 The operator shall limit the throughput to no more than 90,000 barrel(s) in any calendar month.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: (monthly total weight throughput, lbs/month) / (density of product stored, lbs/gal x 42 gal/bbl), where the monthly total weight throughput of the tank shall be determined by the continuous monitoring system described below.



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

The operator shall install and maintain a load cell system and a data acquisition system to continuously record the changes in weight of the tank. For the purpose of this condition, continuous recording is defined as once every 15 minutes.

The operator shall calculate the total weight throughput of the tank at the end of each month. The total weight throughput shall be calculated by totaling up the increases in weight of the tank recorded by the data acquisition system for the calendar month.

The accuracy of the load cell system shall be verified annually by a third-party tester in accordance to the manufacturer's specifications. If a calibration check point has an error of 1 percent or greater, the load cell system shall be adjusted, re-calibrated and repaired if necessary and put back into service within 10 days. While the load cell system is being repaired, throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to the discovery of the discrepancy.

In the event of a failure or routine maintenance of the load cell system, the load cell system shall be repaired (if necessary) and put back into service within 10 days of the time that the load cell system failed or was removed from service for maintenance. While the load cell system is being repaired or maintained, the throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to time that the load cell system went out of service.

The operator shall keep the following records for the load cell system on the tank: density of product used to convert throughput from weight to volume, calibration procedures specified by the manufacturer, and annual calibration records that includes but not limited to identification of the error point, percent error and a description of adjustment/repair made. The calibration records shall be signed and dated by the person and company performed the calibration.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D527, D528]

C1.23 The operator shall limit the firing rate to no more than 30 MM Btu per hour.

The operator shall also limit the firing rate to no more than 18 MMBtu/hr on an average daily basis.

For the purpose of this condition, firing rate shall be defined as the energy or heat input of the natural gas to the equipment combustion chamber based on the higher heating value (HHV) of the natural gas.

To comply with this condition, the operator shall install and maintain a flow meter to accurately indicate the natural gas usage of the incinerator.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002]



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition: C531]

C1.30 The operator shall limit the throughput to no more than 90,000 barrel(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.

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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D523, D525]

C1.31 The operator shall limit the throughput to no more than 100,000 barrel(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level travel in feet per month.



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

The operator shall install and maintain an automatic tank level gauge (ATLG) and recorder to continuously record the vertical movement of the tank level. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.

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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D273, D274]

C6.11 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 500 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D273, D274, D277, D287, D288, D289, D290, D291, D293, D303, D523, D525, D527, D528]

C8.1 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, is not less than 1400 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the firebox or in the ductwork immediately downstream from the firebox.

The measuring device or gauge shall be accurate to within plus or minus 50 degree F. It shall be calibrated once every 12 months.



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 470, 5-7-1976]

[Devices subject to this condition: C531]

D. Monitoring/Testing Requirements

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: C596, C597, C598, C599]

D12.10 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

The operator shall clean or replace the filters of the mist eliminator whenever the static differential pressure being monitored is 3 inches water column or greater

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: C769, C771, C773]

D28.4 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the CO and PM emissions at the outlet.

The test shall be conducted at least once every three years.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]

[Devices subject to this condition: C531]



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

SOX concentration in ppmv

Concentrations shall be corrected to zero percent excess air on a dry basis.

Oxygen concentration in percent volume

The CEMS shall be installed in accordance with the requirements of 40CFR60 Subpart J.

[40CFR 60 Subpart J, 10-4-1991]

[Devices subject to this condition: C531]

D90.5 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.

The operator shall monitor the VOC concentrations at least once a week. If a tank filling is scheduled during a week, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a week, the VOC measurements may be taken at anytime.

[RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: C762, C764, C765, C766, C767, C768, C772, C774]

D90.9 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.

The operator shall monitor the VOC concentrations at least once a day during any day that exhaust gases are vented to the carbon adsorbers. If a tank filling is scheduled during a day, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a day, the VOC measurements may be taken at anytime.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C770]



FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001**]

[Devices subject to this condition: D80, D85, D87, D89, D179, D181, D187, D206, D273, D274, D285, C396, D570, D579, D602]

D323.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a monthly basis, at least, unless the equipment did not operate during the entire monthly period. The routine monthly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

Devices subject to this condition: D254, D523, D525]

E. Equipment Operation/Construction Requirements

E17.2 The operator shall not use more than 4 of the following items simultaneously:

Device ID: D206 [Only 4 out of 12 loading arms shall be operated at a time]

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D206]

E128.1 The operator shall keep all spent carbon in a tightly covered container which shall remain closed except when it is being transferred into or out of the container.

[RULE 1401, 3-4-2005]



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition: C770, C772, C797]

E153.5 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 48 ppmv at the outlet of the carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.9 and is measured as hexane.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C770]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition: C596, C597, C598, C599]

E336.7 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in tandem with SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).

This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C599]

E336.9 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the incinerator (Device C531 in Process 15, System 3) in tandem with SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569) or to the carbon adsorbers (Device C770 in Process 10, System 1). The operator shall only vent this equipment to the carbon adsorbers during periods when the incinerator is out of service due to maintenance, repairs, or malfunction.



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

This equipment shall not be operated unless the subject incinerator and the SOx scrubbing system or carbon adsorbers are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: C769]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, Subpart | J |

[40CFR 60 Subpart J, 10-4-1991]

[Devices subject to this condition: C531]

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, Subpart | UU |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition: D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525]

H23.18 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463(c) |



**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[**RULE 463, 3-11-1994; RULE 463, 5-6-2005**]

[Devices subject to this condition: D270, D272, D273, D274, D277, D287, D288, D289, D290, D291, D293, D303, D307, D309, D311, D312, D315, D316, D318, D319, D320, D327, D328]

| | | |
|---|-----------------------------|---|
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- PERMIT TO CONSTRUCT (PC) -
 ANs 435397, 477239 – 477241, 479413,
 479418 - 479421, and 480174
- PERMIT TO OPERATE (PO) -
 ANs 421387, 421388, 421390, 421391,
 421395, 423111, 483327, 483334, 483338,
 483341, and 483342

COMPANY NAME: Paramount Petroleum Corporation
MAILING ADDRESS: 14700 Downey Avenue
 Paramount, CA 90723

EQUIPMENT LOCATION: 14700 Downey Avenue
 Paramount, CA 90723

PROJECT OVERVIEW:

All of the applications covered in this evaluation are related to the Air Blowing (AB) Stills Incinerator at the Paramount Refinery. Some of the applications are for PO no PC for equipment for which the vent stream from the equipment was connected to the incinerator without a permit. Other applications are for PCs for equipment that Paramount is proposing to connect the vent stream to the subject incinerator. Paramount has also submitted an application to make changes to the operation of the incinerator.

EQUIPMENT DESCRIPTION:

For Permits to Operate in Section D of the RECLAIM FP.

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|---|---|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 6: ASPHALT TANK TRUCK LOADING RACK NO. 6 (60/61) | | | | | |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357904 421387 | D192 | C596 | | HAP: (10)40CFR63 SUBPART LLLL, 5-7-2003; VOC: 0.08 LBS/4000-GAL [RULE 462, 5-14- 1999] | S1.2 (modified), S1.3 (existing), S13.6 (existing) D323.2 (existing) |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|----------------------------|---|
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357039 483327 | C596 | D192 C531 | | | D12.4 (existing), E224.1 (existing), E336.7 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|---|---|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 7: ASPHALT TWO-POSITION TANK TRUCK LOADING RACK NO. 7 (70/71) | | | | | S1.2 (modified), S1.3 (existing) S13.6 (existing) |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357031 421388 | D196 | C597 | | HAP: (10)(40CFR63 SUBPART LLLLL, 5-7-2003; VOC: 0.08 LBS/1000-GAL (RULE 462, 5-14-1999) | D323.2 (existing) |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357040 483334 | C597 | D196 C531 | | | D12.4 (existing), E224.1 (existing) E336.7 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|---|---|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 8: ASPHALT TANK TRUCK LOADING RACK NO. 8 (80/81) | | | | | S1.2 (modified), S1.3 (existing) S13.6 (existing) |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357032 421390 | D200 | C598 | | HAP: (10)(40CFR63 SUBPART LLLLL, 5-7-2003; VOC: 0.08 LBS/1000-GAL (RULE 462, 5-14-1999) | D323.2 (existing) |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|----------------------------|---|
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER. WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN. LENGTH: 6 FT 10 IN A/N: 357041-483338 | C598 | D200 C531 | | | D12.4 (existing), E224.1 (existing), E336.7 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|--|--|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 9: ASPHALT TANK TRUCK LOADING/UNLOADING RACK NO. 11 | | | | | S13.6 (existing) |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN; 2 UNLOADING ARMS, DIAMETER: 4 IN, WITH DROP TUBE A/N: 353044 421391 | D179 | C575 | | HAP: (10)40CFR63 SUBPART LLLLL, 5-7-2003; VOC: 0.08 LBS/1000 GAL (RULE 462, 5-14-1999) | D28.2 (existing); D323.2 (existing) |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM121, 1000 CFM, PRESS DROP 6" W.C., WITH PREFILTER, MAIN FILTER, WIDTH: 2 FT.; HEIGHT: 1 FT 8 IN; LENGTH: 7 FT 4 IN A/N: 353065 483341 | C575 | D179 C531 | | | D12.4 (existing), E224.1 (existing) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|--|--|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 11: ASPHALT TANK TRUCK LOADING/UNLOADING RACK NO. 13 | | | | | S1.2 (new), S13.6 (existing) |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN; 1 UNLOADING ARMS, DIAMETER: 4 IN, WITH DROP TUBE A/N: 353045 421395 | D187 | C576 | | HAP: (10)40CFR63 SUBPART LLLLL, 5-7-2003; VOC: 0.08 LBS/1000 GAL (RULE 462, 5-14-1999) | C1.4 (existing); D28.2 (existing); D323.2 (existing) |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|----------------------------|---|
| MIST ELIMINATOR, CECO FILTER, MODEL DLM121, 1000 CFM, PRESS DROP 6" W.C., WITH PREFILTER, MAIN FILTER, WIDTH: 2 FT., HEIGHT: 1 FT 8 IN; LENGTH: 7 FT 4 IN A/N: 353045 483342 | C576 | D187 C531 | | | D12.4 (existing), E224.1 (existing), E336.7 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|---|---|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 23: ASPHALT TANK TRUCK LOADING/UNLOADING RACK NO. 26 | | | | | |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, ASPHALT, 2-LOADING ARMS, DIAMETER: 4 IN; 1 UNLOADING ARM, DIAMETER: 4 IN, WITH DROP TUBE A/N: 353059 423441 | D570 | C852 | | HAP: (10)40CFR63 SUBPART LLLL, 5-7-2003; VOC: 0.08 LBS/1000-GAL (RULE 462, 5-14-1999) | D28.2 (existing); D323.2 (existing), E336.3 (existing) |
| CARBON ADSORBER, 1 TOTAL, 55-GALLONS, 200 LBS VAPOR COLLECTION SYSTEM EQUIPPED WITH 100 CFM BLOWER A/N: 423441 | C852 | D570 | | | E336.8 (new) D90.8 (new) E128.1 (existing), E153.4 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|----------------------------|---|
| Process 10: STORAGE TANKS | | | | | |
| System 1: FIXED ROOF TANKS | | | | | |
| TANK, HEATED, T-20, ASPHALT, POLYMER WETTING, WITH IN-TANK MIXER, HEIGHT: 15 FT; DIAMETER: 10 FT 6 IN A/N: 353068 448913 | D579 | C581 | | | S13.4 (existing) A63.5 (existing), C1.9 (modified), C6.7 (existing), C6.13 (new) D323.2 (existing), H23.14 (existing) |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--------------|---------------------|----------------------------|-----------------------------------|
| MIST ELIMINATOR, FIBERMESH FILTER ELEMENT WITH PRE-KNOCKOUT SEPARATOR, HEIGHT: 6 FT; DIAMETER: 1 FT A/N: 353068 448913 | C581 | D579 C531 | | | D12.2 (existing), E336.7 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|---|--|--|--|
| Process 15: AIR POLLUTION CONTROL | | | | | |
| System 3: INCINERATION SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | |
| INCINERATOR, H-907, NATURAL GAS, HEAT RECOVERY SECTION, 48 30 MMBTU/HR WITH BURNER, NORTH AMERICAN, MODEL NO. 4131D-48 MMBTU/HR AN 353056 435397 | C531 | C81 C86 C88 C90 C566 C575 C576 C577 C581 C596 C597 C598 C761 C763 | NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE ** | CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986] ; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981] SO2: 20 PPMV (8) [40CFR60 Subpart J, 10-4-1991] | C1.23 (modified), C8.1 (modified), D28.1 (existing), D28.4 (existing), D82.3 (existing), H23.4 (existing) |

The connections of C81, C86, C88, C90, D277, D287, D288, D289, D290 and D291 to the H-907 Incinerator are currently specified in Conditions E336.3 and E336.4. For consistency, they will also be added in the "Connected To" column for the H-907 Incinerator (C531).

NOTE: The applicable pages for each of these permit units from Paramount's current RECLAIM Facility Permit are contained in Appendix A.

NOTE: The master file for this evaluation is AN 435397. All of the documentation referenced in the appendices of this evaluation is only contained in the folder for AN 435397.

Process Conditions: None

System Conditions:

S1.2 The operator shall limit the throughput to no more than 4e+06 666,667 barrel(s) in any one year calendar month.

- To comply with this condition, the operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s): Date and time that a commodity/product is loaded into a tank truck, total quantity (in barrels) of the commodity/product that is loaded into each tank truck, and total quantity (in barrels) of all commodities/products loaded through the loading rack during each month.



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[~~RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002~~] [Systems subject to this condition: ~~Process 8, System 6, 7, 8, 11~~]

~~S1.3 The operator shall limit the throughput to no more than 9e+06 barrel(s) in any one year.~~

~~• For the purpose of this condition, throughput shall be defined as the combined amounts of asphalt loaded by Loading Racks 6, 7, & 8 (Systems 6, 7, & 8, respectively).~~

[~~RULE 1303(b)(2)-Offset, 5-10-1996~~] [Systems subject to this condition: ~~Process 8, System 6, 7, 8~~]

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[~~RULE 463, 3-11-1994; RULE 463, 5-6-2005~~] [Systems subject to this condition: ~~Process 10, System 1~~]

S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 462 |

[~~RULE 462, 5-14-1999~~][Systems subject to this condition: ~~Process 8, System 6, 7, 8, 9, 11, 13, 18, 22, 23, 24, 25~~]

Device Conditions:

A63.5 The operator shall limit emissions from this equipment as follows:

| Contaminant | Emission Limit |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[~~40CFR 60 Subpart UU, 8-5-1983~~] [Devices subject to this condition: ~~D80, D85, D87, D89, D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525, D579~~]

~~C1.4 The operator shall limit the throughput to no more than 6720 barrel(s) in any one day.~~
[~~RULE 1303(b)(2)-Offset, 5-10-1996~~] [Devices subject to this condition: ~~D187~~]

C1.9 The operator shall limit the throughput to no more than ~~600000~~ 90,000 barrel(s) in any one year calendar month.



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- For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.
- The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.
- The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.
- 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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **D579**]

C1.23 The operator shall limit the fuel usage firing rate to no more than 411,000 cubic feet per day. 30 MM Btu per hour.

- The operator shall also limit the firing rate to no more than 18 MMBtu/hr on an average daily basis.
- For the purpose of this condition, firing rate shall be defined as the energy or heat input of the natural gas to the equipment combustion chamber based on the higher heating value (HHV) of the natural gas.
- To comply with this condition, the operator shall install and maintain a flow meter to accurately indicate the natural gas usage of the incinerator.
- The operator shall also install and maintain a device to continuously record the parameter being measured.

[**RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **C531**]

C6.7 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 350 Deg F.

- To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[**RULE 1301, 12-7-1995**] [Devices subject to this condition: **D92, D285, D579**]



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C6.13 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 450 Deg F.

- To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: D579]

C8.1 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, is not less than 1400 Deg F.

- To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the firebox or in the ductwork immediately downstream from the firebox.
- The measuring device or gauge shall be accurate to within plus or minus 50 degree F. It shall be calibrated once every 12 months.
- The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(a)(1)-BACT, 5-10-1996; ~~RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997;~~ RULE 470, 5-7-1976] [Devices subject to this condition: C531]

D12.2 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filter. The operator shall determine and record the parameter being monitored once per week.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997] [Devices subject to this condition: D275, D276, C308, C310, D328, C581]

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; ~~RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]~~ [Devices subject to this condition: ~~C573, C575, C576, C596, C597, C598, C599]~~

~~**D28.1** The operator shall conduct source test(s) in accordance with the following specifications:~~

- ~~• The test shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.~~
- ~~• The test shall be conducted to determine the CO emissions at the outlet.~~
- ~~• The test shall be conducted to determine ROG emissions at the outlet.~~
- ~~• The test shall be conducted to determine the PM10 emissions at the outlet.~~
- ~~• The test shall be conducted to determine the oxygen concentration at the outlet.~~
- ~~• The test shall be conducted to determine the moisture content at the outlet.~~
- ~~• The test shall be conducted to determine the flow rate at the outlet.~~
- ~~• The test shall be conducted to determine Benzo(a)pyrene emissions at the outlet.~~
- ~~• The test shall be conducted to determine Formaldehyde emissions at the outlet.~~
- ~~• The test shall be conducted to determine Acetaldehyde emissions at the outlet.~~
- ~~• The test shall be conducted to determine Chromium (VI) emissions at the outlet.~~
- ~~• The test shall be conducted to determine Arsenic emissions at the outlet.~~



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- ~~The test shall be conducted to determine the efficiency of the Incinerator for ROG.~~
 - ~~The test shall be conducted to demonstrate compliance with 40CFR60, Subpart UU and Rule 404.~~
 - ~~The test shall be conducted when the Asphalt Oxidizing Units are operating at no less than 80 percent of the permitted production rate.~~
 - ~~The District shall be notified of the date and time of the test at least 10 days prior to the test.~~
- ~~[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 8-13-1999] [Devices subject to this condition: C531]~~

[This one time initial source test has been completed.]

D28.2 The operator shall conduct source test(s) in accordance with the following specifications:

- The test shall be conducted to determine the PM10 emissions at the outlet.
- The test shall be conducted at least in one of the loading racks equipped with a CECO filter Model DLM 121 and another loading rack with DLM 161, to determine the hydrocarbon concentration at the outlet of the filter. Such test shall be conducted during a loading operation.
- The test shall be conducted to determine the ROG emissions at the outlet.
- The District shall be notified at least seven days from the scheduled source test.
- The test results shall be submitted to the District within 60 day from the date of the test.

[RULE 1303(b)(2)-Offset, 5-10-1996] [Devices subject to this condition: D179, D187, D570]

D28.4 The operator shall conduct source test(s) in accordance with the following specifications:

- The test shall be conducted to determine the CO and PM emissions at the outlet.
- The test shall be conducted at least once every three years.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]] [Devices subject to this condition: C531]

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

- SOX concentration in ppmv
- Concentrations shall be corrected to zero percent excess air on a dry basis.
- Oxygen concentration in percent volume

The CEMS shall be installed in accordance with the requirements of 40CFR60 Subpart J. **[40CFR 60 Subpart J, 10-4-1991] [Devices subject to this condition: C531]**

D90.8 The operator shall periodically monitor the hydrocarbon concentration at the outlet of the carbon adsorber according to the following specifications:

- The operator shall monitor once each week unless the unloading rack did not operate during the week. The monitoring shall be performed during a period that the unloading rack is in operation.
- The operator shall monitor the hydrocarbon concentration in accordance with EPA Reference Method 21. The operator shall calibrate the instrument used to monitor the parameter in ppmv hexane.

[Rule 402, 5-7-1976] [Devices subject to this condition: C852]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions,



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whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001] [Devices subject to this condition : D80, D85, D87, D89, **D179**, D181, D183, D185, **D187**, D189, **D192**, **D196**, **D200**, D206, D273, D274, D275, D276, D277, D285, D287, D288, D289, D290, D291, D293, D294, D295, D296, D297, D298, D301, D302, D303, D304, D307, D309, D311, D312, D323, D328, D527, D528, **D570**, **D579**]

E128.1 The operator shall keep all spent carbon in a tightly covered container which shall remain closed except when it is being transferred into or out of the container.

[RULE 1401, 3-4-2005] [Devices subject to this condition: C770, C772, C797, **C852**]

E153.4 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

- For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 500 ppmv at the outlet of the carbon adsorber.
 - Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.8.
- [Rule 402, 5-7-1976] [Devices subject to this condition: C852]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002] [Devices subject to this condition: C573, C575, C576, C596, C597, C598, C599]



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E336.3 The operator shall vent the vent gases from this equipment as follows:

- All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in tandem series with the SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).
- This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 470, 5-7-1976] [Devices subject to this condition: C81, C86, C88, C90, D181, ~~D570~~]

E336.7 The operator shall vent the vent gases from this equipment as follows:

- All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in series with the SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).
- This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002 [Devices subject to this condition: C575, C576, C581, C596, C597, C598]

E336.8 The operator shall vent the vent gases from this equipment as follows:

- All vent gases shall be directed to the carbon adsorber (Device C852 in Process 8, System 23). The blower shall be in operation and the vent hood shall be in place over the tank truck hatch anytime that the hatch is open.
- This equipment shall not be operated unless the carbon adsorber is in full use and has a valid permit to receive vent gases from this equipment.

[RULE 1401, 3-4-2005] [Devices subject to this condition: C852]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, Subpart | J |

[40CFR 60 Subpart J, 10-4-1991] [Devices subject to this condition: C531]

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, Subpart | UU |

[40CFR 60 Subpart UU, 8-5-1983] [Devices subject to this condition: D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525, D579]



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For Permits to Construct in Section H of the RECLAIM FP.

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|--|--|
| Process 8: LOADING/UNLOADING FACILITIES | | | | | |
| System 25: ORGANIC TANK/RAIL CAR LOADING/UNLOADING FACILITY | | | | | S1.1 (existing), S1.2 (new), S13.6 (existing) |
| LOADING ARM, TANK CAR, ASPHALT, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, 8-12 TOTAL, DIAMETER: 4 IN. A/N: 357033 482509 | D206 | C599 | | VOC: 0.08 LBS/1000 GAL. (5) (RULE: 462, 5-14-1999) | D323.2 (existing), E17.2 (existing) |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM 161, 1500 CFM, PRESS. DROP 6 IN. W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT, HEIGHT: 1 FT 8 IN, LENGTH: 6 FT 10 IN A/N: 357042 477241 | C599 | D206 C531 | | | D12.4 (existing), E224.1 (existing) E336.7 (new) |
| LOADING ARM, TANK CAR, FUEL OIL, DISTILLATE, SWIVEL TYPE WITH LOADING VALVE AND DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357033 482509 | D210 | | | | |
| LOADING ARM, TANK CAR, SPENT CAUSTIC, SWIVEL WITH LOADING VALVE AND DROP TUBE, 1 TOTAL; DIAMETER: 4 IN A/N: 357033 482509 | D253 | | | SOX: 500 PPMV (5) [RULE 407, 4-2-1982] | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 357033 482509 | D706 | | | | |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--------------|---------------------|----------------------------|--|
| Process 10: STORAGE TANKS | | | | | |
| System 1: FIXED ROOF TANKS | | | | | S13.4 (existing) |
| STORAGE TANK, NO. T-1012, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 403455 479420 | D273 | C769 | | | <u>C1.31 (modified)</u> , C6.11 (existing), D323.2 (existing), H23.18 (existing) |
| STORAGE TANK, NO. T-1013, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 403456 477240 | D274 | C769 | | | <u>C1.31 (modified)</u> , C6.11 (existing), D323.2 (existing), H23.18 (existing) |
| STORAGE TANK, HEATED, NO. T-509, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 500 BBL; DIAMETER: 15 FT 6 IN; HEIGHT: 16 FT AN: 403453 479418 | D523 | C769 | | | A63.5 (existing), <u>C1.30 (modified)</u> , C6.11 (existing), D323.3 (existing), H23.9 (existing), H23.14 (existing), H23.18 (existing) |
| STORAGE TANK, HEATED, NO. T-777, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 834 BBL; DIAMETER: 15 FT 6 IN; HEIGHT: 24 FT 6 IN A/N: 403454 479419 | D525 | C769 | | | A63.5 (existing), <u>C1.30 (modified)</u> , C6.11 (existing), D323.3 (existing), H23.9 (existing), H23.14 (existing), H23.18 (existing) |
| STORAGE TANK, HEATED, NO. T-141, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 403454 477239 | D527 | C769 | | | <u>C1.11 (modified)</u> , C6.11 (existing), D323.2 (existing), H23.18 (existing) |
| STORAGE TANK, HEATED, NO. T-142, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 403452 479413 | D528 | C769 | | | <u>C1.11 (modified)</u> , C6.11 (existing), D323.2 (existing), H23.18 (existing) |



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| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|---|--------|--|---------------------|----------------------------|---|
| MIST ELIMINATOR, D-936, FIBER MESH FILTER ELEMENT, WITH A PRESSURE VALVE, COMMON TO TANKS T-141, T-142, T-509, T-777, T-1012 & T-1013 A/N: 403450 479421 | C769 | D273 D274 D523 D525 D527 D528 C770 C531 | | | D12.10 (existing) E336.9 (new) |
| CARBON ADSORBER, 3 TOTAL, BACKUP, CONNECTED IN PARALLEL, 180 LBS EACH A/N: 403450 479421 | C770 | C769 | | | D90.5 (existing); D90.9 (new) E128.1 (existing), E153.1 (existing) E153.5 (new) |

| Description | ID No. | Connected To | RECLAIM Source Type | Emissions and Requirements | Conditions |
|--|--------|--|--|--|--|
| Process 15: AIR POLLUTION CONTROL | | | | | |
| System 3: INCINERATION SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | |
| INCINERATOR, H-907, NATURAL GAS, HEAT RECOVERY SECTION, 18 30 MMBTU/HR WITH BURNER, NORTH AMERICAN, MODEL NO. 4131D, 18 MMBTU/HR AN 353056 435397 | C531 | C81 C86 C88 C90 C566 C575 C576 C577 C581 C596 C597 C598 C599 C761 C763 C769 | NOX: MAJOR SOURCE**; SOX: MAJOR SOURCE ** | CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981] SO2: 20 PPMV (8) [40CFR60 Subpart J, 10-4-1991] | C1.23 (modified), C8.1 (modified), D28.1 (existing), D28.4 (existing), D82.3 (existing), H23.4 (existing) |

Process Conditions: None

System Conditions:

S1.1 The operator shall limit the throughput to no more than 500000 barrel(s) in any one month.

[~~RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002~~]

[Systems subject to this condition: Process 8, System 25]

S1.2 The operator shall limit the throughput to no more than 4e+06 666,667 barrel(s) in any one year calendar month.

• For the purpose of this condition, throughput shall be defined as amount of asphalt loaded by the individual loading rack.

[~~RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002~~] [Systems subject to this condition: Process 8, System 6, 7, 8, 11, 25]



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S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[**RULE 463, 3-11-1994**; **RULE 463, 5-6-2005**] [Systems subject to this condition: Process 10, System 1]

S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 462 |

[**RULE 462, 5-14-1999**] [Systems subject to this condition : Process 8, System 6, 7, 8, 9, 11, 13, 18, 22, 23, 24, ~~25~~]

Device Conditions:

A63.5 The operator shall limit emissions from this equipment as follows:

| Contaminant | Emission Limit |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[**40CFR 60 Subpart UU, 8-5-1983**] [Devices subject to this condition: D80, D85, D87, D89, D267, D268, D269, D270, D271, D278, D280, D286, D328, **D523, D525**]

C1.11 The operator shall limit the throughput to no more than ~~300000~~ 90,000 barrel(s) in any one year calendar month.

- For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.
- The operator shall calculate the throughput, in barrels, by the following equation: (monthly total weight throughput, lbs/month) / (density of product stored, lbs/gal x 42 gal/bbl), where the monthly total weight throughput of the tank shall be determined by the continuous monitoring system described below.
- The operator shall install and maintain a load cell system and a data acquisition system to continuously record the changes in weight of the tank. For the purpose of this condition, continuous recording is defined as once every 15 minutes.
- The operator shall calculate the total weight throughput of the tank at the end of each month. The total weight throughput shall be calculated by totaling up the increases in weight of the tank recorded by the data acquisition system for the calendar month.



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- The accuracy of the load cell system shall be verified annually by a third-party tester in accordance to the manufacturer's specifications. If a calibration check point has an error of 1 percent or greater, the load cell system shall be adjusted, re-calibrated and repaired if necessary and put back into service within 10 days. While the load cell system is being repaired, throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to the discovery of the discrepancy.
- In the event of a failure or routine maintenance of the load cell system, the load cell system shall be repaired (if necessary) and put back into service within 10 days of the time that the load cell system failed or was removed from service for maintenance. While the load cell system is being repaired or maintained, the throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to time that the load cell system went out of service.

The operator shall keep the following records for the load cell system on the tank: density of product used to convert throughput from weight to volume, calibration procedures specified by the manufacturer, and annual calibration records that includes but not limited to identification of the error point, percent error and a description of adjustment/repair made. The calibration records shall be signed and dated by the person and company performed the calibration.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: D527, D528]

C1.23 The operator shall limit the ~~fuel usage~~ firing rate to no more than ~~411,000~~ 411,000 cubic feet per day. 30 MM Btu per hour.

- The operator shall also limit the firing rate to no more than 18 MMBtu/hr on an average daily basis.
- For the purpose of this condition, firing rate shall be defined as the energy or heat input of the natural gas to the equipment combustion chamber based on the higher heating value (HHV) of the natural gas.
- To comply with this condition, the operator shall install and maintain a flow meter to accurately indicate the natural gas usage of the incinerator.
- The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(b)(2)-Offset, 5-10-1996, RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: C531]

C1.30 The operator shall limit the throughput to no more than ~~600,000~~ 90,000 barrel(s) in any one ~~year~~ calendar month.

- For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.
- The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.
- The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.



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- 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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: **D523, D525**]

C1.31 The operator shall limit the throughput to no more than ~~340000~~ 100,000 barrel(s) in any one year calendar month.

- For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.
- The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.
- The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.
- 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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: **D273, D274**]

C6.11 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 500 Deg F.

- To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.



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[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **D273, D274, D277, D287, D288, D289, D290, D291, D293, D303, D523, D525, D527, D528**]

C8.1 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, is not less than 1400 Deg F.

- To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the firebox or in the ductwork immediately downstream from the firebox.
- The measuring device or gauge shall be accurate to within plus or minus 50 degree F. It shall be calibrated once every 12 months.
- The operator shall also install and maintain a device to continuously record the parameter being measured.

[**RULE 1303(a)(1)-BACT, 5-10-1996; ~~RULE 3004(a)(4) Periodic Monitoring, 12-12-1997;~~**
RULE 470, 5-7-1976] [Devices subject to this condition: **C531**]

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; ~~RULE 3004(a)(4)-~~**
Periodic Monitoring, 12-12-1997] [Devices subject to this condition: **C596, C597, C598, C599**]

D12.10 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

- The operator shall clean or replace the filters of the mist eliminator whenever the static differential pressure being monitored is 3 inches water column or greater

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; ~~RULE 3004(a)(4)-~~**
Periodic Monitoring, 12-12-1997] [Devices subject to this condition: **C769, C771, C773**]

~~**D28.1** The operator shall conduct source test(s) in accordance with the following specifications:~~

- ~~• The test shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.~~
- ~~• The test shall be conducted to determine the CO emissions at the outlet.~~
- ~~• The test shall be conducted to determine ROG emissions at the outlet.~~
- ~~• The test shall be conducted to determine the PM10 emissions at the outlet.~~
- ~~• The test shall be conducted to determine the oxygen concentration at the outlet.~~
- ~~• The test shall be conducted to determine the moisture content at the outlet.~~
- ~~• The test shall be conducted to determine the flow rate at the outlet.~~
- ~~• The test shall be conducted to determine Benzo(a)pyrene emissions at the outlet.~~
- ~~• The test shall be conducted to determine Formaldehyde emissions at the outlet.~~
- ~~• The test shall be conducted to determine Acetaldehyde emissions at the outlet.~~
- ~~• The test shall be conducted to determine Chromium (VI) emissions at the outlet.~~
- ~~• The test shall be conducted to determine Arsenic emissions at the outlet.~~
- ~~• The test shall be conducted to determine the efficiency of the Incinerator for ROG.~~
- ~~• The test shall be conducted to demonstrate compliance with 40CFR60, Subpart UU and Rule 404.~~



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- ~~The test shall be conducted when the Asphalt Oxidizing Units are operating at no less than 80 percent of the permitted production rate.~~
- ~~The District shall be notified of the date and time of the test at least 10 days prior to the test. [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 8-13-1999] [Devices subject to this condition: C531]~~

[This one time initial source test has been completed.]

D28.4 The operator shall conduct source test(s) in accordance with the following specifications:

- The test shall be conducted to determine the CO and PM emissions at the outlet.
 - The test shall be conducted at least once every three years.
- [RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]] [Devices subject to this condition: C531]

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

- SOX concentration in ppmv
- Concentrations shall be corrected to zero percent excess air on a dry basis.
- Oxygen concentration in percent volume

The CEMS shall be installed in accordance with the requirements of 40CFR60 Subpart J. [40CFR 60 Subpart J, 10-4-1991] [Devices subject to this condition: C531]

D90.5 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

- The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.
- The operator shall monitor the VOC concentrations at least once a week. If a tank filling is scheduled during a week, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a week, the VOC measurements may be taken at anytime.

[RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997] [Devices subject to this condition: C762, C764, C765, C766, C767, C768, ~~C770~~, C772, C774]

D90.9 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

- The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.
- The operator shall monitor the VOC concentrations at least once a day during any day that exhaust gases are vented to the carbon adsorbers. If a tank filling is scheduled during a day, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a day, the VOC measurements may be taken at anytime.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: C770]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the



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equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

~~This condition shall become effective when the initial Title V permit is issued to the facility.~~

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001**] [Devices subject to this condition: D80, D85, D87, D89, D179, D181, D187, **D206, D273, D274, D285, C396, D570, D579, D602**]

D323.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a monthly basis, at least, unless the equipment did not operate during the entire monthly period. The routine monthly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.



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The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001**] [Devices subject to this condition: **D254, D523, D525**]

E17.2 The operator shall not use more than 4 of the following items simultaneously:

Device ID: D206 [Only 4 out of 8 12 loading arms shall be operated at a time]

[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **D206**]

E128.1 The operator shall keep all spent carbon in a tightly covered container which shall remain closed except when it is being transferred into or out of the container.

[**RULE 1401, 3-4-2005**] [Devices subject to this condition: **C770, C772, C797**]

E153.1 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

- For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 48 ppmv at the outlet of the carbon adsorber.
- Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.5 and is measured as hexane.

[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **C770**]

E153.5 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

- For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 48 ppmv at the outlet of the carbon adsorber.
- Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.9 and is measured as hexane.

[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002**] [Devices subject to this condition: **C770**]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002**] [Devices subject to this condition: **C596, C597, C598, C599**]

E336.7 The operator shall vent the vent gases from this equipment as follows:



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- All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in tandem with SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).
- This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002 [Devices subject to this condition: C599]

E336.9 The operator shall vent the vent gases from this equipment as follows:

- All vent gases shall be directed to the incinerator (Device C531 in Process 15, System 3) in tandem with SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569) or to the carbon adsorbers (Device C770 in Process 10, System 1). The operator shall only vent this equipment to the carbon adsorbers during periods when the incinerator is out of service due to maintenance, repairs, or malfunction.
- This equipment shall not be operated unless the subject incinerator and the SOx scrubbing system or carbon adsorbers are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002] [Devices subject to this condition: C769]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, Subpart | J |

[40CFR 60 Subpart J, 10-4-1991] [Devices subject to this condition: C531]

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, Subpart | UU |

[40CFR 60 Subpart UU, 8-5-1983] [Devices subject to this condition: D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525]

H23.18 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------|--------------|
|-------------|------|--------------|



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| VOC | District Rule | 463(c) |
|-----|---------------|--------|

[**RULE 463, 3-11-1994**; **RULE 463, 5-6-2005**] [Devices subject to this condition: D270, D272, **D273**, **D274**, D277, D287, D288, D289, D290, D291, D293, D303, D307, D309, D311, D312, D315, D316, D318, D319, D320, D327, D328, ~~D523, D525, D527, D528~~]

BACKGROUND

Facility

Paramount Petroleum Corporation owns a refinery (ID 800183) in the city of Paramount. Prior to 1995, the refinery distilled gasoline and other refined distillates. From 1995 until 2005, the Paramount refinery was operated in a topping mode producing various types of asphalt and naphtha but was not producing refined motor fuels such as CARB gasoline. In 2005, Paramount modified various downstream refining process units (including upgrading of the hydrotreating systems) in order to produce low sulfur CARB diesel and CARB III gasoline. The refinery is equipped with distillation/fractionation units and a Catalytic Reforming Unit (CRU) but is not equipped with any cracking units, such as an FCCU, hydrocracking unit, or thermal cracking unit (coking unit), or an alkylation unit.

Subject Applications

The following table contains a summary of the applications that are covered in this evaluation. All of these applications are related to the Air Blowing Stills Incinerator (H-907; C531). In June of 2003, Paramount submitted applications for connection of the vent streams for the Crude Unit washwater drum and the Crude Unit API Separator to the afterburner. Upon review of the materials submitted for these applications, it was determined that the vent streams from five (5) asphalt loading racks had been connected to the afterburner without a permit to construct. In October and December of 2003, Paramount submitted applications for the five (5) loading racks. All of these loading racks had existing CECO Filters on the vent streams. It was recently identified that applications were also required for each of the CECO Filters since it was the vent streams exiting the CECO Filters that were connected to the incinerator without a permit. Paramount submitted the required PO no PC applications for the CECO Filters in April 2008. In 2003, Paramount also submitted an application for one loading rack which had been permitted to be connected to the incinerator but was constructed as an unloading rack only with no connection to the incinerator.

In September of 2004, Paramount was issued NOV No. P12050 for operating the AB Stills Incinerator (H-907; C531) at a higher firing rate than is specified in the equipment description of the permit. This NOV included one other incinerator (H-402) and several heaters. The District alleged that "any operation of the heaters and incinerators at levels higher than those stated in the permit descriptions constitutes a violation of Paramount's permits". Paramount submitted AN 435397 on Sept. 29, 2004 for an increase in the firing rate for the AB Stills Incinerator from the current 18 MMbtu/hr specified in the permit description of the incinerator up to 30 MMbtu/hr.



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On October 13, 2004, the Hearing Board issued a Stipulated Order for Abatement (Case No. 2914-72), which ordered that Paramount shall not fire the incinerator at a rate greater than 30 MMBtu/hr and "18 MMBtu/hr on an average daily basis" (See Appendix B). This requirement remains in effect until "the District has issued a revised permit to construct/operate". Paramount has subsequently revised their requested firing rate for this incinerator. They currently request that the permitted firing rate be changed from "18 MMBtu/hr" to "18 MMBtu/hr on an average daily basis" instead of 30 MMBtu/hr.

On November 14, 2006, Paramount rescinded their request under AN 417076 and 417078 that the Crude Unit Wash Water Drum (D-818) and API Separator vent streams be connected to the subject incinerator. Paramount stated that "Paramount safety and operations groups are unable to satisfy potential safety (flashback) concerns associated with venting D-818 and the API to H-907. Therefore, Paramount no longer wants to vent these streams to the AB Stills Incinerator. Paramount wants to vent these streams to an improved carbon system (2000 lb vessels)." ANs 417076 and 417078 are not being evaluated in this document.

In January and March of 2008, Paramount submitted nine (9) additional applications for connection of vent streams from six (6) additional storage tanks and the one (1) rail car loading/Unloading Rack. The tanks currently vent to a mist eliminator followed by a carbon adsorber. The mist eliminator will be retained but the vent gases from the mist eliminator are proposed to be vented to the AB Stills Incinerator instead of the existing carbon adsorber. The carbon adsorber will be utilized as a backup control. The "Organic Tank/Rail Car Loading/Unloading Facility" (Process 8, System 25) currently vents to a mist eliminator. Paramount proposes to vent the mist eliminator to the subject incinerator.

In May of 2008, Paramount submitted an application for four additional loading arms on the Organic Rail Car Load/Unload Rack (Process 8, System 25). These arms had been installed without a permit to construct.

Paramount is also requesting that some corrections and changes be made to the permit for Tank T-20 [D572 in P10/S1 (fixed roof tanks)]. The engineering evaluation for PC AN 353068 proposed that the vent stream for this tank would be connected to the AB Stills Incinerator. This error will be corrected by including the connection in the RECLAIM permit. Paramount also requests to change the permitted maximum storage temperature for this tank from 350°F up to 450°F. As discussed in more detail in the Calculation Section, Paramount is also requesting to increase the permitted throughput for all of the storage tanks and most of the loading racks that are included in this evaluation. For most of this equipment, the requested increase in throughput was precipitated by the District's requirement to convert the existing annual throughput limits to monthly throughput limits.

The following table contains a summary of the applications that are covered in this evaluation.



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Applications Covered in this Evaluation

| Appl. Number | Device Description | Device Number | Process / System | Notes |
|---|-----------------------------------|---------------|------------------|---|
| Applications for Permit to Operate | | | | |
| 421387 | Asphalt TT Rack No. 6 (60/61) | D192 | P8/S6 | Connected this rack through the associated CECO Filter to the H-907 incinerator without obtaining a permit to construct. |
| 483327 | CECO Filter | C596 | P8/S6 | |
| 421388 | Asphalt TT Rack No. 7 (70/71) | D196 | P8/S7 | Connected this rack through the associated CECO Filter to the H-907 incinerator without obtaining a permit to construct. |
| 483334 | CECO Filter | C597 | P8/S7 | |
| 421390 | Asphalt TT Rack No. 8 (80/81) | D200 | P8/S8 | Connected this rack through the associated CECO Filter to the H-907 incinerator without obtaining a permit to construct. |
| 483338 | CECO Filter | C598 | P8/S8 | |
| 421391 | Asphalt TT Rack No. 11 | D179 | P8/S9 | Connected this rack through the associated CECO Filter to the H-907 incinerator without obtaining a permit to construct. |
| 483341 | CECO Filter | C575 | P8/S9 | |
| 421395 | Asphalt TT Rack No. 13 | D187 | P8/S11 | Connected this rack through the associated CECO Filter to the H-907 incinerator without obtaining a permit to construct. |
| 483342 | CECO Filter | C576 | P8/S11 | |
| 423441 | Asphalt TT Rack No. 26 | D570 | P8/S23 | Permitted as a loading/ unloading rack with connection to a CECO filter and the incinerator. Built as an unloading rack only with a 200 lb carbon canister for "odor" control. |
| 482509 | Organic Rail Car Load/Unload Rack | D206 | P8S25 | Installed four additional asphalt loading arms without obtaining a permit to construct. |
| 448913 | Asphalt Mix Tank No. T-20 | D579 | P10S1 | Correct the permit to the configuration permitted under 353068 with connection to incinerator. Also increase permitted temperature from 350°F up to 450°F. |
| 417079 | AB Stills Incinerator (H-907) | C531 | P15/S3 | Submitted originally for connection of the Crude Unit Wash Water Drum and API Separator vent streams to the incinerator. Paramount subsequently revoked this request. Appl. has been changed to PO no PC (Class III) for the connection of the loading racks/CECO filters listed above. |
| Applications for Permit to Construct | | | | |
| 477239 | Asphalt Mix Tank No. T-141 | D527 | P10S1 | These tanks are current connected to a common mist eliminator (C769) followed |



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| Appl. Number | Device Description | Device Number | Process / System | Notes |
|--------------|-----------------------------------|---------------|------------------|---|
| 479413 | Asphalt Mix Tank No. T-142 | D528 | P10S1 | by three parallel carbon absorbers (180 lbs. each) (C770). Paramount requests that the vent stream from the mist eliminator be vented to the AB Stills Incinerator with the carbon absorbers as a backup control for period when the stream can't be vented to the incinerator. |
| 479418 | Asphalt Tank No. T-509 | D523 | P10S1 | |
| 479419 | Asphalt Mix Tank No. T-777 | D525 | P10S1 | |
| 479420 | Asphalt Mix Tank No. T-1012 | D273 | P10S1 | |
| 477240 | Asphalt Mix Tank No. T-1013 | D274 | P10S1 | |
| 479421 | CECO Filter & Carbon Absorber | C769/ C770 | P10S1 | Modification of this control system by connecting the CECO Filter to the H-907 incinerator and utilizing the carbon absorbers as a backup control. |
| 480174 | Organic Rail Car Load/Unload Rack | D206 | P8S25 | Request connection of this rack to the H-907 incinerator through the existing CECO filter |
| 477241 | CECO Filter | C599 | P8S25 | This is the existing CECO for the Organic Liquid Rack. Connection of this existing CECO to the H-907 incinerator. |
| 435397 | AB Stills Incinerator (H-907) | C531 | P15/S3 | Submitted on Sept. 29, 2004 to increase the rating of this incinerator from the current 18 MMBtu/hr up to 30 MMBtu/hr. This application was submitted following discovery by District enforcement staff that the incinerator had exceeded the permitted 18 MMBtu/hr firing rate at times over the previous 4 year period. |

Condition C1.23 currently specifies that the "operator shall limit the fuel usage to no more than 411000 cubic feet per day". This condition will be modified to specify that the operator shall limit the firing rate to 30 MM Btu per hour and the operator shall also limit the firing rate to 18 MM Btu per hour on a daily average basis.

FEE ANALYSIS

Paramount has paid all applicable application fees. The following table contains a summary of the applicable fees.



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Summary of Fee Analysis

| A/N | Equipment Description | BCAT/CCAT | Fee Schl. | Appl. Type | Appl. Status | Penalty | Iden. Equip. | Exp. Proc. | Fiscal Year (1) | Fee (\$) |
|-----------------------------|-----------------------|-----------|-----------|------------|--------------|---------|--------------|------------|-----------------|------------------|
| Permits to Operate | | | | | | | | | | |
| 417079 | Incinerator | 05 | D | 50 | 21 | N | N | N | 03-04 | 3,081.85 |
| 421387 | TT Rack No. 6 | 214108 | D | 50 | 21 | Y | Y* | N | 03-04 | 4,622.78 |
| 421388 | TT Rack No. 7 | 214108 | D | 50 | 21 | Y | Y | N | 03-04 | 2,311.39 |
| 421390 | TT Rack No. 8 | 214108 | D | 50 | 21 | Y | Y | N | 03-04 | 2,311.39 |
| 421391 | TT Rack No. 11 | 214108 | D | 50 | 21 | Y | Y* | N | 03-04 | 4,622.78 |
| 421395 | TT Rack No. 13 | 214108 | D | 50 | 21 | Y | Y | N | 03-04 | 2,311.39 |
| 423441 | TT Rack No. 26 | 214112 | C | 50 | 21 | Y | N | N | 03-04 | 3,349.44 |
| 448913 | Tank No. T-20 | 214910 | B | 50 | 21 | N | N | N | 05-06 | 1,541.34 |
| 483327 | CECO, Rack 6 | 30 | B | 50 | 21 | Y | Y* | N | 07-08 | 2,797.53 |
| 483334 | CECO, Rack 7 | 30 | B | 50 | 21 | Y | Y | N | 07-08 | 1,398.77 |
| 483338 | CECO, Rack 8 | 30 | B | 50 | 21 | Y | Y | N | 07-08 | 1,398.77 |
| 483341 | CECO, Rack 11 | 30 | B | 50 | 21 | Y | Y* | N | 07-08 | 2,797.53 |
| 483342 | CECO, Rack 13 | 30 | B | 50 | 21 | N | Y | N | 07-08 | 1,398.77 |
| Permits to Construct | | | | | | | | | | |
| 477239 | Tank No. T-141 | 214910 | B | 50 | 20 | N | Y* | Y | 07-08 | 2,797.53 |
| 479413 | Tank No. T-142 | 214910 | B | 50 | 20 | N | Y | Y | 07-08 | 1,398.77 |
| 479418 | Tank No. T-509 | 214910 | B | 50 | 20 | N | N | Y | 07-08 | 2,797.53 |
| 479419 | Tank No. T-777 | 214910 | B | 50 | 20 | N | N | Y | 07-08 | 2,797.53 |
| 479420 | Tank No. T-1012 | 214910 | B | 50 | 20 | N | Y | Y | 07-08 | 1,398.77 |
| 477240 | Tank No. T-1013 | 214910 | B | 50 | 20 | N | Y* | Y | 07-08 | 2,797.53 |
| 479421 | CECO Filter/CA | 1B | C | 50 | 20 | N | N | Y | 07-08 | 4,424.88 |
| 480174 | Organic Rail Rack | 214108 | D | 50 | 20 | N | N | Y | 07-08 | 6,107.06 |
| 482509 | Organic Rail Rack | 214108 | D | 50 | 20 | Y | N | N | 07-08 | 6107.06 |
| 477241 | CECO Filter | 30 | B | 50 | 20 | N | N | Y | 07-08 | 2,797.53 |
| 435397 | Incinerator | 05 | D | 50 | 20 | N | N | N | 04-05 | 3,174.31 |
| | | | | | | | | | | 70,542.23 |

(1) Based on the date that the application was submitted.

* Lead application for identical equipment group.

PERMIT HISTORY

A summary of the permitting history for the subject permit units is contained in the following tables.



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For Permits to Operate in Section D of the RECLAIM FP.

| Permit to Construct | | Permit to Operate | | Description of Modification |
|---|------------|-------------------|------------|---|
| No. | Issue Date | No. | Issue Date | |
| Asphalt TT Rack No. 6 (60/61) | | | | |
| A12876 | | A13233 | | |
| C15455 | 1982 | | | This application was to update the permit to reflect some pump changes. Douglas Oil requested that all applications and PCs (including this one) be cancelled since they were selling the refinery. All of the existing POs remained active. |
| 104003 | na. | M53139 | 1982 | Change of ownership from Douglas Oil Co. of California to Pacific Oasis (1982) and name change from Pacific Oasis to Paramount Petroleum (1987). |
| 357904 | na. | F24670 | 3/00 | For connection of the rack to an individual CECO filter for emission control. NOV had previously been issued for adding this control without a permit. Was previously permitted to be connected to a common mist eliminator with Racks No. 7 and 8. |
| 421387 | | | | For connection of the rack to the AB Stills Incinerator that was made without a permit to construct. |
| CECO Filter for Rack No. 6 (60/61) | | | | |
| 357039 | na. | F24633 | 03/2000 | PO no PC for installation of this CECO Filter on the exhaust line for Rack No. 6. Originally installed without a permit. |
| 483327 | na. | na. | na. | PO no PC for connection of the CECO Filter exhaust line to the AB Stills Incinerator. |
| Asphalt TT Rack No. 7 | | | | |
| A48885 | | P26087 | | |
| C15456 | 1982 | | | This application was to update the permit to reflect some pump changes. Douglas Oil requested that all applications and PCs (including this one) be cancelled since they were selling the refinery. All of the existing POs remained active. |
| 104274 | na. | M53175 | 1982 | Change of ownership from Douglas Oil Co. of California to Pacific Oasis (1982) and name change from Pacific Oasis to Paramount Petroleum (1987). |
| 357031 | na. | F24671 | 3/00 | For connection of the rack to an individual CECO filter for emission control. NOV had previously been issued for adding this control without a permit. Was previously permitted to be connected to a common mist eliminator with Racks No. 6 and 8. |
| 421388 | na. | na. | na. | For connection of the rack to the AB Stills Incinerator |



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|-----------------------------------|------------|-------------------|------------|---|
| No. | Issue Date | No. | Issue Date | |
| | | | | that was made without a permit to construct. |
| CECO Filter for Rack No. 7 | | | | |
| 357040 | na. | F24618 | 03/2000 | PO no PC for installation of this CECO Filter on the exhaust line for Rack No. 7. Originally installed without a permit. |
| 483334 | na. | na. | na. | PO no PC for connection of the CECO Filter exhaust line to the AB Stills Incinerator. |
| Asphalt TT Rack No. 8 | | | | |
| C18520 | Not issued | na. | na. | Permit history for this rack is confusing. Appears that this rack was constructed in 1972 but Douglas Oil did not submit a permit application until 1978. This application submitted in conjunction with connection of the rack to a HEAF filter. This application remained pending from 1978 until the change of ownership to Paramount. |
| 109940 | na. | M53176 | 10/83 | Change of ownership from Douglas Oil Co. of California to Pacific Oasis (1983) and name change from Pacific Oasis to Paramount Petroleum (1986). |
| 357032 | na. | F24669 | 3/00 | For connection of the rack to an individual CECO filter for emission control. NOV had previously been issued for adding this control without a permit. Was previously permitted to be connected to a common mist eliminator with Racks No. 6 and 7. |
| 421390 | na. | na. | na. | For connection of the rack to the AB Stills Incinerator that was made without a permit to construct. |
| CECO Filter for Rack No. 8 | | | | |
| 357041 | na. | F24632 | 03/2000 | PO no PC for installation of this CECO Filter on the exhaust line for Rack No. 8. Originally installed without a permit. |
| 483338 | na. | na. | na. | PO no PC for connection of the CECO Filter exhaust line to the AB Stills Incinerator. |
| Asphalt TT Rack No. 11 | | | | |
| A47406 | | P26083 | | |
| 104272 | na. | M32859 | 1982 | Change of ownership from Douglas Oil Co. of California to Pacific Oasis (1982) and name change from Pacific Oasis to Paramount Petroleum (1987). |
| 326556 | na. | F7994 | 7/97 | Change of condition. |
| 353044 | 8/99 | na. | na. | For connection of the rack to a CECO filter for emission control. |
| 421391 | | | | Rack connected to the AB Stills Incinerator without a permit. This application is for evaluation of this connection. |



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| No. | Issue Date | No. | Issue Date | |
| CECO Filter for Rack No. 11 | | | | |
| 353065 | 08/99 | na. | na. | Original installation of this CECO Filter on the exhaust stream of Loading Rack No. 11. |
| 483341 | na. | na. | na. | PO no PC for connection of the CECO Filter exhaust line to the AB Stills Incinerator. |
| Asphalt TT Rack No. 13 | | | | |
| A47399 | | P26076 | | |
| 104271 | na. | M32858 | 1982 | Change of ownership from Douglas Oil Co. of California to Pacific Oasis (1982) and name change from Pacific Oasis to Paramount Petroleum (1987). |
| 122276 | 6/84 | D11681 | 11/89 | Added two new 30 HP gear pumps. |
| 353045 | 8/99 | na. | na. | For connection of the rack to a CECO filter for emission control. The CECO Filter is included in the permit for the loading rack. |
| 421395 | | | | For connection of the rack to the AB Stills Incinerator that was made without a permit to construct. |
| CECO Filter for Rack No. 13 | | | | |
| 483342 | na. | na. | na. | CECO Filter connected to the AB Stills Incinerator without a permit. Also separating this CECO from the loading rack permit since it is an active control with blower. |
| Asphalt TT Rack No. 26 | | | | |
| 353059 | 8/99 | na. | na. | For construction of a loading / unloading rack with connection to the incinerator for primary control and a CECO filter as a backup. Actually built an unloading rack that vents to a 200 lb carbon adsorber for "odor" control. |
| 421387 | na. | na. | na. | Application is for evaluation of the rack as constructed (unloading only with carbon adsorber for "odor" control). |
| Polymer Wetting Agent Tank (T-20) (P10/S1; D579) | | | | |
| 353068 | 8/99 | na. | na. | Original construction of this storage tank. |
| 448913 | na. | na. | na. | Increase the temperature limit from 350°F to 450°F and correct the permit to show the connection to the H-907 incinerator that was approved under PC AN 353068. |



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For Permits to Construct in Section H of the RECLAIM FP.

| Permit to Construct | | Permit to Operate | | Description of Modification |
|--|------------|-------------------|------------|---|
| No. | Issue Date | No. | Issue Date | |
| AB Stills Incinerator H-907 (P15S3; C531) | | | | |
| 335220 | 5/21/98 | na. | na. | Construction of the incinerator for control of emissions from the 4 asphalt oxidizing units (D81, D86, D88, & D90). |
| 353056 | 8/27/99 | na. | na. | Increase rating from 14 MMBtu/hr to 18 MMBtu/hr and connection of the vent streams from 10 tanks (9 asphalt and one polymer) and 2 asphalt loading racks. Also added a SOX scrubber and a flue gas reheater downstream of the incinerator. This was part of a project to increase the asphalt production capability of this refinery from 2990 bpd to 6000 bpd. |
| 417079 | na. | na. | na. | Propose connection of the Crude Unit API Separator (D254), Crude Unit Water Wash Drum (D-818; D2), and 5 asphalt loading racks. |
| 435397 | na. | na. | na. | Propose to change the permitted firing rate from 18 mmbtu/hr to "18 MMBtu/hr on an average daily basis". Later propose to connect the vent stream from 6 asphalt tanks to the incinerator. |
| Asphalt Mix Tank No. T-141 (P10S1; D527) | | | | |
| 326475 | 07/97 | na. | na. | Original construction of this storage tank. |
| 403451 | 03/05 | F74437 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common vent header that formed a vapor balance system for the six tanks. The common header vented to a control system consisting of a CECO filter (C769) and three parallel carbon adsorbers (C770). Also increased the temperature limit from 350°F up to 500°F. |
| 477239 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |
| Asphalt Mix Tank No. T-142 (P10S1; D528) | | | | |
| 326476 | 07/97 | na. | na. | Original construction of this storage tank. |
| 403452 | 03/05 | F74438 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common control system. See additional description under Tank T-141 (D527). Also increased the temperature limit from 350°F up to 500°F. |
| 479413 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |



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| Permit to Construct | | Permit to Operate | | Description of Modification |
|--|------------|-------------------|------------|--|
| No. | Issue Date | No. | Issue Date | |
| Asphalt Tank No. T-509 (P10S1; D523) | | | | |
| 326477 | 07/97 | na. | na. | Original construction of this storage tank. |
| 403453 | 03/05 | F74439 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common control system. See additional description under Tank T-141 (D527). Also increased the T'Put limit from 300,000 bbl/yr up to 600,000 bbl/yr and increased the temperature limit from 350°F up to 500°F. |
| 479418 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |
| Asphalt Mix Tank No. T-777 (P10S1; D525) | | | | |
| 326479 | 07/97 | na. | na. | Original construction of this storage tank. |
| 403454 | 03/05 | F74440 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common control system. See additional description under Tank T-141 (D527). Also increased the T'Put limit from 300,000 bbl/yr up to 600,000 bbl/yr and increased the temperature limit from 350°F up to 500°F. |
| 479419 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |
| Asphalt Mix Tank No. T-1012 (P10S1; D273) | | | | |
| C05487 | na. | P67452 | 06/76 | Tank had previously been exempt from permitting requirements by LA APCD Rule 11 but was no longer exempt under new SC APCD Rule 219. |
| 104314 | na. | M33111 | 04/84 | Change of ownership from Douglas Oil Company to Paramount Petroleum Company. |
| 326561 | 07/97 | na. | na. | Installed an external tank mixer and changed the permit description from "Steam Heated" to "Steam/Hot Oil Heated". |
| 403455 | 03/05 | F74441 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common control system. See additional description under Tank T-141 (D527). Also increased the temperature limit from 350°F up to 500°F. A throughput limit of 340,000 was installed under this permit based on information submitted under AN 326561. |
| 479420 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |
| Asphalt Mix Tank No. T-1013 (P10S1; D274) | | | | |



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|---|------------|-------------------|------------|--|
| No. | Issue Date | No. | Issue Date | |
| C05488 | na. | P67453 | 06/76 | Tank had previously been exempt from permitting requirements by LA APCD Rule 11 but was no longer exempt under new SC APCD Rule 219. |
| 104315 | na. | M33112 | 04/84 | Change of ownership from Douglas Oil Company to Paramount Petroleum Company. |
| 326562 | 07/97 | na. | na. | Installed an external tank mixer and changed the permit description from "Steam Heated" to "Steam/Hot Oil Heated". |
| 403456 | 03/05 | F74442 | 03/05 | PC/PO issued for connection of the vapor space of six storage tanks to a common control system. See additional description under Tank T-141 (D527). Also increased the temperature limit from 350°F up to 500°F. A throughput limit of 340,000 was installed under this permit based on information submitted under AN 326562. |
| 477240 | na. | na. | na. | For connection of this tank (through the existing CECO Filter) to the AB Stills Incinerator for primary control with the existing carbon absorber as a backup. |
| CECO Filter & Carbon Adsorber (P10S1; C769/C770) | | | | |
| 403450 | 03/05 | F74436 | 03/05 | Original construction. PC/PO issued for connection of the vapor space of six storage tanks to this control system. |
| 479421 | na. | na. | na. | For connection of the CECO filter to the AB Stills Incinerator with the existing carbon adsorber as a backup control when the incinerator is down. |
| Organic Liquid Rail Car Loading/Unloading Rack (P8S25; D206) | | | | |
| ????? | ????? | P26082 | ????? | Records incomplete. Some records indicate this rack has been in existence since the 1950s. |
| C00744 | ????? | M02302 | 08/78 | Records Incomplete. |
| 104010 | na. | R-M32810 | 04/84 | Change of ownership from Douglas Oil Company to Paramount Petroleum. |
| 122275 | 05/84 | M50895 | 09/86 | Changed out some pump motors. |
| 154199 | 11/86 | M59329 | 11/87 | Removed eleven loading arms. |
| 215868 | 05/90 | D39867 | 07/91 | Installed a caustic loading arm. |
| 357033 | na. | F24915 | 03/2000 | Permit to operate for connecting the rack to a CECO Filter (C599), which was installed without a permit. It was previously permitted to vent to a different mist eliminator. The connection was made without a permit. |
| 482509 | na. | na. | na. | Paramount installed 4 additional loading arms without |



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| Permit to Construct | | Permit to Operate | | Description of Modification |
|----------------------------------|------------|-------------------|------------|--|
| No. | Issue Date | No. | Issue Date | |
| | | | | obtaining a permit to construct. This applications was submitted as a PO no PC. Application will be cancelled and the modification evaluated under AN 480174 |
| 480174 | na. | na. | na. | For connection of the loading rack (through the existing CECO Filter (C599)) to the AB Stills Incinerator. |
| CECO Filter (P8S25; C599) | | | | |
| 357042 | na. | F24619 | 03/2000 | PO no PC for installation of this CECO Filter. Originally installed without a permit. |
| 477241 | na. | na. | na. | For connection of the CECO filter to the AB Stills Incinerator. |

COMPLIANCE RECORD REVIEW

A summary of Notices to Comply (NCs) and Notices of Violation (NOVs) issued to Paramount since January 2006 is contained in Appendix C. The status of each of the NOVs is either *closed* or *in compliance*. The table below contains a summary of the H-907 related NOVs that were issued to Paramount in 2004.

| Equipment | NOV No. | Violation Date | Issue Date | Violation |
|--------------------------------------|---------|----------------|------------|---|
| AB Stills Incinerator (H-907), et al | P12049 | 9/01/00 | 9/08/04 | "Operating equipment Heaters H-801, H-704, H-902, Incinerators H-402, H-907 without a valid written permit to operate". |
| AB Stills Incinerator (H-907), et al | P12050 | 9/01/03 | 9/08/04 | "Operating Heaters H-802, H-601, H-805, H-602, H-705, H-801, H-704, H-902, H-402 and Incinerator H-907." Violation of Rule 203(a) requiring a valid permit to operate to operate equipment. |

Paramount is currently subject to two open Stipulated Orders for Abatement (SOFA). A summary of these SOFAs is contained in the following table.

| Stipulated Order for Abatement Case No. | Description | Status |
|---|--|---|
| SOFA 2914-72 | Paramount is required to install ultra low-NOx burners (ULNB), which meet a NOx concentration limit of 15 ppmv, on the | Paramount has installed ULNBs on heaters H-601, H-602 H-802 and H-805. SCR has been installed on H- |



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| Stipulated Order for Abatement Case No. | Description | Status |
|---|---|---|
| | following heaters: H-601, H-602 H-802 and H-805. Paramount is also required to install Selective Catalytic Reduction (SCR) on heaters H-601 and H-802 (or substitute heater) to reduce NOx emissions to 5 ppmv or less. Paramount was also required to submit permit applications to change the permitted firing rate limits for Incinerators H-402 and H-907. H-402 is the SRU/TGTU Incinerator. | 601. Paramount has installed SCR on H-101, H-102 and H501/H502 in place of H-802. Paramount will be in full compliance with the SOFA upon issuance of permits for Incinerators H-402 and H-907. The H-402 permit will be proposed in the same Title V permit revision as the H-907 related permits. |
| SOFA 2914-90 | Requires Paramount to implement a project to ensure that future emissions from the "misc. refinery gas streams" connected to and combusted by Incinerator H-402 meet NSPS Subpart J requirements for fuel gas combustion devices. Paramount is proposing to reroute certain process vents with high (H ₂ S) content from H-402 Tail Gas Incinerator to the front of the SRU. | Paramount will be in compliance with the order upon issuance of permits to reroute the vents from Tail Gas Incinerator H-402 to the front of the Sulfur Recovery Unit. The H-402 related permits will be proposed in the same Title V permit revision as the H-907 incinerator related permits. |

PROCESS DESCRIPTION

General

The incinerator was originally constructed for control of VOC and CO emissions from Paramount's four air blowing stills. The air blowing process removes the gas-oil from topped crude oil. Air blowing is mainly a hydrogenation process in which the oxygen in the air bubbled through the asphalt in a still combines with hydrogen in the oil molecules to form water vapor. The progressive loss of hydrogen causes polymerization of the asphalt to the desired hardness. Each of the stills are equipped with a scrubber (condenser) located downstream of the still. The excess air and asphalt fumes flow from the still through this condenser, which is filled with water or oil to remove any condensable hydrocarbons. The exhaust gas flows from these scrubbers to the AB Stills incinerator for control of CO and VOC emissions from the stills. The incinerator exhaust, which has relatively high concentrations of SO₂, flows through a packed bed, counter flow, caustic scrubber for control of the SO₂ emissions. The caustic solution in the scrubber cools the exhaust stream to about 120°F. To prevent excessive water vapor condensation in the stack, the exhaust duct is equipped with an 8 MMBtu/hr duct burner to reheat the exhaust gas stream to about 400°F.

AB Stills Incinerator

The AB Stills incinerator (H-907; C531) was manufactured by Phoenix Resources, Inc. It has a horizontal combustion chamber with an internal diameter of 10.5 feet and a length of 21 feet. The combustion chamber is equipped with a North American Model 4131D Burner that is nominally rated at 18 MMBtu/hr. Documentation for this series of burners is contained in



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Appendix D. The burner is fired with natural gas and includes an integral fan that provides 100% of the combustion air required for combustion of the natural gas. The burner is mounted in the center of the combustion chamber.

The incinerator is followed by a caustic scrubber for control of SO₂ in the incinerator exhaust gas. The scrubber exhaust duct is equipped with a duct burner to heat the exhaust gas prior to venting it to the atmosphere.

The incinerator was constructed for control of VOC emissions from the four asphalt blowing stills under AN 335220, which was issued in 1998. The vent streams from a number of other devices have been subsequently connected to the incinerator. A list of the devices that currently vent to the incinerator follows:

- AB Still No. 1 (D80/C81) [AN 353039]
- AB Still No. 2 (D85/C86) [AN 353041]
- AB Still No. 3 (D87/C88) [AN 353042]
- AB Still No. 4 (D89/C90) [AN 353043]
- Asphalt TT Rack No. 6 (60/61) (D192) - connected but not permitted
- Asphalt TT Rack No. 7 (70/71) (D196) - connected but not permitted
- Asphalt TT Rack No. 8 (80/81) (D200) - connected but not permitted
- Asphalt TT Rack No. 11 (D179) - connected but not permitted
- Asphalt TT Rack No. 13 (D187) - connected but not permitted
- Asphalt Rack No. 15 (D181) [AN 356033]
- Asphalt Rack No. 26 (D570) [353059] - Permitted but never connected
- Asphalt Storage Tank No. T-1019 (D277) (Mist eliminator/Incinerator or CA)
- Asphalt Storage Tank No. T-2044 (D287) (Mist eliminator/Incinerator or CA)
- Asphalt Storage Tank No. T-2046 (D288) (Mist eliminator/Incinerator or CA)
- Asphalt Storage Tank No. T-2047 (D289) (Mist eliminator/Incinerator or CA)
- Asphalt Storage Tank No. T-2048 (D290) (Mist eliminator/Incinerator or CA)
- Asphalt Storage Tank No. T-2049 (D291) (Mist eliminator/Incinerator or CA)

Asphalt Loading Racks

There are a total of 14 asphalt/ asphalt emulsion transfer racks at the Paramount Refinery. All of the racks are included in Process 8 of the RECLAIM Facility Permit. The table below contains a summary of the asphalt loading, unloading, and loading/unloading racks at the refinery. The racks that have open applications that are included in this evaluation are shaded in this table. As can be seen from this table: seven (7) of the racks are tank truck loading racks, three (3) are tank truck loading/unloading racks, one (1) is a rail car/ tank truck loading/ unloading rack, and three (3) are tank truck unloading racks.

Asphalt Loading Racks

| Rack No. | System | Material Transferred | Control Type (as permitted) | Control Type (as built) | Permit Limits |
|---------------------------------|--------|----------------------|-----------------------------|-------------------------|----------------|
| <i>Tank Truck Loading Racks</i> | | | | | |
| 3 | 3 | Asphalt Emul. | None | Same | TVP ≤ 0.1 psia |
| 4 | 4 | Asphalt Emul. | None | Same | TVP ≤ 0.7 psia |
| 5 | 5 | Asphalt Emul. | None | Same | TVP ≤ 0.1 psia |

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| Rack No. | System | Material Transferred | Control Type (as permitted) | Control Type (as built) | Permit Limits |
|--|--------|----------------------|-------------------------------|-------------------------------|--|
| 6 | 6 | Asphalt | Mist Eliminator | Incinerator / Mist Eliminator | T'Put ≤ 4MM bbl/yr each rack; T'Put ≤ 9 MMbbl/yr for racks 6, 7, & 8 combined |
| 7 | 7 | Asphalt | Mist Eliminator | Incinerator / Mist Eliminator | |
| 8 | 8 | Asphalt | Mist Eliminator | Incinerator / Mist Eliminator | |
| 15 | 13 | Cutback Asphalt | Incinerator / Mist Eliminator | Incinerator / Mist Eliminator | |
| Tank Truck Loading/Unloading Racks | | | | | |
| 11 | 9 | Asphalt | Mist Eliminator | Incinerator / Mist Eliminator | |
| 13 | 11 | Asphalt | Mist Eliminator | Incinerator / Mist Eliminator | T'Put ≤ 6720 bbl/day |
| 26 | 23 | Asphalt | Incinerator / Mist Eliminator | Unloading only w/ CA for odor | |
| Tank Truck / Rail Car Loading/Unloading Racks | | | | | |
| (1) | 25 | Asphalt | Mist Eliminator | Same | ≤500K bbl/month total organic liquid |
| Tank Truck Unloading Racks | | | | | |
| 12 | 10 | Asphalt | None | Same | |
| 16 | 14 | Asphalt | None | Same | |
| 17 | 15 | Asphalt | None | Same | |

(1) Organic Loading/Unloading Facility (Asphalt Loading Arm)

The mist eliminators on the control systems for the loading racks are CECO filters. A description of these CECO filters is contained later in this evaluation. All of these asphalt loading racks utilize top loading arms. The loading arms are inserted into the truck through a hatch on top of the tank. The loading arm assembly is equipped with a hood that sets down over the hatch when the loading arm is fully inserted. There is not an air tight connection between the hood and the truck hatch. Piping that is connected to the hood transports vapors to the CECO filter. A blower is located downstream of the CECO Filter such that it is pulling a suction on the CECO filter and vapor collection hood. The blower turns on automatically whenever the loading arm is lowered down into the truck. Excess air is pulled in around the collection hood whenever the blower is in operation. With the proposed modifications, the exhaust of this blower will be routed into the suction of the air blower for the AB Stills Incinerator so that the additional air drawn into the vapor collection system will replace ambient air that would normally be drawn into the combustion air blower.

As discussed earlier, Rack No. 26, which was permitted for construction of a loading/unloading rack, was actually constructed as an unloading rack only with a carbon adsorber for odor control. The two proposed asphalt loading arms were not installed. Asphalt is unloaded from the bottom of the tank truck through a singular 4 inch unloading arm. During unloading, the track hatch is



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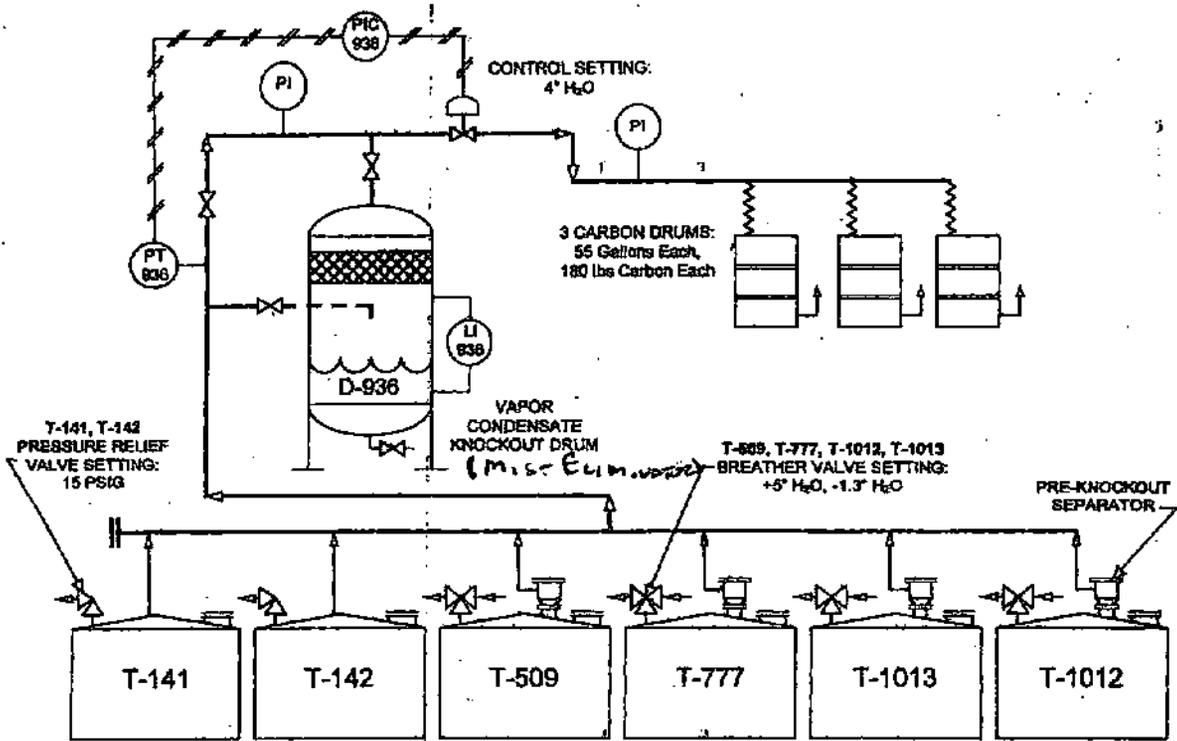
left open to prevent damage to the truck tank from the vacuum that is formed as material is pumped out of the tank. With the hatch open, there will be a net influx of gas (air) into the truck tank as asphalt is pumped out of the tank. There may be some minimal evolution of light VOCs from the tank hatch but the quantity is not expected to be substantial.

The rack is equipped with a vapor collection system/carbon adsorber for control of any odors from the unloading process. The vapor collection system consists of a hood assembly, which is connected to a downstream blower followed by a 200-lb carbon canister. The hood assembly is lowered over the hatch during loading. An interlock system prevents pumping of asphalt out of the truck unless the hood is lowered into place and the blower is in operation. There is not an air tight connection between the hood and hatch so ambient air is drawn into the hood along with any vapors from the tank truck. The exhaust from the blower is piped to a 55 gallon carbon adsorber (200 lbs.).

Storage Tanks

As shown below, the current vapor control system for the Polymer Modified Asphalt Tanks (PMA) utilize a combination of vapor balance, mist eliminator, and carbon adsorber.

POLYMER MODIFIED ASPHALT (PMA) TANK FARM VAPOR BALANCE SYSTEM



| | | |
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The vents of the tanks are connected to one another via a 12-inch diameter header and routed to a common condensate knockout drum with a fiber mesh filter that serves as a mist eliminator. Three parallel carbon adsorbers are located downstream of the mist eliminator. A pressure control valve located between the mist eliminator and the carbon adsorbers prevents vapors from flowing to the carbon adsorber until the pressure reaches 4 inches of water column. With this design, the tank vapor space, header, and mist eliminator serve as a vapor balance system in which the vapors from one PMA tank can flow into the vapor space of the other PMA tanks. There are also pre-knockout separators located at the vents of some of the tanks to help condense the vapors. The condensate collected from the pre-knockout separators is drained back into the respective tanks, while the condensate from the mist eliminator must be manually drained.

CECO Filters

Manufacturer's information for these CECO filters is contained in Appendix E. CECO Filter models utilized on the subject loading racks include Models DLM 121 and DLM 161.

CALCULATION:

Volatile Organic Compounds

Asphalt Vapor Pressure

All of the subject loading racks and storage tanks load or store asphalt material. Paramount produces a number of base asphalt products. According to Paramount, all of the product blends that they produce and store/load are produced from these base products. Since the product blends are produced by combining the various base products, the vapor pressure of the asphalt blends are not expected to exceed the vapor pressure of the base products.

Paramount has determined the vapor pressure of the base products through a test program that utilized the Residual Storage Vapor Pressure (RSVP) test method. This test method, which is for the determination of vapor pressure of asphalt and residual oils, has received District approval for SIP rule application. This method is appropriate for use in estimation of VOC emissions for each of the subject loading racks and storage tanks. A summary of the results of Paramount's vapor pressure testing is contained in the following table.

| Paramount Base Product | Asphalt Type | Vapor Pressure (psia @ storage temp.) | |
|------------------------|--------------|--|-------|
| | | 450°F | 500°F |
| MAC10 | | | 0.64 |
| MAC10 | | | 0.53 |
| MAC10 | | 0.36 | |
| MAC10 | | 0.33 | |
| 708 Saturant | Air Blown | | 0.05 |
| 708 Saturant | Air Blown | | 0.16 |



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| Paramount Base Product | Asphalt Type | Vapor Pressure (psia @ storage temp.) | |
|-------------------------|--------------|--|-------|
| | | 450°F | 500°F |
| 708 Saturant | Air Blown | | 0.20 |
| 748 Coating | Air Blown | | 0.25 |
| 748 Coating | Air Blown | | 0.29 |
| Oriente Flux | Flux | | 0.11 |
| Oriente Flux | Flux | | 0.10 |
| 207 Flux | Flux | | 0.20 |
| 207 Flux | Flux | | 0.17 |
| AR-4000/PG64-16/PG64-10 | Paving | | 0.24 |
| AR-4000/PG64-16/PG64-10 | Paving | | 0.25 |
| AR-8000/PG70-10 | Paving | | 0.22 |
| AR-8000/PG70-10 | Paving | | 0.13 |

The majority of the organic compound emissions from the asphalt storage tanks and loading racks are condensable organics that are volatilized at the elevated asphalt storage and loading temperatures. These condensable organics are effectively controlled with the CECO filters/mist eliminators. The assumed organic compound control efficiency for the mist eliminators is 95%. The majority of the organics that pass through the mist eliminators are believed to be gaseous VOC. A conservative control efficiency of 98% of these gaseous VOCs is assumed for the incinerator. VOC control efficiency for the incinerator measured during the March 1999 source test was 99.3%.

The exact breakdown of gaseous VOC and condensable organic emissions is not known for each of the asphalt products. Note that a significant portion of the condensable organics can be classified as either PM10 or VOC. For NSR purposes, all organic compound emissions to the atmosphere are assumed to be VOC. Since the controlled organic compound emissions are very low for the subject tanks and racks, the issue of whether the emissions should be classified as PM10 or VOC is not critical.

Asphalt Loading Racks

Six of the seven loading (or unloading) racks are post-NSR equipment since they have been constructed or modified after 10/07/76 with a resulting increase in the maximum potential to emit (PTE) for VOC. The six post NSR racks are Rack Nos. 6, 7, 8, 13, 26, and the organic liquids loading rack. Only Rack No. 11 is a pre-NSR equipment. The table below shows the current permitted throughput limits and the VOC maximum potential to emit (PTE) calculated for Regulation XIII. These racks are not conditioned with limits on loading temperature. Historic practice has been to place temperature limits on storage tanks but not loading racks. There is no source of heat in the loading systems so the asphalt is loaded at temperatures that are equal to or less than the storage temperature.



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NSR Loading Racks: PM and VOC Maximum PTE Estimated under Current PC or PO

| Rack No. | Process / System | Application for Current PC or PO | Current Permit Limits | | Current NSR Max. PTE (lb/day) | |
|----------|------------------|----------------------------------|-----------------------|-------------------|-------------------------------|------|
| | | | Material | Throughput | PM | VOC |
| 6 | 8 / 6 | 357904 | Asphalt | 4MM bbl/yr (2) | No estimate | 4.7 |
| 7 | 8 / 7 | 357031 | Asphalt | 4MM bbl/yr (2) | No estimate | 4.7 |
| 8 | 8 / 8 | 357032 | Asphalt | 4MM bbl/yr (2) | No estimate | 4.7 |
| 13 | 8 / 11 | 353045 | Asphalt | 6720 bbl/day (3) | No estimate | 1.0 |
| 26 | 8 / 23 | 353059 | Asphalt | 1.2MM bbl/yr (4) | No estimate | 0.28 |
| (1) | 8 / 25 | 357033 | Asphalt | 500,000 bbl/month | No estimate | 7.0 |

(1) Organic Liquid Rail Car Loading/Unloading Rack

(2) Permit also includes a total limit on Racks 6, 7, and 8 of 9 MMbbl/yr combined. This limit will be removed.

(3) This throughput limit is in the PO in Section D but was not carried over to the PC/temporary PO in Section H.

(4) This limit is the basis of NSR calculations for this tank but never put in the permit.

As discussed above, the District has approved the RSVP Method for determination of asphalt vapor pressure for emission estimation purposes. This approval was issued subsequent to the emission estimates shown in the table above for the current PCs or POs. In order to accurately estimate the change in VOC maximum PTE for each of the loading racks and storage tanks, the vapor pressures determined with the RSVP Method will be utilized to estimate the pre- and post-modification VOC maximum PTE.

The VOC emission estimation methodology for the asphalt loading racks is taken from Chapter 5.2 of the 5th Edition of EPA AP-42 (Jan. 1995). The equation follows:

$$L_L = \frac{12.46 \text{ SPM}}{T}$$

where:

L_L = loading loss, pounds per 1000 gallons (lb/M gal) of liquid loaded

S = saturation factor (AP-42, Table 5.2-1) = 1.45 [splash loading: dedicated normal service]

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia)

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole)

T = temperature of bulk liquid loaded, °R (°F + 460)

The equation is multiplied by the conversion factor of 42 gals/bbl to convert the equation from lb/Mgal to lb/Mbbl.

$$L_L = \frac{523.3 \text{ SPM}}{T}; \text{ where } L_L = \text{loading loss in lbs/ Mbbl of liquid loaded}$$



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Utilizing a worst case saturation factor of 1.45 (for splash loading) and a MW of 125 the loading emissions equations becomes:

$$L_L = \frac{98,642 P}{T} ; \text{ where } L_L = \text{lb/Mbbl of asphalt loaded}$$

Based on vapor pressure testing with the RSVP Method, a worst case vapor pressure of 0.5 psia is utilized for a worst case temperature of 500°F (960°R). Worst case loading emissions are estimated to be 51.4 lb/Mbbl of asphalt loaded [(98,642)(0.5)/(960)].

The following table shows the maximum PTE for each of the racks based on the same rack and control device configuration that the current NSR emissions are based on but using the vapor pressure measured with the RSVP method. In the table, the partially controlled emissions are the emissions following 95% control by the CECO filters. Full control includes the 95% control of the CECO filters and the 98% control of the AB Stills Incinerator. An estimation of VOC emissions is not required for Rack No. 11 since the only change to this pre-NSR rack is the connection of the CECO filter to the incinerator. This connection will yield a decrease in VOC emissions so NSR is not triggered.

NSR Loading Racks: Summary of Estimated Pre-Modification Maximum PTE for VOC Using RSVP Method Vapor Pressure

| Rack No. | Process/System | Current Throughput Limit (bbl/month) | Uncontrolled VOC Emissions | | Controlled VOC Emissions (lb/day) | |
|----------|----------------|--------------------------------------|----------------------------|------------|-----------------------------------|--------------|
| | | | lb/month | lb/day (2) | Partial Control | Full Control |
| 6 | 8 / 6 | 4MM bbl/yr | 17133. | 571. | 28.6 | 0.57 (4) |
| 7 | 8 / 7 | 4MM bbl/yr | 17133. | 571. | 28.6 | 0.57 (4) |
| 8 | 8 / 8 | 4MM bbl/yr | 17133. | 571. | 28.6 | 0.57 (4) |
| 13 | 8 / 11 | 6720 bbl/day | - | 345. | 17.3 | 0.35 (4) |
| 26 | 8 / 23 | 1.2MM bbl/yr | 5140. | 171. | na. (3) | 3.2 |
| (1) | 8 / 25 | 500,000 bbl/month | 25700. | 857. | 42.9 | (5) |

(1) Organic Liquid Rail Car Loading/Unloading Rack

(2) 30-day average

(3) Loading/Unloading Rack was proposed with a direct connection to the incinerator. The CECO filter was proposed as a standby control.

(4) In evaluation of request for increased rack throughput, the pre-modification estimate includes 98% control for incinerator since the connection was made prior to the request for increased throughput.

(5) The connection to the incinerator has not been made so pre-modification estimate does not include 98% control efficiency of the incinerator.

Since NSR maximum PTE is based on a 30-day average, it is District policy to convert annual throughput limits to monthly throughput limits. The monthly limit is calculated by dividing the annual throughput limit by twelve. As seen in Appendix F, Paramount argues that this method of



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calculation is not equitable since asphalt sales are seasonal with much higher asphalt sales during the summer months than the winter months. As a result, Paramount has requested to increase the monthly throughput limits to levels that will accommodate their highest sales months. Paramount's proposed throughput limits are shown in the following table.

NSR Loading Racks: Summary of Proposed Changes of Permit Limits

| Rack No. | Process / System | Current Permit Limits | | Proposed Permit Limits | |
|----------|------------------|-----------------------|-------------------|------------------------|------------------------|
| | | Material | Throughput | Material | Throughput (bbl/month) |
| 6 | 8 / 6 | Asphalt | 4MM bbl/yr (2) | Asphalt | 666,667 |
| 7 | 8 / 7 | Asphalt | 4MM bbl/yr (2) | Asphalt | 666,667 |
| 8 | 8 / 8 | Asphalt | 4MM bbl/yr (2) | Asphalt | 666,667 |
| 13 | 8 / 11 | Asphalt | 6720 bbl/day (3) | Asphalt | 666,667 |
| 26 | 8 / 23 | Asphalt | 1.2MM bbl/yr (4) | Asphalt | None (5) |
| (1) | 8 / 25 | Asphalt | 500,000 bbl/month | Asphalt | 666,667 |

(1) Organic Liquid Rail Car Loading/Unloading Rack

(2) Permit also includes a total limit on Racks 6, 7, and 8 of 9 MMbbl/yr combined.

(3) This throughput limit is in the PO in Section D but was not carried over to the PC/temporary PO in Section H.

(4) This limit is the basis of NSR calculations for this loading rack but never put in the permit.

(5) Will be an unloading rack only.

The following table shows the post-modification maximum PTE for each of the racks based on the proposed monthly throughput limits and connection of some of the racks to the H-907 incinerator. The loading equation is not utilized to estimate VOC emissions from Rack No. 26 since this rack is now an unloading rack only. As discussed earlier, there are no significant emissions from this unloading rack. The VOC emissions are estimated to be zero.

NSR Loading Racks: Summary of Post-Modification Maximum PTE for VOC

| Rack No. | Process/ System | Appl. No. | Proposed Throughput Limit (bbl/month) | Uncontrolled VOC Emissions (2) | | Controlled VOC Emissions (lb/day)(2) | |
|----------|-----------------|-----------|---------------------------------------|--------------------------------|--------|--------------------------------------|--------------|
| | | | | lb/month | lb/day | Partial Control | Full Control |
| 6 | 8 / 6 | 421387 | 666,667 | 34267. | 1142. | 57.1 | 1.14 |
| 7 | 8 / 7 | 421388 | 666,667 | 34267. | 1142. | 57.1 | 1.14 |
| 8 | 8 / 8 | 421390 | 666,667 | 34267. | 1142. | 57.1 | 1.14 |
| 13 | 8 / 11 | 421395 | 666,667 | 34267. | 1142. | 57.1 | 1.14 |
| 26 | 8 / 23 | 423441 | none (3) | 0 | 0 | 0 | 0 |
| (1) | 8 / 25 | 480174 | 666,667 | 34267. | 1142. | 57.1 | 1.14 |

(1) Organic Liquid Rail Car Loading/Unloading Rack



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- (2) 30-day average
- (3) Rack was constructed as an unloading rack only.

The change in VOC maximum PTE is shown in the table below.

NSR Loading Racks: Change in VOC Maximum PTE

| Rack No. | Process/ System | New Appl. No. | Controlled VOC Max. PTE (lb/day)(2) | | |
|----------|--------------------|---------------|-------------------------------------|----------|--------|
| | | | Pre-Mod | Post-mod | Change |
| 6 | 8 / 6 | 421387 | 0.57 | 1.14 | +0.57 |
| 7 | 8 / 7 | 421388 | 0.57 | 1.14 | +0.57 |
| 8 | 8 / 8 | 421390 | 0.57 | 1.14 | +0.57 |
| 13 | 8 / 11 | 421395 | 0.35 | 1.14 | +0.79 |
| 26 | 8 / 23 | 423441 | 3.2 | 0 | -3.2 |
| (1) | 8 / 25 | 482509 | 42.9 | 1.14 | -41.8 |

- 1.) Organic Liquid Rail Car Loading/Unloading Rack
- 2.) 30 day average

The change in VOC maximum PTE shown in the table above for Rack No. 26 and the Organic Liquid Rail Car Loading/Unloading Rack overstates the reduction in VOC emission under Regulation XIII (NSR) because the baseline NSR emissions for these racks are 0.3 and 7 lb/day, respectively. The actual change in VOC emissions under the Districts NSR regulation are shown in the table below for these racks. This table also shows adjustments that will be made to the NSR baseline VOC emissions for loading rack nos. 6, 7, 8, and 13. As discussed above, the maximum VOC emissions entered into the NSR database for the current applications are different than the pre-modification maximum PTE estimated in this evaluation due primarily to the difference in asphalt vapor pressure utilized in the calculations. The VOC emissions entered in the District's NSR database for the current applications will be adjusted to accurately account for the increase in VOC emissions for the proposed modifications for rack nos. 6, 7, 8, and 13. These adjustments are shown in the following table.

NSR Loading Racks: Change in VOC Emissions Under District Regulation XIII (NSR)

| Rack No. | Process/ System | Current Appl. No. | New Appl. No. | VOC Emissions (lb/day) (2) | | | |
|----------|--------------------|-------------------|---------------|----------------------------|-----------------------|-------------------|------------|
| | | | | Current NSR Baseline | Adjusted NSR Baseline | Post-Modification | Change (3) |
| 6 | 8 / 6 | 357904 | 421387 | 4.7 | 0.57 | 1.14 | +0.57 |
| 7 | 8 / 7 | 357031 | 421388 | 4.7 | 0.57 | 1.14 | +0.57 |
| 8 | 8 / 8 | 357032 | 421390 | 4.7 | 0.57 | 1.14 | +0.57 |
| 13 | 8 / 11 | 353045 | 421395 | 1.0 | 0.35 | 1.14 | +0.79 |
| 26 | 8 / 23 | 353059 | 423441 | 0.28 | 0.28 (4) | 0 | -0.3 |
| (1) | 8 / 25 | 357033 | 482509 | 7.0 | 7.0 (4) | 1.14 | -5.9 |



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- 1.) Organic Liquid Rail Car Loading/Unloading Rack
- 2.) Maximum PTE - 30 day average
- 3.) Change shown in NSR database after adjustment (if required)
- 4.) No adjustment required

Asphalt Storage Tanks

All of the subject tanks are post-NSR tanks with permit limits on the materials that can be stored, the maximum temperature the material can be stored at, and the annual throughput of the materials. As seen in the Permit History section, storage tanks T-141, T-142, T-509, and T-777 were constructed under permits to construct that were issued in 1997. Tank T-20 was constructed under PC issued in 1999. Tanks T-1012 and T-1013 were originally constructed prior to 10/08/76 but triggered NSR in 1997 with the issuance of permits to construct for installation of external mixers. The table below shows the current material, throughput, and storage temperature limits for each of the subject tanks along with the current VOC emissions entered into the District's NSR database for each tank.

Storage Tanks: PM and VOC Maximum PTE Estimated under Current PC or PO

| Tank No. | Device No. | Application for Current PC or PO | Current Permit Limits | | | NSR Max. PTE under Previous Appl. (lb/day) | |
|----------|------------|----------------------------------|-----------------------|----------------|--------------------|--|------|
| | | | Material | T'Put (bbl/yr) | Storage Temp. (°F) | PM | VOC |
| T-20 | 579 | 353068 | Asphalt | 600,000 | 350 | 0.0 | 0.02 |
| T-141 | 527 | 403451 | Asphalt | 300,000 | 500 | 0.13 | 0.0 |
| T-142 | 528 | 403452 | Asphalt | 300,000 | 500 | 0.13 | 0.0 |
| T-509 | 523 | 403453 | Asphalt | 600,000 | 500 | 0.28 | 0.0 |
| T-777 | 525 | 403454 | Asphalt | 600,000 | 500 | 0.30 | 0.0 |
| T-1012 | 273 | 403455 | Asphalt | 340,000 | 500 | 0.21 | 0.0 |
| T-1013 | 274 | 403456 | Asphalt | 340,000 | 500 | 0.21 | 0.0 |

The annual throughput limits for the subject storage tanks will be converted to monthly throughput limits. As discussed earlier, Paramount requests a monthly throughput limit that is higher than the current annual limit divided by 12 due to the seasonal nature of their business.

Storage Tanks: Summary of Proposed Changes of Permit Limits

| Tank No. | Device No. | Current Permit Limits | | | Proposed Permit Limits | | |
|----------|------------|-----------------------|----------------|--------------------|------------------------|-------------------|--------------------|
| | | Material | T'Put (bbl/yr) | Storage Temp. (°F) | Material | T'Put (bbl/month) | Storage Temp. (°F) |
| T-20 | 579 | Asphalt | 600,000 | 350 | Asphalt | 90,000 | 450 |
| T-141 | 527 | Asphalt | 300,000 | 500 | Asphalt | 90,000 | 500 |



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| Tank No. | Device No. | Current Permit Limits | | | Proposed Permit Limits | | |
|----------|------------|-----------------------|----------------|--------------------|------------------------|-------------------|--------------------|
| | | Material | T'Put (bbl/yr) | Storage Temp. (°F) | Material | T'Put (bbl/month) | Storage Temp. (°F) |
| T-142 | 528 | Asphalt | 300,000 | 500 | Asphalt | 90,000 | 500 |
| T-509 | 523 | Asphalt | 600,000 | 500 | Asphalt | 90,000 | 500 |
| T-777 | 525 | Asphalt | 600,000 | 500 | Asphalt | 90,000 | 500 |
| T-1012 | 273 | Asphalt | 340,000 | 500 | Asphalt | 100,000 | 500 |
| T-1013 | 274 | Asphalt | 340,000 | 500 | Asphalt | 100,000 | 500 |

As discussed previously, the District has approved the RSVP Method for determination of asphalt vapor pressure for emission estimation purposes. This approval was issued subsequent to the emission estimates shown in the table above for the current PCs or POs. In order to accurately estimate the emission increase for each of the tanks, the RSVP vapor pressures will be utilized to estimate the current (pre-modification) and post-modifications emissions for each tank. EPA Tanks 4.09d is utilized to estimated VOC emissions for each of the subject storage tanks. The EPA Tanks 4.09d printouts are contained in Appendix H.

As discussed previously, the PM/VOC control system for tanks T-141, T-142, T-509, T-777, T-1012, and T-1013 consists of a vapor balance system followed by a CECO filter and three carbon adsorbers. The control efficiency of the incinerator is conservatively assumed to be 98%. As a conservative assumption, no control credit is given for the vapor balance system. For this evaluation, the control efficiency of CECO filters is estimated to be 95% and the control efficiency of the subject carbon adsorbers is estimated to be 96%. A more detailed evaluation of the carbon adsorber efficiency is contained in the engineering evaluation for ANs 403451 – 403456 for these tanks. A copy of this discussion is contained in Appendix G. As discussed previously, a VOC control efficiency of 98% is utilized for the incinerator.

Storage Tanks: Pre-Modification VOC Maximum PTE Utilizing Vapor Pressure Measured with the RSVP Method

| Tank No. | Appl. No. | Material Stored | Max. Storage Temp. | Permitted T'Put (bbl/yr) | Uncontrolled VOC Max. PTE | | Controlled VOC Max. PTE (lb/day) | |
|----------|-----------|-----------------|--------------------|--------------------------|---------------------------|------------|----------------------------------|------------------|
| | | | | | lb/year | lb/day (1) | Partial Control (2) | Full Control (3) |
| T-20 | 448913 | Asphalt | 350 | 600,000 | 1916. | 5.3 | 0.27 | 0.01 |
| T-141 | 477239 | Asphalt | 500 | 300,000 | 4302. | 12.0 | 0.6 | 0.02 |
| T-142 | 479413 | Asphalt | 500 | 300,000 | 4302. | 12.0 | 0.6 | 0.02 |
| T-509 | 479418 | Asphalt | 500 | 600,000 | 9210. | 25.6 | 1.3 | 0.05 |
| T-777 | 479419 | Asphalt | 500 | 600,000 | 9904. | 27.5 | 1.4 | 0.06 |
| T-1012 | 479420 | Asphalt | 500 | 340,000 | 6861. | 19.1 | 1.0 | 0.04 |
| T-1013 | 477240 | Asphalt | 500 | 340,000 | 6861. | 19.1 | 1.0 | 0.04 |



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- (1) 30 day average
- (2) VOC emissions after CECO Filter
- (3) VOC emissions after Carbon Adsorber (except T-20, which is after incineration)

The following table contains the post-modification maximum PTE for VOC.

Storage Tanks: Post-Modification VOC Maximum PTE

| Tank No. | Appl. No. | Material Stored | Max. Storage Temp. | Proposed T'Put (bbl/month) | Uncontrolled VOC Max. PTE | | Controlled VOC Max. PTE (lb/day) | |
|----------|-----------|-----------------|--------------------|----------------------------|---------------------------|------------|----------------------------------|------------------|
| | | | | | lb/year | lb/day (1) | Partial Control (2) | Full Control (3) |
| T-20 | 448913 | Asphalt | 450 | 90,000 | 9137. | 25.4 | 1.27 | 0.03 |
| T-141 | 477239 | Asphalt | 500 | 90,000 | 14701. | 40.8 | 2.04 | 0.04 |
| T-142 | 479413 | Asphalt | 500 | 90,000 | 14701. | 40.8 | 2.04 | 0.04 |
| T-509 | 479418 | Asphalt | 500 | 90,000 | 15610 | 43.4 | 2.17 | 0.04 |
| T-777 | 479419 | Asphalt | 500 | 90,000 | 16304. | 45.3 | 2.27 | 0.05 |
| T-1012 | 479420 | Asphalt | 500 | 100,000 | 18328. | 50.9 | 2.55 | 0.05 |
| T-1013 | 477240 | Asphalt | 500 | 100,000 | 18328. | 50.9 | 2.55 | 0.05 |

- (1) 30 day average
- (2) VOC emissions after CECO Filter
- (3) VOC emissions after incinerator

The change in estimated VOC emissions for each of the subject tanks due to the proposed modifications and permit condition changes is summarized in the following table.

Storage Tanks: Change in VOC Maximum PTE

| Tank No. | Appl. No. | Material Stored | Max. Storage Temp. | Proposed T'Put (bbl/month) | Controlled VOC Max. PTE (lb/day)(1) | | |
|----------|-----------|-----------------|--------------------|----------------------------|-------------------------------------|----------|--------|
| | | | | | Pre-Mod | Post-mod | Change |
| T-20 | 448913 | Asphalt | 450 | 90,000 | 0.01 | 0.03 | +0.02 |
| T-141 | 477239 | Asphalt | 500 | 90,000 | 0.02 | 0.04 | +0.02 |
| T-142 | 479413 | Asphalt | 500 | 90,000 | 0.02 | 0.04 | +0.02 |
| T-509 | 479418 | Asphalt | 500 | 90,000 | 0.05 | 0.04 | -0.01 |
| T-777 | 479419 | Asphalt | 500 | 90,000 | 0.06 | 0.05 | -0.01 |
| T-1012 | 479420 | Asphalt | 500 | 100,000 | 0.04 | 0.05 | +0.01 |
| T-1013 | 477240 | Asphalt | 500 | 100,000 | 0.04 | 0.05 | +0.01 |

- 1.) 30 day average



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As shown previously, the emissions from most of the subject storage tanks are currently shown as PM10 in the NSR database. For the current applications, all emissions will be entered as VOC so the NSR database will show a small reduction in PM10 emissions and a small increase in VOC emissions.

Incinerator

With the proposed change in the firing rate limit from "18 MMBtu/hr" to "18 MMBtu/hr on an average daily basis", there is no change in the estimated maximum potential to emit (PTE) for any criteria air pollutants (CAPs) or toxic air contaminants (TACs) on a daily, monthly, or annual basis. For Regulation XIII, the 30-day average maximum PTE estimated under the application (AN 353056) for the current permit to construct will be updated using current emission factors. The estimate from AN 353056 and the estimate using current emission factors are shown in the following table. Note that the emissions from the stack gas reheater (duct burner) are not included since it is a separate permit unit.

Incinerator: Estimated Maximum PTE for Criteria Pollutants (lb/day)

| Pollutant | Max. Firing Rate | | AN 353056 Estimate | | Current Estimate | |
|-----------|------------------|-----------|--------------------|-------------|------------------|-------------|
| | | | Emission Factor | Maximum PTE | Emission Factor | Maximum PTE |
| | (MMBtu/hr) | (mmcf/hr) | (lb/MMBtu) | (lb/day) | (lb/mmcf) | (lb/day) |
| CO | 18 | 0.017 (1) | 0.08 (2) | 34.6 | 35 (3) | 14.3 |
| NOx | 18 | 0.017 (1) | 0.095 (2) | 41.0 | 151. (6) | 61.6 |
| PM10 | 18 | 0.017 (1) | 0.007 (3) | 3.0 | 7.5 (3)(4) | 3.1 |
| ROG | 18 | 0.017 (1) | 0.007 (3) | 3.0 | 7 (3) | 2.9 |
| SO2 | 18 | 0.017 (1) | 0.001 (3) | 0.4 | 0.83 (3)(5) | 0.34 |

(1) Based on a high heating value (HHV) of 1050 btu per scf of natural gas.

(2) Derived from EPA AP-42 emission factors.

(3) Default EF from Instruction Book for AER Program (Default EF for NG combustion; external, other) - see Appendix J

(4) Assume PM = PM10 for gaseous fuel fired combustion sources.

(5) Emission factor from SCAQMD Rule 2002.

(6) Derived from RECLAIM CEMS data. See discussion below.

Under AN 353056, the following emissions were entered:

- CO - 0.7 lb/day
- NOx - 16.3 lb/day
- PM10 - 7.7 lb/day
- ROG - 0.7 lb/day
- SOx - 0.5 lb/day

The entered emissions are the increase in estimated maximum PTE under AN 353056 and not the total maximum PTE. Also the emission increase for CO was erroneously entered for PM10 and vice versa. Since there is no actual increase in daily emissions of any of the pollutants under the



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AN 435397, the NSR entries for AN 353056 will be corrected to the maximum PTE estimated for the current application as shown in the table above. The emission increase for all pollutants in the NSR database for the current application will be zero.

With the proposed increase in maximum permitted hourly firing rate from 18 MMBtu/hr to 30 MMBtu/hr, there will be an increase in maximum PTE for both criteria and toxic air pollutants on an hourly basis. As discussed in more detail later, the maximum hourly emissions of NOx and SOx must be evaluated for District Rule 2005 and the acute health impacts of the increase in maximum hourly emissions of TACs must be evaluated for District Rule 1401. The maximum hourly emissions for NOx and SOx and for TACs from the incinerator are shown in the tables below. Note that the NOx emission factor was derived from RECLAIM CEMS data for incinerator for the period of Feb. – April of 2008. As seen in Appendix I, the data was sorted by the daily average firing rate and the emission factor is based on NOx data from days with a daily average firing rate greater than 10 MMBtu/hr. The developed emission factor is a conservative factor because it does not take into account natural gas fired in the gas reheater (duct burner), which is located downstream of the incinerator. The increase in SOx emissions is based on the increase from natural gas firing. The vast majority of SOx emitted from the incinerator comes from the air blowing stills. The permitted capacity of the air blowing stills is not impacted by the proposed changes in incinerator firing rate so there will not be any increase in the maximum potential SOx emissions from the blowing stills.

Incinerator: Estimated Maximum Hourly Emissions for NOx and SOx (lb/hr)

| CAP Type | Emission Factor (lb/MMCF) | Current (18 MMBtu/hr) | | Proposed (30 MMBtu/hr) | | Emission Increase (lb/hr) |
|----------|---------------------------|-----------------------|-------------------|------------------------|-------------------|---------------------------|
| | | NG Flow (MMCF/hr) (1) | Emissions (lb/hr) | NG Flow (MMCF/hr) (1) | Emissions (lb/hr) | |
| NOx | 151 (2) | 1.71×10^{-2} | 2.57 | 2.86×10^{-2} | 4.32 | 1.75 |
| SOx | 0.83 (3) | 1.71×10^{-2} | 0.014 | 2.86×10^{-2} | 0.024 | 0.01 |

1. Based on a HHV of 1050 BTU/SCF
2. Derived from RECLAIM CEMS data.
3. Default EF from District Rule 2002

For Rule 1401, a Tier 1 screening risk assessment was performed using the estimated increase in maximum hourly potential TAC emissions. A Tier 1 screening analysis utilizes the most conservative receptor distance regardless of whether the receptor is commercial or residential. A conservative receptor distance of 25 meters was used in the assessment. There is no increase in cancer/chronic risk since there is no increase in daily, monthly, or annual TAC emissions. There is an increase in acute risk since there is an increase in maximum hourly TAC emissions. The increase in maximum hourly TAC emissions is shown in the table below. Using these emission increases, the total acute pollutant screening index (PSI) from the Tier 1 screening analysis is 0.33. The incinerator passes screening risk assessment since the acute PSI is less than 1.0. Documentation for the risk assessment is contained in Appendix J.



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Estimate of Increase in Maximum Potential Hourly TAC Emissions

| Toxic Air Contaminant | Emission Factor (lb/MMCF) (1) | Current (18 MMBtu/hr) | | Proposed (30 MMBtu/hr) | | Emission Increase (lb/hr) |
|-------------------------|-------------------------------|-----------------------|------------------|------------------------|------------------|---------------------------|
| | | NG Flow (MMCF/hr) (2) | Emission (lb/hr) | NG Flow (MMCF/hr) (2) | Emission (lb/hr) | |
| Benzene | 5.80E-03 | 1.71E-02 | 9.92E-05 | 2.86E-02 | 1.66E-04 | 6.67E-05 |
| Formaldehyde | 1.23E-02 | 1.71E-02 | 2.10E-04 | 2.86E-02 | 3.52E-04 | 1.41E-04 |
| PAH (excl. Naphthalene) | 1.00E-04 | 1.71E-02 | 1.71E-06 | 2.86E-02 | 2.86E-06 | 1.15E-06 |
| Naphthalene | 3.00E-04 | 1.71E-02 | 5.13E-06 | 2.86E-02 | 8.58E-06 | 3.45E-06 |
| Acetaldehyde | 3.10E-03 | 1.71E-02 | 5.30E-05 | 2.86E-02 | 8.87E-05 | 3.57E-05 |
| Acrolein | 2.70E-03 | 1.71E-02 | 4.62E-05 | 2.86E-02 | 7.72E-05 | 3.11E-05 |
| Propylene | 5.30E-01 | 1.71E-02 | 9.06E-03 | 2.86E-02 | 1.52E-02 | 6.10E-03 |
| Toluene | 2.65E-02 | 1.71E-02 | 4.53E-04 | 2.86E-02 | 7.58E-04 | 3.05E-04 |
| Xylenes (Total) | 1.97E-02 | 1.71E-02 | 3.37E-04 | 2.86E-02 | 5.63E-04 | 2.27E-04 |
| Ethylbenzene | 6.90E-03 | 1.71E-02 | 1.18E-04 | 2.86E-02 | 1.97E-04 | 7.94E-05 |
| Hexane | 4.60E-03 | 1.71E-02 | 7.87E-05 | 2.86E-02 | 1.32E-04 | 5.29E-05 |

1. The emissions factors utilized in this estimate were developed by the California Air Resources Board for use in AB2588 emissions inventories for natural gas fired external combustion equipment. Documentation of these emission factors, as compiled by the Ventura County Air Pollution Control District, is contained in Appendix J.
2. Based on a HHV of 1050 BTU/SCF

EVALUATION AND RULE REVIEW:

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed "projects" be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. According to the District's CEQA Guidelines, the net emission increase thresholds for significant effect are:

CO: 550 lb/day
 NOx: 55 lb/day
 PM10: 150 lb/day
 SOx: 150 lb/day
 VOC: 55 lb/day

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CEQA analysis is not required for the proposed modifications since there is no exceedance of any of these net emission increase thresholds and there are no other significant environmental impacts. On all 400-CEQA forms, Paramount marked "No" for all of the additional criterion that may trigger CEQA. For these reasons, CEQA does not apply.

Regulation II: Permits

Rule 212: Standards for Approving Permits

212(c)(1) – Public notice is required for a project if any of the modified permit units are located within 1000 feet of a school unless the modification will result in a reduction of emissions of air contaminants from the facility and no increase in health risk at any receptor location or the modification has no potential to affect emissions. There are two schools within 1000 feet of portions of the refinery. As shown on the map in Appendix K, the AB Stills Incinerator (H-907) and all of the subject storage tanks and loading racks are more than 1000 feet from the two schools. Public notice is not required under this clause.

212(c)(2) – Under this clause, a project requiring notice is "any modified facility which has on-site emission increases exceeding any of the daily maximums specified in subdivision (g)". The threshold from subdivision (g) are shown in the table below. 30-day average data is utilized in this. Under this section, the daily air contaminant emissions from each project are evaluated on a 30-day average basis. For the sake of argument, it will be assumed that all of the subject applications make up one project.

Public notice is not required since there is no change in the emission of CO, NOx, PM10, or SOx on a 30-day average basis and there is a net decrease in VOC emissions.

212(c)(3): Public notice is required for a project if any of the modified permit units have an increase in toxic air contaminants that results in an increase of maximum individual cancer risk (MICR) of more than one in a million (1×10^{-6}) during a lifetime (70 years). As discussed in additional detail in the evaluation of Rule 1401, none of the modifications to individual permit units result in an increase in MICR of more than 1×10^{-6} . Public notice is not required under this clause.

212(g): 212(g) specifies that any new or modified sources subject to Regulation XIII which undergo construction or modifications resulting in an emissions increase exceeding any of the daily maximum emission thresholds (listed in the table above) will require notification. From Regulation XIII (Rule 1302), the definition of "Source" is any permitted individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant. This includes any permit unit at any non-RECLAIM facility and any device at a RECLAIM facility.

Public notice is not required under this clause since none of the subject permit units have emission increases that exceed the 212(g) thresholds.

Rule 218: Continuous Emissions Monitoring

This rule includes requirements for all CEMS except:



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- CEMS subject to RECLAIM (Regulation XX); Regulation IX - "New Source Performance Standards (NSPS)", Regulation X - National Emission Standards for Hazardous Air Pollutants (NESHAPS), or Regulation XXXI - "Acid Rain Program".
- CEMS subject to permit conditions where the purpose of the CEMS is to monitor the performance of the basic and/or control equipment and not to determine compliance with any applicable limit or standard.
- CEMS where alternative performance specifications are required by another District rule.

The incinerator stack is equipped with NO_x and SO₂ CEMS. These CEMS are not subject to this rule since they were installed and are utilized for compliance with RECLAIM. The SO₂ CEMS was also installed for compliance with NSPS Subpart J. A discussion of the certification of the NO_x and SO₂ CEMS is contained in the evaluation of the RECLAIM Regulation.

Regulation IV: Prohibitions

Rule 401: Visible Emissions

This rule specifies that a person shall not discharge emissions from a source for a period or periods aggregating more than three minutes in any one hour which are as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or emissions of such opacity that it obscures an observers view to an equal or greater level. This is equivalent to opacity of 20%. The incinerator exhaust stream does not have any history of elevated opacity or visible emissions. The connection of the vent streams for the additional asphalt loading arm and the six asphalt storage tanks is not expected to impact the opacity of the incinerator exhaust stream. Continued compliance with this regulation is expected.

Rule 402: Nuisance

Loading Rack Nos. 6, 7, 8, 11, and 13 have been connected to the incinerator since 2000 with no nuisance complaints. For the asphalt loading arm and asphalt storage tanks that are proposed for connection to the incinerator, it is expected that the incinerator will provide equal or improved emission control to existing controls so there is no expected increase in nuisance potential.

Rule 404: Particulate Matter - Concentration

Stack PM concentrations for this gas fired incinerator are expected to be well below the limit specified in this rule. As seen in Appendix L, PM emissions during a January 1999 source test averaged 0.013 gr/dscf for the three one hour test runs. The source test was performed during worst case operation of the air blowing stills and incinerator. This PM emission level is well below the Rule 404 PM limit of 0.083 gr/dscf for the average stack gas flow of 7738 dscfm during the three test runs. The vent streams from the additional asphalt loading arms and storage tanks are not expected to significantly impact PM emissions. Compliance with this rule is expected.

Rule 405: Solid Particulate Matter – Weight

This rule sets solid PM mass emission limits for the processing of solid materials. It is not applicable to combustion sources such as the incinerator. None of the sources covered under this evaluation are subject to the requirements of this rule.



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Rule 407: Liquid and Gaseous Air Contaminants

Compliance with the 2000-ppm emission limit for CO is expected. The CO emissions from the incinerator/scrubber during a January 1999 source test averaged 6 ppm over three test runs. The SOx emission limit in this rule does not apply since the incinerator is subject to RECLAIM.

Rule 409: Combustion Contaminants

This rule contains a limit on combustion contaminants from the combustion of fuel of 0.23 gram per cubic meter (0.1 grain per cubic foot) of flue gas (15 minute avg. at 12% CO₂). As shown in the evaluation of Rule 404, the average PM concentration in the incinerator stack gas during the January 1999 source test was 0.0128 gr/dscf at an average CO₂ concentration of 6.44%. The PM concentration is corrected to 12% CO₂ by multiplying the as measured PM concentration by (12 ÷ 6.44). The average PM concentration in the incinerator stack gas was 0.024 gr/dscf at 12% CO₂. The average PM concentration is well below the limit of this rule. Compliance with this rule is expected.

Rule 462: Organic Liquid Loading

(b)(2) A CLASS "A" FACILITY is any facility that loads 20,000 gallons or more on any one day of organic liquids into any tank truck, trailer, or railroad tank car. Organic liquid is any liquid compound containing the element carbon that has a vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual loading conditions excluding liquefied petroleum gases (LPG), methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

As seen from analytical results shown in the calculation section of this evaluation, the vapor pressure of each type of asphalt produced at Paramount is below 1.5 psia at storage temperatures. For this reason, these asphalts are not "organic liquids" under the definition in this rule. The Asphalt loading racks at Paramount are not subject to this rule since they do not load "organic liquids".

Rule 463: Storage of Organic Liquids

This rule is applicable to storage tanks with a storage volume of greater than 19,815 gallons (471.8 barrels), which store organic liquids. An organic liquid is defined as any liquid containing VOCs. Tanks T-509, T-777, T-1012 and T-1013 all store organic liquids and have storage capacities greater than 19,815 gallons (471.8 barrels).

The primary requirements of this rule are specified at 463(c). These requirements are applicable to tanks with a capacity greater than 39,630 gallons that store any organic liquid with a true vapor pressure of 0.5 psia or greater under actual storage conditions, and tanks with a storage capacity between 19,815 and 39,630 gallons that store any organic liquid true vapor pressure of 1.5 psia or greater under actual storage conditions. As explained in the calculation section, all of the subject tanks are permitted to store asphalt at a maximum temperature of 500°F. Vapor pressure test data submitted by Paramount shows that the vapor pressure of MAC10 asphalt may exceed 0.5 psia at 500°F. Based on the analytical data, the vapor pressure for other types of asphalt is less than 0.5 psia at 500°F. Only Tanks T-1012 and T-1013 have capacities greater than 39,630 gallons. For these reasons, Tanks T-1012 and T-1013 will be subject to Rule 463 when storing MAC10 asphalt.



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The primary requirements at 463(c)(3) include:

- Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a vapor-tight cover which shall be closed at all times except during gauging or sampling. The tank roof shall be properly maintained to be vapor tight with no holes, tears or uncovered openings. [463(c)(3)(A)]. These tanks are equipped with the required vapor tight covers. Compliance is expected.
- All piping, valves and fittings shall be constructed and maintained in a vapor-tight condition, in accordance with requirements of other District rules for such equipment. [463(c)(3)(B)]. Compliance is expected.
- The vapor recovery system shall have an efficiency of at least 95 percent by weight [463(c)(3)(C)]. The vent streams from each of these tanks will be controlled with a CECO filter followed by the incinerator. This combined control efficiency is greater than 99%. Compliance is expected.

Condition H23.18, which is tagged to all six of the asphalt storage tanks, specifies that the tanks are subject to the applicable requirements of Rule 463(c). This condition will be removed from storage tanks T-141, T-142, T-509, and T-777 since none of these tanks are subject to the requirements of 463(c).

Rule 470: Asphalt Air Blowing

This rule requires that "a person shall not operate or use any equipment for the air blowing of asphalt unless all gases, vapors and gas-entrained effluents from such equipment are: (a) Incinerated at temperatures of not less than 760°C (1400°F) for a period of not less than 0.3 second". Paramount monitors and records the incinerator temperature. Paramount operates the incinerator with a daily average temperature of near 1600°F. According to Paramount, the incinerator is operated at this temperature to improve odor control. The greatest load to the incinerator will occur during operation of the air blowing stills. The 1999 source test was performed during air blowing operation. The wet stack gas flow rate averaged just less than 11,000 scfm during the source testing at a firing rate of 14 MMBtu/hr. A conservative estimate of the maximum stack gas flowrate is to ratio this flow up to the maximum firing rate of 30 MMBtu/hr by multiplying 11,000 scfm by 30/14. This methodology is conservative since it assumes that the waste gas load to the incinerator will more than double but the increase in waste gas load due to the connection of the new vent gas streams will be much less than this. Using this conservative methodology, the estimated maximum gas flow through the incinerator is 23,570 scfm.

The incinerator combustion temperature is measured at the exit of the combustion chamber. The incinerator's combustion chamber has an internal diameter of 9 ft. and length of 21 ft. Based on these dimensions, the internal volume is 1335 ft³ [(3.14)(4.5ft)²(21ft)]. At 1600°F, the gas volume would be 91,600 cfm [((1600°F+460)/(70°F+460))(23570scfm)] or 1527 ft³/sec. The estimated residence time is 0.87 seconds [1335 ft³ / 1527 ft³/sec]. The residence time in the incinerator is above the minimum residence time requirement of this rule. Continuing compliance with the requirements of this rule is expected.

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Regulation IX: Standards of Performance for New Stationary Sources (NSPS)

40CFR60: Subpart J: Standards of Performance for Petroleum Refineries

This regulation is applicable to any fuel gas combustion device which commences construction or modification after June 11, 1973. The AB Stills Incinerator is subject to this NSPS since it was constructed in 1999.

Fuel gas is defined as "any gas that is generated at a petroleum refinery and which is combusted". The primary fuel, natural gas, does not qualify as a fuel gas under this definition but all of the gas streams that are incinerated in this device meet the definition of a fuel gas.

60.104(a): Standards for Sulfur Oxides – The operator shall not "burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H₂S in excess of 230 mg/dscm (160 ppmv).

60.105(a): Monitoring of Emissions and Operations – (3) This clause permits continuous monitoring of stack SO₂ emissions to show compliance with the 160 ppmv H₂S fuel gas limit in lieu of continuous monitoring of the fuel gas H₂S concentration. The stack SO₂ "monitoring level equivalent" is 20 ppmv (dry, 0% excess O₂, 3-hr avg.). Paramount has chosen the SO₂ CEMS compliance option. The 3-hr average SO₂ concentrations (0% excess O₂) for the period of 11/01/06 to 2/29/08 are shown in Appendix M. As seen in the data, there were some periods of exceedance of the 20 ppmv SO₂ limit. Exceedances are allowed under this regulation.

Reporting Requirements: §60.7(c) requires that "each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report and/or the summary report form to the administrator semiannually". This report must be postmarked by the 30th day following the end of each six-month period. According to §60.105(e), for the purpose of reports under §60.7(c), periods of excess emissions that shall be determined and reported are defined as "all rolling 3-hour periods during which the average concentration of SO₂ as measured by the SO₂ continuous monitoring system under 60.105(a)(3) exceeds 20 ppm".

According to 60.7(d), only a summary report must be submitted if the total duration of excess emissions is less than 1 percent of the total operating time or the reporting period and the duration of the CMS downtime is less than 5 percent of the total operating time for the reporting period. If either of these thresholds is exceeded, both the summary report and a the excess emissions report, which among other things includes specification of corrective action or preventative measures taken in regards to periods of excess emissions, must be submitted.

A copy of Paramount's semi-annual reports for the 2007 are contained in Appendix M. Only a summary report was submitted since the total duration of reported excess emissions for SO₂ was 0.62% and 0.27% for the 1st and 2nd half of 2007 respectively. SO₂ CEMS downtime is 1.29% and 0.14%, respectively. The subject summary reports contain all of the information specified at 60.7(d).



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Connection of the vent streams for the additional asphalt loading arm and storage tanks will yield a minimal increase in the SO₂ load from the incinerator. Compliance with the requirements of this regulation is not expected to be impacted. Compliance is expected.

40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Storage Vessels (Including Petroleum Liquids Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Applicable facilities under this subpart are storage vessels with a capacity greater than 20,000 gallons that are used to store volatile organic liquids (VOL's) for which construction, reconstruction, or modification is commenced after July 23, 1984. Six of the asphalt storage tanks in this evaluation were constructed or modified after July 23, 1984.

60.110b(c) – Storage tanks with a capacity greater than or equal to 40,000 gallons storing a liquid with a max. TVP less than 0.5 psia or with a capacity greater than or equal to 20,000 but less than 40,000 gallons storing a liquid with a max. TVP less than 2.2 psia are exempt from the General Provisions (part 60, subpart A) and from the provisions of this subpart.

As discussed in the evaluation of Rule 463, only tanks T-1012 and T-1013 have a capacity greater than 40,000 gallons. These tanks may be subject to this NSPS when storing MAC10 asphalt.

60.112b – This section specifies control requirements for the following tanks:

- Capacity ≥ 151 m³ (39,626 gals) and liquid VP ≤ 5.2 kPa (0.75 psia)
- Capacity ≥ 75 cu. m (19,813 gallons) and ≤ 151 m³ (39,626 gals) with liquid VP ≤ 27.6 kPa (4.0 psia)

Since the vapor pressure of MAC10 asphalt is less than 0.75 psia at the temperature limit of 500°F, tanks T-1012 and T-1013 are not subject to the control requirements of this regulation.

40CFR60: Subpart UU: Standards of Performance for Asphalt Processing and Asphalt Roofing.

The applicable portions of this NSPS apply to asphalt storage tanks and blowing stills that were constructed or modified after May 26, 1981 at asphalt processing plants and petroleum refineries. The following tanks from this evaluation are subject to this regulation: T-20 (D579), T-509 (D523) and T-777 (D525). Condition H23.14, which is tagged to these tanks, specifies the applicability of this regulation.

60.472(c) specifies that exhaust gas from subject asphalt storage tanks shall not have an opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. Since the subject tanks are equipped with both a mist eliminator and incinerator for control of PM and VOC emissions, the exhaust gases are not expected to have opacity greater than 0 percent under normal operation. Compliance with this opacity limit is expected.

60.473(b) requires that afterburners utilized to comply with this NSPS shall have the temperature in the combustion zone continuously monitored and recorded. Condition C8.1, which specifies a 1400°F temperature limit for the incinerator, also requires continuous monitoring and recording

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of the combustion zone temperature. As discussed previously, Paramount routinely operates the incinerator at 1600°F for improved odor control.

Regulation X: National Emission Standards for Hazardous Air Pollutants (NESHAPS)

40CFR63: Subpart CC: National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries

Paramount has provided data to the District to show that that the refinery is not a major HAP source, which is defined as a source that emits 10 tons/year of any one HAP or 25 tons/yr total of all HAPs combined.

Regulation XI: Source Specific Standards

Rule 1178: Further Reductions of VOC emissions from Storage Tanks at Petroleum Facilities

This rule is applicable to this facility since it is a petroleum refinery with facility wide VOC emissions exceeding the 20 ton/year VOC threshold.

This rule applies to all aboveground storage tanks that have capacity equal to or greater than 75,000 liters (19,815 gallons) and are used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions.

1178(i)(3) – The methodology for determining the subjectivity of tanks storing liquids at elevated temperatures is specified in this clause. Organic liquids that are stored at above ambient temperatures with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature TAdj as determined by ASTM Method D-86 of:

$$T_{Adj} = 300 \text{ oF} + T_l - T_a$$

Where: T_l = Liquid Storage Temperature (oF)
 T_a = Ambient Temperature (oF) = 70 oF

ASTM Method D-86 cannot be used to test asphaltic materials due to high quantities of residual material. Since the specified test method cannot be utilized on asphalt, it is determined that tanks storing asphalt are not subject to this rule.

Regulation XIII: New Source Review

Rule 1303: Requirements (December 6, 2002)

This rule allows the Executive Officer to deny a Permit to Construct for any new, modified or relocated source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is used. This rule also requires modeling and offset (among other requirements) if there is a net increase in any non-attainment air contaminants for any new or modified source.

The South Coast Air Basin (SOCAB) is designated in attainment for the CO, NOx and SOx National Ambient Air Quality Standards (NAAQS). The following are currently considered non-

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attainment air contaminants: NOx, SOx, PM₁₀, and VOC. VOC & NOx are included since they are precursors for ozone. VOC, NOx, and SOx are included as PM-10 precursors. Note that although the SOCAB has been designated in attainment with the CO NAAQS, combustion sources will continue to be subject to CO BACT requirements per District policy. Other requirements of this regulation are not applicable for CO.

The Paramount Refinery is a Cycle 1 RECLAIM Facility that is subject to both the NOx and SOx requirements of District Regulation XX: Regional Clean Air Incentive Market (RECLAIM). New Source Review requirements for NOx and SOx are specified in Rule 2005, which is part of Regulation XX. The NSR requirements of Rule 2005 are discussed later in this evaluation.

Rule 1303(a)(1): Best Available Control Technology (BACT)

Any new or modified source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia, must employ BACT for the new or relocated source or for the actual modification to an existing source. Per District policy, BACT is required for any increase in emissions that exceeds 1.0 lb per day on a maximum daily basis.

Loading Racks and Storage Tanks: As seen in the Calculation Section, none of the loading racks or storage tanks have an increase in VOC emissions if 1.0 lb/day or greater. BACT is not required on any of the loading racks or storage tanks.

AB Stills Incinerator: As discussed in the Calculation Section of this evaluation, the connection of the subject loading racks and storage tanks to the incinerator and the proposed change in the permitted firing rate limit from "18 MMBtu/hr" to "18 MMBtu/hr on an average daily basis" will not result in the increase maximum potential to emit of CO, PM10, or VOC on a 30-day average basis. BACT is not required for CO, PM10, or VOC.

1303(b) – The Executive Officer or designee shall "deny the Permit to Construct for any new or modified source which results in a net emission increase of any non-attainment air contaminant at a facility", unless the requirements specified in 1303(b)(1) through 1303(b)(5) are met.

As stated in an email from Mr. Mohsen Nazemi, the Deputy Executive Officer of the District's Engineering and Compliance Office, "we consider all emission increases associated with the applications(s) for a new facility or project to determine the offset requirements for the new facility or project". Due to a recent court ruling, the District has suspended its internal bank of emission reduction credits (ERCs), also known as offset credits. One function of the internal bank was to provide offset credits to fund offset exemptions specified in Rule 1304 including concurrent facility modifications. For this reason, an emission decrease from one permit unit cannot currently be utilized to net out an emission increase of the same pollutant from another permit unit being modified under the same project. Paramount will provide ERCs to offset the total cumulative VOC emission increase for the permit units in this project that have an emission increase. .

Project emissions netting is also not used in this evaluation to determine the applicability of the other requirements in 1303(b). It is assumed that all 1303(b) requirements are applicable since there is at least one permit unit in this project that has an increase in maximum PTE for a Regulation XIII pollutant.



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Rule 1303(b)(1): Modeling

The applicant must substantiate with modeling that the new facility or modification will not cause a violation, or make significantly worse an existing violation of any state or national ambient air quality standards at any receptor location in the District. According to 1306(b), the new total emissions for modified sources shall be calculated on a pound per day basis for determination of BACT and modeling applicability. The modeling procedures are discussed in Appendix A to the rule.

Modeling is not required for any permit units being modified under this project because it is specified in Appendix A that modeling is not required for VOC.

Rule 1303(b)(2): Offsets

By District policy, offsets are required for an increase in maximum daily PTE of 0.5 lb/day or more for a project. The cumulative emission increase for permit units in this project that have an emission increase is shown in the following table.

Project VOC Emission Increase

| Equipment | Application No. | Emission Increase (lb/day) |
|-----------------|-----------------|----------------------------|
| Rack No. 6 | 421387 | +0.57 |
| Rack No. 7 | 421388 | +0.57 |
| Rack No. 8 | 421390 | +0.57 |
| Rack No. 13 | 421395 | +0.79 |
| Tank No. T-20 | 448913 | +0.02 |
| Tank No. T-141 | 477239 | +0.02 |
| Tank No. T-142 | 479413 | +0.02 |
| Tank No. T-1012 | 479420 | +0.01 |
| Tank No. T-1013 | 477240 | +0.01 |
| Total | | 2.58 |

Paramount will provide VOC ERCs in the amount of 3 lbs/day ($2.58 \times 1.2 = 3.10 \sim 3.0$) to offset project emission increases. In the District's NSR database, VOC ERCs in the amount of 1 lb/day will be applied to each of the following applications: 421387, 421388, and 421395.

1303(b)(3) - Sensitive Zone Requirements: This section pertains to Emission Reduction Credits (Arcs) for facilities in the South Coast Air Basin (SOCAB). Except for credits that are obtained from the Priority Reserve, facilities are subject to the Sensitive Zone requirements (H&SC Section 40410.5) for Arcs. A facility in zone 1 may obtain Arcs originated in zone 1 only, and a facility in zone 2A may obtain Arcs from either zone 1 or zone 2A.

Paramount is located in Zone 1. Therefore, emission reduction credits will be obtained from the same Zone 1. Compliance with this requirement is expected.



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1303(b)(4) - Facility Compliance: The facility must be in compliance with all applicable rules and regulations of the District. As discussed in the Compliance Record Review section, there are two outstanding Stipulated Orders For Abatement: Case Nos. 2914-72 and 2914-90. However, as agreed in the meeting with Jay Chen, compliance to the SOFAs will be considered compliance to the requirements of Rule 1303(b)(4). Therefore, by issuing permits for subject pieces of equipment (Incinerators H-402 and H-907) covered by both SOFAs, the facility will be brought to compliance. Compliance with this requirement is expected.

1303 (b)(5) - Major Polluting Facilities: Any new major polluting facility or major modification at an existing major polluting facility must comply with the requirements summarized below. A major modification is defined in 1302(r) as any modification at an existing major source that will cause

- an increase of one pound per day or more, of the facility's potential to emit (PTE) for NO_x or VOC if the facility is located in the SOCAB, or
- an increase of 40 tons per year or more, of the facility's PTE for SO_x, or
- an increase of 15 tons per year or more, of the facility's PTE for PM₁₀; or,
- an increase of 50 tons per year or more, of the facility's PTE for CO.

This project qualifies as a "major modification: since the increase in VOC emissions is greater than 1 lb/day.

(A) Alternative Analysis - Applicant must conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with that project. In lieu of conducting an alternative analysis, Paramount meets the requirements of this subparagraph through compliance with the California Environmental Quality Act (CEQA) in accordance with Rule 1303(b)(5)(D)(i).

(B) Statewide Compliance: The applicant must demonstrate that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by the applicant in the State of California are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act. Paramount complies with this requirement by certification. The certification letter is included in Appendix P.

(C) Protection of Visibility - A modeling analysis for plume visibility is required if the net emission increase exceeds 15 tons/yr of PM₁₀ or 40 tons/yr of NO_x. This requirement does not apply since there is no increase in annual PM or NO_x emissions.

(D) Compliance through California Environmental Quality Act - The CEQA Applicability Form (400-CEQA) submitted by Paramount indicates that the project does not have any impacts which trigger the preparation of a CEQA document; therefore a CEQA analysis is not required.

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Regulation XIV: Toxic Air Contaminants

Rule 1401 New Source Review of Toxic Air Contaminants

Requirements – Rule 1401 contains the following requirements:

- 1) *(d)(1) MICR and Cancer Burden* - The cumulative increase in MICR which is the sum of the calculated MICR values for all toxic air contaminants emitted from the new, relocated or modified permit unit will not result in any of the following:
 - (A) an increased MICR greater than one in one million (1.0×10^{-6}) at any receptor location, if the permit unit is constructed without T-BACT;
 - (B) an increased MICR greater than ten in one million (1.0×10^{-5}) at any receptor location, if the permit unit is constructed with T-BACT;
 - (C) a cancer burden greater than 0.5.
- 2) *(d)(2) Chronic Hazard Index* - The cumulative increase in total chronic HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location.
- 3) *(d)(3) Acute Hazard Index* - The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location.

Analysis –

Asphalt Racks and Tanks – Asphalt does not contain appreciable concentrations of listed TACs. Additionally, low VOC emission increases for the tanks and racks supports the judgment that there are no significant emission increases for any TACs. A health risk assessment is not warranted. Compliance is expected.

AB Stills Incinerator – As seen in the Calculation Section, the incinerator passed a Tier 1 health risk screening analysis. Compliance is expected.

Regulation XVII - Prevention of Significant Deterioration (PSD)

The PSD program is the federal New Source Review (NSR) program for pollutants for which an area is in attainment with or unclassified with respect to a National Ambient Air Quality Standard (NAAQS). As discussed earlier, SOCAB is currently designated as attainment with Nabs for SO₂, NO₂, CO, and Lead. Hydrogen Sulfide is not classified in terms of attainment status but it is a PSD pollutant for which there is an existing NAAQS and a PSD significance threshold has been established.

AQMD and EPA have signed a “Partial PSD Delegation Agreement”. According to a memo from Mr. Mohsen Nazemi, who is the Deputy Executive Officer of the AQMD Engineering and Compliance Division, this Partial Delegation Agreement is “intended to delegate the authority and responsibility to AQMD for issuance of initial PSD permits and for PSD permit modifications where the applicant does not seek to use the emissions calculation methodologies promulgated in 40 CFR 52.21 (NSR Reform) but not set forth in AQMD Regulation XVIII.”



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Applicability –

1701(b)(1) - The BACT requirement applies to a net emission increase of a criteria air contaminant from a permit unit at any stationary source.

1701(b)(2) - All of the requirements of this regulation apply, except as exempted in Rule 1704, to the following stationary sources:

(A) A new source or modification at an existing source where the increase in potential to emit is at least 100 or 250 tons of attainment air contaminants per year, depending on the source category; or

(B) A significant emission increase at an existing major stationary source; or

(C) Any net emission increase at a major stationary source located within 10 km of a Class I area, if the emission increase would impact the Class I area by 1.0 ug/m³, (24-hours average).

1703(b)(3) - For the purpose of this regulation, a source meeting any of the conditions of subparagraph (b)(2) shall be considered a major stationary source with a significant increase.

Definition – In Rule 1702, a significant emission increase is defined as a cumulative net emission increase from a major stationary source that exceeds the following thresholds:

- CO – 100 tons/year
- NO_x – 40 tons/year
- SO₂ – 40 tons/year

Analysis – In this regulation, net emission increase is evaluated on an annual basis. The requirements of this regulation are not applicable for the proposed modification of the AB Stills Incinerator since there is no net increase in annual emissions of any of the attainment air pollutants.

Regulation XX: Regional Clean Air Incentive Market (RECLAIM)

The Paramount Refinery is a Cycle 1 RECLAIM Facility that is subject to both the NO_x and SO_x requirements of this regulation.

Rule 2005: New Source Review for RECLAIM

This rule sets forth pre-construction review requirements for new facilities subject to the requirements of the RECLAIM program, for modifications to RECLAIM facilities, and for facilities which increase their allocation to a level greater than their starting Allocation plus non-tradable credits.

According to this rule [Rule 2005(c)], a permit to construct (RECLAIM Facility Permit Amendment) cannot be approved for installation of a new source or modification of an existing source that results in an emission increase of NO_x or SO_x at an existing RECLAIM unless the following requirements are met:

- 1.) Best Available Control Technology is applied to the source [2005(c)(1)(A)]
- 2.) The operation of the source will not result in a significant increase in the air quality concentration for NO₂ as specified in Appendix A [2005(c)(1)(B)], and



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- 3.) The applicant demonstrates that the facility holds sufficient RECLAIM Trading Credits to offset the annual emission increase for the first year of operation at a 1-to-1 ratio [2005(c)(2)].

According to 2005(d), "An increase in emissions occurs if a source's maximum hourly potential to emit immediately prior to the proposed modification is less than the source's post-modification maximum hourly potential to emit. The amount of emission increase will be determined by comparing pre-modification and post-modification emissions on an annual basis by using: (1) an operating schedule of 24 hours per day, 365 days per year; or (2) a permit condition limiting mass emissions."

BACT [2005(c)(1)(A)]: The Executive Officer shall not approve an application for a Facility Permit Amendment to authorize the installation of a new source or modification of an existing source which results in an emission increase as defined in subdivision (d), unless the applicant demonstrates that Best Available Control Technology (BACT) will be applied to the source.

As seen in the calculation section, there is an increase in the maximum hourly potential to emit for NO_x of 1.75 lb/hr. There is also a minimal increase in SO_x emissions. BACT must be applied to the incinerator.

NO_x - Low and Ultra-Low NO_x burners such as those utilized on process heaters, boilers, and some thermal oxidizers require precise control of the fuel flow, fuel heating value, and air flow control to control temperatures and oxygen levels in target zones of the flame. The turndown ranges of Low NO_x burners have improved over the years and some Low NO_x burners are being developed for combustors that operate at higher oxygen levels but there are not currently any true Low NO_x burners available for combustion of waste gas streams that have widely variable heating values such as the combined streams from the AB Stills, storage tanks, and loading racks that are vented to the AB Stills Incinerator. Current Low NO_x burners have some ability to adjust to changes in the flow of the fuel but not to unanticipated changes in heat content.

The BACT evaluation did not identify any burner manufacturers that will guarantee lower NO_x emissions than the NO_x emissions of the subject incinerator or any air blowing stills equipped with Low NO_x burners. The primary function of the incinerator is efficient combustion of VOCs and reduced sulfur compounds (RSCs). Inefficient combustion of RSCs may cause odor problems at the location. No burners were identified that will reduce NO_x emissions while performing the primary function of efficient combustion of VOCs and RSCs.

Downstream NO_x controls such as selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) require constant flue gas temperatures and flows that fall within an optimum operating range. These technologies do not operate well with stream of varying temperature and flow such as flue gas from the incinerator. The flue gas temperature and flow for the AB Stills Incinerator can vary appreciably when the AB Stills cycles begin and proceed. The optimum temperature range for SNCR is in the range of 1600 to 2000°F, which is above the flue gas temperature for the incinerator. An SCR would have to be installed upstream of the SO_x scrubber so it would be subjected to a flue gas with high SO₂ concentrations during Air Blowing Stills operation. High SO₂ concentrations can poison the SCR catalyst to significantly reduce catalyst life. Neither of these NO_x control technologies are appropriate for the AB Stills Incinerator.



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The NOx emissions of the subject thermal oxidizer can potentially be reduced through lower temperature combustion but lowering of the minimum combustion temperature cannot be achieved without an increase in VOC emissions and nuisance due to odors.

SOx – The use of natural gas and a downstream caustic scrubber is BACT for SO2 for this type of combustion device.

Modeling [2005(c)(1)(B)]: The Executive Officer shall not approve an application for a Facility Permit Amendment to authorize the installation of a new source or modification of an existing source which results in an emission increase as defined in subdivision (d), unless the applicant demonstrates that the operation of the source will not result in a significant increase in the air quality concentration for NO2 as specified in Appendix A. The applicant shall use the modeling procedures specified in Appendix A.

According to Appendix A, an applicant must either (1) provide an analysis approved by the Executive Officer or designee, or (2) show by using the Screening Analysis in Appendix A, that a significant change (increase) in air quality concentration will not occur at any receptor location for which the state or national ambient air quality standard for NO2 is exceeded. The increase in maximum hourly NOx emissions of 1.75 lb/hour exceeds the threshold for the screening analysis in Appendix A so more detailed modeling must be performed.

The Federal Ambient Air Quality Standard for NO2 is an annual mean concentration limit. The state has both an annual mean and one-hour concentration standard. Since there is no increase in the daily or annual NO2 emissions from the incinerator, modeling is not required for the state and federal annual mean concentration standards. Modeling is required only for the state one-hour standard of 0.18 ppmv (338 ug/m³). The nearest ambient air monitoring station to the Paramount Refinery is Station No. 084 in Source Receptor Area No. 12. The table below shows the maximum one-hour NO2 concentrations measured at Station No. 084 over the previous three year period (2005 – 2007). As seen in the table, the maximum measured one-hour concentration during the last three year period is 0.14 ppmv, which is below the state NO2 one-hour standard.

| Pollutant | Averaging Time | Max. Conc. by Year (ppmv) | | | California Standard | | Federal Standard | | Zone in Attainment? |
|-----------|----------------|---------------------------|------|------|---------------------|-------|------------------|-------|---------------------|
| | | 2005 | 2006 | 2007 | ppmv | ug/m3 | ppmv | ug/m3 | |
| NO2 | 1-hour | 0.11 | 0.14 | 0.10 | 0.18 | 338 | none | none | Yes |

Since the maximum NO2 concentration measured near the refinery is in compliance (attainment) with the state standard, the maximum estimated increase in one-hour ground-level ambient NO2 concentration from the incinerator must be added to the highest measured concentration of 0.14 ppmv (263 ug/m³) to determine if the incinerator will cause an exceedance of the one-hour state standard.



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EPA SCREEN3 is utilized to determine the maximum 1-hour pollutant concentration for NO_x at ground level. The SCREEN3 model is a simplified single source model that assumes a worst case meteorology. A more refined model, which can account for site-specific meteorology, is utilized if the worst case SCREEN3 modeled NO₂ concentrations exceed the significant change thresholds. The SCREEN3 model is run at the current permitted maximum hourly emission rate based on a maximum firing rate of 18 MMBtu/hr and at the maximum hourly emissions rate at the proposed maximum firing rate of 30 MMBtu/hr. The model was run with full meteorology and no building downwash.

The stack flow for both of these cases is based on measured stack flows during particulate matter sources tests performed on 1/19/99. During these source tests, the wet stack gas flowrate averaged 10,822 scfm at an incinerator natural gas firing rate of 13.14 MMBtu/hr. The actual wet flow rate at a stack temp of 320°F was 15,930 cfm. If the ratio of stack gas flow to natural gas flow from this source test is applied at 18 and 30 MMBtu/hr, the resulting estimated actual stack gas flow rate is 21,820 and 36,370 cfm, respectively. As seen in the calculation section, the estimated maximum hourly emissions at 18 and 30 MMBtu/hr are 2.57 and 4.32 lbs, respectively. This is equivalent to 0.324 and 0.544 grams per second, respectively.

The NO₂ modeling results are summarized in the following table.

| Averaging Time | Ambient Background Conc. | Model Results for 18 MMBtu/hr | Model Results for 30 MMBtu/hr | Increase in Hourly Ambient Conc. | Max. Ambient NO ₂ Conc. | Most Stringent AAQS | Conc. Below Standard? |
|----------------|--------------------------|-------------------------------|-------------------------------|----------------------------------|------------------------------------|---------------------|-----------------------|
| | ug/m ³ | ug/m ³ | ug/m ³ | ug/m ³ | ug/m ³ | ug/m ³ | |
| 1-hour | 263 | 11.9 | 13.2 | 1.3 | 264.3 | 338 | Yes |

As seen in the table, the change in the hourly rating of the incinerator is estimated to increase the current maximum ambient NO₂ concentration of 263 ug/m³ up to a maximum of 264.3 ug/m³, which is below the state ambient standard of 338 ug/m³. The NO₂ modeling is passed since the modeling will not cause an exceedance of the state standard. The modeling printouts and ambient monitoring summary for 2005-2007 are contained in Appendix N.

Reclaim Trading Credits [2005(c)(2)]:

The applicant is required to demonstrate that they hold sufficient RTCs to offset the annual emission increase for the first year of operation using a 1-to-1 offset ratio. Offsets are not required since there is not an increase in annual NO_x or SO_x emissions.

Additional Federal Requirements for Major Stationary Sources [2005(g)]: The Executive Officer shall not approve the application for a Facility Permit or an Amendment to a Facility Permit for a new, relocated or modified major stationary source, as defined in the Clean Air Act, 42 U.S.C. Section 7511a(e), unless the applicant complies with the requirements contained under this clause.

| | | |
|--|------------------------------------|------------------------|
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A major stationary source is defined as any facility which emits, or has the potential to emit 10 tons per year or more of NOx or 100 tons per year or more of SOx. The Paramount Refinery is a major stationary source since it has the potential to emit more than 10 tons per year of NOx. Modification is defined at 42 U.S.C. Section 7511a(e) as "any change at a major stationary source which results in any increase in emissions from any discrete operation, unit, or other pollutant emitting activity at the source.....". This definition does not specify whether a modification is based on an hourly or yearly increase in emissions. For NSPS, EPA has specified an increase in emissions as an increase in hourly emissions. EPA's NSR/PSD regulation bases a modification on an annual increase in emissions. Since Rule 2005 is an NSR rule, the EPA NSR definition of emission increase is utilized in this evaluation.

As shown in the Calculation Section of this evaluation, there is no increase in emissions of NOx or SOx on a daily, monthly, or annual basis. Therefore, the following requirements are not triggered.

(1) *Statewide Compliance*: The applicant must certify that all other major stationary sources in the state which are controlled by the applicant are in compliance or on a schedule for compliance with all applicable federal emission limitations or standards (42 U.S.C. Section 7503(a)(3)). *Not Applicable.*

(2) *Alternative Analysis* – Applicant must conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project significantly outweigh the environmental and social costs associated imposed as a result of its location, construction, or modification (42 U.S.C. Section 7503(a)(5)). *Not Applicable.*

(4)(A): *Protection of Visibility* – the applicant shall conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the net emission increase from the new or modified source exceeds 40 tons/year of NOX; and the location of the source, relative to the closest boundary of a specified Federal Class I area, is within the distance specified in Table 4-1 of this rule. *Not Applicable.*

Public Notice [2005(h)]: - The applicant shall provide public notice, if required, pursuant to Rule 212 - Standards for Approving Permits.

Public notice is not required. (See Rule 212 analysis).

Rule 1401 [2005(i)]: All new or modified sources shall comply with the requirements of Rule 1401 - New Source Review of Carcinogenic Air Contaminants, if applicable.

This modified source complies with the requirements of Rule 1401 (See R1401 analysis).

| | | |
|---|-----------------------------|-----------------|
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Rule 2011: Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SOx) Emissions and Rule 2012: Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) emissions

The incinerator is subject to the Major SOx Source and Major NOx Source requirements of these rules.

RECLAIM NOx and SOx CEMS certification and QA/QC requirements are contained in Rule 2011/2012, Appendix A, Chapter 2 and Attachment C.

It is specified at R2011: Appendix A, Chapter 2.A.3 and R2012: Appendix A, Chapter 2.A.1. that the Facility Permit holder of each major SOx and NOx equipment shall install, calibrate, maintain, and operate an approved CEMS to measure and record the following:

- Sulfur oxide concentrations in the gases discharged to the atmosphere
- Nitrogen oxide concentrations in the gases discharged to the atmosphere
- Oxygen concentrations if required for calculation of the stack gas flow rate
- Stack gas volumetric flow rate

The RECLAIM CEMS for the incinerator consists of the following: NOx analyzer (0 – 100 ppm range), SOx analyzer (0 – 100 ppm range), O2 Analyzers (wet and dry; 0 – 25%) and stack gas flowmeter (0 – 25 mscfm).

The subject SOx and NOx CEMS were originally certified by the District in May of 2000. The CEMS were recertified by the District in December 2001 with lower NOx and SOx concentration ranges. A copy of the December 2001 certification letter is contained in Appendix O. Continued compliance with the monitoring, reporting, and record keeping requirements of these rules is expected.

Regulation XXX: Title V Permits

Paramount's initial Title V permit was issued on February 27, 2009. The permits issued for this project will be issued as a revision of the Title V permit. Permit revisions are categorized into the following four types: *administrative, minor, de minimis significant and significant*. The review and distribution requirements for each revision type are summarized in the following table.

| Revision Type | Permit Review and Distribution Requirements | | |
|------------------------|---|---------------------------|-----------------------------|
| | EPA Review (45-day) | Public Notice (30-day) | Send Final Permit to EPA |
| Administrative | No | No | Yes |
| Minor | Yes | No | Yes |
| De Minimis Significant | Yes | No | Yes |
| Significant | Yes | Yes | Yes |



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As defined in Rule 3000, a minor Title V permit revision is any revision that:

- (1) does not require or change a case-by-case evaluation of: reasonably available control technology (RACT) pursuant to Title I of the federal Clean Air Act; or maximum achievable control technology (MACT) pursuant to 40 CFR Part 63, Subpart B;
- (2) does not violate a regulatory requirement;
- (3) does not require any significant change in monitoring terms or conditions in the permit;
- (4) does not require relaxation of any recordkeeping, or reporting requirement, or term, or condition in the permit;
- (5) does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process;
- (6) does not result in an increase in emissions of a pollutant subject to Regulation XIII - New Source Review or a hazardous air pollutant;
- (7) does not establish or change a permit condition that the facility has assumed to avoid an applicable requirement;
- (8) is not an installation of a new permit unit subject to a New Source Performance Standard (NSPS) pursuant to 40 CFR Part 60, or a National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to 40 CFR Part 61 or 40 CFR Part 63; and,
- (9) is not a modification or reconstruction of an existing permit unit, resulting in new or additional NSPS requirements pursuant to 40 CFR Part 60, or new or additional NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63; or,
- (10) incorporates an existing general permit, as defined in subdivision (e) of Rule 3004, and its associated requirements, into another Title V permit.

This Title V permit revision meets all of the requirements above so it is a minor revision. The revision would be a de minimis revision if there is a net increase in VOC emissions. The table below shows that there is not a net VOC emission increase for this Title V revision.

VOC Emission Change for Title V Permit Revision (lb/day)

| Equipment | Application No. | Emission Change (lb/day) |
|----------------------------------|------------------------|---------------------------------|
| Rack No. 6 | 421387 | +0.57 |
| Rack No. 7 | 421388 | +0.57 |
| Rack No. 8 | 421390 | +0.57 |
| Rack No. 13 | 421395 | +0.79 |
| Rack No. 26 | 423441 | -0.3 |
| Organic Liquid Loading/Unloading | 482509 | -5.9 |
| Tank No. T-20 | 448913 | +0.02 |
| Tank No. T-141 | 477239 | +0.02 |



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| Equipment | Application No. | Emission Change (lb/day) |
|------------------|------------------------|---------------------------------|
| Tank No. T-142 | 479413 | +0.02 |
| Tank No. T-509 | 479418 | -0.01 |
| Tank No. T-777 | 479419 | -0.01 |
| Tank No. T-1012 | 479420 | +0.01 |
| Tank No. T-1013 | 477240 | +0.01 |
| Total | | -3.6 |

This minor Title V Permit revision will be sent to EPA for a 45-day review. Public notice is not required.

CONCLUSION AND RECOMMENDATION

The operation of the subject pieces of equipment is expected to comply with all applicable District, State and Federal Rules and Regulations. Therefore, it is recommended that Permits to Operate and Permits to Construct be issued subject to the conditions listed previously in this evaluation.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|---------------------------------|-------------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| System 6 : CUTBACK ASPHALT TANK TRUCK LOADING FACILITY NO. 6 | | | | | S1.2, S1.3, S13.6 |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357904 | D192 | C596 | | VOC: (9) [RULE 1108,2-1-1985] | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357039 | C596 | D192 | | | D12.4, E224.1 |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 357904 | D824 | | | | H23.2 |
| System 7 : CUTBACK ASPHALT TWO-POSITION TANK TRUCK LOADING NO. 7 | | | | | S1.2, S1.3, S13.6 |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357031 | D196 | C597 | | VOC: (9) [RULE 1108,2-1-1985] | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357040 | C597 | D196 | | | D12.4, E224.1 |

- * (1)(1A)(1B) Denotes RECLAIM emission factor
 - (3) Denotes RECLAIM concentration limit
 - (5)(5A)(5B) Denotes command and control emission limit
 - (7) Denotes NSR applicability limit
 - (9) See App B for Emission Limits
 - (2)(2A)(2B) Denotes RECLAIM emission rate
 - (4) Denotes BACT emission limit
 - (6) Denotes air toxic control rule limit
 - (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 - (10) See Section J for NESHAP/MACT requirements
- ** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|--------|--------------|---|-----------------------------------|---------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 357031 | D825 | | | | H23.2 |
| System 8 : CUTBACK ASPHALT TANK TRUCK LOADING FACILITY NO. 8 | | | | | |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, COUNTER-WEIGHTED WITH DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357032 | D200 | C598 | | VOC: (9) [RULE 1108.2-1- 1985] | D323.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357041 | C598 | D200 | | | D12.4, E224.1 |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 357032 | D826 | | | | H23.2 |
| System 9 : CUTBACK ASPHALT TANK TRUCK LOAD/UNLOADING FACILITY #11 | | | | | |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, RACK #11, ASPHALT, WITH LOADING VALVE, DROP TUBE, AND UNLOADING HOSE, 2 TOTAL; DIAMETER: 3 IN A/N: | D179 | | | VOC: (9) [RULE 1108.2-1- 1985] | D323.2 |

* (1)(1A)(1B) Denotes RECLAIM emission factor
 (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit
 (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit
 (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit
 (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
 (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|--------|--------------|---|---------------------------------|--------------|
| Practice 8 : LOADING/UNLOADING FACILITIES | | | | | |
| System 10 : ASPHALT TANK TRUCK UNLOADING RACK NO.12 | | | | | |
| UNLOADING ARM, BOTTOM, TANK TRUCK, ASPHALT, HOSE CONNECTIONS, 2 TOTAL; DIAMETER: 3 IN A/N: 167207 | D189 | | | | D323.2 |
| System 11 : CUTBACK ASPHALT TANK TRUCK LOAD/UNLOADING RACK NO.13 | | | | | |
| LOADING ARM, TANK TRUCK, TOP, ASPHALT, WITH LOADING VALVE AND DROP TUBE, 2 TOTAL; DIAMETER: 3 IN A/N: | D187 | | | VOC: (9) [RULE 1108,2-1-1985] | CI.4, D323.2 |
| System 12 : FUEL OIL/GAS OIL TANK TRUCK LOADING RACK NO.14 | | | | | |
| LOADING ARM, TANK TRUCK, TOP, GAS OIL, FUEL OIL, DIAMETER: 3 IN A/N: 167206 | D230 | | | | CI.2 |
| System 13 : CUTBACK ASPHALT TANK TRUCK LOADING FACILITY NO.15 | | | | | |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, RACK # 15, ASPHALT, WITH LOADING VALVE, DROP TUBE, AND UNLOADING HOSE A/N: | D181 | | | VOC: (9) [RULE 1108,2-1-1985] | D323.2 |

* (1)(1A)(1B) Denotes RECLAIM emission factor
 (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit
 (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit
 (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit
 (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
 (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|-----------------|--------------|---|---|------------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| System 21 : GASOLINE BLENDSTOCK TANK TRUCK UNLOADING RACK NO. 23 | | | | | |
| UNLOADING ARM, BOTTOM, TANK TRUCK, GASOLINE BLENDING STOCKS, DISTILLATES, DIAMETER: 4 IN A/N: 449358 | D215 | | | | |
| UNLOADING ARM, BOTTOM, TANK TRUCK, GASOLINE BLENDING STOCKS, DISTILLATES, DIAMETER: 3 IN A/N: 449358 | D216 | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 449358 | D705 | | | | H23.2 |
| System 25 : ORGANIC TANK/RAIL CAR LOADING/UNLOADING FACILITY | | | | | |
| LOADING ARM, TANK CAR, ASPHALT, SWIVEL TYPE WITH LOADING VALVE AND DROP TUBE, 8 TOTAL; DIAMETER: 4 IN A/N: 357033 | D206 | C599 | | VOC: 0.08 LBS/1000 GAL (5) [RULE 462,5-14-1999] | D323.2, E17.2 |
| MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 1500 CFM, PRESS DROP 6" W.C., WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN A/N: 357042 | C599 | D206 | | | D12.4, E224.1 |

* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|--------|--------------|---|---|---------------------------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| LOADING ARM, TANK CAR, FUEL OIL, DISTILLATE, SWIVEL TYPE WITH LOADING VALVE AND DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 357033 | D210 | | | | |
| LOADING ARM, TANK CAR, SPENT CAUSTIC, SWIVEL WITH LOADING VALVE AND DROP TUBE, 1 TOTAL; DIAMETER: 4 IN A/N: 357033 | D253 | | | SOX: 500 PPMV (5) [RULE 407,4-2-1982] | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 357033 | D706 | | | | H23.2 |
| System 26 : SULFUR TRUCK LOADING RACK | | | | | |
| LOADING ARM, TANK TRUCK, SULFUR, OVERHEAD SWIVEL TYPE, VENTED TO ATMOSPHERE A/N: 104011 | D250 | | | SOX: 500 PPMV (5) [RULE 407,4-2-1982] | D90.4 |
| System 27 : GASOLINE TANK TRUCK LOADING RACK NO. 21 | | | | | |
| LOADING ARM, BOTTOM, TANK TRUCK, GASOLINE, WITH DRY BREAK COUPLERS, 5 TOTAL; DIAMETER: 4 IN A/N: 167299 | D233 | | | VOC: 0.08 LBS/1000 GAL (5) [RULE 462,5-14-1999] | SI.7, SI.8, SI3.6, SI3.8, SI5.3 |
| LOADING ARM, BOTTOM, TANK TRUCK, JET FUEL, WITH DRY BREAK COUPLERS, 2 TOTAL; DIAMETER: 4 IN A/N: 167299 | D234 | | | | |

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|-----------------|---|---|---------------------------------|--|
| Process 10: STORAGE TANKS | | | | | |
| STORAGE TANK, NO.T-514, ASPHALT, WITH HEATING COILS, 500 BBL A/N: 104320 | D270 | | | | A63.5, D323.3, H23.14, K67.2 |
| STORAGE TANK, FIXED ROOF, NO.776, ASPHALT, WITH HEATING COILS, 770 BBL A/N: 419600 | D271 | | | | A63.5, D12.8, D323.3, E448.1, H23.14, K67.2 |
| STORAGE TANK, NO.T-515, ASPHALT, WITH HEATING COILS, 500 BBL A/N: 104321 | D272 | | | | D323.3, K67.2 |
| → STORAGE TANK, NO.T-1012, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 403455 | D273 | C769 | | | C1.31, C6.11, D323.2 |
| → STORAGE TANK, NO.T-1013, ASPHALT, HOT OIL OR STEAM HEATED, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1000 BBL; DIAMETER: 21 FT 6 IN; HEIGHT: 16 FT A/N: 403456 | D274 | C769 | | | C1.31, C6.11, D323.2 |
| → MIST ELIMINATOR, D-936, FIBER MESH FILTER ELEMENT, WITH A PRESSURE VALVE, COMMON TO TANKS T-141, T-142, T-509, T-777, T-1012 & T-1013 A/N: 403450 | C769 | D273 D274 D523 D525 D527 D528 C770 | | | D12.10 |

* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|---------------------------------|-------------------------------------|
| Process 10: STORAGE TANKS | | | | | |
| CARBON ADSORBER, 3 TOTAL, CONNECTED IN PARALLEL, 180 LBS EACH A/N: 403450 | C770 | C769 | | | D90.5, E128.1, E153.1 |
| STORAGE TANK, NO T-1014, ASPHALT, WITH HEATING COILS, A 10 HP MIXER AND A VENT DEMISTER, WITH MIST ELIMINATOR, 1000 BBL A/N: 419601 | D275 | | | | D12.2, D12.8, D323.2, E448.1, K67.2 |
| STORAGE TANK, NO. 1015, ASPHALT, WITH HEATING COILS, A 5HP MIXER AND A VENT DEMISTER, WITH MIST ELIMINATOR, 1000 BBL A/N: 419602 | D276 | | | | D12.2, D12.8, D323.2, E448.1, K67.2 |
| STORAGE TANK, HEATED, NO T-1019, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 1113 BBL; DIAMETER: 18 FT 1 IN; HEIGHT: 24 FT 4 IN A/N: 403444 | D277 | C761 C762 | | | C1.7, C6.11, D323.2, E336.4 |
| MIST ELIMINATOR, F-716, CECO, FIBER MESH FILTER ELEMENT, WITH SEAL POT D-937A AND DRAIN DRUM D-938A A/N: 403444 | C761 | D277 C531 | | | D12.9 |
| CARBON ADSORBER, STANDBY, 2 TOTAL, CONNECTED IN PARALLEL, 180 LBS EACH, WITH A KNOCKOUT POT A/N: 403444 | C762 | D277 | | | D90.5, E71.6 |

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|-----------------|--------------|---|---------------------------------|--|
| Process ID : STORAGE TANKS | | | | | |
| STORAGE TANK, FIXED ROOF, NO. T-10005, FUEL OIL, DIESEL FUEL, 420000 GALS; DIAMETER: 54 FT 1 IN; HEIGHT: 24 FT 5 IN A/N: 417129 | D334 | | | | K67.2 |
| → STORAGE TANK, HEATED, NO. T-509, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 500 BBL; DIAMETER: 15 FT 6 IN; HEIGHT: 16 FT A/N: 403453 | D523 | C769 | | | A63.5, C1.30, C6.11, D323.3, H23.9, H23.14 |
| → STORAGE TANK, HEATED, NO. T-777, ASPHALT, WITH A MIXER AND A PRE-KNOCKOUT SEPARATOR, 834 BBL; DIAMETER: 15 FT 6 IN; HEIGHT: 24 FT 6 IN A/N: 403454 | D525 | C769 | | | A63.5, C1.30, C6.11, D323.3, H23.9, H23.14 |
| → STORAGE TANK, HEATED, NO. T-141, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 403451 | D527 | C769 | | | C1.11, C6.11, D323.2 |
| → STORAGE TANK, HEATED, NO. T-142, ASPHALT, MIX TANK, WITH A MIXER, 6000 GALS; DIAMETER: 8 FT; HEIGHT: 16 FT A/N: 403452 | D528 | C769 | | | C1.11, C6.11, D323.2 |

- (1)(1A)(1B) Denotes RECLAIM emission factor
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1176 |

[RULE 1176, 9-13-1996]

[Processes subject to this condition : 9]

SYSTEM CONDITIONS

S1.1 The operator shall limit the throughput to no more than 500000 barrel(s) in any one month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 8, System 25]

S1.2 The operator shall limit the throughput to no more than 4e+06 barrel(s) in any one year.

For the purpose of this condition, throughput shall be defined as amount of asphalt loaded by the individual loading rack.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 8, System 6, 7, 8]

S1.3 The operator shall limit the throughput to no more than 9e+06 barrel(s) in any one year.

For the purpose of this condition, throughput shall be defined as the combined amounts of asphalt loaded by Loading Racks 6, 7, & 8 (Systems 6, 7, & 8, respectively).

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 8, System 6, 7, 8]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

S13.3 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1166 |

[RULE 1166, 7-14-1995; RULE 1166, 5-11-2001]

[Systems subject to this condition : Process 13, System 3]

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[RULE 463, 5-6-2005]

[Systems subject to this condition : Process 10, System 1]

S13.5 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1178 |

[RULE 1178, 4-7-2006]

[Systems subject to this condition : Process 10, System 2 , 4]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 462 |

[RULE 462, 5-14-1999]

[Systems subject to this condition : Process 8, System 6 , 7 , 8 , 9 , 11 , 13 , 18 , 22 , 23 , 24 , 25 , 27]

S13.7 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | QQQ |
| VOC | District Rule | 1176 |

[RULE 1176, 9-13-1996; 40CFR 60 Subpart QQQ, 5-5-1989]

[Systems subject to this condition : Process 9, System 4]

S13.8 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | XX |

[40CFR 60 Subpart XX, 12-19-2003]

[Systems subject to this condition : Process 8, System 18 , 27]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least five years, and shall be made available to Executive Officer of his authorized representative upon request.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 1, System 7; Process 2, System 1; Process 15, System 1]

DEVICE CONDITIONS

A. Emission Limits

A63.5) The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D80, D85, D87, D89, D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525]

B. Material/Fuel Type Limits

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

C1.11 The operator shall limit the throughput to no more than 300000 barrel(s) in any one year.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: (monthly total weight throughput, lbs/month) / (density of product stored, lbs/gal x 42 gal/bbl), where the monthly total weight throughput of the tank shall be determined by the continuous monitoring system described below.

The operator shall install and maintain a load cell system and a data acquisition system to continuously record the changes in weight of the tank. For the purpose of this condition, continuous recording is defined as once every 15 minutes.

The operator shall calculate the total weight throughput of the tank at the end of each month. The total weight throughput shall be calculated by totaling up the increases in weight of the tank recorded by the data acquisition system for the calendar month.

The accuracy of the load cell system shall be verified annually by a third-party tester in accordance to the manufacturer's specifications. If a calibration check point has an error of 1 percent or greater, the load cell system shall be adjusted, re-calibrated and repaired if necessary and put back into service within 10 days. While the load cell system is being repaired, throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to the discovery of the discrepancy.

In the event of a failure or routine maintenance of the load cell system, the load cell system shall be repaired (if necessary) and put back into service within 10 days of the time that the load cell system failed or was removed from service for maintenance. While the load cell system is being repaired or maintained, the throughput shall be determined by the changes in weight data averaged for the previous 30 days, prior to time that the load cell system went out of service.

The operator shall keep the following records for the load cell system on the tank: density of product used to convert throughput from weight to volume, calibration procedures specified by the manufacturer, and annual calibration records that includes but not limited to identification of the error point, percent error and a description of adjustment/repair made. The calibration records shall be signed and dated by the person and company performed the calibration.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D527, D528]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

C1.30 The operator shall limit the throughput to no more than 600000 barrel(s) in any one year.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.

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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D523, D525]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

C1.31 The operator shall limit the throughput to no more than 340000 barrel(s) in any one year.

For the purpose of this condition, material processed shall be defined as any asphalt products except cutback asphalts.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on tank strapping chart and L is the total vertical one-way tank level 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 tank level. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way tank level movement at the end of each month. The total one-way tank level movement shall be determined for the calendar month and in unit of feet.

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, throughput shall be determined by hourly tank level data averaged for 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)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D273, D274]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

C6.7 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 350 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1301, 12-7-1995]

[Devices subject to this condition : D92, D285]

C6.9 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 120 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt vapors at a location upstream of the fiberglass filter.

[RULE 1301, 12-7-1995]

[Devices subject to this condition : D307, D309]

C6.11 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 500 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

This condition shall not apply when the tank stores MAC 10 or asphalt products containing MAC 10. The maximum temperature limit shall be reduced from 500 to 450 Deg F when the tank stores MAC 10 or asphalt products containing MAC 10.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D273, D274, D277, D287, D288, D289, D290, D291, D293, D303, D523, D525, D527, D528]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator.

The operator shall record the parameter being monitored once every 7 days.

The monitoring and recording frequency shall increase to at least once every 8 hours whenever the static differential pressure reaches 20 inches water column or greater. The operator shall clean or replace the filter when 3 consecutive readings of 20 inches water column or greater are recorded.

The operator shall maintain the differential pressure gauges in good working condition.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C596, C597, C598, C599]

D12.8 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the asphalt stored in or pumped into this tank.

The operator shall record the parameter being measured at least once per 12 hour shift

[RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D267, D268, D269, D271, D275, D276, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D305, D306, D323]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

- D12.9 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

The operator shall clean or replace the filters of the mist eliminator whenever the static differential pressure being monitored is 9 inches water column or greater

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C761, C763]

- D12.10 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator. The operator shall determine and record the parameter being monitored once per week.

The operator shall clean or replace the filters of the mist eliminator whenever the static differential pressure being monitored is 3 inches water column or greater

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C769, C771, C773]

- D28.7 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine NH₃ emissions at the outlet.

The test shall be conducted at least once every three years.

The test shall be conducted when the equipment being vented by the SCR are operating under normal conditions.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C77]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

D90.5 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.

The operator shall monitor the VOC concentrations at least once a week. If a tank filling is scheduled during a week, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a week, the VOC measurements may be taken at anytime.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C762, C764, C765, C766, C767, C768, C770, C772, C774]

D90.6 The operator shall periodically monitor the concentration of VOC at the outlet of the carbon adsorber according to the following specifications:

The operator shall monitor using either: (a) EPA Reference Method 21 with a District approved hydrocarbon detection instrument calibrated in ppmv methane, or (b) District Grab Sample Method as described in Attachment A of District Rule 1176.

The operator shall monitor each time the sump (device D796) receives wastes and not less than once every month. If the sump does not receive waste during a month, the VOC monitor may be conducted at anytime.

[RULE 1176, 9-13-1996; 40CFR 60 Subpart QQQ, 5-5-1989]

[Devices subject to this condition : C797]

**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP (EIS USE)**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1) Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2) Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1) Stack or emission point identification;
- 2) Description of any corrective actions taken to abate visible emissions;
- 3) Date and time visible emission was abated; and
- 4) All visible emission observation records by operator or a certified smoke reader.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D80, D85, D87, D89, D179, D181, D183, D185, D187, D189, D192, D196, D200, D206, D273, D274, D275, D276, D277, D285, D287, D288, D289, D290, D291, D293, D294, D295, D296, D297, D298, D301, D302, D303, D304, D307, D309, D311, D312, D323, D328, D527, D528]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

D323.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a monthly basis whenever fuel oil is burned. The routine monthly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D92, D176, D177, D178, D267, D268, D269, D270, D271, D272, D278, D279, D280, D281, D282, D283, D284, D286, D292, D299, D300, D305, D306, D327, D523, D525]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

E17.1 The operator shall not use more than 1 of the following items simultaneously:

Device ID: D65 [COMPRESSOR, C-120, CLARK, RECIPROCATING ,IC DRIVEN (COMMON TO KEROSENE HDS UNIT)]

Device ID: D64 [COMPRESSOR, C-124, WORTHINGTON, RECIPROCATING, 1-STAGE, 700 HP (COMMON TO KEROSENE HDS)]

This condition shall not apply when changeover takes place from one compressor to another, for 1 hour.

[Devices subject to this condition : D64, D65]

E17.2 The operator shall not use more than 4 of the following items simultaneously:

Device ID: D206 [Only 4 out of 8 loading arms shall be operated at a time]

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D206]

E57.1 The operator shall vent this equipment to dust control equipment whenever SCR catalyst loading/unloading or handling/transport operations produces catalyst fines.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : C77]

E71.3 The operator shall not operate this equipment for more than 50 percent of its maximum rated horse power.

[RULE 1304(c)-Offset Exemption, 6-14-1996]

[Devices subject to this condition : D551]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

- E71.6 The operator shall only vent the tank to this equipment during periods when the incinerator is out of service. The operator shall not conduct any filling operation in the tank while it is being vented to this equipment.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : C762, C764, C765, C766, C767, C768]

- E71.7 The operator shall only use this equipment to receive wastes drained from: (1) the low points in the piping of the Penex Plus process (Process 16, System 1, 2 and 3), and Naphtha Splitter (Process 1, System 7), and the pumps serving these process units. (2) the water boot on the Naphtha Splitter overhead accumulator (device D721).

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D796]

- E73.1 Notwithstanding the requirements of Section E conditions, the operator is not required to use ammonia injection if any of the following requirement(s) are met:

the temperature at the inlet to the SCR catalyst bed is below 550 deg F

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C77]

- E128.1 The operator shall keep all spent carbon in a tightly covered container which shall remain closed except when it is being transferred into or out of the container.

[RULE 1401, 3-4-2005]

[Devices subject to this condition : C770, C772, C797]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

E153.1 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 48 ppmv at the outlet of carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.5 and is measured as hexane.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C770]

E153.2 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 540 ppmv at the outlet of the carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.5 and is measured as hexane.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C772]

E153.3 The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 500 ppmv at the outlet of the carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition D90.6.

[RULE 1176, 9-13-1996; RULE 1303(a)-BACT, 5-10-1996; 40CFR 60 Subpart QQQ, 5-5-1989]

[Devices subject to this condition : C797]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

E161.1 The operator shall not operate this tank unless the vent gases are sparged at least 10 inches below the liquid surface of a trap containing a minimum of 35 gallons of caustic solution maintained at pH 8 or higher.

To comply with this condition, the operator shall monitor the pH of the scrubbing solution after each filling operation, and shall keep records, in a manner approved by the District, of the pH of the caustic solution as monitored according to this condition.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D331, D332]

E193.3 The operator shall operate and maintain this equipment according to the following specifications:

The operator shall comply with all applicable requirements specified by Section 60.18 of Subpart A of the 40CFR 60.

[40CFR 60 Subpart A, 4-9-1993]

[Devices subject to this condition : C396]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C596, C597, C598, C599]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1173 |

[RULE 1173, 5-13-1994; RULE 1173, 12-6-2002]

[Devices subject to this condition : D607, D608, D609, D616, D617, D618, D619, D620, D621, D649, D650, D655, D656, D657, D694, D695, D700, D701, D702, D703, D704, D705, D706, D707, D708, D709, D710, D711, D712, D718, D821, D822, D823, D824, D825, D826]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1149 |
| VOC | District Rule | 463 |
| VOC | District Rule | 1178 |

[RULE 1149, 7-14-1995; RULE 1178, 4-7-2006; RULE 463, 5-6-2005]

[Devices subject to this condition : D264]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, SUBPART | J |

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D26, D27, D28, D44, D46, D47, D73, D74, D75, D76]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

H23.8 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| Halon | District Rule | 1418 |

[RULE 1418, 9-10-1999]

[Devices subject to this condition : E644]

H23.9 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | Kb |

[40CFR 60 Subpart Kb, 10-15-2003]

[Devices subject to this condition : D335, D337, D342, D352, D523, D525]

H23.10 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, SUBPART | UU |
| PM | District Rule | 470 |
| VOC | District Rule | 470 |

[RULE 470, 5-7-1976; 40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D80, D85, D87, D89]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

H23.11 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|------------------|---------------|--------------|
| VOC | District Rule | 465 |
| Sulfur compounds | District Rule | 465 |

[RULE 465, 8-13-1999]

[Devices subject to this condition : D696, D697]

H23.13 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | QQQ |
| VOC | District Rule | 1176 |

[RULE 1176, 9-13-1996; 40CFR 60 Subpart QQQ, 5-5-1989]

[Devices subject to this condition : D648]

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, SUBPART | UU |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D267, D268, D269, D270, D271, D278, D280, D286, D328, D523, D525]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|-----------------|-----------------|---|---|---------------------------|
| Process B : LOADING/UNLOADING FACILITIES | | | | | |
| System 11 : CUTBACK ASPHALT TANK TRUCK LOAD/UNLOADING RACK NO.13 | | | | | S13.6 |
| LOADING AND UNLOADING ARM, TOP, RACK#13, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN, 1 UNLOADING ARM, DIAMETER: 4 IN, WITH DROP TUBE A/N: 353045 Permit to Construct Issued: 08/27/99 | D187 | C576 | | VOC: (9) [RULE 1108,2-1- 1985] | D28.2, D323.2 |
| MIST ELIMINATOR, MODEL DLM 121, 1500 CFM, CECO FILTER, PRESS DROP 6" W.C., WITH PREFILTER, MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 7 FT 4 IN A/N: 353045 Permit to Construct Issued: 08/27/99 | C576 | D187 | | | D12.4, E224.1 |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 353045 Permit to Construct Issued: 08/27/99 | D828 | | | | H23.2 |
| System 13 : CUTBACK ASPHALT TANK TRUCK LOADING FACILITY NO.15 | | | | | S13.6 |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, RACK # 15, ASPHALT, 2 LOADING ARMS, DIAMETER: 3 IN; 1 UNLOADING ARM, DIAMETER: 4 IN, DROP TUBE A/N: 356033 Permit to Construct Issued: 08/27/99 | D181 | C577 | | VOC: (9) [RULE 1108,2-1- 1985] | D323.2, E336.3 |

* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|--|-----------------------|
| Process 8 : LOADING/UNLOADING FACILITIES | | | | | |
| LOADING ARM, BOTTOM, TANK TRUCK, LPG (C3, C4 & C5 HYDROCARBONS); WITH QUICK SHUTOFF VALVES AND VAPOR RETURN LINE, DIAMETER: 4 IN A/N: 421653 Permit to Construct Issued: 06/17/04 | D251 | | | | E71.5 |
| LOADING ARM, BOTTOM, TANK TRUCK, LPG (C3, C4 & C5 HYDROCARBONS); WITH QUICK SHUTOFF VALVES AND VAPOR RETURN LINE, DIAMETER: 3 IN A/N: 421653 Permit to Construct Issued: 06/17/04 | D252 | | | | E71.5 |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 421653 Permit to Construct Issued: 06/17/04 | D704 | | | | H23.2 |
| System 23 : CUTBACK ASPHALT LOADING/UNLOADING RACK NO.26 | | | | | S13.6 |
| LOADING AND UNLOADING ARM, TANK TRUCK, TOP, RACK # 26, ASPHALT, 2 LOADING ARMS, DIA: 4 IN; 1 UNLOADING ARM, DIA: 4 IN, WITH DROP TUBE A/N: 353059 Permit to Construct Issued: 08/27/99 | D570 | | | VOC: (9) [RULE 1108,2-1-1985]; VOC: 0.08 LBS/1000 GAL (5) [RULE 462,5-14-1999] | D28.2, D323.2, E336.3 |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 353059 Permit to Construct Issued: 08/27/99 | D831 | | | | H23.2 |

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|-----------------|-----------------|---|---------------------------------|--|
| Process 10 : STORAGE TANKS | | | | | |
| System 1 : FIXED ROOF TANKS | | | | | S11.4 |
| STORAGE TANK, NO. T-1027, ASPHALT, WITH HEATING COILS AND IN-TANK MIXER, 1000 BBL A/N: 357751 Permit to Construct Issued: 03/01/00 | D285 | C601 | | | C1.14, C6.7, D323.2 |
| MIST ELIMINATOR, WITH FIBER MESH FILTER A/N: 357751 Permit to Construct Issued: 03/01/00 | C601 | D285 | | | D12.2 |
| STORAGE TANK, HEATED, NO. T-510, ASPHALT, WITH A MIXER, 500 BBL, DIAMETER: 15 FT 6 IN; HEIGHT: 16 FT 1 IN A/N: 326478 Permit to Construct Issued: 07/07/97 | D324 | | | | A63.5, C1.5, C6.7, D323.3, H23.14 |
| TANK, HEATED, T-20, ASPHALT, POLYMER WETTING, WITH IN-TANK MIXER, HEIGHT: 15 FT; DIAMETER: 10 FT 6 IN A/N: 353068 Permit to Construct Issued: 08/27/99 | D579 | C581 | | | A63.5, C1.9, C6.7, D323.2, H23.14 |
| MIST ELIMINATOR, FIBER MESH FILTER ELEMENT WITH PRE- KNOCKOUT SEPARATOR, HEIGHT: 6 FT; DIAMETER: 1 FT A/N: 353068 Permit to Construct Issued: 08/27/99 | C581 | D579 | | | D12.2 |

* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--|--|--|---|
| Process 15 : AIR POLLUTION CONTROL | | | | | |
| FLARE, ELEVATED WITH STEAM INJECTION, NW-791, REFINERY GAS, HEIGHT: 100 FT; DIAMETER: 1 FT WITH A/N: 459987 Permit to Construct Issued: 07/25/08 BURNER, JOHN ZINK, MODEL EEF-QS-18 | C396 | D738 | | CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] | D12.3, D323.1, D323.2, E193.3, E193.5, H23.2, H23.4, H23.5, H23.6, H23.7, H23.8, H23.9, H23.10, H23.11, H23.12, H23.13, H23.14, H23.15, H23.16, H23.17, H23.18, H23.19, H23.20, H23.21, H23.22, H23.23, H23.24, H23.25, H23.26, H23.27, H23.28, H23.29, H23.30, H23.31, H23.32, H23.33, H23.34, H23.35, H23.36, H23.37, H23.38, H23.39, H23.40, H23.41, H23.42, H23.43, H23.44, H23.45, H23.46, H23.47, H23.48, H23.49, H23.50, H23.51, H23.52, H23.53, H23.54, H23.55, H23.56, H23.57, H23.58, H23.59, H23.60, H23.61, H23.62, H23.63, H23.64, H23.65, H23.66, H23.67, H23.68, H23.69, H23.70, H23.71, H23.72, H23.73, H23.74, H23.75, H23.76, H23.77, H23.78, H23.79, H23.80, H23.81, H23.82, H23.83, H23.84, H23.85, H23.86, H23.87, H23.88, H23.89, H23.90, H23.91, H23.92, H23.93, H23.94, H23.95, H23.96, H23.97, H23.98, H23.99, H23.100 |
| DRUM, D-806, RELIEF, W/CONDENSING WATER SPRAYS, HEIGHT: 34 FT 3 IN; DIAMETER: 5 FT A/N: 459987 Permit to Construct Issued: 07/25/08 | D397 | | | | |
| FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 459987 Permit to Construct Issued: 07/25/08 | D650 | | | | H23.2 |
| System 3 : INCINERATION SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | |
| INCINERATOR, H-907, NATURAL GAS, HEAT RECOVERY SECTION, 18 MMBTU/HR WITH A/N: 353056 Permit to Construct Issued: 08/27/99 | C531 | C81 C86 C88 C90 C566 C577 C761 C763 | NOX: MAJOR SOURCE** SOX: MAJOR SOURCE** | CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: (9) [RULE 404,2-7-1986] SO2: 20 PPMV (8) [40CFR 60 Subpart J,6-24-2008] | C1.23, C8.1, D28.1, D28.5, D82.3, D323.1, H23.4, H23.2 |

* (1)(1A)(1B) Denotes RECLAIM emission factor
 (2)(2A)(2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit
 (4) Denotes BACT emission limit
 (5)(5A)(5B) Denotes command and control emission limit
 (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit
 (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
 (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|--|--------|--------------|---|---|------------|
| Process 15 : AIR POLLUTION CONTROL | | | | | |
| BURNER, NORTH AMERICAN, MODEL NO. 4131D, 18 MMBTU/HR | | | | | |
| System 4 : SOX SCRUBBING SYSTEM SERVING ASPHALT BLOWING PLANT | | | | | S13.2 |
| SCRUBBER, PACKED BED, W-900, AMEREX TOWER, STAINLESS STEEL, HEIGHT: 23 FT; DIAMETER: 8 FT A/N: 353057 Permit to Construct Issued: 08/27/99 | C566 | C531 D569 | | | C8.2 |
| STORAGE TANK, FIXED ROOF, TK- 242, REACTED CAUSTIC, HEIGHT: 15 FT; DIAMETER: 10 FT 6 IN A/N: 353058 Permit to Construct Issued: 08/27/99 | D568 | | | SOX: 500 PPMV (5) [RULE 407,4-2-1982] | |
| HEATER, H-908, SCRUBBER OUTLET GAS REHEAT, NATURAL GAS, FORCED DRAFT, WITH DUCT BURNER, 8 MMBTU/HR A/N: 353074 Permit to Construct Issued: 08/27/99 | D569 | C566 | NOX: LARGE SOURCE** | CO: 400 PPMV (5A) [RULE 1146,11-17-2000] ; CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; NOX: 30 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996 RULE 1303(a)(1)-BACT,12-6- 2002] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: (9) [RULE 404,2-7-1986] | C1.6 |

- | | |
|---|---|
| <p>* (1)(1A)(1B) Denotes RECLAIM emission factor (3) Denotes RECLAIM concentration limit (5)(5A)(5B) Denotes command and control emission limit (7) Denotes NSR applicability limit (9) See App B for Emission Limits</p> | <p>(2)(2A)(2B) Denotes RECLAIM emission rate (4) Denotes BACT emission limit (6) Denotes air toxic control rule limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.) (10) See Section J for NESHAP/MACT requirements</p> |
|---|---|

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

S13.3 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1166 |

[RULE 1166, 7-14-1995; RULE 1166, 5-11-2001]

[Systems subject to this condition : Process 13, System 3]

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 463 |

[RULE 463, 5-6-2005]

[Systems subject to this condition : Process 10, System 1]

S13.5 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1178 |

[RULE 1178, 4-7-2006]

[Systems subject to this condition : Process 10, System 2 , 4]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 462 |

[RULE 462, 5-14-1999]

[Systems subject to this condition : Process 8, System 6, 7, 8, 9, 11, 13, 18, 22, 23, 24, 25, 27]

S13.7 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | QQQ |
| VOC | District Rule | 1176 |

[RULE 1176, 9-13-1996; 40CFR 60 Subpart QQQ, 5-5-1989]

[Systems subject to this condition : Process 9, System 4]

S13.8 All devices under this system are subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | XX |

[40CFR 60 Subpart XX, 12-19-2003]

[Systems subject to this condition : Process 8, System 18, 27]

**FACILITY PERMIT TO OPERATE
 PARAMOUNT PETR CORP (EIS USE)**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least five years, and shall be made available to Executive Officer of his authorized representative upon request.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 1, System 7; Process 2, System 1; Process 15, System 1]

DEVICE CONDITIONS

A. Emission Limits

A63.5 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|-------------------|---|
| Visible emissions | Less than or equal to 0 Percent opacity |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D80, D85, D87, D89, D524, **D579**, D602]

**FACILITY PERMIT TO OPERATE
PARAMOUNT PETR CORP (EIS USE)**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

C1.6 The operator shall limit the fuel usage to no more than 182000 cubic feet per day.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D569]

C1.9 The operator shall limit the throughput to no more than 600000 barrel(s) in any one year.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D579]

C1.12 The operator shall limit the operating time to no more than 199 hour(s) in any one year.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 5-6-2005]

[Devices subject to this condition : D592]

C1.14 The operator shall limit the throughput to no more than 16667 barrel(s) in any one month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D285]

C1.22 The operator shall limit the throughput to no more than 125000 barrel(s) in any one month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D602]

C1.23 The operator shall limit the fuel usage to no more than 41000 cubic feet per day.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : C531]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- C6.3 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 120 Deg F.

The operator shall install and maintain a temperature reading device prior to the mist eliminator to ensure compliance with this condition.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C603]

- C6.4 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 400 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D602]

- C6.7 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 350 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[RULE 1301, 12-7-1995]

[Devices subject to this condition : D285, D524, D579]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- C6.12 The operator shall use this equipment in such a manner that the percent spent caustic being monitored, as indicated below, does not exceed 70 percent.

The operator shall monitor the spent caustic concentration of the recirculating NaOH scrubbing solution once a day.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

This condition shall only apply when the exhaust gas from the caustic scrubber (Device C167) is being vented to the flare (Device C396).

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 407, 4-2-1982]

[Devices subject to this condition : C167]

- C8.1 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, is not less than 1400 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the firebox or in the ductwork immediately downstream from the firebox.

The measuring device or gauge shall be accurate to within plus or minus 50 degree F. It shall be calibrated once every 12 months.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 470, 5-7-1976]

[Devices subject to this condition : C531]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

- D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the mist eliminator.

The operator shall record the parameter being monitored once every 7 days.

The monitoring and recording frequency shall increase to at least once every 8 hours whenever the static differential pressure reaches 20 inches water column or greater. The operator shall clean or replace the filter when 3 consecutive readings of 20 inches water column or greater are recorded.

The operator shall maintain the differential pressure gauges in good working condition.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C575, C576, C577]

- D12.5 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH₃).

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C682, C794, C814]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted to determine ROG emissions at the outlet.

The test shall be conducted to determine the PM10 emissions at the outlet.

The test shall be conducted to determine the oxygen concentration at the outlet.

The test shall be conducted to determine the moisture content at the outlet.

The test shall be conducted to determine the flow rate at the outlet.

The test shall be conducted to determine Benzo(a)pyrene emissions at the outlet.

The test shall be conducted to determine Formaldehyde emissions at the outlet.

The test shall be conducted to determine Acetaldehyde emissions at the outlet.

The test shall be conducted to determine Chromium (VI) emissions at the outlet.

The test shall be conducted to determine Arsenic emissions at the outlet.

The test shall be conducted to determine the efficiency of the Incinerator for ROG.

The test shall be conducted to demonstrate compliance with 40CFR60, Subpart UU and Rule 404.

The test shall be conducted when the Asphalt Oxidizing Units are operating at no less than 80 percent of the permitted production rate.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 3-4-2005]

[Devices subject to this condition **C5311**]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D28.2 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the PM10 emissions at the outlet.

The test shall be conducted at least in one of the loading racks equipped with a CECO filter Model DLM 121 and another loading rack with DLM 161, to determine the hydrocarbon concentration at the outlet of the filter. Such test shall be conducted during a loading operation. The District shall be notified at least seven days from the scheduled source test. The test results shall be submitted to the District within 60 day from the date of the test.

The test shall be conducted to determine the ROG emissions at the outlet.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D179, D187, D570]

D28.3 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the Benzene at the inlet and outlet.

The test shall be conducted to determine the VOC emissions at the inlet and outlet.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C175]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D28.4 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the CO, PM and ROG emissions at the outlet.

The test shall be conducted at least once every three years.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]

[Devices subject to this condition : C175]

D28.5 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted once per three years to determine the CO, ROG and PM emissions at the outlet.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 404, 2-7-1986; RULE 407, 4-2-1982; RULE 409, 8-7-1981]

[Devices subject to this condition : C531]

D28.7 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine NH₃ emissions at the outlet.

The test shall be conducted at least once every three years.

The test shall be conducted when the equipment being vented by the SCR are operating under normal conditions.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C77]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

SOX concentration in ppmv

Concentrations shall be corrected to zero percent excess air on a dry basis.

Oxygen concentration in percent volume

The CEMS shall be installed in accordance with the requirements of 40CFR60 Subpart J

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : **C531**]

D90.2 The operator shall periodically analyze the concentration of VOC in ppmv as hexane at the inlet and outlet of the incinerator according to the following specifications:

The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to analyze the parameter.

The operator shall analyze once every day for the first seven days, then every seven operating days for a month, then monthly thereafter.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : C175]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a bi-weekly basis whenever fuel oil is burned. The routine bi-weekly inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C175, C396, **C531**]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

This condition shall become effective when the initial Title V permit is issued to the facility.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D80, D85, D87, D89, D179, D181, D187, D285, C396, D570, D579, D602]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

E193.5 The operator shall operate and maintain this equipment according to the following specifications:

The assisted-steam system shall have the capability to deliver a maximum rate of 21,000 lb/hr of 100 psig steam to the flare flame

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C396]

E193.6 The operator shall operate and maintain this equipment according to the following specifications:

The pressure-vacuum relief valves shall be set to either 10 percent below the maximum allowable working pressure of the tank or a minimum setting of 15 psig whichever requires to prevent actuating the valves during normal operating conditions

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D358, D359]

E224.1 The operator shall replace the filter when the pressure drop across the fiberbed approaches 12" W.C.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C575, C576, C577]

E224.2 The operator shall replace the prefilter and filterbed when the pressure drop across the equipment approaches 10 inches water.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C603]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

E336.3 The operator shall vent the vent gases from this equipment as follows:

All vent gases shall be directed to the incinerator (Device C531 of Process 15, System 3) in tandem with SOx scrubbing system (Process 15, System 4), which consists of a scrubber (Device C566) followed by a scrubber exhaust gas re-heater (Device D569).

This equipment shall not be operated unless the incinerator and the SOx scrubbing system are in full use and have a valid permit to receive vent gases from this equipment.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 470, 5-7-1976]

[Devices subject to this condition : C81, C86, C88, C90, D181, D570]

H. Applicable Rules

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| VOC | District Rule | 1173 |

[RULE 1173, 5-13-1994; RULE 1173, 12-6-2002]

[Devices subject to this condition : D618, D621, D650, D701, D704, D718, D803, D812, D816, D817, D818, D819, D827, D828, D829, D831]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| H2S | 40CFR60, SUBPART | J |

[40CFR 60 Subpart J, 6-24-2008]

[Devices subject to this condition : D27, D29, D30, D31, D44, D45, D46, D73, D74, D75, D76, C175, **S31**]

H23.9 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | 40CFR60, SUBPART | Kb |

[40CFR 60 Subpart Kb, 10-15-2003]

[Devices subject to this condition : D748]

H23.10 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, SUBPART | UU |
| PM | District Rule | 470 |
| VOC | District Rule | 470 |

[RULE 470, 5-7-1976; 40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D80, D85, D87, D89]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| PM | 40CFR60, SUBPART | UU |

[40CFR 60 Subpart UU, 8-5-1983]

[Devices subject to this condition : D524, **D579**, D602]

H23.22 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|---------------|--------------|
| SOX | District Rule | 1118 |

[RULE 1118, 11-4-2005]

[Devices subject to this condition : C396]

H23.23 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | District Rule | 1173 |
| VOC | 40CFR60, SUBPART | GGG |

[RULE 1173, 5-13-1994; RULE 1173, 6-1-2007; 40CFR 60 Subpart GGG, 6-7-1985]

[Devices subject to this condition : D723, D726, D733, D744]

FACILITY PERMIT TO OPERATE PARAMOUNT PETR CORP (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

H23.24 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|-------------|------------------|--------------|
| VOC | District Rule | 1173 |
| VOC | 40CFR60, SUBPART | GGGa |

[RULE 1173, 5-13-1994; RULE 1173, 6-1-2007; 40CFR 60 Subpart GGGa, 6-2-2008]

[Devices subject to this condition : D610, D808, D809]

I. Administrative

11.1 The operator shall comply with all the requirements of the Variance, Case No. 2914-87, dated April 24, 2007, and the modification and extension to this variance, dated July 17, 2008, in accordance with the Findings and Decisions of the Hearing Board or as subsequently modified by the Hearing Board. The operator shall submit progress reports at least semi-annually, or more frequently if specified in the Findings and Decisions. The progress reports shall contain dates for achieving activities, milestones or compliance required in the schedule of compliance and dates when such activities, milestones or compliance were achieved; and an explanation of why any dates in the schedule of compliance were not, or will not be met, and any preventative or corrective measures adopted.

[RULE 3004(a)(10)(C), 12-12-1997]

[Devices subject to this condition : C396]

11.2 The operator shall comply with all the requirements of the Stipulated Order for Abatement, Case No. 2914-72, dated October 14, 2004, in accordance with the Findings and Decisions of the Hearing Board or as subsequently modified by the Hearing Board. The operator shall submit progress reports at least semi-annually, or more frequently if specified in the Findings and Decisions. The progress reports shall contain dates for achieving activities, milestones or compliance required in the schedule of compliance and dates when such activities, milestones or compliance were achieved; and an explanation of why any dates in the schedule of compliance were not, or will not be met, and any preventative or corrective measures adopted.

[RULE 3004(a)(10)(C), 12-12-1997]

[Devices subject to this condition : D29, D44, D45, D46, C175, C531]

APPENDIX B

Rafiq Beshari

*Khang Nguyen
Helen Chin*

MINUTE ORDER

PARAMOUNT PETROLEUM CORPORATION
14700 Downey Avenue
Paramount, CA 90723

Case No: 2914-72
Facility ID: 800183

Hearing Date: 10/13/04 Hearing Type: Stipulated Order for Abatement

HEARING BOARD ACTION

Action: Issued Starting Date: 10/13/2004 Ending Date: 4/30/2009

RULES

- 202(a)
- 202(b)
- 203(b)
- 2004(f)

PM

EQUIPMENT DESCRIPTION DEVICE/APPLICATION/PERMIT

| | |
|---------------------------------------|------|
| Heater H-601 | D30 |
| Heater H-602 | D31 |
| Heater H-802 | D29 |
| Heater H-805 | D27 |
| TGU Incinerator | C175 |
| Asphalt Air Blowing Plant Incinerator | C531 |

CONDITIONS

Respondent shall comply with the conditions set forth in the Stipulated Order for Abatement and Findings and Decision of the Hearing Board, attached.

REMINDER

In the event Respondent will be unable to comply with the ending date, a petition requesting a modification of the Order for Abatement may be filed. To meet notice requirements, the petition **must be** filed no later than **April 1, 2009**. In the event the hearing is not needed and taken off calendar, Respondent may request a refund of 50% of the filing fee; however, Respondent will be responsible for the publication fee.

Present:

- Edward Camarena, Chair
- Laurine E. Tuleja, Vice Chair
- Joseph D. Auerbach, M.D.
- Marti L. Klein
- Barry Read

PARAMOUNT PETROLEUM CORPORATION - Case No. 2914-72

Representing the Petitioner: Elliott Semel, Senior Deputy District Prosecutor

Representing the Respondent: Jocelyn Thompson, Attorney at Law

Witness for the Respondent: June Christman, Environmental Director

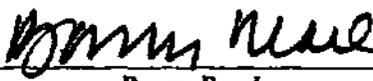
Petitioner's Exhibit:

- A - Proposed Findings and Decision
- B - Copy of Notice of Violation No. P12019 dated 3/31/03
- C - Copy of Notice of Violation No. P12047 dated 8/31/03
- D - Copy of Notice of Violation No. P12049 dated 9/1/00
- E - Copy of Notice of Violation No. P12050 dated 9/1/03

Respondent's Exhibit: #1 - Copy of Facility P/O No. 800183

Notice: READ/TULEJA 5-0

Board
Review/Approval


Barry Read

Prepared by Rosalinda Diaz
Attachment: Stipulated Order for Abatement and Findings and Decision

**BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

In the Matter of

**SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT,**

Petitioner,

v.

**PARAMOUNT PETROLEUM
CORPORATION,**

Respondent.

Case No. 2914-72

**STIPULATED ORDER FOR
ABATEMENT AND FINDINGS
AND DECISION OF THE HEARING
BOARD**

FINDINGS AND DECISION OF THE HEARING BOARD

This Petition for a Stipulated Order for Abatement was heard on October 13, 2004, pursuant to notice and in accordance with the provisions of California Health & Safety Code Section 40823 and District Rule 812. Five members of the Hearing Board were present: Edward Camarena, Chair; Laurine E. Tuleja, Vice Chair; Joseph D. Auerbach, M.D.; Marti L. Klein; and Barry Read. Petitioner Executive Officer was represented by Elliott Sernel, Senior Deputy District Prosecutor. Respondent Paramount Petroleum Corporation (Paramount) was represented by Jocelyn Thompson of the Weston Benshoof law firm. The public was given the opportunity to testify. The matter was submitted and evidence received. The Hearing Board finds and decides as follows:

FINDINGS OF FACT

1. Petitioner is a body corporate and politic established and existing pursuant to Health and Safety Code Section 40000, *et seq.* and 40400, *et seq.* and is the sole and exclusive local agency with the responsibility for comprehensive air pollution control in the South Coast Air Basin.

2. Respondent Paramount operates a petroleum refinery (hereinafter, the "Refinery") within the South Coast Air Basin, located at 14700 Downey Avenue, Paramount CA 90723. The Refinery is subject to RECLAIM, and operates pursuant to Facility Permit No. 800183.

3. Paramount operates four crude oil heaters (the "Heaters") at the Refinery, which are used as part of the initial step in refining crude oil into usable petroleum products and blend stocks. The four heaters, and the corresponding device numbers, are indicated below:

| HEATER | DEVICE ID |
|--------|-----------|
| H-601 | D-30 |
| H-602 | D-31 |
| H-802 | D-29 |
| H-805 | D-27 |

4. Paramount also operates two incinerators (the "Incinerators") at the Refinery, described below together with the corresponding device numbers. The Incinerators are air pollution control devices that control emissions of VOCs and H₂S.

| INCINERATOR | USE | DEVICE ID |
|-------------|---------------------------------------|-----------|
| H-402 | TGU Incinerator | C175 |
| H-907 | Asphalt Air Blowing Plant Incinerator | C531 |

5. Respondent is subject to District Rules 202(a), 202(b), 203(b), and 2004(f) which require that it obtain permits and operate in accordance with its permit conditions.

6. Each of the Heaters and Incinerators is described in Subsection D or H of Facility Permit No. 800183, including a description of "MMBtu/hr." The District asserts that the equipment descriptions set forth in Paramount's facility permit, and in particular the MMBtu/hr descriptions, constitute permit conditions enforceable through District Rules 202, 203 and 2004(f)(1). The District alleges that any operation of the Heaters or Incinerators at levels higher than those stated in the permit descriptions constitutes a violation of Paramount's permits. Paramount disputes the District's interpretation, and believes that the described duties are only nominal firing rates reflecting the output under a certain set of design criteria.

7. The District has issued four Notices of Violation relating to the operation of the Heaters and Incinerators at the Refinery (P12019, P12047, P12049 and P12050) (the "NOVs"). The NOVs allege violations of Rule 203(a).

8. On August 27, 2004, the District filed a Petition for a Stipulated Order for Abatement alleging that Respondent has been operating in violation of its permit conditions and in violation of District Rules.

9. On September 30, 2004, the District issued to Respondent a new Section D of its Facility Permit No. 800183 (Revision #19). Conditions C1.28 and C1.27 of Revision 19 specify that H-601 and H-802 shall not be fired at rates exceeding 50.5 and 53.5 MMBtu/hour, respectively.

10. Respondent is willing to make additional investments in emission reduction technology to ensure continued compliance with District Rules, but those changes will take some time to implement, including time for obtaining necessary permits to construct from the District. Respondent needs to continue to operate the Heaters and Incinerators while those changes are being implemented.

11. Respondent has submitted applications relating to the Heaters and Incinerators. The applications for the Heaters propose the addition of ultra-low NOx burners ("ULNBs") in conjunction with raising the allowable firing rates. The applications relating to the Incinerators seek to increase the allowable firing rates for H-402 and H-907.

CONCLUSION

1. The parties have stipulated to the issuance of this Order for Abatement, pursuant to Health and Safety Code Section 42451(b).
2. The Findings of Fact are based on Petitioner's and Respondent's stipulation to an uncontested prima facie case as of the date hereof.
3. The issuance of this Stipulated Order for Abatement will not constitute a taking of property without due process of law.
4. The adoption of the conditions set forth hereinafter is likely to result in compliant operations at Respondent's Refinery.

ORDER

THEREFORE, subject to the aforesaid statements and good cause appearing, Respondent is hereby ordered to cease all operation of the Heaters which results in violation of District Rules 202, 203 or 2004(f), or comply with the conditions set forth below:

1. Paramount shall not fire the Heaters and/or Incinerators at rates exceeding the maximum rates set forth below. For each of the Heaters, this paragraph shall remain in effect until that heater has been modified in accordance with Paragraph 2) below, at which point the rate specified in the permit to construct/permit to operate shall supercede this paragraph. For each of the Incinerators, this paragraph shall remain in effect until the District has issued a revised permit to construct/permit to operate.

| HEATER | RATE (MMBtu/hr) |
|--------|-----------------|
| H-601 | 85.0 |
| H-602 | 39.9 |
| H-802 | 85.0 |
| H-805 | 35.0 |
| H-402 | 10.0 |
| H-907 | 30.0* |

*Operation of H-907 shall not exceed 18 MMBtu/hr on an average daily basis.

2. Paramount shall install ultra-low-NOx burners ("ULNBs") meeting a NOx concentration limit of 15 ppm averaged over one hour at 3% oxygen on the Heaters upon the schedule and conditions set forth below:

(a) Paramount shall install ULNBs on the Heaters during the crude unit turnaround scheduled for the first quarter of 2005, but not later than March 31, 2005.

3. Paramount will install Selective Catalytic Reduction emission control technology (SCR) to reduce NOx emissions from Heaters H-601 and H-802 to 5 ppm or less averaged over 3 hours at 3 percent oxygen upon the schedule and conditions set forth below:

a) For Heater H-601, Paramount shall meet the following requirements:

I. On or before October 31, 2005, Paramount shall submit applications for permits to construct SCR on H-601 and associated equipment, and submit documents as required pursuant to the California Environmental Quality Act (CEQA). The permit applications and

CEQA documents must contain all information necessary for District evaluation in order for the application to be deemed complete by the District.

II. On or before March 31, 2007, Paramount shall place SCR in full operation to control NOx emissions from Heater H-601 to a level not to exceed 5 ppm averaged over 3 hours at 3 percent oxygen.

b) For Heater H-802, Paramount shall meet the following requirements:

I. On or before October 31, 2007, Paramount shall submit applications for permits to construct SCR on H-802 and associated equipment, and submit documents as required pursuant to the California Environmental Quality Act (CEQA). The permit applications and CEQA documents must contain all information necessary for District evaluation in order for the application to be deemed complete by the District.

II. On or before March 31, 2009, Paramount shall place SCR in full operation to control NOx emissions from Heater H-802 to a level not to exceed 5 ppm averaged over 3 hours at 3 percent oxygen.

c) Notwithstanding Paragraph 3(b), if the Executive Officer of the SCAQMD concurs that the installation of SCR technology for H-802 is not feasible, then Paramount, upon approval of the Executive Officer of the SCAQMD, may install SCR on any other equipment (e.g., heaters H-301, H-302, H-501, H-502 or H-101, H-102, H-704 or H-705, or boilers B-7, B-8 or B-9) provided that the following conditions are met:

- I. No later than January 1, 2007, Paramount submits information to demonstrate to the satisfaction of the Executive Officer of the SCAQMD that it is not feasible to install SCR on Heater H-802. Such information may include a letter from the SCR manufacturer along with its technical analysis.
- II. No later than March 1, 2007, Paramount submits a letter to the Executive Officer of the SCAQMD providing information regarding the combustion devices selected for the installation of SCR in lieu of Heater H-802.
- III. No later than October 31, 2007, Paramount submits applications for permits to construct and any required CEQA documents in order for the application to be deemed complete by SCAQMD.
- IV. Paramount demonstrates that the resulting NOx emission reduction is no less than the reduction that would have been achieved from adding SCR to H-802. Paramount's demonstration may consider the total NOx reduction as well as the reduction gained by installing such equipment sooner than the first quarter of 2009 as set forth in Paragraph 3)b).
- V. On or before March 31, 2009, Paramount shall place SCR in full operation to control NOx emissions from combustion devices selected pursuant to Paragraph 3)c)II. above in lieu of Heater H-802. The SCR must reduce NOx emissions to the level equivalent to the level that would have occurred if the SCR was installed on Heater H-802.

4. This Order of Abatement is not and does not act as a variance, and Respondent is subject to all rules and regulations of the District, and with all applicable provisions of California law. Nothing herein shall be deemed or construed to limit the authority of the District to issue Notices of Violation, or to seek civil penalties, criminal penalties, or injunctive relief, or to seek further orders for abatement, or other administrative or legal relief.

5. The Hearing Board shall retain jurisdiction over this matter until April 30, 2009 or 30 days after installation and start of operation of the last of the ULNBs and SCR units referenced in Paragraph 2 and 3 above, whichever occurs first.

6. The Hearing Board may modify the Order for Abatement without the stipulation of the parties upon a showing of good cause therefore and upon making the findings required by Health and Safety Code Section 42451(a) and District Rule 806(a). Any modification of the Order shall be made only at a public hearing held upon 10 days published notice and appropriate written notice to Respondent.

FOR THE BOARD: 
Barry Read

DATED: 10-14-04

Prepared by Jocelyn Thompson
and Reviewed by Elliott Sernel

Appendix C

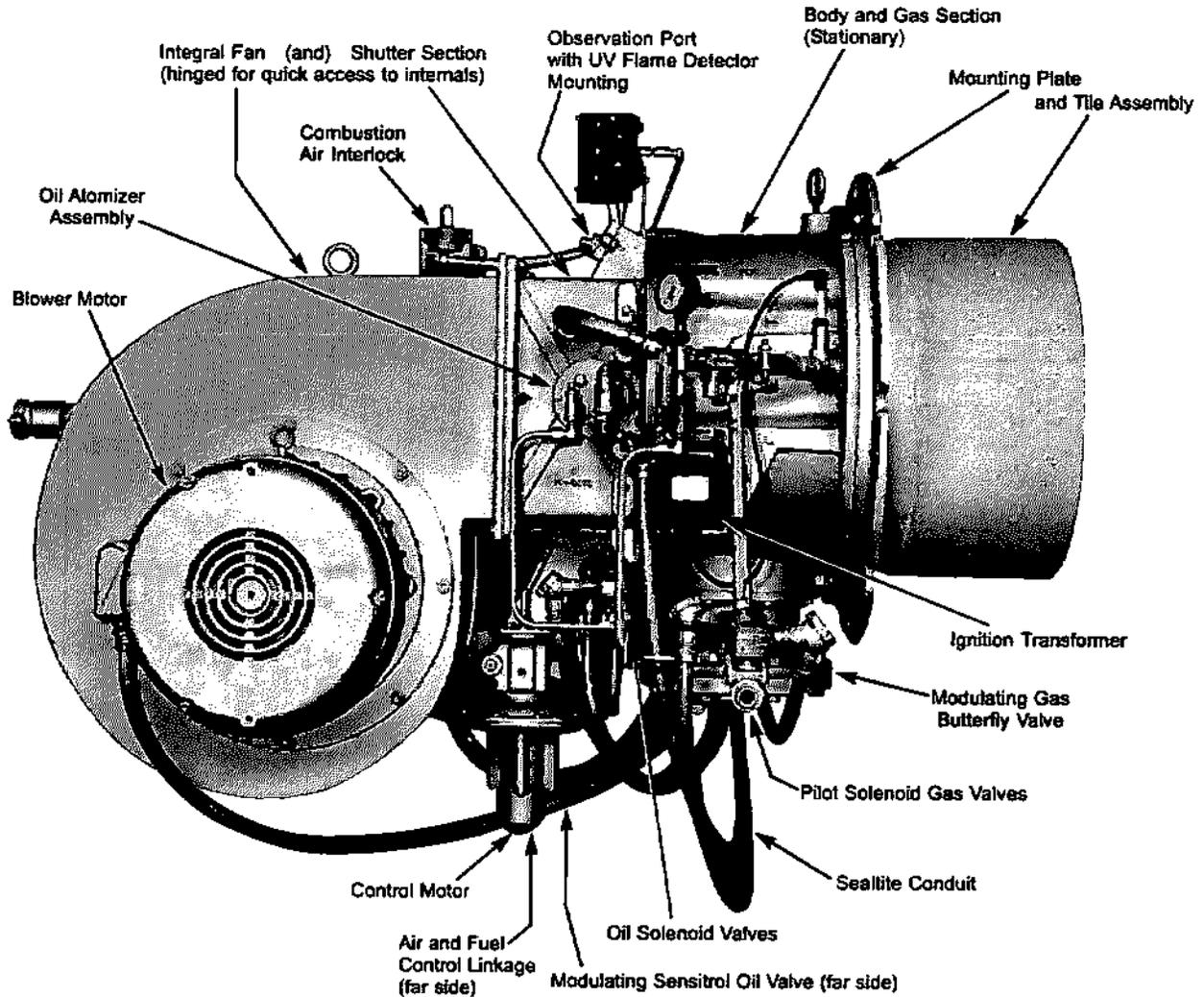
List of Paramount NOV/NCs Since January 1, 2006

| NOTICE NO. | NOTICE TYPE | VIOLATION DATE | STATUS | VIOLATION |
|------------|-------------|----------------|-------------------|--|
| C95529 | NC | 1/12/2006 | Closed on 1/22/08 | ENSURE THAT ALL CEMS INSTRUMENT RANGES MATCH REQUIREMENTS IN CORRESPONDING CEMS CERTIFICATION LETTERS BY SUBMITTING REQUIRED APPLICATIONS |
| C95530 | NC | 2/9/2006 | In Compliance | MAINTAIN RECORDS/CONDUCT REPAIRS AND RE-INSPECTIONS IN ACCORDANCE WITH RULE REQUIREMENTS. |
| C95531 | NC | 2/9/2006 | In Compliance | PROVIDE 2 YEARS OF TEMPERATURE RECORDINGS (STRIP CHART) RECORDS FOR DEVICE #C175 - TAIL GAS INCINERATOR H-402. |
| P46844 | NOV | 3/24/2006 | Closed on 5/30/07 | Failure to maintain storage tank #T-5501 in proper operating condition as required by administrative condition section F, number 2. |
| P47415 | NOV | 4/6/2006 | In Compliance | FAILURE TO SUBMIT ACCURATE QCER'S FOR THE CYCLE 1 RECLAIM COMPLIANCE YEAR 2003. |
| P47416 | NOV | 4/6/2006 | In Compliance | FAILURE TO SUBMIT ACCURATE QCER'S FOR THE CYCLE 1 RECLAIM COMPLIANCE YEAR 2002. |
| C95537 | NC | 6/14/2006 | In Compliance | SUBMIT A REPORT TO THE EXECUTIVE OFFICER WITHIN 96 HRS. WHENEVER A MONITORING DEVICE IS NON-OPERATIONAL FOR MORE THAN 24 HRS. |
| P47422 | NOV | 6/14/2006 | In Compliance | FAILURE TO COMPLY WITH ALL RULES AND PERMIT CONDITIONS (F/P SECTION GH11) APPLICABLE TO THE FACILITY; FAILURE TO TRANSMIT DAILY MASS EMISSIONS AND DAILY STATUS CODES BY 5:00PM OF THE FF: DAY (APRIL 22,24,25,26, 2003) |
| P45644 | NOV | 1/19/2007 | In Compliance | FACILITY FAILED TO CONTINUOUSLY MEASURE EMISSIONS FROM THEIR REFORMING HEATERS H-303, H-304, H-305 AND H-306. |
| P48447 | NOV | 8/8/2007 | Closed on 2/12/08 | DISTRICT INSPECTION DETECTED OPEN ENDED LINES. WASTEWATER SEPARATOR NOT PROVIDED WITH COVER OR OTHER ALTERNATIVE CONTROL MEASURE. TANK WAS FOUND IN NON-VAPOR TIGHT CONDITION. |
| D01680 | NC | 9/1/2007 | In Compliance | ENSURE NOX AND SOX PROCESS EMISSIONS ARE SUBMITTED ELECTRONICALLY IN A TIMELY MANNER. |
| P39614 | NOV | 3/12/2008 | In Compliance | 1) DISTRICT INSPECTORS OBSERVED OPEN ENDED LINES. 2) COVER MATERIAL WAS NOT FREE FROM HOLES. 3) GAUGING OR SAMPLING OPENING(S) ON SEPARATOR WAS NOT COVERED. 4) FAILURE TO PREVENT GAPS OR MAINTAIN VAPOR TIGHT SEAL. |

| NOTICE NO. | NOTICE TYPE | VIOLATION DATE | STATUS | VIOLATION |
|------------|-------------|----------------|---------------|--|
| D01671 | NC | 6/3/2008 | In Compliance | PLEASE PROVIDE A WRITTEN RESPONSE TO THE INFORMATION REQUESTED IN THE THOMAS ROONEY EMAIL ENTITLED "NTC FOR SCR BYPASSES WITHOUT CEMS" - SEE ATTACHMENT. |
| P53502 | NOV | 11/3/2008 | In Compliance | 1) FAILURE TO OPERATE FLARE IN A SMOKELESS MANNER. 2) FAILURE TO DIGITALLY RECORD AND ACCURATELY DATE AND TIME STAMP FLARE OPERATIONS AS REQUIRED BY R1118(g)(7) |
| P53506 | NOV | 2/17/2009 | In Compliance | THE FACILITY WAS FOUND TO DISCHARGE ODORS WHICH CREATED A PUBLIC NUISANCE IN VIOLATION OF CALIFORNIA HEALTH AND SAFETY CODE 41700 AND AQMD RULE 402 |
| P53507 | NOV | 3/11/2009 | In Compliance | THE FACILITY WAS FOUND TO DISCHARGE ODORS WHICH CREATED A PUBLIC NUISANCE IN VIOLATION OF CALIFORNIA HEALTH AND SAFETY CODE 41700 AND AQMD RULE 402 |
| P53510 | NOV | 4/01/2009 | In Compliance | THE FACILITY WAS FOUND TO DISCHARGE ODORS WHICH CREATED A PUBLIC NUISANCE IN VIOLATION OF CALIFORNIA HEALTH AND SAFETY CODE 41700 AND AQMD RULE 402 |



DESCRIPTION, CAPACITIES, SPECIFICATIONS, APPLICATIONS



Features of NORTH AMERICAN Integral Fan Burners



BUILT-IN FAN: Delivers 100% of combustion air required for burner operation. Eliminates need to install an expensive and bulky air delivery system. Avoids dependency of several burners on one blower.



CONTROL VARIETY: Building from the basic burner package, two ratio control systems are available along with many pre-packaged gas and oil trains, motorized controls, flame safeguard accessories, and programming systems.



WIDE RANGE OF CAPACITIES: 3 000 000 to 30 000 000 Btu/hr, in seven sizes. Typical air turndown is 4:1 on standard models. Greater turndowns are available for special applications.



RUGGED, VERSATILE, AND RELIABLE: An ultra stable burner designed to operate with 20% excess air in chambers at temperatures up to 2000 F and under negative or slightly positive pressures. Cold, tight chambers present no problem for this rugged, low-maintenance workhorse. Proven reliability while operating with natural gas, any grade of commercial fuel oil, crude oil, pitch, or refinery bottoms.

| Table 1. Burner Data | CAPACITIES ② | | | | CHARACTERISTICS Flame Size, dia. x length | BLOWER | |
|-------------------------|--------------|-------------------|-----------------------|--------------|---|--------|------|
| | Btu/hr | Main air, scfh | Natural gas, scfh③ | Oil, gph③ | | hp | rpm |
| 4131A | 4 200 000 | 50 000 | 4 200 | - | 2.5' x 5' | 1.5 | 3450 |
| 5131A- { 2 | 4 200 000 | 50 000 | - | 30.3 | 2.5' x 5' | 1.5 | 3450 |
| 6131A- { 5,6 | 4 200 000 | 50 000 | 4 200 | 27.9 | 2.5' x 5' | 1.5 | 3450 |
| CR | 4 200 000 | 50 000 | 4 200 | 27.9 | 2.5' x 5' | 1.5 | 3450 |
| 4131B | 6 300 000 | 76 000 | 6 300 | - | 3' x 7' | 3 | 3450 |
| 5131B- { 2 | 6 300 000 | 76 000 | - | 50.7 | 3' x 7' | 3 | 3450 |
| 6131B- { 5,6 | 6 300 000 | 76 000 | 6 300 | 42.0 | 3' x 7' | 3 | 3450 |
| CR | 6 300 000 | 76 000 | 6 300 | 42.0 | 3' x 7' | 3 | 3450 |
| 5131CL- { 4 | 10 500 000 | 126 000 | - | 78 | 3.5' x 11' | 5 | 1750 |
| 6131CL- { 5,6 | 10 500 000 | 126 000 | 10 500 | 70 | 3.5' x 11' | 5 | 1750 |
| 4131C { ④ | 12 300 000 | 141 000 | 12 300 | - | 3.5' x 12' | 5 | 3450 |
| 5131C- { 2④ | 12 300 000 | 141 000 | - | 91 | 3.5' x 12' | 5 | 3450 |
| 6131C- { 5,6 | 8 400 000 | 105 000 | 8 400 | 55.8 | 3.5' x 12' | 5 | 3450 |
| 4131CS { ⑤ | 8 400 000 | 105 000 | 8 400 | - | 3.5' x 12' | 7.5 | 3450 |
| 5131CS- { 2⑤ | 8 400 000 | 105 000 | - | 55.8 | 3.5' x 12' | 7.5 | 3450 |
| 6131CS- { 2⑤ | 8 400 000 | 105 000 | 8 400 | 55.8 | 3.5' x 12' | 7.5 | 3450 |
| 4131D | 18 000 000 | 216 000 | 18 000 | - | 4' x 12' | 7.5 | 1750 |
| 5131D- { 2 | 18 000 000 | 216 000 | - | 131 | 4' x 12' | 7.5 | 1750 |
| 6131D- { 5,6 | 16 800 000 | 200 000 | 16 800 | 112 | 4' x 12' | 7.5 | 1750 |
| 4131E | 25 200 000 | 300 000 | 25 200 | - | 4' x 12' | 10 | 1750 |
| 5131E- { 2 | 25 200 000 | 300 000 | - | 182 | 4' x 12' | 10 | 1750 |
| 6131E- { 5,6 | 25 200 000 | 300 000 | 25 200 | 167 | 4' x 12' | 10 | 1750 |
| CR | 25 200 000 | 300 000 | 25 200 | 167 | 4' x 12' | 10 | 1750 |
| 4131FA | 30 000 000 | 360 000 | 30 000 | - | 4' x 18' | 20 | 3450 |
| 5131FA- { 2 | 30 000 000 | 360 000 | - | 222 | 4' x 18' | 20 | 3450 |
| 6131FA- { 5,6 | 30 000 000 | 360 000 | 30 000 | 200 | 4' x 18' | 20 | 3450 |
| CR | 30 000 000 | 360 000 | 30 000 | 200 | 4' x 18' | 20 | 3450 |

BURNER DESIGNATION ①

① Burner model number breakdown is as follows:

First digit identifies burner as—

- 4 = gas only
- 5 = oil only
- 6 = dual-fuel

Next 3 digits, 131, identify burner as part of integral fan series

Letters designate burner frame size

Numerals or CR after hyphen show fuel selection—

- 2 = #2 or #4 oil
- 5 = #5 oil
- 6 = #6

CR = crude oil

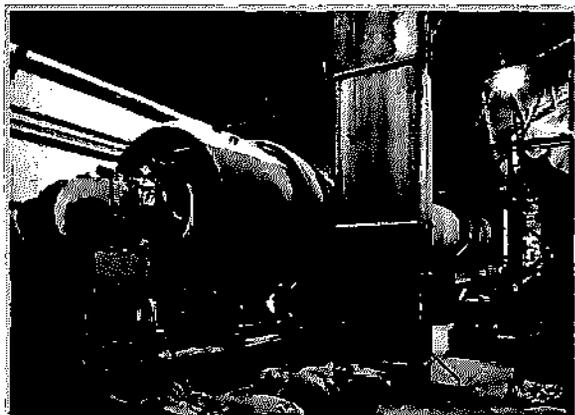
② Capacities and flame lengths are with 20% excess air and 1.5"wc backpressure in a cold, tight chamber. Excess air operation at rates greater than 20%, through reduction of fuel input, is possible for nearly all of these burners. Consult factory for maximum excess air rate for any particular size and fuel.

③ Fuel rates are based on the following calorific values:

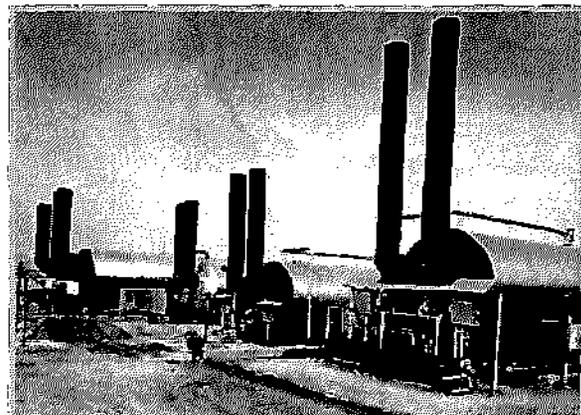
- 1 000 Btu/cu ft of natural gas
- 135 000 Btu/gallon of light (#2 or #4) oil
- 150 000 Btu/gallon of heavy (#5 or #6) oil
- 145 000 Btu/gallon of crude oil

④ Capacity is with 15% excess air and 0.5"wc backpressure.

⑤ Capacity is with 20% excess air and 5"wc backpressure.



Sand Dryer



Heater Treater

APPLICATIONS

Process Heaters
Steam Generators
Emulsion Treaters
Direct-Fired Oil Heaters

Water Heaters
Core Dryers
Paint Dryers
Ceramic Dryers

Liquid Asphalt Heaters
Bollers
Vaporizers
Dross Reclaiming Furnaces

Aluminum Melters
Incinerators
Air Heaters
Rotary Dryers for Ore, Sand, or Aggregate

SPECIFICATIONS

Integral fans provide 100% combustion air to these nozzle-mix burners. Oil atomizers are of the tip emulsion design, using steam or compressed air as the atomizing medium. Oil must be delivered to the nozzle at viscosities below 100 SSU.

The ruggedly constructed burners consist of three basic sections.

Front Section. A heavy cast iron mounting plate, with slotted mounting holes, fitted with a high strength castable burner life rated for service up to 2600 F. A carbon steel or 304 stainless steel tile support jacket is available as an option.

Center Section. A circular gas plenum with bottom gas inlet, a combustion air diffuser, a connection for a spark-ignited premix gas pilot (for natural gas or propane), and a threaded boss to accommodate a flame rod.

Rear Section. Hinge-mounted includes blower motor, impeller, intake guard, a large reinforced glass observation port, provisions for mounting a flame detector, the flange-mounted oil atomizer, and the manual or motorized firing rate control. An accurate linked valve ratio control is provided by a compact arrangement of linkage rods and swivels that connect the internal main air proportioning shutters with a butterfly gas valve and/or a Sensitrol Oil Valve. Fuel oil enters the Sensitrol Oil Valve via a swivel type joint mounted on the hinge.

Basic Gas Burner consists of the above three sections fitted with a manually positioned and a butterfly firing rate control lever (shown in burner photo) and a butterfly gas valve with linkage assembly. Refer to Bulletin 6140 for main and pilot gas accessories.

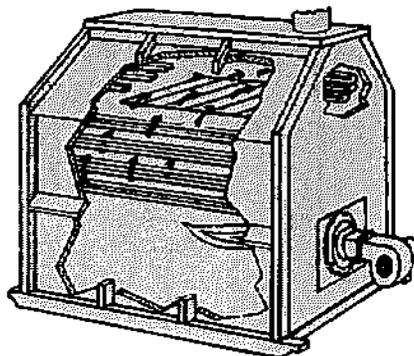
Basic Light Oil Burner consists of the three basic sections described above, with the following equipment: a manually positioned and lockable firing rate control lever, a Sensitrol Oil Valve with linkage assembly, and a flange mounted oil atomizer assembly. Refer to Table 2 for oil and atomizing medium pressure/flow requirements. Specify this burner arrangement for oils up to and including #4 grade.

Basic Heavy Oil Burner is similar to the light oil burner except atomizer, Sensitrol Oil Valve, and oil piping are sized and arranged to accommodate heavy oil or crude oil. Oil temperature is maintained electrically within the burner through four low wattage cartridge heaters: one within Sensitrol valve body, two in heater blocks attached to oil tube, and one in a heater block attached to the nozzle. The hinge assembly is fitted with a hot oil return valve (shown in the photograph). This burner is recommended for all heavy oils, including blended grades.

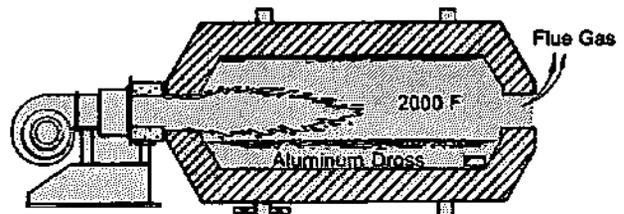
Basic Dual-Fuel Burner is similar to oil burner except provision is made for burning either gas or a pre-selected grade of oil. A dual-fuel burner fitted for heavy oil permits use of any grade, ranging from diesel through very heavy #6.

Flame Supervision and Control. There is a long list of optional accessories that can be added to the basic burners described above. In many applications of this burner, the combustion chamber is below 1400 F. Electronic flame supervisory systems are strongly recommended. Such systems are offered by North American and others. A specially designed system is available for boilers.

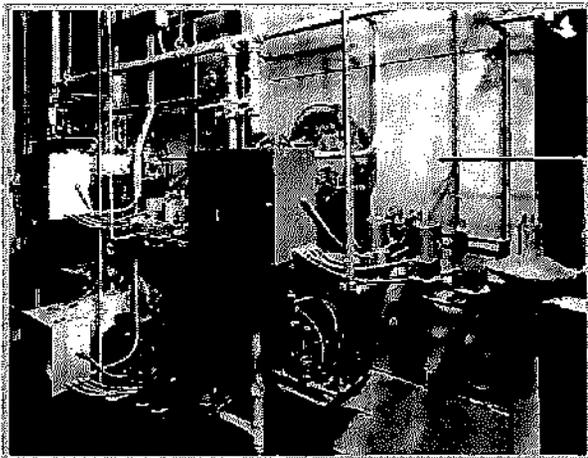
Your local North American sales engineer can help select burner accessories required to make a firing system that will be reliable, efficient, and safe to operate.



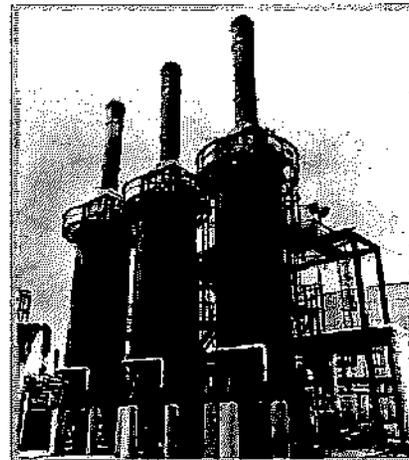
Cooking Oil Heater



Aluminum Dross Reclaiming Furnace



Pathological Incinerator



Liquid Asphalt Heaters

Table 2.

| Burner Size Designation ① | Flows and Pressures Req'd at Burners | Atomizing Mediums ② | | Oil Pressures ③ | | Minimum Gas Pressures ④ "wc | Gas Metering Valve Size ⑤ |
|---------------------------|--------------------------------------|----------------------|-------------------|-----------------|-----------------|--------------------------------|---------------------------|
| | | Comp. air flow, scfm | Steam flow, lb/hr | Light oil, psig | Heavy oil, psig | | |
| A | | 4 | 30 | 120 | 70 | 2.2 | 3" |
| B | | 4 | 50 | 90 | 65 | 3.1 | 3" |
| CL (heavy oil) | | 8 | 70 | — | 80 | 2.8 | 4" |
| C (light oil) | | 4 | 91 | 85 | — | 2.2 | 4" |
| C (heavy oil) | | 7 | 130 | — | 70 | 2.2 | 4" |
| CS (light oil) | | 16 | 110 | 125 | — | 14.0 | 4" |
| D | | 16 | 130 | 50 | 60 | 4.0 | 6" |
| E (light oil) | | 14 | 182 | 55 | — | 3.0 | 8" |
| E (heavy oil) | | 28 | 168 | — | 70 | 3.0 | 8" |
| FA | | 28 | 200 | 75 | 90 | 6.0 | 8" |

① Letters designate frame size—see Table 1, page 2.

② Oil and dual-fuel burners require an accessory package for the atomizing medium. Pressures required at the inlet of that package are 75-100 psi for air and 50-125 psi for steam.

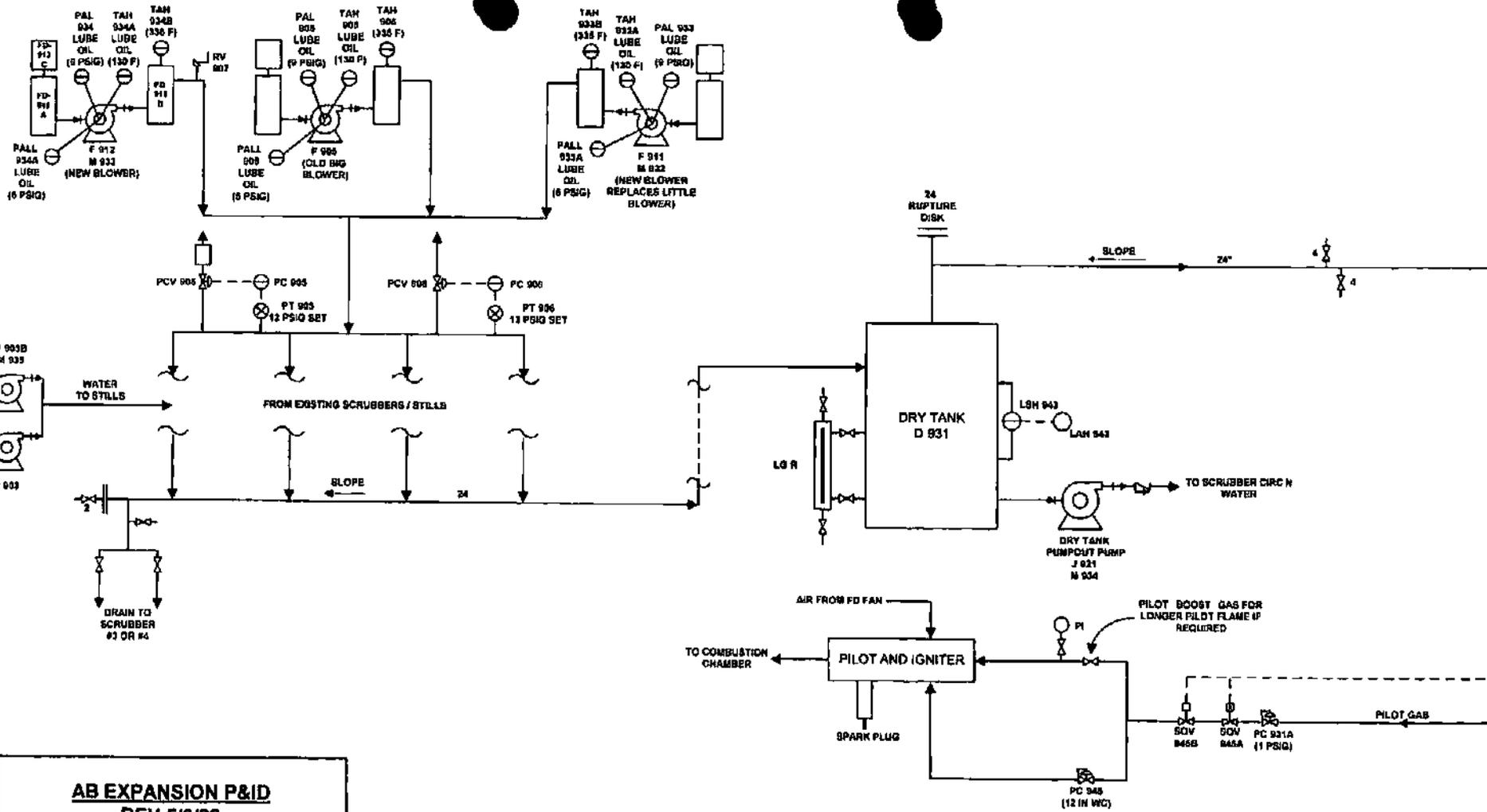
③ Oil and dual-fuel burners require oil delivered to burner hinge at a viscosity below 100 SSU and at pressures listed above. If a liquid fuel other than commercial fuel oil is to be used, consult North American for recommendations of pressure and flow requirements.

④ Gas burners are intended for use with natural gas or propane. Listed pressures are for natural gas—consult North American for propane pressures. Pressures listed are for system sizing only. They are not for ratio adjustment.

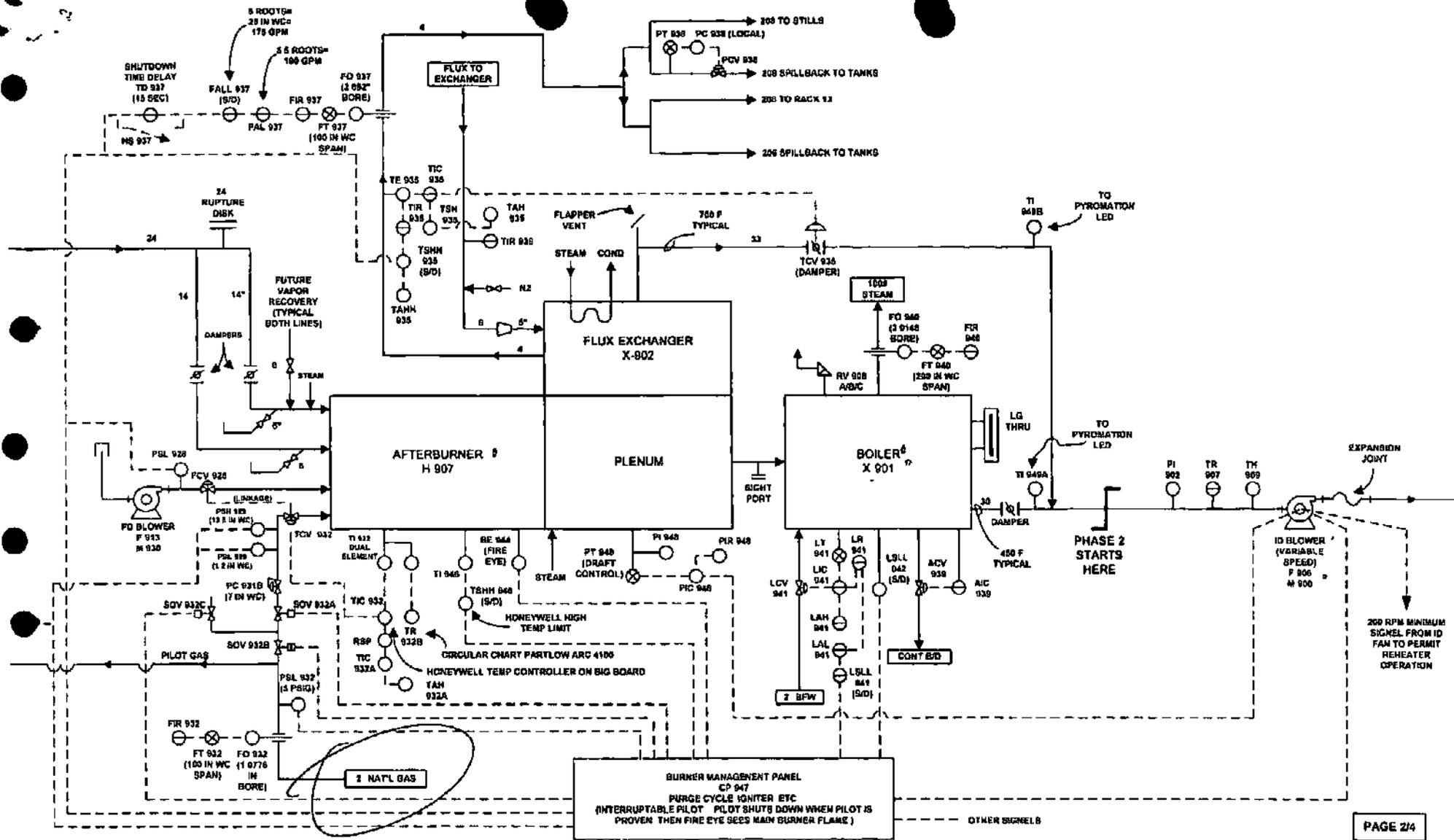
⑤ Gas piping upstream of burner gas metering butterfly valve to be same size as the metering valve for a minimum of 10 pipe diameters. Place reducer, if used, as close as possible to the gas regulator.

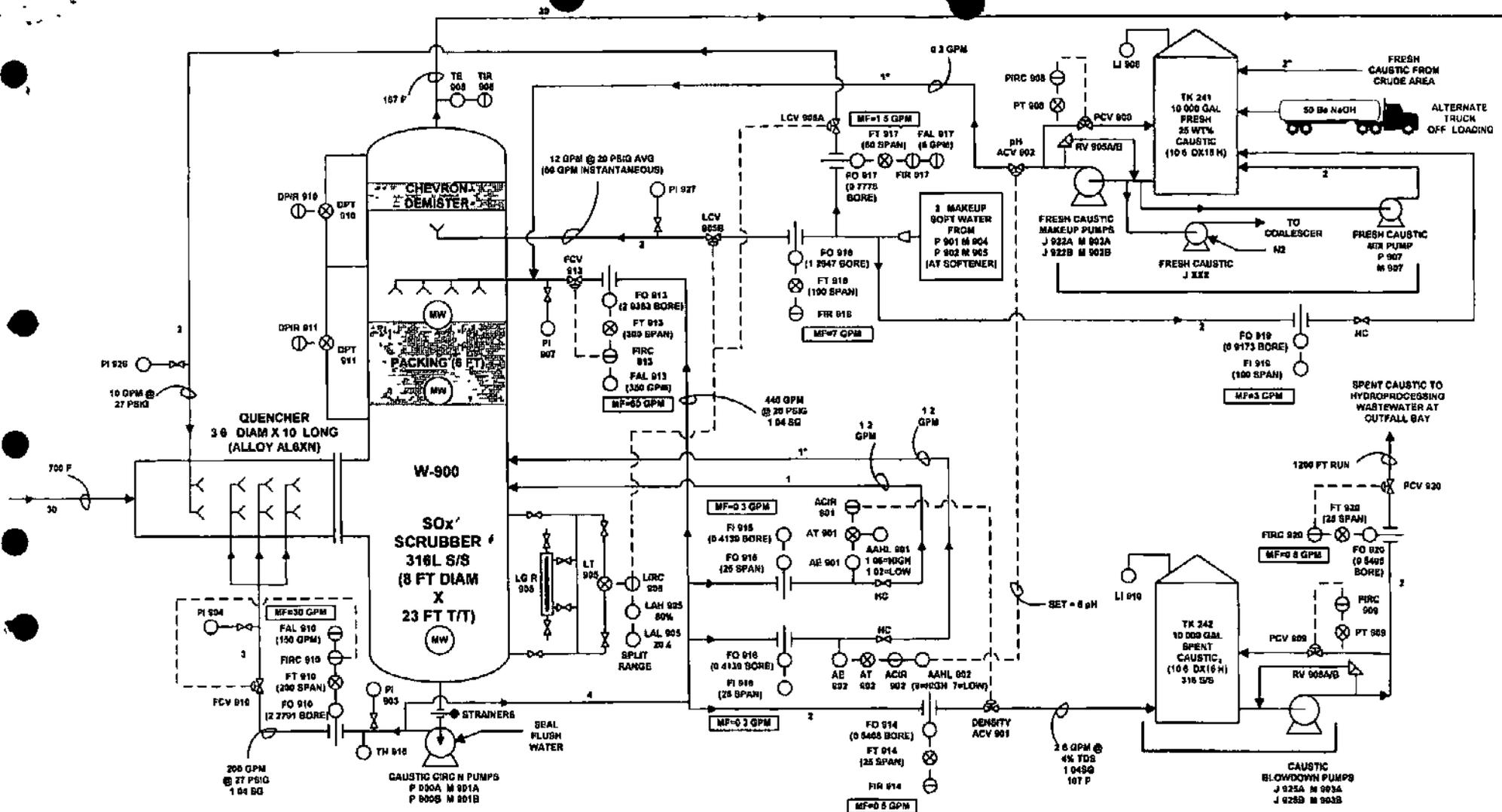
WARNING: Situations dangerous to personnel and property can develop from incorrect operation of combustion equipment. North American urges compliance with National Safety Standards and Insurance Underwriters recommendations, and care in operation.

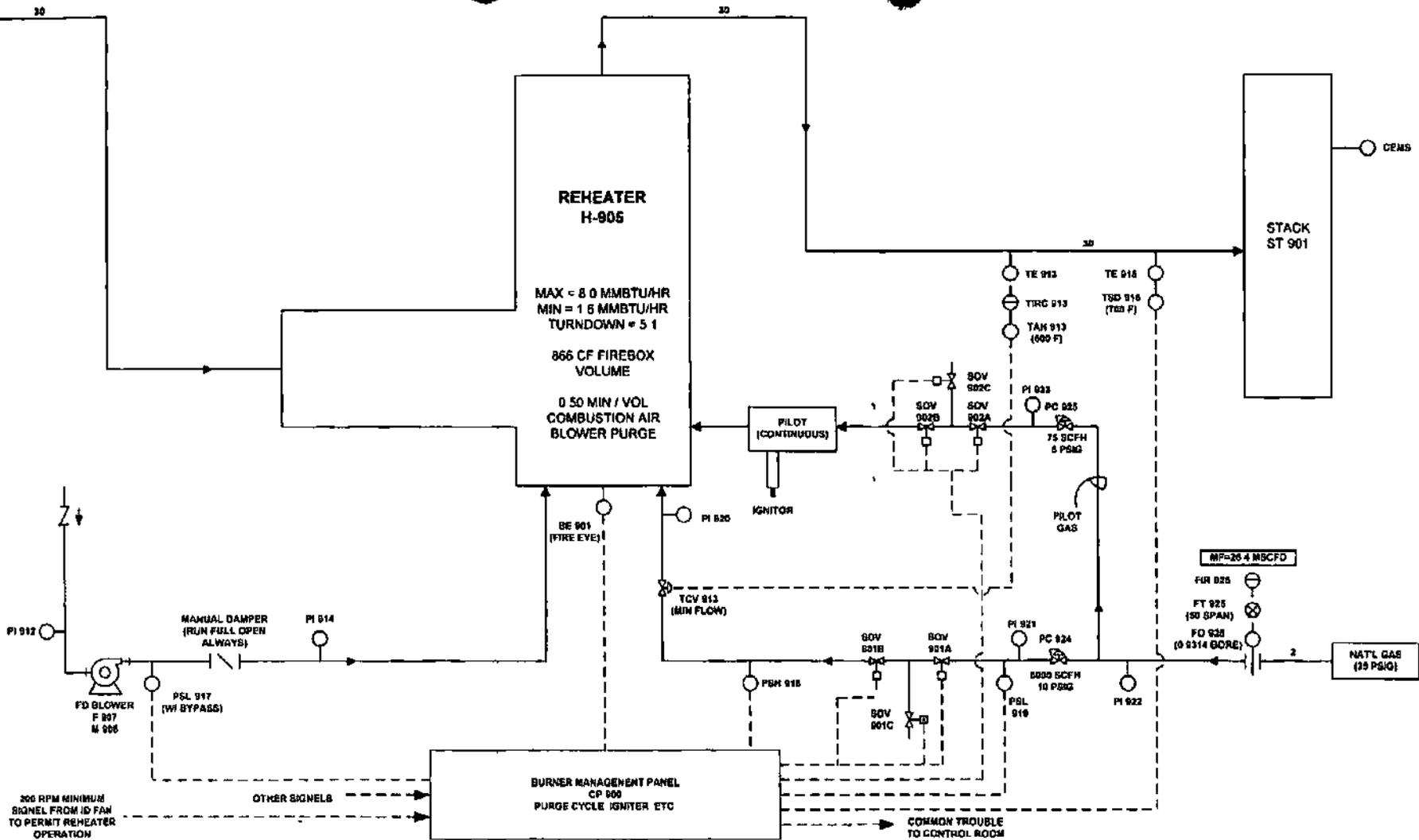
North American Mfg. Co., 4455 East 71st Street, Cleveland, OH 44105-5600 USA, Phone 216-271-6000, Facsimile 216-641-7852
E-mail sales@namfg.com • www.namfg.com



AB EXPANSION P&ID
REV 5/3/99
U WISIOAB P&ID VSD







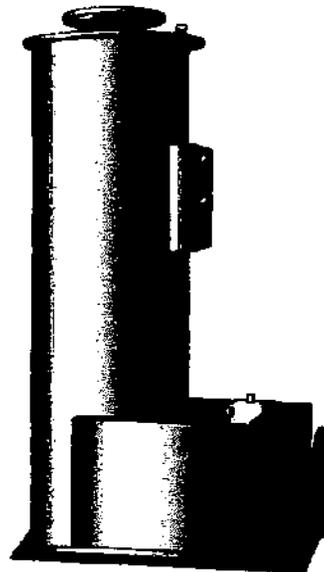
DLM FILTER SYSTEM

The CECO Filters DLM System is used for controlling mist emissions in a wide range of applications and industries. This system was Designed for Lightning Fast Maintenance and it allows plant personnel to change the main filter and pre-filter very quickly. Available in standard or custom-designed configurations and materials of construction, this system offers simplified maintenance.

- Long filter life - Up to 10 years!
- Cleaned air can go back into plant
- Low maintenance requirements
- Low operating costs
- Efficiencies approaching 100% for particles >3 micron
- Efficiencies of 99.5% or higher for particles <3 micron

DLM System Features

- Direct fan mount on vessel top
- Unitized vessel design
- Quick change of pre-filter
- Easy to read pressure gauges
- Fast removal of vessel cover



Industries and Typical Applications

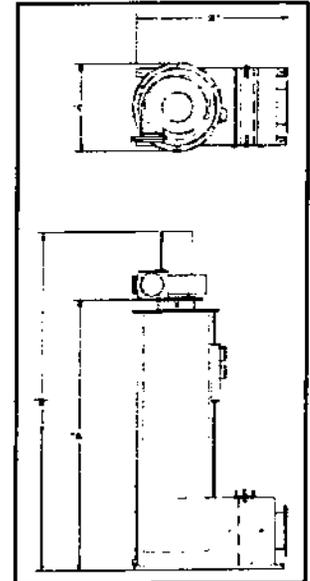
- Chemical: Acid / Caustic Mist
- Asphalt: Storage Tank Emissions
- Metals: Rolling Mill Lubricant Emissions
- Power: Turbine Lube Oil Vent
- Pulp & Paper: Scrubber Visible Emissions
- Semiconductor: Wet Bench Acid Mist
- Printed Wire Board: Hot Air Solder Leveling
- Fertilizer: Nitric Acid / Platinum Recovery

DLM Filter System Specifications

DLM 121
DLM 161

| Model | Flow (ACFM) | Height w/o fan (A) | Height w/fan (B) | Dimension (C) | Dimension (D) |
|----------|-------------|--------------------|------------------|---------------|---------------|
| DLM-500 | 500 | 62-3/4 | 82-1/4 | 28-1/2 | 56-7/8 |
| DLM-750 | 750 | 62-3/4 | 90-1/8 | 28-1/2 | 58-1/4 |
| DLM-1000 | 1,000 | 100 | 127-3/8 | 28-1/2 | 58-1/4 |
| DLM-1500 | 1,500 | 100 | 127-3/8 | 28-1/2 | 59-1/2 |
| DLM-2000 | 2,000 | 78 | 105-3/8 | 42-1/2 | 76-1/4 |
| DLM-3000 | 3,000 | 100 | 132-3/4 | 42-1/2 | 76-1/4 |
| DLM-4500 | 4,500 | 178-5/8 | - | 42-1/2 | 76-1/4 |

NOTE: All dimensions in inches.



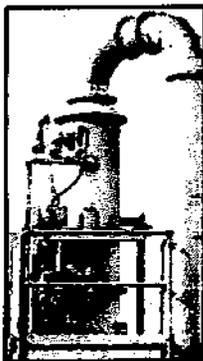
Options

- Blower and silencer
- Motor starter and controls
- Turnkey installation
- Custom designs / dimensions available

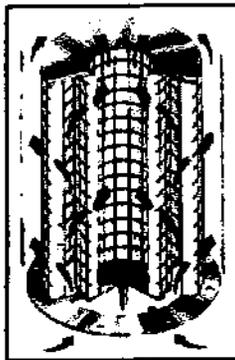
Materials of Construction

- Vessel: Carbon steel, stainless steel, high alloys, plastics, and fiberglass
- Filter Media: Fiberglass, polypropylene, polyester, and others

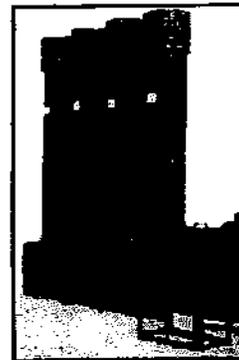
More Solutions from CECO Filters...



- Acid Gas Scrubbing
- Particulate Control



- Increased Filter Capacity
- Reduced Pressure Drop



- Machining Oil Mist Control
- Product Recovery

IV. Process Conditions / Equipment Specifications:

A. Process Conditions:

| | | |
|-----------------------------|---------|-------------------------------------|
| Flow Rate | Unit 1: | <1,500 ACFM |
| | Unit 2: | <1,000 ACFM |
| Temperature at filter inlet | | <120°F |
| Stream Composition | | Air |
| Contaminants | | Oil Mist |
| Liquid Loading | | <50 mg/ACF |
| Pressure Drop Overall | | 6"-12" W.C., (clean/dry to maximum) |

B. Equipment Specifications (for a DLM161 and DLM121 Systems):

Fiber Bed Filters: CECO will provide one (1) diffusion type TWIN-PAK® filter for the modular unit. The filter is designed to be hanging and will be supported at the vessel top plate. The media will be fiberglass and the inner and outer cages and top and bottom plates will be constructed of Carbon Steel. The pre-filter module has a 2' x 2' carbon steel panel pre-filter.

Containing Vessel: The filter containing vessel is constructed of Carbon Steel. The measurements are 36" x 57" x 100" high. The 12" inlet will be located on the lower vessel wall with the outlet located on the vessel top. The vessel top has a removable cover for easy access to filter assembly.

Blower: We have optimized the blower section for performance and economy. If you have specific noise and or electrical requirements for your installation, please provide us with a written specification prior to order placement. If no requirements are called out in the Purchase Order the electrical set up will be 3Ph/60Hz/230/460V. Following delivery, system modifications for noise reduction will be made on a time and material basis only. Motor starter not included. The motor(s) are Class 1, Division 2.

Diffusion:

- Removal efficiency approaching 100%, by weight for particles > 3 microns.
- Removal efficiency approaching 99.5%, by weight for particles < 3 microns.
- Opacity of 5% or less, which is an exhaust that is not visible.

DLM 161 FAN SPEC.
(DLM 1500)

CECO Filters, Inc.

A Division of CECO Environmental Corporation, Member of NASDAQ (CECE)

1029 Conshohocken Road • Conshohocken, PA 19428

(610) 825-6495, Ext. 3111 • Fax: (610) 825-3108 • E-mail: tim@cecofilters.com

Replacement Fan for DLM161

Proposal # 309198

for

Paramount Petroleum

14700 Downey Avenue

Paramount, CA 90723

Attention: Dick Mellor

Prepared by:

**Tim McNally,
Sales Manager**

July 9, 1999

In this proposal for CECO Filter Products, you will find pricing, detailed process conditions, and equipment specifications which are confidential and proprietary to CECO Filters Inc. This information is intended solely for use by the above named person(s) and company to evaluate the products being offered in this proposal. It is not to be shown, discussed or transmitted to others without CECO Filters, Inc. written permission. If our request to maintain the confidential nature of this proposal is unacceptable, please notify CECO immediately. Thank you for considering CECO, the leader in Fiber Bed Filter Technology, for your filter needs.

Paramount Petroleum
July 9, 1999

Price Quotation: **\$1,850.00**

Model No. HP-6C21 fan for operation at 1,400ACFM @ 24" W.C.. Fan will operate at 3,500 RPM, 120°F and 0ft. elevation (.065 lbs/ft³ density) BHP: 10.2. Arrangement 4HM. Rotation: CW. Discharge: BH, Inlet: 6.0. Wheel: 21X2.875.

Features include a drilled inlet flange, TEFLON shaft seal, drilled outlet flange, steel housing, alum. Wheel material, Spark resistance to AMCA B standards, and a slide gate outlet damper. Package to include (shipped separately) an adaptor plate, gasket material, and hardware for the mating of the blower to the system.

Motor is: 15hp, 3,500 RPM, TEFC, 60Hz/3Ph/230-460V.
Weight is: approximately 500 lbs.

Warranty:

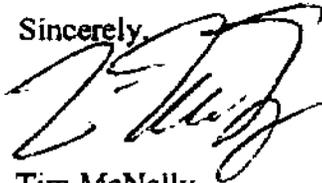
CECO Fiber Bed systems are warranted for defects in materials and workmanship for one (1) year from delivery.

Shipping:

2 - 3 weeks after customer purchase order is received.

I trust that this proposal meets your requirements and I look forward to reviewing it with you in detail. We are confident that we can support your requirements and provide you with the best solution to your application. Should you have any further questions regarding this proposal, please do not hesitate to contact me at (610) 825-6495 ext. 3111.

Sincerely,



Tim McNally,
Industry Sales Manager

cc: CECO Representative, File - 309198.WPD

NOTE: Attached and made part of this proposal is "Appendix A - Terms and Conditions".

DLM 121

C I N C I N N A T I F A N

Air Handling Specialist

SYSTECH DESIGN, INC.
300 N. POTTSTOWN PIKE
EXTON, PA 19341
(610) 524-9048

Job Name : CECCO
Reference: QUOTE # 81661

Fan Requirements

1100 ACFM, Volume
16.00 in. W.G., Static Pressure
0.0684 lb/cu.ft., Density
120 degree F., Temperature
0 feet, Altitude
0.0 percent, Relative Humidity
1.000 Specific Gravity

Selected Fan

Model - PB-15A
Inlet - 8" Diameter
Width - Full
Wheel - 16.5X4.38
RPM - 3450
Wheel - 16.500" Dia.
Inlet - 0.349 sq. ft.
Outlet - 0.349 sq. ft.

SOUND DATA

Directivity factor (2), Hemispherical radiation.
This fan has a non-ducted inlet and a ducted outlet.
Sound power level (Lw, LWA) ratings shown in dB referenced to 1.0E-12 watts. Sound pressure level (Lp, LpA) ratings shown in dB referenced to 0.0002 microbar.

| QUANTITY | OCTAVE BAND CENTER FREQUENCY (Hz) | | | | | | | |
|-------------------------------|-----------------------------------|-----|-----|-----|----|----|----|----|
| | 63 | 125 | 250 | 500 | 1K | 2K | 4K | 8K |
| SOUND POWER LEVELS: | | | | | | | | |
| Inlet Lw (dB) | 90 | 94 | 97 | 100 | 95 | 92 | 86 | 81 |
| Outlet Lw (dB) | 90 | 94 | 97 | 100 | 95 | 92 | 86 | 81 |
| Total Lw (dB) | 93 | 97 | 100 | 103 | 98 | 95 | 89 | 84 |
| SOUND PRESSURE LEVELS: | | | | | | | | |
| Inlet Lp (dB) | 78 | 82 | 85 | 88 | 83 | 80 | 74 | 69 |
| Outlet Lp (dB) | 67 | 71 | 74 | 77 | 72 | 69 | 63 | 58 |
| Total Lp (dB) | 79 | 82 | 86 | 88 | 83 | 81 | 74 | 69 |

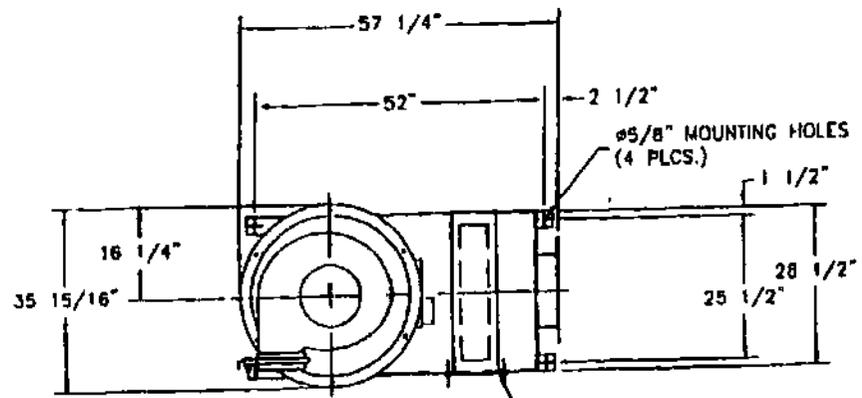
A-Weighted Sound Power Level (LWA) = 103 dB(A)
A-Weighted Sound Pressure Level (LpA) = 89 dB(A) at 5.00 ft.

Sound Pressure Level calculations assume free field propagation occurring outdoors.

Duct end corrections applied (AMCA 300-85 Appendix C)
Blade Passage Frequency = 460 Hz (500 Hz Octave Band)

Noise from the driver is not included.

Sound pressure (Lp, LpA) values are calculated based upon assumed environmental conditions. Actual values may vary for specific installations due to environmental factors such as other noise sources, walls, duct design, etc.



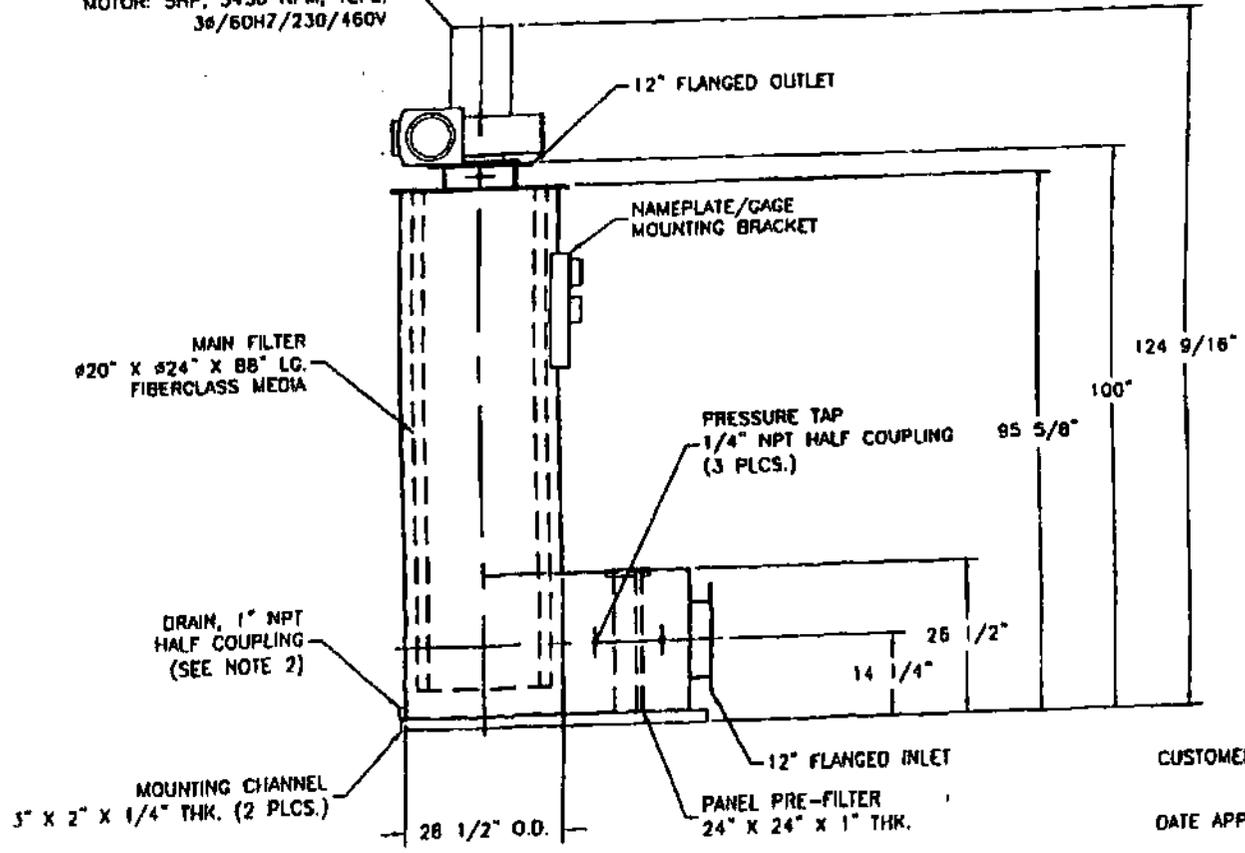
MATERIAL:
CARBON STEEL UNLESS OTHERWISE SPECIFIED.

FINISH:
INTERIOR - CLEANED & OILED
EXTERIOR - PRIMED & PAINTED

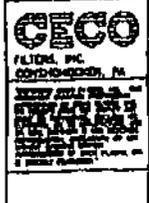
- NOTES:**
1. SYSTEM INCLUDES (2) MAGNAHELIC GAGES & (1) TEMPERATURE GAGE.
 2. SYSTEM DRAIN PIPING REQUIRES A SEAL LEG WITH ADEQUATE CAPACITY TO PREVENT AIR BYPASS SEE DWG QRTRP-B1.
 3. EST. WEIGHT: 2,100 LBS. (WET)

CAST ALUMINUM BLOWER
W/OUTLET DAMPER
1000 ACFM @ 16" W.C.
MOTOR: SHP, 3450 RPM, TEFC,
3ø/60HZ/230/460V

EASY ACCESS
PANEL PRE-FILTER DOOR



SYSTEM, DLM121, CS.
GENERAL ARRANGEMENT



CUSTOMER APPROVAL: _____

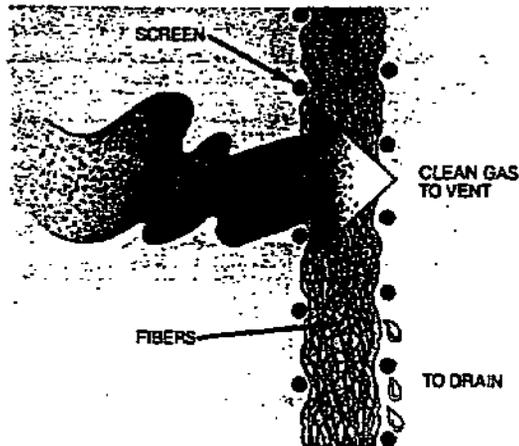
DATE APPROVED: _____

| | |
|------------|----------|
| QUOTE NO.: | |
| JOB NO.: | |
| SCALE: | N.T.S. |
| REV. NO.: | 1 |
| DWG NO.: | DLMCS-A2 |



TECHNICAL INFORMATION ON FILTER OPERATION

Fiber bed filters are used to trap, collect and remove liquids and soluble particulate matter suspended in a gas stream. They are also used to collect insoluble solids. Collection can be achieved with an efficiency as high as 99.5% measured on a particle size basis. Air streams and process gases can be made free of pollution or hazard problems and valuable material can be collected even in heavy liquid loading situations.



CONSTRUCTION Filters are typically constructed in annular cylindrical form from 2' to 20' tall. Specially designed cubical filters which give more surface area per unit volume than cylindrical filters are also available. The cylinder is formed by rolled screens of selected metals, FRP or plastics. An outer and inner screen is used. The filter material, selected from a wide range of media, is placed between the two screens to form the fiber bed. The diameter of the fibers, fiber material, and the material's packing density determines the operating parameters of the filter (such as pressure drop, collection rate, gas through-put, etc.). At the screen ends, plates and flanges are attached to permit a variety of mounting and draining methods.

FILTER PROCESS Mist laden gas passes in a horizontal direction perpendicular to one side of the fiber bed and cleaned gas exits from the opposite side. As the particles try to pass through the fiber bed, they are trapped and held by the fibers. The collected particles are coalesced into drops on the filter's fiber surface and drain by gravity. Particles are collected by a combination of impaction, interception and Brownian movement. Collection of particles less than 2 microns is primarily due to the Brownian movement.

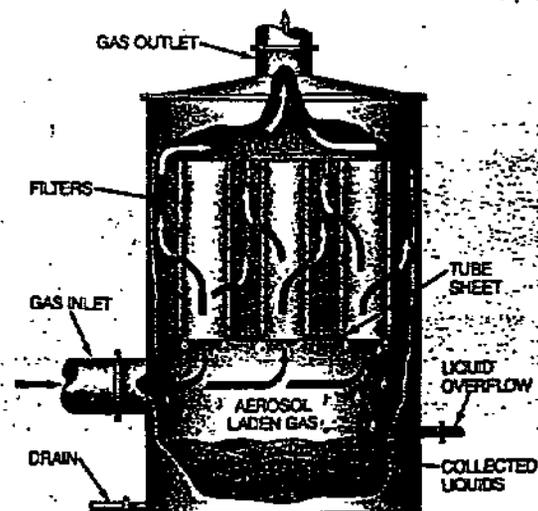
The filter units rest on or are suspended from a tube sheet inside a closed tank. Gas flow can be from outside the filter face to the inside or vice versa. Pressure drops will range from 2" to 20" of water column. In a typical application, a pressure drop of

about 7" dry and 10" at saturation is normal. The greater the liquid loading, the higher the pressure drop. About 50 milligrams of liquid per cubic foot produces the average operating pressure drop of 9" to 10".

The amount of gas throughput for a filter is determined by its physical size, required collection efficiency and the allowable pressure drop. A 24" O.D. ten foot tall filter of 99.5% collection rating has about a 1550 ACFM capacity. A 24" square, 10 foot tall cubical filter will have a capacity of 2000 ACFM under the same conditions. Clusters of filters are used to clean large volumes of gas. Exhaust gas stream temperatures are critical and should be low enough to form a liquid mist.

LIFE AND REPLACEMENT Fiber bed filters can have very long service lives if not plugged by insoluble solids. Continuous service of 5, 10 or even 15 years is common in some industries. CECO's "N-SERT X-SERT" Prefilters may be used to collect these insoluble solids and thus lengthen filter life. These devices can be retro-fitted onto any fiber bed filter.

Filter media replacement, using the same cages and hardware, is accomplished by using CECO's exclusive "SITE-PAK" Filter segments. These devices can be used to repack filters at CECO's plant or in the field at the plant site by plant personnel thus eliminating a lengthy, costly return to the filter manufacturer as required by other suppliers. Filters of any design can accept our "SITE-PAK" segments.



APPENDIX F

Bob Sanford

From: June Christman [JChristman@ppcla.com]
Sent: Friday, May 23, 2008 1:47 PM
To: Bob Sanford
Cc: Edward Nguyen
Subject: RE: Conversion of Annual Throughput Limits to Monthly

Bob,

As I indicated in earlier emails, due to the seasonality of its business, Paramount cannot accept conversion of annual throughputs to monthly simply by dividing the annual throughput by 12.

For Tanks 20, 141, 142, 509 and 777 our peak needs are 90,000 barrels/month. For Tanks 1012 and 1013 our peak needs are 100,000 barrels/month.

Same seasonality issue for the loading racks; peak needs are 666,667 barrels/month.

Let's talk about this and any other H-907 issues at 3:00 PM. We are bringing responses/documents and a check with us to the meeting.

June

From: Bob Sanford [mailto:BSanford@aqmd.gov]
Sent: Tuesday, April 22, 2008 11:16 AM
To: June Christman
Cc: Edward Nguyen
Subject: Conversion of Annual Throughput Limits to Monthly

June:

A majority of the storage tanks and loading racks in the H-907 evaluation are post-NSR equipment with material throughput limits. A listing of the throughput limits follows:

- Storage tank T-20 - 600,000 bbl/yr (condition C1.9)
- Storage tank T-141 - 300,000 bbl/yr (condition C1.11)
- Storage tank T-142 - 300,000 bbl/yr (condition C1.11)
- Storage tank T-509 - 600,000 bbl/yr (condition C1.30)
- Storage tank T-777 - 600,000 bbl/yr (condition C1.30)
- Storage tank T-1012 - 340,000 bbl/yr (condition C1.31)
- Storage tank T-1013 - 340,000 bbl/yr (condition C1.31)

- Storage Rack No. 6 (60/61) - 4,000,000 bbl/yr (condition S1.2)
- Storage Rack No. 7 (70/71) - 4,000,000 bbl/yr (condition S1.2)
- Storage Rack No. 8 (90/91) - 4,000,000 bbl/yr (condition S1.2)
- Organic Rail Rack (P8S25) - 500,000 bbl/month (condition S1.1)

Since the VOC maximum PTE for these permit units is based on a 30-day average, the throughput must also be limited on a 30 day or monthly basis. The annual permit limits will be converted to monthly limits by dividing them by 12. For example, the 600,000 bbl/yr throughput limit for storage tanks T-20, T-509, and T-777 will be converted to 50,000 bbl/month.

7/26/2008

Call or email with any questions or concerns.

Thanks, Bob

Bob Sanford

From: June Christman [JChristman@ppcla.com]
Sent: Friday, May 23, 2008 1:47 PM
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- | | | |
|------------------------------|--------------------------------------|-------------------|
| • Storage tank T-20 | - 600,000 bbl/yr (condition C1.9) | 90,000 / MONTH |
| • Storage tank T-141 | - 300,000 bbl/yr (condition C1.11) | 90,000 / MONTH |
| • Storage tank T-142 | - 300,000 bbl/yr (condition C1.11) | 90,000 / MONTH |
| • Storage tank T-509 | - 600,000 bbl/yr (condition C1.30) | 90,000 / MONTH |
| • Storage tank T-777 | - 600,000 bbl/yr (condition C1.30) | 90,000 / MONTH |
| • Storage tank T-1012 | - 340,000 bbl/yr (condition C1.31) | 100,000 / MONTH |
| • Storage tank T-1013 | - 340,000 bbl/yr (condition C1.31) | 100,000 / MONTH |
| • Storage Rack No. 6 (60/61) | - 4,000,000 bbl/yr (condition S1.2) | } 666,667 / MONTH |
| • Storage Rack No. 7 (70/71) | - 4,000,000 bbl/yr (condition S1.2) | |
| • Storage Rack No. 8 (90/91) | - 4,000,000 bbl/yr (condition S1.2) | |
| • Organic Rail Rack (P8S25) | - 500,000 bbl/month (condition S1.1) | |

Since the VOC maximum PTE for these permit units is based on a 30-day average, the throughput must also be limited on a 30 day or monthly basis. The annual permit limits will be converted to monthly limits by dividing them by 12. For example, the 600,000 bbl/yr throughput limit for storage tanks T-20, T-509, and T-777 will be converted to 50,000 bbl/month.

$$30 \text{ mmStu/hr} = 1.26 \text{ lb/hr}$$

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification: Paramount Tank T-20, 350F & 600k bbl/year
City: Los Angeles C.O.
State: California
Company: Paramount
Type of Tank: Vertical Fixed Roof Tank
Description: Asphalt (Vp=0.15 psia) Storage Temp = 350°F Throughput - 600,000 bbl/year

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 15.00 |
| Diameter (ft): | 10.50 |
| Liquid Height (ft): | 14.00 |
| Avg. Liquid Height (ft): | 7.00 |
| Volume (gallons): | 9,068.38 |
| Turnovers: | 2,778.00 |
| Net Throughput(gal/yr): | 25,191,959.70 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.14 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

APPENDIX G

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-20, 350F & 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mature/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|------------------|-------------------|------------------|------------|---------------------------------------|
| | | Avg. | Min. | Max. | | Avg. | Min. | Max. | | | | | |
| Asphalt 350F | All | 350.00 | 350.00 | 350.00 | 350.00 | 0.1500 | 0.1500 | 0.1500 | 120.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-20, 350F & 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--------------------------------|----------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft) | 714.6574 |
| Vapor Density (lb/cu ft) | 0.0021 |
| Vapor Space Expansion Factor | 0.0000 |
| Vented Vapor Saturation Factor | 0.9384 |

| | |
|----------------------------|----------|
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft) | 714.6574 |
| Tank Diameter (ft) | 10.5000 |
| Vapor Space Outage (ft) | 8.2533 |
| Tank Shell Height (ft) | 15.0000 |
| Average Liquid Height (ft) | 7.0000 |
| Roof Outage (ft) | 0.2533 |

| | |
|-------------------------|--------|
| Roof Outage (Conc Roof) | |
| Roof Outage (ft) | 0.2533 |
| Roof Height (ft) | 0.7600 |
| Roof Slope (ft/ft) | 0.1400 |
| Shell Radius (ft) | 5.2500 |

| | |
|---|------------|
| Vapor Density | |
| Vapor Density (lb/cu ft) | 0.0021 |
| Vapor Molecular Weight (lb/lb-mole) | 120.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.1500 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 809.6700 |
| Daily Average Ambient Temp. (deg. F) | 84.3083 |
| Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)) | 10.731 |
| Liquid Bulk Temperature (deg. R) | 809.6700 |
| Tank Paint Solar Absorptance (Shell) | 0.8000 |
| Tank Paint Solar Absorptance (Roof) | 0.6000 |
| Daily Total Solar Insulation Factor (Btu/sqft day) | 1,571.6498 |

| | |
|---|----------|
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor | 0.0000 |
| Daily Vapor Temperature Range (deg. R) | 0.0000 |
| Daily Vapor Pressure Range (psia) | 0.0000 |
| Breather Vent Press. Setting Range (psia) | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.1500 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia) | 0.1500 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia) | 0.1500 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 809.6700 |
| Daily Min. Liquid Surface Temp. (deg. R) | 809.6700 |
| Daily Max. Liquid Surface Temp. (deg. R) | 809.6700 |
| Daily Ambient Temp. Range (deg. R) | 19.8167 |

| | |
|---|--------|
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor | 0.9384 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.1500 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 8.2533 |
| Working Losses (lb): | 1,916.0192 |
| Vapor Molecular Weight (lb/lb-mole): | 120.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.1500 |
| Annual Net Throughput (gal/yr.): | 25,191,959.6983 |
| Annual Turnovers: | 2,778.0000 |
| Turnover Factor: | 0.1775 |
| Maximum Liquid Volume (gal): | 9,088,3800 |
| Maximum Liquid Height (ft): | 14.0000 |
| Tank Diameter (ft): | 10.5000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 1,916.0192 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-20, 350F & 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 350F | 1,916.02 | 0.00 | 1,916.02 |

= 5.3 lb / day
(30 Day Avg.)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tanks T-141/T-142, 500°F, 300,000 bbl/yr |
| City: | Los Angeles C. O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 300,000 bbl/year |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 8.00 |
| Liquid Height (ft) : | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 5,264.18 |
| Turnovers: | 2,394.00 |
| Net Throughput(gal/yr): | 12,602,457.26 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.19 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tanks T-141/T-142, 500°F, 300,000 bbl/yr - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|-----------------------------------|-----------------------|--------|--------|------------------------|-------------------------|------------------------|---------------|--|
| | | Avg | Min | Max | | Avg | Min | Max | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 180.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tanks T-141/T-142, 500°F, 300,000 bbl/yr - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--|------------|
| Standing Losses (lb): | 0.0000 |
| Vapor Space Volume (cu ft): | 439.9905 |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor: | 0.8117 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 439.9905 |
| Tank Diameter (ft): | 8.0000 |
| Vapor Space Outage (ft): | 8.7533 |
| Tank Shell Height (ft): | 16.0000 |
| Average Liquid Height (ft): | 7.5000 |
| Roof Outage (ft): | 0.2533 |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft): | 0.2533 |
| Roof Height (ft): | 0.7800 |
| Roof Slope (ft/ft): | 0.1900 |
| Shell Radius (ft): | 4.0000 |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole): | 180.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Average Ambient Temp (deg. F): | 64.3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 959.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.6000 |
| Tank Paint Solar Absorptance (Roof): | 0.6000 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,571.6498 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Ambient Temp Range (deg. R): | 19.8167 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |

| | |
|--|-----------------|
| Vapor Space Outage (ft): | 8 7533 |
| Working Losses (lb): | 4,301 5906 |
| Vapor Molecular Weight (lb/lb-mole) | 160 0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0 5000 |
| Annual Net Throughput (gal/yr.) | 12,602,457 2645 |
| Annual Turnovers | 2,394 0000 |
| Turnover Factor: | 0 1782 |
| Maximum Liquid Volume (gal) | 5,264 1843 |
| Maximum Liquid Height (ft) | 15 0000 |
| Tank Diameter (ft) | 8 0000 |
| Working Loss Product Factor: | 1 0000 |
| Total Losses (lb): | 4,301 5906 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tanks T-141/T-142, 500°F, 300,000 bbl/yr - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 4,301.59 | 0.00 | 4,301.59 |

= 12.0 lb/day
(30 Day Avg.)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tank T-509, 500F, 600k bbl/year |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 600,000 bbl/year |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 15.50 |
| Liquid Height (ft): | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 21,172.77 |
| Turnovers: | 1,190.20 |
| Net Throughput(gal/yr): | 25,199,833.94 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.10 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-509, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol. Weight | Liquid Mass Fract. | Vapor Mass Fract. | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|-------------------|--------------------|-------------------|-------------|---------------------------------------|
| | | Avg. | Min. | Max. | | Avg. | Min. | Max. | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-509, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--|------------|
| Standing Losses (lb): | 0.0000 |
| Vapor Space Volume (cu ft): | 1,651.6832 |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor: | 0.8117 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 1,651.6832 |
| Tank Diameter (ft): | 15.5000 |
| Vapor Space Outage (ft): | 8.7533 |
| Tank Shell Height (ft): | 16.0000 |
| Average Liquid Height (ft): | 7.5000 |
| Roof Outage (ft): | 0.2533 |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft): | 0.2533 |
| Roof Height (ft): | 0.7600 |
| Roof Slope (ft/ft): | 0.1000 |
| Shell Radius (ft): | 7.7500 |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole): | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Average Ambient Temp. (deg. F): | 64.3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 959.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.6000 |
| Tank Paint Solar Absorptance (Roof): | 0.6000 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,571.6498 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg R): | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg R): | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg R): | 959.6700 |
| Daily Ambient Temp. Range (deg. R): | 19.8167 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 8.7533 |
| Working Losses (lb): | 9,209.8200 |
| Vapor Molecular Weight (lb/lb-mole) | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Annual Net Throughput (gal/yr): | 25,199,833.9438 |
| Annual Turnovers: | 1,190.2000 |
| Turnover Factor: | 0.1818 |
| Maximum Liquid Volume (gal) | 21,172.7726 |
| Maximum Liquid Height (ft) | 15.0000 |
| Tank Diameter (ft) | 15.5000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 9,209.8200 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-509, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 9,209.82 | 0.00 | 9,209.82 |

= 25.6 lb/day
(30 DAY Avg.)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tanks T-1012/T-1013, 500F, 340k bbl/year |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 340,000 bbl/year |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 21.50 |
| Liquid Height (ft) : | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 40,737.21 |
| Turnovers: | 350.50 |
| Net Throughput(gal/yr): | 14,278,391.27 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.07 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tanks T-1012/T-1013, 500F, 340k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Material/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|--------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|------------------|-------------------|------------------|------------|---------------------------------------|
| | | Avg | Min | Max | | Avg | Min | Max | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tanks T-1012/T-1013, 500F, 340k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|---------------------------------|------------|
| Standing Losses (lb): | 0.0000 |
| Vapor Space Volume (cu ft): | 3,177.9003 |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor: | 0.8117 |

| | |
|-----------------------------|------------|
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 3,177.9003 |
| Tank Diameter (ft): | 21.5000 |
| Vapor Space Outage (ft): | 8.7533 |
| Tank Shell Height (ft): | 16.0000 |
| Average Liquid Height (ft): | 7.5000 |
| Roof Outage (ft): | 0.2533 |

| | |
|-------------------------|---------|
| Roof Outage (Cone Roof) | |
| Roof Outage (ft): | 0.2533 |
| Roof Height (ft): | 0.7600 |
| Roof Slope (ft/ft): | 0.0700 |
| Shell Radius (ft): | 10.7500 |

| | |
|--|------------|
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole): | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Average Ambient Temp. (deg. F): | 64.3083 |
| Ideal Gas Constant R (psia cu ft / (lb-mol-deg R): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 959.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.8000 |
| Tank Paint Solar Absorptance (Roof): | 0.6000 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,571.6498 |

| | |
|--|----------|
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Ambient Temp. Range (deg. R): | 18.8167 |

| | |
|--|--------|
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |

| | |
|--|-----------------|
| Vapor Space Outage (ft) | 8.7533 |
| Working Losses (lb) | 6,880,6631 |
| Vapor Molecular Weight (lb/lb-mole) | 160.0000 |
| Vapor Pressure of Daily Average Liquid | |
| Surface Temperature (psia) | 0.5000 |
| Annual Net Throughput (gal/yr) | 14,278,391.2733 |
| Annual Turnovers | 350.5000 |
| Turnover Factor | 0.2523 |
| Maximum Liquid Volume (gal) | 40,737.2076 |
| Maximum Liquid Height (ft) | 15.0000 |
| Tank Diameter (ft) | 21.5000 |
| Working Loss Product Factor | 1.0000 |
| | |
| Total Losses (lb) | 6,880,6631 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tanks T-1012/T-1013, 500F, 340k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 6,860.66 | 0.00 | 6,860.66 |

= 19.1 lb/day

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tank T-777, 500F, 600k bbl/year |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 600,000 bbl/year |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 24.60 |
| Diameter (ft): | 15.50 |
| Liquid Height (ft): | 23.60 |
| Avg. Liquid Height (ft): | 11.80 |
| Volume (gallons): | 33,311.83 |
| Turnovers: | 756.50 |
| Net Throughput(gal/yr): | 25,200,398.55 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.10 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-777, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract. | Vapor Mass Fract. | Mol Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|------------------|--------------------|-------------------|------------|---------------------------------------|
| | | Avg | Min. | Max | | Avg | Min | Max | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-777, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|---|------------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft) | 2,463.0584 |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Space Expansion Factor | 0.0000 |
| Vented Vapor Saturation Factor | 0.7430 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft) | 2,463.0584 |
| Tank Diameter (ft) | 15.5000 |
| Vapor Space Outage (ft) | 13.0533 |
| Tank Shell Height (ft) | 24.8000 |
| Average Liquid Height (ft) | 11.8000 |
| Roof Outage (ft) | 0.2533 |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft) | 0.2533 |
| Roof Height (ft) | 0.7500 |
| Roof Slope (R/R) | 0.1000 |
| Shell Radius (ft) | 7.7500 |
| Vapor Density | |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Molecular Weight (lb/lb-mol) | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Average Ambient Temp. (deg. F) | 64.3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)) | 10.731 |
| Liquid Bulk Temperature (deg. R) | 959.6700 |
| Tank Paint Solar Absorptance (Shell) | 0.8000 |
| Tank Paint Solar Absorptance (Roof) | 0.6000 |
| Daily Total Solar Insolation Factor (Btu/sqft day) | 1,571.6498 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor | 0.0000 |
| Daily Vapor Temperature Range (deg. R) | 0.0000 |
| Daily Vapor Pressure Range (psia) | 0.0000 |
| Breather Vent Press. Setting Range (psia) | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Ambient Temp. Range (deg. R) | 19.8167 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor | 0.7430 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 13.0533 |
| Working Losses (lb): | 9,903.6596 |
| Vapor Molecular Weight (lb/lb-mole) | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.6000 |
| Annual Net Throughput (gal/yr.): | 25,200,398.5507 |
| Annual Turnovers: | 756.5000 |
| Turnover Factor: | 0.2063 |
| Maximum Liquid Volume (gal): | 33,311.8288 |
| Maximum Liquid Height (ft): | 23.6000 |
| Tank Diameter (ft): | 15.5000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 9,903.6596 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-777, 500F, 600k bbl/year - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 9,903.66 | 0.00 | 9,903.66 |

= 27.5 lb/day
(30 Day Avg)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|---|
| User Identification: | Paramount Tank T-20, 450°F, 90k bbl/month |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.35 psia) Storage Temp = 450°F Throughput - 90,000 bbl/month |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 15.00 |
| Diameter (ft): | 10.50 |
| Liquid Height (ft) : | 14.00 |
| Avg. Liquid Height (ft): | 7.00 |
| Volume (gallons): | 9,068.38 |
| Turnovers: | 5,002.00 |
| Net Throughput(gal/yr): | 45,360,036.87 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.14 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-20, 450°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|------------------|-------------------|------------------|------------|---------------------------------------|
| | | Avg | Min | Max | | Avg | Min | Max | | | | | |
| Asphalt 450F | All | 450.00 | 450.00 | 450.00 | 450.00 | 0.3500 | 0.3500 | 0.3500 | 140.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-20, 450°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--|------------|
| Standing Losses (lb): | 0.0000 |
| Vapor Space Volume (cu ft): | 714 6574 |
| Vapor Density (lb/cu ft): | 0.0050 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor: | 0.8672 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 714 6574 |
| Tank Diameter (ft): | 10 5000 |
| Vapor Space Outage (ft): | 8 2533 |
| Tank Shell Height (ft): | 15 0000 |
| Average Liquid Height (ft): | 7 0000 |
| Roof Outage (ft): | 0.2533 |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft): | 0.2533 |
| Roof Height (ft): | 0 7600 |
| Roof Slope (ft/ft): | 0 1400 |
| Shell Radius (ft): | 5 2500 |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0050 |
| Vapor Molecular Weight (lb/lb-mole): | 140.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.3500 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 909.6700 |
| Daily Average Ambient Temp. (deg. F): | 64 3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 909.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.6000 |
| Tank Paint Solar Absorptance (Roof): | 0.8000 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,571.6498 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.3500 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.3500 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.3500 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 909.6700 |
| Daily Min. Liquid Surface Temp. (deg. R): | 909.6700 |
| Daily Max. Liquid Surface Temp. (deg. R): | 909.6700 |
| Daily Ambient Temp. Range (deg. R): | 19.8167 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8672 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.3500 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 8.2533 |
| Working Losses (lb): | 9,137,4005 |
| Vapor Molecular Weight (lb/lb-mole) | 140.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.3500 |
| Annual Net Throughput (gal/yr.): | 45,360,036.8650 |
| Annual Turnovers: | 6,002.0000 |
| Turnover Factor: | 0.1727 |
| Maximum Liquid Volume (gal): | 8,068,3800 |
| Maximum Liquid Height (ft): | 14.0000 |
| Tank Diameter (ft): | 10.5000 |
| Working Loss Product Factor: | 1.0000 |
| | |
| Total Losses (lb): | 9,137,4005 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-20, 450°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 450F | 9,137.40 | 0.00 | 9,137.40 |

= 25.4 lb/day

(30 Day Avg.)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification: Paramount Tank T-141, 500°F, 90k bbl/month *T-142*
City: Los Angeles C.O.
State: California
Company: Paramount
Type of Tank: Vertical Fixed Roof Tank
Description: Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 90,000 bbl/month

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 8.00 |
| Liquid Height (ft): | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 5,264.18 |
| Turnovers: | 8,617.00 |
| Net Throughput(gal/yr): | 45,361,476.29 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.19 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-141, 500°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---------------------------------------|--------|--------|--------------------------|-----------------------|--------|--------|------------------|-------------------|------------------|------------|---------------------------------------|
| | | Avg | Min | Max | | Avg | Min | Max | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-141, 500°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--|------------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft): | 439.9905 |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor | 0.8117 |
| | |
| Tank Vapor Space Volume | |
| Vapor Space Volume (cu ft): | 439.9905 |
| Tank Diameter (ft) | 8.0000 |
| Vapor Space Outage (ft) | 8.7533 |
| Tank Shell Height (ft) | 16.0000 |
| Average Liquid Height (ft): | 7.5000 |
| Roof Outage (ft) | 0.2533 |
| | |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft): | 0.2533 |
| Roof Height (ft) | 0.7500 |
| Roof Slope (ft/ft) | 0.1600 |
| Shell Radius (ft) | 4.0000 |
| | |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole): | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Average Ambient Temp. (deg. F) | 64.3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 959.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.6000 |
| Tank Paint Solar Absorptance (Roof): | 0.8000 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,571.6498 |
| | |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Ambient Temp. Range (deg. R) | 19.8167 |
| | |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 8.7533 |
| Working Losses (lb) | 14,701.2792 |
| Vapor Molecular Weight (lb/lb-mole) | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Annual Net Throughput (gal/yr) | 45,361,476.2941 |
| Annual Turnovers | 8,617.0000 |
| Turnover Factor | 0.1701 |
| Maximum Liquid Volume (gal) | 5,264.1843 |
| Maximum Liquid Height (ft) | 15.0000 |
| Tank Diameter (ft) | 8.0000 |
| Working Loss Product Factor | 1.0000 |
| Total Losses (lb) | 14,701.2792 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-141, 500°F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 14,701.28 | 0.00 | 14,701.28 |

= 40.8 lb/day

(30 Days Aug)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tank T-509, 500F, 90k bbl/month |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 90,000 bbl/month |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 15.50 |
| Liquid Height (ft): | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 21,172.77 |
| Turnovers: | 2,142.40 |
| Net Throughput(gal/yr): | 45,360,548.01 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.10 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-509, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Material/Component | Month | Daily Liquid Surf Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol Weight | Liquid Mass Fract | Vapor Mass Fract | Mol Weight | Basis for Vapor Pressure Calculations |
|--------------------|-------|---------------------------------------|--------|--------|--------------------------|-----------------------|--------|--------|------------------|-------------------|------------------|------------|---------------------------------------|
| | | Avg | Min | Max | | Avg | Min | Max | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-509, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|---|------------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft) | 1,651.6832 |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Space Expansion Factor | 0.0000 |
| Vented Vapor Saturation Factor | 0.8117 |
| Tank Vapor Space Volume | |
| Vapor Space Volume (cu ft) | 1,651.6832 |
| Tank Diameter (ft) | 15.5000 |
| Vapor Space Outage (ft) | 8.7533 |
| Tank Shell Height (ft) | 16.0000 |
| Average Liquid Height (ft) | 7.5000 |
| Roof Outage (ft) | 0.2533 |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft) | 0.2533 |
| Roof Height (ft) | 0.7600 |
| Roof Slope (ft/ft) | 0.1000 |
| Shell Radius (ft) | 7.7500 |
| Vapor Density | |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole) | 180.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Average Ambient Temp. (deg. F) | 84.3083 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)) | 10.731 |
| Liquid Bulk Temperature (deg. R) | 959.6700 |
| Tank Paint Solar Absorptance (Shell) | 0.6000 |
| Tank Paint Solar Absorptance (Roof) | 0.6000 |
| Daily Total Solar Insolation Factor (Btu/eqft day) | 1,571.6498 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor | 0.0000 |
| Daily Vapor Temperature Range (deg. R) | 0.0000 |
| Daily Vapor Pressure Range (psia) | 0.0000 |
| Breather Vent Press. Setting Range (psia) | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Ambient Temp. Range (deg. R) | 19.8167 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |

Vapor Space Outage (ft): 8.7533

Working Losses (lb): 15,610.0467

Vapor Molecular Weight (lb/lb-mole): 180.0000

Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 0.5000

Annual Nit Throughput (gal/yr): 45,360,548.0097

Annual Turnover: 2,142.4000

Turnover Factor: 0.1807

Maximum Liquid Volume (gal): 21,173.7728

Maximum Liquid Height (ft): 15.0000

Tank Diameter (ft): 15.3000

Working Loss Product Factor: 1.0000

Total Losses (lb): 15,610.0467

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-509, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 15,610.05 | 0.00 | 15,610.05 |

= 43.4 lb/day
(30 Day Avg.)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tank T-777, 500F, 90k bbl/month |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput = 90,000 bbl/month |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 24.60 |
| Diameter (ft): | 15.50 |
| Liquid Height (ft): | 23.60 |
| Avg. Liquid Height (ft): | 11.80 |
| Volume (gallons): | 33,311.83 |
| Turnovers: | 1,361.70 |
| Net Throughput(gal/yr): | 45,360,717.39 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|----------------------------|------|
| Type: | Cone |
| Height (ft): | 0.76 |
| Slope (ft/ft) (Cone Roof): | 0.10 |

Breather Vent Settings

| | |
|---------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig): | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tank T-777, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol. Weight | Liquid Mass Fract. | Vapor Mass Fract. | Mol Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|-------------------|--------------------|-------------------|------------|---------------------------------------|
| | | Avg. | Min. | Max. | | Avg. | Min. | Max. | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tank T-777, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|---|------------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft) | 2,463.0584 |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Space Expansion Factor | 0.0000 |
| Vented Vapor Saturation Factor | 0.7430 |
| | |
| Tank Vapor Space Volume | |
| Vapor Space Volume (cu ft) | 2,463.0584 |
| Tank Diameter (ft) | 15.5000 |
| Vapor Space Outage (ft) | 13.0533 |
| Tank Shell Height (ft) | 24.6000 |
| Average Liquid Height (ft) | 11.8000 |
| Roof Outage (ft) | 0.2533 |
| | |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft) | 0.2533 |
| Roof Height (ft) | 0.7800 |
| Roof Slope (ft/ft) | 0.1000 |
| Shell Radius (ft) | 7.7500 |
| | |
| Vapor Density | |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole) | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Average Ambient Temp. (deg. F) | 64.3083 |
| Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)) | 10.731 |
| Liquid Bulk Temperature (deg. R) | 959.6700 |
| Tank Paint Solar Absorptance (Shell) | 0.6000 |
| Tank Paint Solar Absorptance (Roof) | 0.6000 |
| Daily Total Solar Insulation Factor (Btu/sq ft day) | 1,571.6498 |
| | |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor | 0.0000 |
| Daily Vapor Temperature Range (deg. R) | 0.0000 |
| Daily Vapor Pressure Range (psia) | 0.0000 |
| Breather Vent Press. Setting Range (psia) | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia) | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia) | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R) | 959.6700 |
| Daily Ambient Temp. Range (deg. R) | 19.8167 |
| | |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor | 0.7430 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia) | 0.5000 |

| | |
|---|-----------------|
| Vapor Space Outage (ft): | 13.0533 |
| Working Losses (lb): | 16,303,7608 |
| Vapor Molecular Weight (lb/lb-mole): | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Annual Net Throughput (gal/yr): | 45,360,717.3913 |
| Annual Turnovers: | 1,361.7000 |
| Turnover Factor: | 0.1887 |
| Maximum Liquid Volume (gal): | 33,311.8289 |
| Maximum Liquid Height (ft): | 23.6000 |
| Tank Diameter (ft): | 15.5000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 16,303,7608 |

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tank T-777, 500F, 90k bbl/month - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 16,303.76 | 0.00 | 16,303.76 |

= 45.3 lb/day

630 Days/Year

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

| | |
|----------------------|--|
| User Identification: | Paramount Tanks T-1012/T-1013, 500F, 100k bbl/mnth |
| City: | Los Angeles C.O. |
| State: | California |
| Company: | Paramount |
| Type of Tank: | Vertical Fixed Roof Tank |
| Description: | Asphalt (Vp=0.5 psia) Storage Temp = 500°F Throughput - 100,000 bb/month |

Tank Dimensions

| | |
|--------------------------|---------------|
| Shell Height (ft): | 16.00 |
| Diameter (ft): | 21.50 |
| Liquid Height (ft) : | 15.00 |
| Avg. Liquid Height (ft): | 7.50 |
| Volume (gallons): | 40,737.21 |
| Turnovers: | 1,237.20 |
| Net Throughput(gal/yr): | 50,400,073.28 |
| Is Tank Heated (y/n): | Y |

Paint Characteristics

| | |
|--------------------|------------------|
| Shell Color/Shade: | Aluminum/Diffuse |
| Shell Condition: | Good |
| Roof Color/Shade: | Aluminum/Diffuse |
| Roof Condition: | Good |

Roof Characteristics

| | |
|---------------------------|------|
| Type: | Cone |
| Height (ft) | 0.76 |
| Slope (ft/ft) (Cone Roof) | 0.07 |

Breather Vent Settings

| | |
|--------------------------|------|
| Vacuum Settings (psig): | 0.00 |
| Pressure Settings (psig) | 0.00 |

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Paramount Tanks T-1012/T-1013, 500F, 100k bbl/mnth - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) | | | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) | | | Vapor Mol. Weight | Liquid Mass Fract. | Vapor Mass Fract. | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|--|--------|--------|--------------------------|-----------------------|--------|--------|-------------------|--------------------|-------------------|-------------|---------------------------------------|
| | | Avg | Min. | Max. | | Avg | Min | Max. | | | | | |
| Asphalt 500F | All | 500.00 | 500.00 | 500.00 | 500.00 | 0.5000 | 0.5000 | 0.5000 | 160.0000 | | | 250.00 | |

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Paramount Tanks T-1012/T-1013, 500F, 100k bbl/mnth - Vertical Fixed Roof Tank
Los Angeles C.O., California

Annual Emission Calculations

| | |
|--|------------|
| Standing Losses (lb) | 0.0000 |
| Vapor Space Volume (cu ft): | 3,177.9003 |
| Vapor Density (lb/cu ft) | 0.0078 |
| Vapor Space Expansion Factor: | 0.0000 |
| Vented Vapor Saturation Factor: | 0.8117 |
| | |
| Tank Vapor Space Volume | |
| Vapor Space Volume (cu ft): | 3,177.9003 |
| Tank Diameter (ft) | 21.5000 |
| Vapor Space Outage (ft): | 8.7533 |
| Tank Shell Height (ft): | 16.0000 |
| Average Liquid Height (ft): | 7.5000 |
| Roof Outage (ft): | 0.2533 |
| | |
| Roof Outage (Cone Roof) | |
| Roof Outage (ft) | 0.2533 |
| Roof Height (ft) | 0.7600 |
| Roof Slope (ft/ft) | 0.0700 |
| Shell Radius (ft): | 10.7500 |
| | |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0078 |
| Vapor Molecular Weight (lb/lb-mole): | 160.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Average Ambient Temp. (deg. F): | 64.3083 |
| Ideal Gas Constant R (psia-cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 959.6700 |
| Tank Paint Solar Absorptance (Shell): | 0.8000 |
| Tank Paint Solar Absorptance (Roof): | 0.6000 |
| Daily Total Solar Insolation Factor (Btu/sqft day): | 1,571.6498 |
| | |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0000 |
| Daily Vapor Temperature Range (deg. R): | 0.0000 |
| Daily Vapor Pressure Range (psia): | 0.0000 |
| Breather Vent Press. Setting Range (psia): | 0.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.5000 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.5000 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Min. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Max. Liquid Surface Temp. (deg. R): | 959.6700 |
| Daily Ambient Temp. Range (deg. R): | 19.8187 |
| | |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.8117 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.5000 |

Vapor Space Outage (ft) 8.7533

Working Losses (lb) 18,327.8637

Vapor Molecular Weight (lb/lb-mole) 160.0000

Vapor Pressure at Daily Average Liquid Surface Temperature (psia) 0.5000

Annual Net Throughput (gal/yr.) 50,400,073.2761

Turnover Factor 1,237.2000

Maximum Liquid Volume (gal) 0.1909

Maximum Liquid Height (ft) 40,737.2076

Tank Diameter (ft) 15.0000

Working Loss Product Factor 21.5000

1.0000

Total Losses (lb): 18,327.8637

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Paramount Tanks T-1012/T-1013, 500F, 100k bbl/mnth - Vertical Fixed Roof Tank
Los Angeles C.O., California

| Components | Losses(lbs) | | |
|--------------|--------------|----------------|-----------------|
| | Working Loss | Breathing Loss | Total Emissions |
| Asphalt 500F | 18,327.86 | 0.00 | 18,327.86 |

= 50.9 lb/day

(30. Apr Aug)

| | | |
|--|--------------|------------|
| SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION PROCESSING AND CALCULATIONS | Page | 37 of 55 |
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| | Processed by | knguyen |
| | Reviewed by | |
| | Date | 10/14/2004 |

ACTIVATED CARBON ADSORBER REPLACEMENT & BREAKTHROUGH

As shown in Figures 3 to 5 (page nos. 18 to 20), all of the tanks in this project except for the Coating tanks are equipped 55-gallon drums of activated carbon adsorbers as primary control devices. Since all of the PMA tanks and two of the Small tanks are subject to New Source Review, monitoring and replacement of the carbon are required to ensure that emissions do not exceed the potential to emit amounts determined for the tanks. To estimate carbon replacement period and breakthrough point of the activated carbon adsorbers, the calculations assume the followings:

- (1) The equilibrium adsorptivity of the carbon equals to 20 lbs THC per 100 lbs carbon.
- (2) Since there are no secondary control devices downstream the adsorbers, a safety factor of 50 percent is used to ensure that the carbon is replaced at the point when only half of the carbon is spent.
- (3) PM emissions are included in the breakthrough calculations because PM emissions are assumed to be hydrocarbons and hence being controlled by the activated carbon adsorbers.
- (4) The inlet temperature of the carbon adsorbers equal 120°F. The assumption is reasonable given that the vapor passes through pre-knockout pots, a 12-inch header line, a main knockout pot and a fiber mesh filter before entering into the carbon adsorbers.

ACTIVATED CARBON ADSORBERS SERVING PMA TANKS (SEE FIGURE 3)

$$\begin{aligned} \text{Working capacity} &= 3 \times (0.2 \times 180 \text{ lbs carbon}) \times 0.5 \\ &= 54 \text{ lbs THC} \end{aligned}$$

The emissions from the tanks are calculated by assuming that the activated carbon adsorbers capture both VOC and PM. It should be noted that uncontrolled PM emissions are already being reduced by 95 percent with a fiber mesh filter prior to venting to the activated carbon adsorbers.

$$\text{THC flow rate @inlet} = [\text{VOC}_{\text{uncontrl}} + (0.05 \times \text{PM}_{\text{uncontrl}})]_{\text{post-mod}}$$

The emissions of the PMA tanks are provided in Table C on page 34. Consequently,

$$\begin{aligned} \text{VOC}_{\text{uncontrl}} &= (0.01 + 0.01 + 0.02 + 0.02 + 0.01 + 0.01) \text{ lb/day} \\ &= 0.08 \text{ lb/day} \\ \text{PM}_{\text{uncontrl}} &= (65.41 + 65.41 + 138.72 + 150.44 + 104.56 + 104.56) \text{ lbs/day} \\ &= 629.1 \text{ lbs/day} \\ \text{THC flow rate @inlet} &= 0.08 \text{ lb/day} + (0.05 \times 629.1) \text{ lbs/day} \\ &= 31.54 \text{ lb/day} \end{aligned}$$

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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APPLICATION PROCESSING AND CALCULATIONS

Therefore,

$$\begin{aligned} \text{Life of carbon} &= \frac{54 \text{ lbs THC}}{31.54 \text{ lbs THC/day}} \\ &= 1.71 \text{ days or 1 days 16 hours} \end{aligned}$$

The life of carbon calculated above do not consider two factors that would extend the actual life of the activated carbon adsorbers serving the tanks. Firstly, vapors from the tanks do not vent to the adsorbers at all times because a pressure control valve is utilized to prevent the vapor from venting to the carbon adsorbers until the exhaust gas flow is sufficiently high to open the valve. Secondly, PM particles may not be "adsorbed" by the carbon rather the carbon bed could act more like a filter for PM particles. This is reasonable scenario since PM particles generally do not have the affinity or the small sizes necessary for them to be "trapped" in the pores of carbon (i.e. being "adsorbed" by the carbon). Some of PM particles can be held via adsorption, but others will likely be dislodged by VOC molecules with higher affinity to carbon. PM particles could be collected on the exterior surface areas and in-between carbon granules instead of on the internal areas of the pores of carbon. As the result, PM particles are captured by the adsorbers, but they do not use up the carbon adsorptivity. Therefore, the calculated carbon life in this case may not be a reliable indicator for carbon replacement.

In practice, non-generative activated carbon adsorber is generally replaced using breakthrough point which is identified by measuring VOC concentration at the outlet of the adsorber. To calculate VOC concentration of breakthrough point, mass emissions at inlet of adsorbers are converted to concentration by volume, and then multiplied by control efficiency to determine outlet VOC concentration.

For the carbon adsorbers serving the PMA tanks, the greatest VOC concentration occurs when all six tanks undergo filling at the same time, and the gas flows is high enough to cause the pressure control valve to open. The gas flow rate at the inlets of the adsorbers equal the sum of the maximum filling rates of the six tanks corrected for the temperature difference between the tanks' vapor spaces and the inlets of the adsorbers, and then divided by the number of adsorbers serving the tanks. The maximum filling rate of each tank equals to 400 bbls/hr, the maximum capacity of the loading pumps. As with the carbon life calculations, a safety factor of 50 percent is applied to the breakthrough point to ensure compliance. Therefore, the breakthrough point is calculated as followed:

$$\text{Gas flow rate @ inlet of each adsorber} = \frac{\Sigma \text{Max. filling rates}}{\text{No. of adsorbers}} \times \frac{T_{\text{inlet}}}{T_{\text{Tank}}}$$

Where,

$$\begin{aligned} T_{\text{tank}} &= 500^{\circ}\text{F} \\ T_{\text{inlet}} &= 120^{\circ}\text{F} \end{aligned}$$

Consequently,

$$\text{Gas flow rate @inlet} = \frac{(6 \text{ tanks} \times 400 \text{ bbls/hr-tank})}{3} \times \frac{(120 + 460)^{\circ}\text{R}}{(500 + 460)^{\circ}\text{R}}$$

| | | | |
|--|--------------|-----------|------------|
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Gas flow rate @inlet = 483.33 bbls/hr or 2714 ft³/hr

THC flow rate @inlet = $\frac{31.54 \text{ lbs/day THC}}{24 \text{ hr/day}}$

THC flow rate @inlet = 1.314 lb/hr

Thus, the total hydrocarbon concentrations (in ppmv) at the inlets of the adsorbers equal to:

$$\text{mass flow} \frac{\text{lb THC}}{\text{hr}} \times \frac{\text{hr}}{\text{gas flow ft}^3} \times 10.73 \frac{\text{psia} \cdot \text{ft}^3}{\text{°R} \cdot \text{lb} \cdot \text{mol}} \times \frac{(T_{\text{inlet}})^{\circ}\text{R}}{(P_{\text{inlet}}) \text{psia}} \times \frac{\text{lb} \cdot \text{mol}}{\text{MW lb}} \times (1 \times 10^6)$$

Where,

$T_{\text{inlet}} = 120^{\circ}\text{F}$
 $P_{\text{inlet}} = 4 \text{ in. H}_2\text{O gauge (the setting of the pressure control valve)}$
 $= 14.84 \text{ psia}$

Consequently,

$$1.314 \frac{\text{lb THC}}{\text{hr}} \times \frac{\text{hr}}{2714 \text{ ft}^3} \times 10.73 \frac{\text{psia} \cdot \text{ft}^3}{\text{°R} \cdot \text{lb} \cdot \text{mol}} \times \frac{(120 + 460)^{\circ}\text{R}}{14.84 \text{ psia}} \times \frac{\text{lb} \cdot \text{mol}}{84 \text{ lb asphalt vapor}} \times (1 \times 10^6)$$

THC_{inlet} = 2417 ppmv

Since the emissions from the tanks are determined using 96 percent control efficiency by the activated carbon adsorbers, the THC concentrations at the outlet of the adsorbers shall remain below.

$\text{THC}_{\text{outlet}} = 0.04 \times 2417 \text{ ppmv}$
 $= 96.7 \text{ ppmv}$

Applying a 50 percent safety factor, the adsorbers are required replacement whenever the THC concentrations at the outlets of the adsorbers are greater than or equal to:

$\text{THC}_{\text{outlet w/ safety}} = 0.5 \times 97 \text{ ppmv}$
 $= 48.3 \text{ ppmv}$

It should be noted that a 96 percent control efficiency was used in the emission calculations of PMA tanks as opposed to 98 percent used for the Small tanks. There are two reasons for applying the lower control efficiency: (1) None of the PMA tanks has an increase in emissions as shown in Table 8 even when using a 96 percent control efficiency by the carbon adsorbers. (2) Using a 96 percent control efficiency raises the breakthrough point of the carbon and thus allows the carbon adsorbers to be in service longer before it needs to be changed out. However, a 96 percent control efficiency by the carbon adsorbers is still sufficiently high for the PMA tanks to demonstrate compliance to applicable rule requirements.

| | | |
|--|-----------------------|------------------|
|  SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE COMPLIANCE DIVISION APPLICATION PROCESSING AND CALCULATIONS | PAGES 7 | PAGE 6 |
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| | PROCESSED BY LTB | CHECKED BY |

Emission Summary, lb/yr (lb/hr)

| <u>Tank Identification</u> | <u>R1</u> | <u>R2</u> |
|----------------------------|---------------|--------------|
| Tank 1027 | 736 6 (2 02) | 36 8 (0 10) |
| Tank 10004 | 7016 6 (19 2) | 357 2 (0 98) |

Loading rack ROG emissions are based on the throughput of individual racks as follows

Loading rack # 6, 7, & 8 have a combined throughput of 9 million BPY PPC representative, Doug Thompson, requested to maintain the combined throughput to allow the flexibility of operating the rack. Because of future difficulty in enforcing the combined throughputs, since these racks are permitted separately and throughput limitations will be on individual devices, I suggested to assign a value for each rack. Doug agreed and requested to allow a maximum throughput of 4 million barrels per year for each rack. He would email a request to use the value for the emission calculations. Since Loading Rack #6, according to record was modified to take some of the pumps for asphalt loading out of service and allow in-line mixer for cutback asphalt capability, I requested to provide the throughput reported in the EFB for the last 2 years

Baseline Emissions

ROG emissions from each of the loading racks 6, 7, & 8 are as follows

$$\text{Loading Loss Emission Factor (lb/MB)} = \frac{523.32 \times S \times P \times M}{T}$$

Where

| | | |
|---|---|---|
| S | = | Saturation Factor (AP-42, Table 5 2-1, Jan, 1995) |
| P | = | Vapor Pressure, psi |
| M | = | Molecular weight |
| T | = | Loading Temp (Deg R) |

$$\begin{aligned} \text{Emission Factor} &= \frac{523.32 \times 0.10 \times 103}{920} \\ &= 8.50 \text{ lb/MB} \end{aligned}$$

These emissions will be reduced by 95% using a CECO filter, or 0.425 lb/MB

Permitted throughput for Rack #8 is 1238 BPD based on 8 trucks per day @ 6500 gal/truck. The file for Racks # 6 & 7 do not have any emission calculations similar to #8. Since these Racks are operated interchangeably, throughputs are assumed to be the same for all three (In the Emission Calculation for Rack No 6, throughput used was 1000 gal of

| | | |
|--|-----------------------|------------------|
|  SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE COMPLIANCE DIVISION APPLICATION PROCESSING AND CALCULATIONS | PAGES 8 | PAGE 5 |
| | APPL NO 357031etal | DATE 03/01/00 |
| | PROCESSED BY LTB | CHECKED BY |

emulsified asphalt Paramount insisted that there possibly was some kind of miscommunication at the time of the application processing The rack was modified to have the capability to mix in-line and load 1000 gal/day of cutback asphalt, but the rack could also load other products For calculation purposes, these three racks are assumed to be of the same throughputs) In the Emission Calculation for Rack #8, the emission control device (shared must eliminator) was assumed to be 65% efficient for both Rack #7 & 8

Before Modification, Emissions for Racks 6, 7 & 8

ROG emissions = 8 trucks/day X 6500 gal/truck X 12 lb/1000 Bbl - 42 gal/Bbl
= 14 86 lb/day
@ 65% control, R2 = 5 2 lb/day for each of racks 6, 7, & 8

After Modification

Annual emissions = 4,000,000 BPY x 0 425 lb/1000 B
= 1700 lb/yr
= 4 7 lb/day, or 0 194 lb/hr for each of 3 racks

Rail Car Emissions Before modification

From the AEIS database, ROG emissions is 6 lb/day, or 0 25 lb/hr

After Modification

Rail Car Rack Emissions = 0 425 lb/1000 B x 6,000,000 BPY
= 2550 lb/yr
= 6 99 lb/day, or 0 29 lb/hr

OZGONILE LIQUID
LOADING RACK.

Since these loading racks were previously sharing a must eliminator, the vapors from the racks when operating simultaneously might not be handled efficiently by one control device Control efficiency for the shared control device was assumed at 65% With individual controls in place, a conservative control efficiency of 95% (pls refer to CECO Filters, Inc Installation and Operation Manual v 1 0, pg 15) is assumed in the emission calculations

Tanks 1027 and 10004

Please refer to the attached Tanks 4 0 calculations

Appendix : RECLAIM CEMS Data from February 2008 through April 2008 for Incinerator H-907

| Date | NOx (ppm) | SOx (ppm) | NOx (ppm) (3% O2) | SOx (ppm) (3% O2) | O ₂ (%) | Firing Rate (mmBtu/hr) | NOX (lb/day) | SOx (lb/day) | NOx (lb/MMBtu) | SOx (lb/MMBtu) | NOx (lb/MMscf) | SOx (lb/MMscf) |
|-----------|-----------|-----------|-------------------|-------------------|--------------------|------------------------|--------------|--------------|----------------|----------------|----------------|----------------|
| 7-Feb-08 | 36.7 | 2.3 | 54.9 | 3.5 | 8.9 | 0.0 | 47.62 | 18.42 | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| 1-Feb-08 | 28.8 | 1.4 | 66.0 | 3.0 | 12.8 | 0.1 | 34.13 | 16.67 | 22.82 | 11.15 | 0.199 | 0.097 |
| 2-Feb-08 | 32.3 | 0.9 | 85.9 | 2.0 | 13.9 | 0.1 | 37.89 | 16.48 | 25.01 | 10.88 | 0.218 | 0.095 |
| 3-Feb-08 | 33.4 | 1.6 | 96.2 | 4.5 | 14.7 | 0.1 | 38.78 | 16.3 | 19.97 | 8.39 | 0.174 | 0.073 |
| 13-Feb-08 | 32.4 | 1.4 | 70.4 | 3.0 | 12.4 | 0.3 | 40.48 | 17.53 | 5.48 | 2.37 | 0.048 | 0.021 |
| 6-Feb-08 | 30.5 | 1.5 | 53.8 | 2.6 | 10.6 | 0.4 | 43.32 | 20.21 | 4.27 | 1.99 | 0.037 | 0.017 |
| 8-Feb-08 | 31.2 | 0.6 | 71.8 | 1.5 | 12.8 | 1.2 | 33.91 | 15.29 | 1.16 | 0.52 | 0.010 | 0.005 |
| 4-Feb-08 | 33.1 | 1.1 | 82.2 | 2.2 | 13.4 | 1.7 | 40.26 | 16.96 | 0.96 | 0.41 | 0.008 | 0.004 |
| 12-Feb-08 | 37.4 | 2.8 | 60.8 | 4.3 | 9.6 | 3.0 | 49.97 | 18.99 | 0.68 | 0.26 | 0.006 | 0.002 |
| 14-Feb-08 | 35.7 | 0.5 | 71.0 | 1.1 | 11.7 | 4.9 | 48.21 | 18.9 | 0.41 | 0.16 | 0.004 | 0.001 |
| 9-Feb-08 | 33.9 | 0.6 | 67.3 | 1.3 | 11.7 | 5.9 | 36.5 | 17.13 | 0.26 | 0.12 | 273.0 | 128.1 |
| 5-Feb-08 | 31.9 | 1.1 | 69.3 | 2.3 | 12.3 | 6.4 | 44.72 | 19.79 | 0.29 | 0.13 | 307.6 | 136.1 |
| 11-Feb-08 | 33.7 | 20.3 | 55.4 | 26.7 | 10.0 | 6.4 | 54.2 | 17.3 | 0.35 | 0.11 | 370.9 | 118.4 |
| 21-Feb-08 | 36.5 | 1.3 | 57.3 | 2.0 | 9.3 | 8.7 | 45.72 | 16.98 | 0.22 | 0.08 | 230.7 | 85.7 |
| 23-Feb-08 | 36.5 | 0.9 | 71.3 | 1.7 | 11.5 | 8.7 | 42.13 | 16.32 | 0.20 | 0.08 | 211.7 | 82.0 |
| 29-Apr-08 | 34.0 | 1.7 | 52.4 | 2.3 | 9.3 | 8.8 | 40.18 | 15.35 | 0.19 | 0.07 | 198.9 | 76.0 |
| 16-Mar-08 | 28.9 | 0.6 | 72.0 | 1.3 | 13.4 | 9.1 | 29.43 | 14.34 | 0.13 | 0.07 | 141.4 | 68.9 |
| 18-Apr-08 | 34.8 | 0.7 | 72.7 | 1.6 | 12.1 | 9.1 | 36.37 | 15 | 0.17 | 0.07 | 174.4 | 71.9 |
| 4-Mar-08 | 34.2 | 0.6 | 67.8 | 1.1 | 11.7 | 9.4 | 39.59 | 16.66 | 0.18 | 0.07 | 184.9 | 77.8 |
| 10-Mar-08 | 32.9 | 0.6 | 63.9 | 1.8 | 11.5 | 9.5 | 38.5 | 15.41 | 0.17 | 0.07 | 177.9 | 71.2 |
| 10-Apr-08 | 32.1 | 1.2 | 67.8 | 2.2 | 11.9 | 9.6 | 36.17 | 15.99 | 0.16 | 0.07 | 165.0 | 72.9 |
| 6-Mar-08 | 31.4 | 0.9 | 53.7 | 1.5 | 10.2 | 9.6 | 38.62 | 17.58 | 0.17 | 0.08 | 175.6 | 80.0 |
| 11-Apr-08 | 33.2 | 1.1 | 87.8 | 2.6 | 14.1 | 9.7 | 34.39 | 14.46 | 0.15 | 0.06 | 154.8 | 65.1 |
| 22-Apr-08 | 31.2 | 1.7 | 67.4 | 2.2 | 11.9 | 9.8 | 31.95 | 14.41 | 0.14 | 0.06 | 142.8 | 64.4 |
| | | | | | | | | | | | | |
| 10-Feb-08 | 35.3 | 1.2 | 66.4 | 2.3 | 11.2 | 10.1 | 81.02 | 20.34 | 0.33 | 0.08 | 351.7 | 88.3 |
| 20-Apr-08 | 34.5 | 0.6 | 68.3 | 1.0 | 11.7 | 10.2 | 39.4 | 16.42 | 0.16 | 0.07 | 169.3 | 70.6 |
| 27-Feb-08 | 35.9 | 1.9 | 64.5 | 3.2 | 10.8 | 10.3 | 46.41 | 18.02 | 0.19 | 0.07 | 196.4 | 76.3 |
| 5-Mar-08 | 30.3 | 0.5 | 58.2 | 1.2 | 11.2 | 10.4 | 37.84 | 17.5 | 0.15 | 0.07 | 159.3 | 73.7 |
| 3-Mar-08 | 31.7 | 0.7 | 73.7 | 1.5 | 13.0 | 10.4 | 36.65 | 16.2 | 0.15 | 0.06 | 154.2 | 68.2 |
| 19-Feb-08 | 30.0 | 0.6 | 55.0 | 0.8 | 11.0 | 10.4 | 37.87 | 17.98 | 0.15 | 0.07 | 158.8 | 75.4 |
| 21-Apr-08 | 30.7 | 0.9 | 62.0 | 1.4 | 11.5 | 10.5 | 36.16 | 16.31 | 0.14 | 0.06 | 150.3 | 67.8 |

APPENDIX I

| Date | NOx (ppm) | SOx (ppm) | NOx (ppm) (3% O2) | SOx (ppm) (3% O2) | O ₂ (%) | Firing Rate (mmBtu/hr) | NOx (lb/day) | SOx (lb/day) | NOx (lb/MMBtu) | SOx (lb/MMBtu) | NOx (lb/MMscf) | SOx (lb/MMscf) |
|-----------|-----------|-----------|-------------------|-------------------|--------------------|------------------------|--------------|--------------|----------------|----------------|----------------|----------------|
| 28-Feb-08 | 32.3 | 1.5 | 69.9 | 3.0 | 12.3 | 10.6 | 40.7 | 16.89 | 0.16 | 0.07 | 167.8 | 69.6 |
| 20-Feb-08 | 34.2 | 0.5 | 61.4 | 0.7 | 10.8 | 10.7 | 43.09 | 17.87 | 0.17 | 0.07 | 176.8 | 73.2 |
| 26-Mar-08 | 26.4 | 1.2 | 50.1 | 2.1 | 11.4 | 10.7 | 31.67 | 16.54 | 0.12 | 0.06 | 129.5 | 67.6 |
| 20-Mar-08 | 32.7 | 1.3 | 63.4 | 1.8 | 11.1 | 10.7 | 40.69 | 17.26 | 0.16 | 0.07 | 165.9 | 70.4 |
| 22-Feb-08 | 29.2 | 0.5 | 64.3 | 1.2 | 12.4 | 10.7 | 37.1 | 17.05 | 0.14 | 0.07 | 151.2 | 69.5 |
| 18-Mar-08 | 31.7 | 1.0 | 69.0 | 2.1 | 12.2 | 10.8 | 37.01 | 16.52 | 0.14 | 0.06 | 150.5 | 67.2 |
| 14-Mar-08 | 29.2 | 1.0 | 70.5 | 2.3 | 13.2 | 10.8 | 34.75 | 16.34 | 0.13 | 0.06 | 141.2 | 66.4 |
| 17-Apr-08 | 35.6 | 0.8 | 67.4 | 1.2 | 10.9 | 10.8 | 42.73 | 16.96 | 0.17 | 0.07 | 173.6 | 68.9 |
| 25-Feb-08 | 31.3 | 0.0 | 77.6 | 0.0 | 13.3 | 10.8 | 41.26 | 18.36 | 0.16 | 0.07 | 167.2 | 74.4 |
| 30-Mar-08 | 31.5 | 0.4 | 74.6 | 1.0 | 13.1 | 10.9 | 36.92 | 16.43 | 0.14 | 0.06 | 148.4 | 66.0 |
| 28-Mar-08 | 32.1 | 0.8 | 64.8 | 1.1 | 11.8 | 10.9 | 41.82 | 17.58 | 0.16 | 0.07 | 167.4 | 70.4 |
| 13-Mar-08 | 27.7 | 0.8 | 57.5 | 1.2 | 11.8 | 11.0 | 32.99 | 16.76 | 0.13 | 0.06 | 131.8 | 66.9 |
| 31-Mar-08 | 30.4 | 1.7 | 65.5 | 2.5 | 12.1 | 11.0 | 38.33 | 17.12 | 0.15 | 0.06 | 152.7 | 68.2 |
| 28-Apr-08 | 30.7 | 1.1 | 57.7 | 2.0 | 11.2 | 11.2 | 35.5 | 15.72 | 0.13 | 0.06 | 139.2 | 61.7 |
| 17-Feb-08 | 29.6 | 0.5 | 70.1 | 0.8 | 13.1 | 11.2 | 35.52 | 16.92 | 0.13 | 0.06 | 139.2 | 66.3 |
| 12-Apr-08 | 33.6 | 0.5 | 95.8 | 1.1 | 14.6 | 11.2 | 35.08 | 14.54 | 0.13 | 0.05 | 136.4 | 58.5 |
| 9-Mar-08 | 29.8 | 0.8 | 57.7 | 1.2 | 11.3 | 11.3 | 37.01 | 17.43 | 0.14 | 0.06 | 143.1 | 67.4 |
| 21-Mar-08 | 32.2 | 0.4 | 81.5 | 0.9 | 13.7 | 11.4 | 37.74 | 16.43 | 0.14 | 0.06 | 145.4 | 63.3 |
| 29-Feb-08 | 29.9 | 0.5 | 71.5 | 1.0 | 13.3 | 11.4 | 36.48 | 16.79 | 0.13 | 0.06 | 139.9 | 64.4 |
| 13-Apr-08 | 34.1 | 0.7 | 95.2 | 1.7 | 14.5 | 11.4 | 36.14 | 14.86 | 0.13 | 0.05 | 138.3 | 56.9 |
| 27-Apr-08 | 25.1 | 0.7 | 60.7 | 1.6 | 13.3 | 11.5 | 43.73 | 14.99 | 0.16 | 0.05 | 166.2 | 57.0 |
| 23-Mar-08 | 34.3 | 1.1 | 83.3 | 2.2 | 12.8 | 11.6 | 40.06 | 16.32 | 0.14 | 0.06 | 151.0 | 61.5 |
| 22-Mar-08 | 31.4 | 1.1 | 77.0 | 2.5 | 13.4 | 11.6 | 35.18 | 15.89 | 0.13 | 0.06 | 132.3 | 59.7 |
| 19-Apr-08 | 30.0 | 2.1 | 70.1 | 3.4 | 12.8 | 11.7 | 35.41 | 16.43 | 0.13 | 0.06 | 132.2 | 61.3 |
| 11-Mar-08 | 33.3 | 2.3 | 55.6 | 3.7 | 10.0 | 11.7 | 46.32 | 19.67 | 0.16 | 0.07 | 172.5 | 73.3 |
| 15-Mar-08 | 31.4 | 0.5 | 71.9 | 1.0 | 12.8 | 11.8 | 39.96 | 17.66 | 0.14 | 0.06 | 148.7 | 65.7 |
| 26-Feb-08 | 32.3 | 0.8 | 56.3 | 1.3 | 10.6 | 12.0 | 46.46 | 19.82 | 0.16 | 0.07 | 170.0 | 72.5 |
| 15-Feb-08 | 33.8 | 1.0 | 95.5 | 2.4 | 14.5 | 12.1 | 40.05 | 16.64 | 0.14 | 0.06 | 144.6 | 60.1 |
| 2-Mar-08 | 28.6 | 0.6 | 67.1 | 1.4 | 13.0 | 12.1 | 34.94 | 17.36 | 0.12 | 0.06 | 125.9 | 62.6 |
| 25-Apr-08 | 33.0 | 1.0 | 70.6 | 1.9 | 12.0 | 12.2 | 38.88 | 16.45 | 0.13 | 0.06 | 139.9 | 59.2 |
| 8-Mar-08 | 30.6 | 1.2 | 58.0 | 1.8 | 11.3 | 12.2 | 41.42 | 19.02 | 0.14 | 0.07 | 148.7 | 68.3 |
| 17-Mar-08 | 32.7 | 1.1 | 60.3 | 1.5 | 11.0 | 12.3 | 43.02 | 17.97 | 0.15 | 0.06 | 153.5 | 64.1 |
| 7-Mar-08 | 31.0 | 0.8 | 58.1 | 1.6 | 11.2 | 12.3 | 40.55 | 18.77 | 0.14 | 0.06 | 144.4 | 66.9 |

| Date | NOx (ppm) | SOx (ppm) | NOx (ppm) (3% O2) | SOx (ppm) (3% O2) | O ₂ (%) | Firing Rate (mmBtu/hr) | NOX (lb/day) | SOx (lb/day) | NOx (lb/MMBtu) | SOx (lb/MMBtu) | NOx (lb/MMscf) | SOx (lb/MMscf) |
|---|-----------|-----------|-------------------|-------------------|--------------------|------------------------|--------------|--------------|----------------|----------------|----------------|----------------|
| 1-Mar-08 | 29.7 | 0.5 | 66.3 | 1.1 | 12.5 | 12.3 | 38.68 | 18.34 | 0.13 | 0.06 | 137.8 | 65.3 |
| 18-Feb-08 | 28.5 | 0.6 | 67.4 | 1.2 | 13.0 | 12.4 | 36.85 | 18.13 | 0.12 | 0.06 | 129.5 | 63.7 |
| 16-Feb-08 | 31.6 | 0.4 | 89.4 | 1.0 | 14.6 | 12.5 | 38.32 | 16.79 | 0.13 | 0.06 | 134.2 | 58.8 |
| 26-Apr-08 | 26.6 | 0.5 | 69.1 | 1.4 | 13.6 | 12.5 | 75.68 | 15.93 | 0.25 | 0.05 | 263.9 | 55.6 |
| 16-Apr-08 | 32.4 | 1.7 | 64.5 | 2.8 | 11.5 | 12.6 | 42.11 | 17.84 | 0.14 | 0.06 | 146.5 | 62.1 |
| 29-Mar-08 | 31.4 | 0.9 | 70.2 | 1.4 | 12.5 | 12.7 | 43.26 | 18.55 | 0.14 | 0.06 | 149.2 | 64.0 |
| 14-Apr-08 | 32.8 | 0.4 | 73.3 | 1.0 | 12.6 | 12.9 | 41.78 | 17.67 | 0.13 | 0.06 | 141.6 | 59.9 |
| 9-Apr-08 | 32.7 | 1.3 | 59.6 | 2.0 | 10.8 | 13.2 | 46.02 | 19.46 | 0.15 | 0.06 | 152.9 | 64.7 |
| 1-Apr-08 | 32.1 | 0.9 | 66.6 | 1.6 | 12.0 | 13.2 | 45.13 | 19.13 | 0.14 | 0.06 | 149.9 | 63.5 |
| 24-Apr-08 | 31.0 | 0.9 | 55.4 | 1.5 | 10.7 | 13.4 | 43.01 | 19.23 | 0.13 | 0.06 | 140.3 | 62.7 |
| 2-Apr-08 | 29.5 | 0.5 | 61.5 | 0.9 | 12.3 | 13.4 | 39.33 | 18.67 | 0.12 | 0.06 | 128.1 | 60.8 |
| 12-Mar-08 | 27.7 | 0.5 | 54.3 | 0.9 | 11.6 | 13.5 | 37.31 | 18.82 | 0.11 | 0.06 | 120.5 | 60.8 |
| 27-Mar-08 | 31.7 | 1.5 | 59.8 | 2.4 | 11.1 | 13.6 | 45.82 | 19.78 | 0.14 | 0.06 | 147.5 | 63.7 |
| 15-Apr-08 | 35.3 | 0.5 | 72.2 | 1.0 | 12.1 | 13.8 | 50.63 | 20.05 | 0.15 | 0.06 | 160.4 | 63.5 |
| 25-Mar-08 | 28.5 | 2.3 | 60.3 | 3.8 | 12.0 | 14.1 | 39.32 | 18.65 | 0.12 | 0.06 | 121.9 | 57.8 |
| 4-Apr-08 | 31.5 | 2.8 | 57.2 | 4.0 | 10.9 | 14.1 | 48.61 | 21.37 | 0.14 | 0.06 | 150.4 | 66.1 |
| 24-Feb-08 | 30.5 | 0.4 | 77.5 | 0.7 | 13.7 | 14.2 | 41.42 | 18.94 | 0.12 | 0.06 | 127.5 | 58.3 |
| 19-Mar-08 | 27.7 | 1.2 | 53.6 | 2.1 | 11.4 | 14.2 | 41.97 | 20.44 | 0.12 | 0.06 | 128.9 | 62.8 |
| 23-Apr-08 | 34.7 | 1.7 | 55.0 | 2.6 | 9.5 | 14.5 | 50.49 | 20.29 | 0.14 | 0.06 | 152.2 | 61.2 |
| 24-Mar-08 | 32.5 | 0.4 | 66.5 | 1.0 | 11.9 | 14.5 | 44.21 | 18.67 | 0.13 | 0.05 | 133.0 | 56.1 |
| 7-Apr-08 | 30.8 | 0.6 | 64.0 | 1.4 | 12.0 | 14.6 | 43.08 | 19.56 | 0.12 | 0.06 | 128.7 | 58.4 |
| 6-Apr-08 | 31.1 | 0.7 | 73.9 | 1.7 | 13.3 | 15.0 | 41.27 | 18.48 | 0.11 | 0.05 | 120.5 | 54.0 |
| 5-Apr-08 | 32.0 | 0.6 | 73.3 | 1.3 | 12.9 | 15.1 | 44.47 | 19.32 | 0.12 | 0.05 | 129.0 | 56.1 |
| 3-Apr-08 | 30.0 | 0.5 | 61.4 | 0.9 | 12.1 | 16.3 | 42.6 | 19.74 | 0.11 | 0.05 | 114.5 | 53.1 |
| 8-Apr-08 | 37.0 | 1.5 | 76.9 | 2.8 | 12.0 | 16.7 | 56.26 | 20.91 | 0.14 | 0.05 | 147.2 | 54.7 |
| Average (for days with an average daily firing rate greater than 10 MMBtu/hr) | | | | | | | | | | | 151.3 | 64.5 |

APPENDIX 5

APPENDIX A - DEFAULT EMISSION FACTORS FOR COMBUSTION EQUIPMENT (CRITERIA AND TOXICS)

Table 1
Default Emission Factors for External Combustion Equipment for Forms B1 and B1U (for all sizes)

| Fuel Type (fuel unit) | Organic Gases (lb/unit) | Methane (lb/unit) | Nitrogen Oxides (lb/unit) | Sulfur Oxides (lb/unit) | Carbon Monoxide (lb/unit) | Particulate Matter (lb/unit) |
|---------------------------------------|-------------------------|-------------------|---------------------------|-------------------------|---------------------------|------------------------------|
| Natural Gas (mmscf) / Boilers Only | 5.50 | 2.30 | 100.00 | 0.60 | 84.00 | 7.60 |
| Natural Gas (mmscf) / Other Equipment | 7.00 | 2.30 | 130.00 | 0.60 | 35.00 | 7.50 |
| LPG, Propane, Butane (1000 gal.) | 0.26 | 0.28 | 12.80 | 4.60 | 3.20 | 0.28 |
| Diesel/Distillate Oil (1000 gal.) | 1.32 | 0.05 | 20.00 | 7.10 | 5.00 | 2.00 |

Table 2
Default Emission Factors for Internal Combustion Engines (ICE) and Micro Turbines for Forms B2 and B2U

| Fuel Type (fuel unit)/Engine Type | Organic Gases (lb/unit) | Methane (lb/unit) | Nitrogen Oxides (lb/unit) | Sulfur Oxides (lb/unit) | Carbon Monoxide (lb/unit) | Particulate Matter (lb/unit) |
|---|-------------------------|-------------------|---------------------------|-------------------------|---------------------------|------------------------------|
| Natural gas (mmscf)/2 Stroke (Lean-Burn) ICE | 122.00 | 1,479.00 | 3233.00 | 0.60 | 394.00 | 39.00 |
| Natural gas (mmscf)/4 Stroke (Lean-Burn) ICE* and Micro Turbine | 120.00 | 1,275.00 | 4162.00 | 0.60 | 323.00 | --- |
| Natural gas (mmscf)/4 Stroke (Rich-Burn) ICE | 30.00 | 235.00 | 2254.00 | 0.60 | 3794.00 | 10.00 |
| LPG, Propane, Butane (1000 gal.)/All ICEs & Micro Turbine | 83.00 | --- | 139.00 | 0.35 | 129.00 | 5.00 |
| Diesel/Distillate Oil (1000 gal.)/All ICEs & Micro Turbine | 37.50 | ---- | 469.00 | 7.10 | 102.00 | 33.50 |
| Gasoline (1000 gal.)/All ICEs & Micro Turbine | 206.00 | ---- | 102.00 | 5.30 | 3,940.00 | 6.50 |

* If engine specification is not available, assume 4 Stroke (Lean-Burn) ICE.

Table 3
Rule-Based Emission Factors for Combustion Equipment for Forms B1 and B2
(For Equipment in Compliance with Rule Limits)

| Fuel Type (fuel unit) | Nitrogen Oxides (lb/fuel unit) |
|--|--------------------------------|
| A) E.F. based on Rule 1146 for Form B1 | |
| Natural Gas (mmscf) | 49.80 |
| LPG, Propane, Butane (1000 gal.) | 4.50 |
| B) E.F. based on Rule 1146.1/1146.2 for Form B1 | |
| Natural Gas (mmscf) | 37.40 |
| LPG, Propane, Butane (1000 gal.) | 3.40 |
| C) E.F. based on Rule 1110.2 for Form B2 (Stationary ICEs only) | |
| Natural gas (mmscf) | 238.70 |
| LPG, Propane, Butane (1000 gallons) | 15.30 |
| Diesel/Distillate Oil (1000 gallons) | 33.40 |
| Gasoline (1000 gallons) | 21.50 |

APPENDIX J



VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT
669 County Square Drive, Ventura CA 93003 805/645-1401 FAX 805/645-1444 www.vcapcd.org

AB 2588 COMBUSTION EMISSION FACTORS

Emission factors for combustion of natural gas and diesel fuel were developed for use in AB 2588 emission inventory reports in 1990 and updated in 1991, 1992 and 1995. These factors have been updated again based on new data available from the USEPA (1) (10).

These emission factors are to be used where source testing or fuel analysis are not required by the AB 2588 Criteria and Guidelines Regulations, Appendix D. The factors are divided into external combustion sources (boilers, heaters, flares) and internal combustion sources (engines, turbines). Natural gas combustion factors are further divided into a number of sub-categories, based on equipment size and type.

If better source specific data such as manufacturer's data, source tests, or fuel analysis is available, it should be used rather than these emission factors.

Natural Gas Combustion Factors

Natural gas combustion factors were developed for listed substances identified by the California Air Resources Board (CARB) as significant components of natural gas combustion emissions (2) and for some federal HAPs.

In the past, the VCAPCD has included emission factors for natural gas fired internal combustion equipment in this document. In 2000, the USEPA published air toxics emission factors for natural gas fired turbines and engines. For natural gas fired internal combustion equipment, the emission factors from the USEPA publication AP-42 (1) should be used.

For natural gas fired turbines, emission factors from Table 3.1-3 of AP-42, dated April 2000 should be used. For natural gas fired internal combustion engines, emission factors from Tables 3.2-1, 3.2-2, and 3.2-3 of AP-42, dated August 2000, as applicable, should be used.

Natural Gas Fired External Combustion Equipment

| | <10 MMBTUh | 10-100 MMBTUh | >100 MMBTUh | flare |
|-------------------------------|---------------------|---------------|-------------|-------|
| Pollutant | Emissions (lb/MMcf) | | | |
| benzene | 0.0080 | 0.0058 | 0.0017 | 0.159 |
| formaldehyde | 0.0170 | 0.0123 | 0.0036 | 1.169 |
| PAH's (including naphthalene) | 0.0004 | 0.0004 | 0.0004 | 0.014 |
| naphthalene | 0.0003 | 0.0003 | 0.0003 | 0.011 |
| acetaldehyde | 0.0043 | 0.0031 | 0.0009 | 0.043 |
| acrolein | 0.0027 | 0.0027 | 0.0008 | 0.010 |
| propylene | 0.7310 | 0.5300 | 0.01553 | 2.440 |
| toluene | 0.0366 | 0.0265 | 0.0078 | 0.058 |
| xylenes | 0.0272 | 0.0197 | 0.0058 | 0.029 |
| ethyl benzene | 0.0095 | 0.0069 | 0.0020 | 1.444 |
| hexane | 0.0063 | 0.0046 | 0.0013 | 0.029 |

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External combustion equipment includes boilers, heaters, and steam generators.

Derivation of Factors

The emission factors for boilers, heaters, and steam generators were based on the results of source tests performed mostly on units rated at between 10 and 100 million BTU per hour. The following test data was used: benzene (3) (6) (16) (19); formaldehyde (3) (6) (19); PAH, naphthalene, toluene, xylenes, ethyl benzene (16) (19); acetaldehyde, acrolein, and propylene (19); and hexane (20).

The test results listed above were used directly to determine the emission factors for boilers, heaters, and steam generators with heat input ratings of 10-100 MMBTU/hr. For units <10 MMBTU/hr and >100 MMBTU/hr, were calculated by scaling the factors for 10-100 MMBTU/hr equipment by the ratios of their TOC emission factors (7).

For flares, the factors were developed by applying the CARB species profiles (8) to the USEPA TOC emission factor for flares (1). The internal combustion species profile was used as CARB stated that they had very little confidence in the external combustion profile, and they use only the internal combustion profile (9). Information on acrolein was not contained in the species profile used. It was therefore assumed that the ratio of acrolein to formaldehyde is the same for flares as for turbines. The PAH emission factor is from EPA (10)

Diesel Combustion Factors

Diesel (#1, #2 fuel oil) combustion factors were developed for listed substances identified by the CARB as significant components of diesel fuel combustion emissions (2) and for federal HAPs for which data was available.

Diesel Combustion Factors

| Pollutant | external combustion | internal combustion |
|-------------------------------|-------------------------|---------------------|
| | Emissions (lb/1000 gal) | |
| benzene | 0.0044 | 0.1863 |
| formaldehyde | 0.3506 | 1.7261 |
| PAH's (including naphthalene) | 0.0498 | 0.0559 |
| naphthalene | 0.0053 | 0.0197 |
| acetaldehyde | 0.3506 | 0.7833 |
| acrolein | 0.3506 | 0.0339 |
| 1,3-butadiene | 0.0148 | 0.2174 |
| chlorobenzene | 0.0002 | 0.0002 |
| dioxins | ND | ND |
| furans | ND | ND |
| propylene | 0.0100 | 0.4670 |
| hexane | 0.0035 | 0.0269 |
| toluene | 0.0044 | 0.1054 |
| xylenes | 0.0016 | 0.0424 |
| ethyl benzene | 0.0002 | 0.0109 |
| hydrogen chloride | 0.1863 | 0.1863 |
| arsenic | 0.0016 | 0.0016 |
| beryllium | ND | ND |
| cadmium | 0.0015 | 0.0015 |
| total chromium | 0.0006 | 0.0006 |
| hexavalent chromium | 0.0001 | 0.0001 |
| copper | 0.0041 | 0.0041 |
| lead | 0.0083 | 0.0083 |
| manganese | 0.0031 | 0.0031 |
| mercury | 0.0020 | 0.0020 |
| nickel | 0.0039 | 0.0039 |
| selenium | 0.0022 | 0.0022 |
| zinc | 0.0224 | 0.0224 |

ND - not detected

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Derivation of Factors

For external combustion equipment, formaldehyde, PAH, and naphthalene emission factors for were developed using source test data (17). Based on information from CARB it was assumed that acetaldehyde and acrolein emissions would be the same as formaldehyde (14). Emission factors for toluene, xylenes, propylene, ethyl benzene, and hexane were based on USEPA emission factors for total organic compounds and CARB species profile (8) for substances identified by CARB as significant.

For internal combustion engines, emission factors for formaldehyde, PAH's, naphthalene, and metals were based on source testing (4), (5), (6), (18). Benzene, acetaldehyde, acrolein, toluene and xylenes emission factors were based on sources (4), (5), and (18). Propylene factors were based on source tests (4) and (5). 1,3-butadiene was based on (4). Ethyl benzene and hexane emission factors were based on (18).

For all oil combustion equipment, emission factors for chlorobenzene, hydrogen chloride, and metals were based on stack testing and fuel analyses (4), (5), (6), (12), (13), (18). It was assumed that 99.9% of the chlorine contained in the fuel was converted to hydrogen chloride (15), with the remainder converted to chlorobenzene. 5% of the chromium in the fuel samples was assumed to be emitted as hexavalent chromium (15).

Dioxins (PCDD's), furans (PCDF's), and beryllium were identified as potentially significant components of diesel combustion exhaust (2). However, the only test results for diesel combustion found (11) reported "not detected" for dioxins and furans. Beryllium has not been detected in any of the diesel fuel analyses reviewed (4), (5), (6), (12), (13), (18). For emission inventory reporting purposes, facilities should report these compounds on for PRO using an emission estimation code of "99" and writing "ND" for the emissions.

References

- (1) USEPA, Compilation of Air Pollutant Emission Factors, Volume I, Fifth Edition, AP-42, January 1995, and Supplement F, 2000
- (2) Gary Agid, California Air Resources Board, Letter to Air Pollution Control District, September 12, 1989
- (3) CARNOT, Emission Inventory Testing at Southern California Edison Company Long Beach Auxiliary Boiler, May 1990
- (4) CARNOT, Emissions of Air Toxic Species: Test Conducted Under AB 2588 for the Western States Petroleum Association, May 1990
- (5) South Coast Environmental, Compliance Report: Hydraulic Dredge "Ollie Riedel", Report Number T1238C, March 8, 1991
- (6) ENSR Consulting and Engineering, Western States Petroleum Association, Pooled Source Report: Oil and Gas Production Combustion Sources, Fresno and Ventura Counties, California, Document Number 7230-007-700, January 1991
- (7) Ventura County Air Pollution Control District, Emission Factors and Calculation Procedures, July 1985
- (8) State of California Air Resources Board, Identification of Volatile Organic Compound Species Profiles, August 1991, as updated November 29, 2000, profiles 504 and 719

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- (9) Paul Allen, California Air Resources Board, Telephone conversation, February 1, 1990
- (10) United States Environmental Protection Agency, Locating and Estimating Air Emissions From Sources of Polycyclic Organic Matter, EPA-454/R-98-014, July 1998
- (11) United States Environmental Protection Agency, Toxic Air Pollutant Emission Factors-A Compilation for Selected Air Toxic Compounds and Sources, EPA-450/2-88-006a, October 1988
- (12) BTC Environmental, Inc., Ventura Port District Dredge: Air Toxics Emissions Retesting, January 29, 1991
- (13) Shell Western E & P, Emission Inventory Report for Ventura Avenue Field, June 11, 1990
- (14) Muriel Strand, California Air Resources Board, Telephone conversation, February 6, 1990
- (15) State of California Air Resources Board, Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588, August 1989
- (16) Shell Western E&P, Emission Measurements for Speciated PAH's and BTXE Compounds on a Gas fired Turbine and Steam Generator, June 24-27, 1991
- (17) Marine Corps Base Camp Pendleton, California: Draft Final Air Toxics Emissions Inventory Report, May 1, 1991
- (18) Entropy Environmentalists, Inc., Pooled Source Testing of a Rig Diesel-Fired Internal Combustion Engine, conducted for Western States Petroleum Association, July 29-31, 1992
- (19) Radian Corporation, Source Test Report for the Texaco Heater Treater, the Mobil Steam Generator, and the SWEPI Gas Turbine in the San Joaquin Valley Unified Air Pollution Control District, September 1992
- (20) AIRx Testing, Emissions Testing OLS Energu Natural Gas Fired Turbine, and Two Auxiliary Boilers, Job Number 22030, April 21, 1994

May 17, 2001

TIER 1 SCREENING RISK ASSESSMENT

| | |
|------------------------------------|----|
| Receptor Distance (actual) | 1 |
| Receptor Distance (for X/Q lookup) | 25 |

| Tier 1 Results | |
|--|---------------------------------|
| Cancer/Chronic ASI 1.28E-03 PASSED | Acute ASI 3.30E-01 PASSED |

APPLICATION SCREENING INDEX CALCULATION

| Compound | Average Annual Emission Rate (lbs/yr) | Max Hourly Emission Rate (lbs/hr) | Cancer / Chronic Pollutant Screening Level (lbs/yr) | Acute Pollutant Screening Level (lbs/hr) | Cancer / Chronic Pollutant Screening Index (PSI) | Acute Pollutant Screening Index (PSI) |
|---|---------------------------------------|-----------------------------------|---|--|--|---------------------------------------|
| Benzene (including benzene from gasoline) | 6.67E-05 | 6.67E-05 | 1.14E+00 | 7.39E-01 | 5.84E-05 | 9.03E-05 |
| Formaldehyde | 1.41E-04 | 1.41E-04 | 5.44E+00 | 4.70E-02 | 2.59E-05 | 3.00E-03 |
| PolyCyclic Aromatic Hydrocarbon (PAHs) | 1.15E-06 | 1.15E-06 | 9.84E-04 | | 1.17E-03 | |
| Naphthalene | 3.45E-06 | 3.45E-06 | 9.51E-01 | | 3.63E-06 | |
| Acetaldehyde | 3.57E-05 | 3.57E-05 | 1.14E+01 | | 3.13E-06 | |
| Acrolein | 3.11E-05 | 3.11E-05 | 1.98E+00 | 9.50E-05 | 1.57E-05 | 3.27E-01 |
| Propylene | 6.10E-03 | 6.10E-03 | 9.92E+04 | | 6.15E-08 | |
| Toluene (methyl benzene) | 3.05E-04 | 3.05E-04 | 9.92E+03 | 1.85E+01 | 3.07E-08 | 1.65E-05 |
| Xylenes (isomers and mixtures) | 2.27E-04 | 2.27E-04 | 2.31E+04 | 1.10E+01 | 9.81E-09 | 2.06E-05 |
| Ethyl benzene | 7.94E-05 | 7.94E-05 | 6.61E+04 | | 1.20E-09 | |
| Hexane (n-) | 5.29E-05 | 5.29E-05 | 2.31E+05 | | 2.29E-10 | |

TOTAL (APPLICATION SCREENING INDEX)

1.28E-03 3.30E-01

Tier1

**EMISSIONS TESTING AT PARAMOUNT'S
AB PLANT INCINERATOR**

Prepared for:

PARAMOUNT PETROLEUM CORPORATION
14700 DOWNEY AVENUE
PARAMOUNT, CALIFORNIA 90723

For Submittal to:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive
Diamond Bar, California 91765

Prepared by:

DELTA AIR QUALITY SERVICES, INCORPORATED
2324 North Batavia, Suite 109
Orange, California 92865
(714) 279-6777

Arlene C. Bell

MARCH, 1999

1.0 INTRODUCTION AND SUMMARY

Paramount Petroleum Corporation contracted Delta Air Quality Services, Incorporated (Delta) to conduct emissions testing on the new AB Plant Incinerator. The incinerator is the final control device on Paramount's asphalt blowing plant. Paramount Petroleum is required to conduct testing on this incinerator to meet the requirements of Section H of their South Coast Air Quality Management District (SCAQMD) Permit to Construct. The permit specifies testing necessary to comply with 1) 40 CFR 60 Subpart UU (Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacturing), 2) SCAQMD Rule 404 (SCAQMD Statutory Limits for Particulate), and 3) Section 28-1 of the permit listing additional pollutant species to be measured in the incinerator exhaust gas.

This general approach to the test program was prepared with the recommendations of the SCAQMD because the facility is a batch process with no separate considerations for this type of process listed in Subpart UU. Emmanuel Rivar of SCAQMD communicated general SCAQMD interpretations of testing applications to meet permit requirements to Arlene Bell of Delta in a telephone conversation on October 7, 1998. The conversation was in response to Delta's letter of October 1, 1998 addressing major concerns about the testing approach. The test plan contained additional details of the testing for District review. The review of the test plan contained additional district requirements. It is contained in Appendix A.2. The issues resolved in the telephone conversation and test plan were:

- Total particulate is required for Subpart UU compliance, not PM₁₀ as stated in the permit. It is required that the facility meet the federal requirements in Subpart UU including requirements for test duration;
- Details of the particulate measurements to meet Subpart UU and SCAQMD Rule 404 compliance will be described fully in the test plan and will include the addition of a SCAQMD 6.1 train to calculate particulate for Rule 404;
- The requirement to conduct testing at no less than 80% of the permitted production rate refers to 80% of the coating output;
- Tests required for SCAQMD purposes only can be run at staggered intervals throughout the blowing cycle. The average result of triplicate tests will represent average emissions from the whole cycle;
- The facility will measure total chromium as well as hexavalent chromium;
- Opacity and visual observations will be conducted by EPA Methods 9 and 22;
- ROG measurements will be performed simultaneously at the incinerator inlet and outlet by SCAQMD Method 25.1.

Table 1-1 presents the tests required to demonstrate compliance with SCAQMD and EPA regulations and any applicable emission limits and references. The following tests were conducted:

- Incinerator Inlet - Triplicate tests for ROG and flow rate;
- Incinerator Outlet - Triplicate tests for CO, ROG, total particulate, moisture, flow rate, benzo(a)pyrene, formaldehyde, acetaldehyde, total and hexavalent chromium, and arsenic;

- Opacity observations of the incinerator stack were conducted by a certified observer according to EPA Method 9. Fugitive emissions observations and visual observations were made by the observer by EPA Method 22;
- The testing determined the efficiency of the incinerator for ROG.

The facility representatives documented plant operating data during the testing.

**TABLE 1-1
AGENCY TEST REQUIREMENTS
PARAMOUNT PETROLEUM CORPORATION
AB PLANT INCINERATOR**

| Parameter | CFR 40 Subpart UU Compliance | | SCAQMD Rule 404 Compliance | | SCAQMD Permit Requirement | |
|---------------------------------------|------------------------------|---|----------------------------|-------------------------------|---------------------------|-------|
| | Required | Limit | Required | Limit | Required | Limit |
| Total Particulate | X | 0.60kg particulate ⁽¹⁾ per megagram of asphalt charged | X | 0.0830 gr/dscf ⁽²⁾ | X | None |
| Opacity | | O% ⁽³⁾ | | | X | |
| Carbon Monoxide | | | | | X | None |
| ROG | | | | | X | |
| ROG Outlet | | | | | X | None |
| ROG Inlet ⁽⁴⁾ | | | | | X | None |
| Benzo(a)pyrene | | | | | X | None |
| Formaldehyde | | | | | X | None |
| Acetaldehyde | | | | | X | None |
| Hexavalent Chromium ⁽⁵⁾ | | | | | X | None |
| Arsenic | | | | | X | None |
| O ₂ Outlet ⁽⁶⁾ | X | | X | | X | None |
| O ₂ Inlet ⁽⁴⁾ | X | | X | | X | None |
| CO ₂ Outlet ⁽⁶⁾ | X | | X | | X | None |
| CO ₂ Inlet ⁽⁴⁾ | X | | X | | X | None |
| Moisture Outlet ⁽⁶⁾ | X | | X | | X | None |
| Moisture Inlet ⁽⁴⁾ | X | | X | | X | None |
| Flow Rate Outlet ⁽⁶⁾ | X | | X | | X | None |
| Flow Rate Inlet ⁽⁴⁾ | X | | X | | X | None |

Notes and References:

- ⁽¹⁾ 40 CFR 60.472(b)(3) - limit for blowing stills without a catalyst.
⁽²⁾ SCAQMD Rule 404 Statutory limit for particulate concentration. Limit cited is based on approximate flow rate of 8879 dscfm. Actual volume of exhaust gas discharged was 7738 dscfm.
⁽³⁾ 40CFR60.472(b)(5).
⁽⁴⁾ Required to determine efficiency of incinerator for ROG.
⁽⁵⁾ Total chromium measurements were performed on each of these samples.
⁽⁶⁾ Required to determine flow rate.

The testing was conducted on January 19-23, 1999. Testing was conducted by Arlene Bell, Dave Wonderly, Stafford Pease, and Lawrence Pedregon of Delta. Mr. Douglas Thompson was the on-site plant representative for Paramount Petroleum.

Table 1-2 contains a summary of the emissions results and a comparison to applicable limits. The results indicate that the incinerator met all emissions limits.

**TABLE 1-2
SUMMARY OF TEST RESULTS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Parameter | Result | Emissions Limit |
|---|------------------------------|-----------------|
| <u>Total Particulate</u> | | |
| kg per megagram of asphalt charged | 0.016 | 0.60 |
| gr/dscf | 0.0128 | 0.0830 |
| lb/hr | 0.85 | |
| <u>Visual Observation</u> | | |
| Opacity, % | 0 | 0 |
| Visual, % of observation time | 0 | |
| Fugitive emissions from incinerator apparatus | None | |
| <u>Carbon Monoxide</u> | | |
| ppm | 6 | |
| lb/hr | 0.20 | |
| <u>ROG (TGNMO as Methane)</u> | | |
| Outlet, ppm | 94 | |
| Outlet, lb/hr | 1.8 | |
| Inlet, ppm | 28,033 | |
| Inlet, lb/hr | 259.1 | |
| Destruction Efficiency, % | 99.3 | |
| <u>Benzo-a-pyrene</u> | | |
| µg/dscm | ND < 0.0013 | |
| lb/hr | ND < 3.32 x 10 ⁻⁸ | |
| <u>Formaldehyde</u> | | |
| ppb | 36 | |
| lb/hr | 0.0013 | |
| <u>Acetaldehyde</u> | | |
| ppb | 12 | |
| lb/hr | 0.0006 | |
| <u>Arsenic</u> | | |
| µg/dscm | 0.30 | |
| lb/hr | 8.33 x 10 ⁻⁶ | |
| <u>Total Chromium</u> | | |
| µg/dscm | 1.02 | |
| lb/hr | 2.81 x 10 ⁻⁵ | |
| <u>Hexavalent Chromium</u> | | |
| µg/dscm | 0.081 | |
| lb/hr | 2.22 x 10 ⁻⁶ | |

This report contains a unit description and operating conditions during testing in Section 2. Section 3 contains a test program overview including the responsible organization for each task, the test schedule, sample locations, test procedures, and

Subpart UU calculations. Section 4 contains detailed results for each test run. The appendices contain excerpts from the SCAQMD permit, and conditional test plan approval, quality assurance information, process operating data, test data, and laboratory reports, example calculations, chain of custody documentation and instrument strip charts.

**TABLE 1-2
SUMMARY OF TEST RESULTS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Parameter | Result | Emissions Limit |
|---|------------------------------|-----------------|
| Total Particulate | | |
| kg per megagram of asphalt charged | 0.016 | 0.60 |
| gr/dscf | 0.0128 | 0.0830 |
| lb/hr | 0.85 | |
| Visual Observation | | |
| Opacity, % | 0 | 0 |
| Visual, % of observation time | 0 | |
| Fugitive emissions from incinerator apparatus | None | |
| Carbon Monoxide | | |
| ppm | 6 | |
| lb/hr | 0.20 | |
| ROG (TGNMO as Methane) | | |
| Outlet, ppm | 94 | |
| Outlet, lb/hr | 1.8 | |
| Inlet, ppm | 28,033 | |
| Inlet, lb/hr | 259.1 | |
| Destruction Efficiency, % | 99.3 | |
| Benzo-a-pyrene | | |
| ug/dscm | ND < 0.0013 | |
| lb/hr | ND < 3.32 x 10 ⁻⁸ | |
| Formaldehyde | | |
| ppb | 36 | |
| lb/hr | 0.0013 | |
| Acetaldehyde | | |
| ppb | 12 | |
| lb/hr | 0.0006 | |
| Arsenic | | |
| ug/dscm | 0.30 | |
| lb/hr | 8.33 x 10 ⁻⁶ | |
| Total Chromium | | |
| ug/dscm | 1.02 | |
| lb/hr | 2.81 x 10 ⁻⁵ | |
| Hexavalent Chromium | | |
| ug/dscm | 0.081 | |
| lb/hr | 2.22 x 10 ⁻⁶ | |

This report contains a unit description and operating conditions during testing in Section 2. Section 3 contains a test program overview including the responsible organization for each task, the test schedule, sample locations, test procedures, and

For the tests required for SCAQMD purposes, triplicate tests for each parameter were staggered over the beginning, midpoint, and end of a still blow down. The other stills were operating on different cycles, however, two stills were in operation throughout the testing.

For testing purposes, Delta observed that the beginning, midpoint, and end of a still blow down could be roughly characterized by the following still and flue gas conditions:

- Beginning:** Rising still temperatures; Approximately 20% flue gas moisture; Approximately 7% flue gas O₂ content.
- Middle:** Rising still temperatures with beginning of water addition; Increasing flue gas moisture to 35-45 %; Decreasing flue gas O₂ concentrations.
- End:** High but steady still temperatures with continued addition of water; Flue gas moisture of 35-45%; Possible low O₂ flue gas levels of approximately 2% - 4%.

**TABLE 2-1
SUMMARY OF OPERATING CONDITIONS
PARAMOUNT PETROLEUM CORPORATION'S
AB PLANT INCINERATOR
JANUARY 1999**

| Date | Stills in Operation | Air Flow, scfm | Fuel Flow mscfd | Incinerator Temperature °F |
|----------|---------------------|------------------|-----------------|----------------------------|
| 01/19/99 | #2, #4 | 2025, 1688 | 300.43 | 1601 |
| 01/20/99 | #2, #4 | 2138, 2160 | 315.68 | 1597 |
| 01/21/99 | #2, #4 | 2115, 2070 | 299.52 | 1600 |
| 01/22/99 | #1, #2, #4 | 2070, 1125, 2183 | 319.36 | 1599 |
| 01/23/99 | #2, #4 | 1170, 1080 | 311.43 | 1599 |

Notes:

- 1) 1/19, 1/20, 1/21, 1/23 stills 2 and 4 blown down throughout testing period;
 - 2) 1/22 Two stills were being blown down through all parts of the testing period. Still 2 blown down throughout the testing period; Still 1 blown down until 1345; Still 4 started at 1345.
- mscfd: thousand standard cubic feet per day.

4.0 RESULTS

This section presents the results of the emissions tests performed at Paramount Petroleum's AB Plant Incinerator on January 19-23, 1999. Detailed results of the tests are presented in the following sections:

- 4.1 Carbon Monoxide;
- 4.2 Particulate and Sulfuric Acid Mist;
- 4.3 Hydrocarbon Emissions and destruction Efficiency;
- 4.4 Arsenic;
- 4.5 Total and Hexavalent Chromium;
- 4.6 Benzo-a-pyrene;
- 4.7 Formaldehyde and Acetaldehyde;
- 4.8 Opacity and Visual Observations.

Additional information on the sampling and analysis is contained in the Appendices. Appendix A contains the SCAQMD permit for the incinerator and conditional approval of the test plan. Appendix B contains Delta's CARB and SCAQMD certifications; quality assurance information, a description of Delta's CEM System and calibration data. Appendix C contains process operating conditions during testing. Data summaries, CEM performance data, field data sheets and laboratory data are contained in Appendix D. Appendix E presents emissions calculations. Appendix F contains chain of custody information and instrument strip charts are located in Appendix G.

4.1 CARBON MONOXIDE

As was discussed in Section 3, carbon monoxide tests were conducted at the beginning, middle, and end of a blow down. The average results of these tests are similar to those obtained over the test day. The average carbon monoxide concentration was 5.9 ppm or 0.20 lb/hr. The results are presented in Table 4-1 and in Appendix D.4

4.2 PARTICULATE AND SULFURIC ACID MIST

Table 4-2 presents the results of the particulate tests. Each test was conducted during the duration of a blow down for EPA Subpart UU purposes. A SCAQMD 6.1 train was run in conjunction with each particulate train throughout the blow down to determine sulfuric acid mist. SCAQMD procedures were followed for calculating the weight of each sample fraction. The sulfuric acid mist is added to the corrected particulate result. Appendix D.5 contains calculations, field and laboratory data.

The particulate emissions results averaged 0.0128 gr/dscf or 0.85 lb/hr.

**TABLE 4-1
CARBON MONOXIDE RESULTS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Test No. | 1-CO | 2-CO | 3-CO |
|-----------------------|-----------|-----------|-----------|
| Date | 01/22/99 | 01/22/99 | 01/22/99 |
| Time | 0855-0925 | 0940-1010 | 1150-1220 |
| Flow Rate, dscfm | 7796 | 7796 | 7354 |
| O ₂ % | 6.74 | 4.67 | 5.05 |
| CO ₂ % | 5.39 | 6.80 | 7.13 |
| Carbon Monoxide ppm | 6.6 | 9.0 | 2.1 |
| Carbon Monoxide lb/hr | 0.23 | 0.31 | 0.07 |

Note: The flow rate for test 1-CO and 2-CO is the average of concurrent tests 1-As and 1-Cr
The flow rate for test 3-CO is the average of the tests 2-As and 2-Cr.

For compliance with EPA Subpart UU, the particulate catch is expressed using the calculations in Section 3 in kg/megagram of asphalt charged. The average result was 0.016 kg/megagram compared to the EPA limit of 0.60 kg/megagram.

4.3 HYDROCARBON EMISSIONS AND DESTRUCTION EFFICIENCY

Simultaneous tests for hydrocarbons were conducted at the incinerator inlet and outlet by SCAQMD Method 25.1. Total gaseous non-methane organic compounds averaged 28,033 ppm as methane at the inlet or 259.1 lb/hr. Total gaseous non-methane organic compounds averaged 93.5 ppm as methane at the outlet or 1.8 lb/hr.

The destruction efficiency was calculated based on mass and average 99.3% for the incinerator.

Table 4-3 contains a summary of the test results.

4.4 ARSENIC

Table 4-4 contains the results of the arsenic testing. Emissions averaged 0.30 µg/dscm or 8.33×10^{-6} lb/hr.

**TABLE 4-2
PARTICULATE AND SULFURIC ACID MIST
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Test No | 1-PM | 2-PM | 3-PM | Average |
|---|--------------|--------------|--------------|---------|
| Date: | 01/19/99 | 01/20/99 | 01/21/99 | |
| Time: | 0830-1515 | 0845-1533 | 0815-1440 | |
| Flow Rate, dscfm: | 7596 | 7908 | 7711 | |
| Sample Volume, dscf: | 174.997 | 189.351 | 171.938 | |
| O ₂ , %: | 5.94 | 5.00 | 4.84 | |
| CO ₂ , %: | 6.52 | 6.72 | 6.89 | |
| H ₂ O, %: | 28.5 | 29.4 | 31.4 | |
| Isokinetic Ratio, %: | 102.1 | 92.5 | 98.8 | |
| Particulate | | | | |
| gr/dscf | 0.0116 | 0.0137 | 0.0131 | 0.0128 |
| lb/hr | 0.75 | 0.93 | 0.87 | 0.85 |
| kg/megagram | 0.0135 | 0.0190 | 0.0155 | 0.0160 |
| Particulate Catch (corrected) | | | | |
| Back-up Filter, mg | 0.8 | 22.3 | 21.2 | |
| Insoluble filter, mg | 2.7 | 1.1 | 0.0 | |
| Organic Extraction, mg | 1.5 | 0.6 | 0.9 | |
| Probe Wash and Impinger Catch, mg | 0.0 | 0.0 | 0.0 | |
| Sulfuric Acid Dihydrate, mg from SO_x train (prorated for sample volume) | 126.4 | 144.0 | 123.9 | |
| TOTAL, mg | 131.4 | 168.0 | 146.0 | |

**TABLE 4-3
HYDROCARBON RESULTS AND DESTRUCTION EFFICIENCY
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Parameter | 1-HC | 2-HC | 3-HC | Average |
|----------------------------------|-----------|-----------|-----------|---------|
| INLET | | | | |
| Date | 01/21/99 | 01/21/99 | 01/21/99 | |
| Time | 0925-1025 | 1100-1155 | 1300-1355 | |
| Flow Rate, dscfm | 3664 | 3591 | 3679 | |
| Methane, ppm | 1280 | 1580 | 1550 | 1470 |
| Ethane (as methane) ppm | 551 | 594 | 578 | 574 |
| TGNMO, ppmv (as methane) | 28200 | 27800 | 28100 | 28033 |
| TGNMO, lb/hr | 262.0 | 253.2 | 262.2 | 259.1 |
| OUTLET | | | | |
| Date | 01/21/99 | 01/21/99 | 01/21/99 | |
| Time | 0925-1030 | 1100-1200 | 1300-1400 | |
| Flow Rate, dscfm | 7711 | 7711 | 7711 | |
| Methane, ppm | ND < 1 | 1.44 | ND < 1 | < 1.15 |
| Ethane (as methane) ppm | ND < 1 | ND < 1 | ND < 1 | ND < 1 |
| TGNMO, ppmv (as methane) | 160 | 47.9 | 72.5 | 93.5 |
| TGNMO, lb/hr | 3.1 | 0.9 | 1.4 | 1.8 |
| Destruction Efficiency, % | | | | |
| | 98.8 | 99.6 | 99.5 | 99.3 |

Notes: TGNMO is total gaseous non-methane, non-ethane organics.
Outlet flow rate from test 3-Particulate



**TABLE 4-4
ARSENIC RESULTS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Test No. | 1-Arsenic | 2-Arsenic | 3-Arsenic | Average |
|----------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Date: | 01/22/99 | 01/22/99 | 01/22/99 | |
| Time: | 0825-1040 | 1145-1355 | 1440-1650 | |
| Flow Rate, dscfm: | 7891 | 7433 | 7348 | |
| Sample Volume, dscf: | 2.142 | 2.105 | 1.876 | |
| O ₂ , %: | 5.86 | 5.06 | 3.17 | |
| CO ₂ , %: | 5.94 | 7.38 | 8.07 | |
| H ₂ O, %: | 26.1 | 33.2 | 36.7 | |
| Isokinetic Ratio, %: | 99.5 | 103.8 | 93.5 | |
| <hr/> | | | | |
| Arsenic | | | | |
| μg/dscm | 0.25 | 0.41 | 0.23 | 0.30 |
| lb/hr | 7.31 x 10 ⁻⁶ | 1.14 x 10 ⁻⁵ | 6.31 x 10 ⁻⁶ | 8.33 x 10 ⁻⁶ |

4.5 TOTAL AND HEXAVALENT CHROMIUM

Total and hexavalent chromium were determined according to CARB Method 425 procedures. Hexavalent chromium emissions averaged 0.081 μg/dscm or 2.22 x 10⁻⁶ lb/hr. Total chromium emissions averaged 1.02 μg/dscm or 2.81 x 10⁻⁵ lb/hr. Hexavalent chromium emissions represent 7.9% of the total chromium emissions. Table 4-5 presents the results of the chromium testing.

4.6 BENZO-A-PYRENE

Benzo-a-pyrene results are presented in Table 4-6. Benzo-a-pyrene was not detected in any sample at a concentration of 0.0013 μg/dscm or an emission rate of 3.32 x 10⁻⁸ lb/hr.

TABLE 4-5
TOTAL AND HEXAVALENT CHROMIUM RESULTS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999

| Test No. | 1-Chromium | 2-Chromium | 3-Chromium | Average |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Date: | 01/22/99 | 01/22/99 | 01/22/99 | |
| Time: | 0824-1039 | 1144-1354 | 1439-1649 | |
| Flow Rate, dscfm: | 7700 | 7275 | 7292 | |
| Sample Volume, dscf: | 2.034 | 2.002 | 1.838 | |
| O ₂ , %: | 5.86 | 5.06 | 3.17 | |
| CO ₂ , %: | 5.94 | 7.38 | 8.07 | |
| H ₂ O, %: | 27.0 | 34.1 | 37.7 | |
| Isokinetic Ratio, %: | 98.6 | 102.8 | 94.1 | |
| <hr/> | | | | |
| Hexavalent Chromium | | | | |
| µg/dscm | 0.033 | 0.167 | 0.043 | 0.081 |
| lb/hr | 9.49×10^{-7} | 4.55×10^{-6} | 1.16×10^{-6} | 2.22×10^{-6} |
| Total Chromium | | | | |
| µg/dscm | 0.402 | 1.71 | 0.952 | 1.02 |
| lb/hr | 1.16×10^{-5} | 4.67×10^{-5} | 2.60×10^{-5} | 2.81×10^{-5} |
| Cr ⁶⁺ /Total Cr, % | 8.2 | 9.8 | 4.5 | 7.9 |

**TABLE 4-6
 BENZO-A-PYRENE RESULTS
 PARAMOUNT PETROLEUM
 AB PLANT INCINERATOR
 JANUARY 1999**

| Test No. | 1-PAH | 2-PAH | 3-PAH | Average |
|----------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Date: | 01/23/99 | 01/23/99 | 01/23/99 | |
| Time: | 0825-1030 | 1100-1305 | 1325-1530 | |
| Flow Rate, dscfm: | 6917 | 6606 | 6259 | |
| Sample Volume, dscf: | 1.823 | 1.769 | 1.765 | |
| O ₂ , %: | 8.41 | 6.25 | 4.98 | |
| CO ₂ , %: | 4.85 | 5.92 | 7.27 | |
| H ₂ O, %: | 15.8 | 24.6 | 35.8 | |
| Isokinetic Ratio, %: | 96.6 | 100.0 | 103.3 | |
| <hr/> | | | | |
| Benzo-a-pyrene | | | | |
| μg/dscm | ND < 0.0013 | ND < 0.0014 | ND < 0.0014 | ND < 0.0013 |
| lb/hr | ND < 3.41 x 10 ⁻⁸ | ND < 3.55 x 10 ⁻⁸ | ND < 3.19 x 10 ⁻⁸ | ND < 3.32 x 10 ⁻⁸ |

4.7 FORMALDEHYDE AND ACETALDEHYDE

Formaldehyde and acetaldehyde results are presented in Table 4-7. Formaldehyde emissions averaged 36 ppb or 0.0013 lb/hr. Acetaldehyde emissions averaged 12 ppb or 0.006 lb/hr.

**TABLE 4-7
 FORMALDEHYDE AND ACETALDEHYDE RESULTS
 PARAMOUNT PETROLEUM
 AB PLANT INCINERATOR
 JANUARY 1999**

| Test No. | 1-Formaldehyde | 2-Formaldehyde | 3-Formaldehyde | Average |
|----------------------|----------------|----------------|----------------|---------|
| Date: | 01/21/99 | 01/21/99 | 01/21/99 | |
| Time: | 0905-1005 | 1115-1215 | 1225-1325 | |
| Flow Rate, dscfm: | 7711 | 7711 | 7711 | |
| Sample Volume, dscf: | 0.896 | 0.883 | 0.876 | |
| Formaldehyde ppb | 26 | 27 | 56 | 36 |
| lb/hr | 0.0010 | 0.0010 | 0.0020 | 0.0013 |
| Acetaldehyde ppb | 10 | 8 | 17 | 12 |
| lb/hr | 0.0006 | 0.0005 | 0.0009 | 0.0006 |

Flow rate from test 3-Particulate

4.8 OPACITY AND VISUAL OBSERVATIONS

Opacity observations by EPA Method 9 and visual observations of the stack and incinerator apparatus by EPA Method 22 were made by Dave Wonderly, a certified observer.

Opacity readings were all 0%. No emissions were observed by EPA Method 22 from the stack or incinerator apparatus which included all ducting and equipment from the still knockout to the stack.

Table 4-8 summarizes the observations. Appendix D.11 contains the original observations including a diagram of the observation point in relation to the stack and sun.

**TABLE 4-8
OPACITY AND VISUAL OBSERVATIONS
PARAMOUNT PETROLEUM
AB PLANT INCINERATOR
JANUARY 1999**

| Set No | 1 | 2 | 3 | Average |
|---|-----------|-----------|-----------|---------|
| <u>Opacity Readings by EPA Method 9</u> | | | | |
| Time: | 1120-1129 | 1210-1219 | 1430-1439 | |
| Number of Observations (15 seconds each) | 40 | 40 | 40 | |
| Range of opacity observations, % | 0 | 0 | 0 | |
| Average opacity, % | 0 | 0 | 0 | 0 |
| <u>Visual Observations by EPA Method 22</u> | | | | |
| Points of Fugitive Emissions | | None | | |
| <u>Stack Observations</u> | | | | |
| Time | 0900-0920 | 0925-0945 | 0950-1010 | |
| Observation Period Duration, min:sec | 20:00 | 20:00 | 20:00 | |
| Accumulated Emission time, min:sec | 0:00 | 0:00 | 0:00 | |

APPENDIX #M



14700 Downey Avenue
P.O. Box 1418
Paramount, CA 90723
(562) 531-2060

January 30, 2007

Ms. Debbie Jordan
Director, Air Division
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: Paramount Petroleum Corporation's Semi-Annual Report NSPS Subpart J

Dear Ms. Jordan:

Paramount Petroleum Corporation (Paramount) submits the attached summary report forms (Attachment A through C) summarizing excess emissions, if any, and monitoring systems performance for affected facilities at its Refinery located at 14700 Downey Avenue, Paramount, CA 90723.

In general, fuel gas is supplied to Refinery combustion sources from either of two sources, the Crude Unit or Hydroprocessing fuel gas mix drums, D-807 and D-712, respectively. Subject FGCDs include Crude Unit heaters H-601, H-602, H-802 and H-805; all of which receive fuel from D-807 and heaters H-303, H-304, H-305, H-306, H-501/502; which receive fuel gas from D-712. The performance reports for the fuel gas H₂S CEMS for each mix drum are provided in Attachments A and B.

Attachment C is the summary report for H-907 includes total duration of excess emission and total CEMS downtime.

Please feel free to contact me with any questions you may have.

Sincerely,


June Christman
Managing Director of Environmental Affairs

Cc: Steve Farkas w/o attachment

File 07.705.100

ATTACHMENT A

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One -- SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 7/1/2007 to 12/31/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 160 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CEMS Certification or Audit : Applied Automation model # 1430102138 / Latest RATA: 6/14/2007

Process Unit(s) Description: Fuel mix drum (D-807)

Total source operating time in reporting period: 4416 hrs.

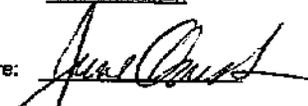
Emission data summary

CEMS performance summary

| | | | |
|---|--------------|--|---------------|
| 1. Duration of excess emissions in reporting period due to: | | 1. CEMS downtime in reporting period due to. | |
| a. Startup/shutdown | <u>n/a</u> | a. Monitor equipment malfunctions. | <u>x</u> |
| b. Control equipment problems. | <u>n/a</u> | b. Non-Monitor equipment malfunctions. | <u>n/a</u> |
| c. Process problems. | <u>n/a</u> | c. Quality assurance calibration. | <u>n/a</u> |
| d. Other known causes. | <u>n/a</u> | d. Other known causes. | <u>n/a</u> |
| e. Unknown causes. | <u>n/a</u> | e. Unknown causes. | <u>n/a</u> |
| 2. Total duration of excess emission. | <u>0 hrs</u> | 2. Total CEMS Downtime. | <u>36 hrs</u> |
| 3. Total duration of excess emissions x (100) [Total source operating time]. | <u>0.00%</u> | 3. [Total CEMS Downtime] x (100) [Total source operating time]. | <u>0.80%</u> |

I certify that the information contained in this report is true, accurate, and complete.

Name: Jane Christman

Signature: 

Title: Director of Environmental Affairs

Date: 1/30/08

ATTACHMENT B

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One — SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 7/1/2007 to 12/31/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 160 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CMS Certification or Audit : Applied Automation model # 1430102138 / Latest RATA: 6/5/2007

Process Unit(s) Description: Fuel mix drum (D-712)

Total source operating time in reporting period: 4416 hrs.

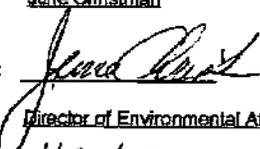
Emission data summary

CEMS performance summary

| | | | |
|--|--------------|---|--------------|
| 1. Duration of excess emissions in reporting period due to: | | 1. CEMS downtime in reporting period due to. | |
| a. Startup/shutdown | <u>n/a</u> | a. Monitor equipment malfunctions. | <u>x</u> |
| b. Control equipment problems. | <u>n/a</u> | b. Non-Monitor equipment malfunctions. | <u>n/a</u> |
| c. Process problems. | <u>n/a</u> | c. Quality assurance calibration. | <u>n/a</u> |
| d. Other known causes. | <u>n/a</u> | d. Other known causes. | <u>n/a</u> |
| e. Unknown causes. | <u>n/a</u> | e. Unknown causes. | <u>n/a</u> |
| 2. Total duration of excess emission. | <u>0 hrs</u> | 2. Total CEMS Downtime. | <u>63</u> |
| 3. Total duration of excess emissions x (100) [Total source operating time]. | <u>0.00%</u> | 3. [Total CEMS Downtime] x (100) [Total source operating time]. | <u>1.40%</u> |

I certify that the information contained in this report is true, accurate, and complete.

Name: June Christman

Signature: 

Title: Director of Environmental Affairs

Date: 1/30/08

ATTACHMENT C

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One — SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 7/1/2007 to 12/31/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 20 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CEMS Certification or Audit : Horiba model # ENDA 1440 / Last RATA: 8/15/2007

Process Unit(s) Description: Thermal Oxidizer

Total source operating time in reporting period: 4416 hrs.

Emission data summary

CEMS performance summary

1. Duration of excess emissions in reporting period due to:

- | | |
|--------------------------------|-----|
| a. Startup/shutdown | n/a |
| b. Control equipment problems. | n/a |
| c. Process problems. | x |
| d. Other known causes. | n/a |
| e. Unknown causes. | n/a |

2. Total duration of excess emission. 12 hrs

3. Total duration of excess emissions x (100) / [Total source operating time]. 0.27%

1. CEMS downtime in reporting period due to.

- | | |
|--|-----|
| a. Monitor equipment malfunctions. | x |
| b. Non-Monitor equipment malfunctions. | n/a |
| c. Quality assurance calibration. | n/a |
| d. Other known causes. | n/a |
| e. Unknown causes. | n/a |

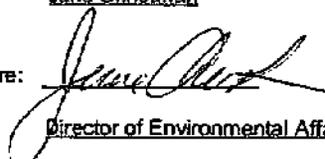
2. Total CEMS Downtime. 6 hrs

3. [Total CEMS Downtime] x (100) / [Total source operating time]. 0.14%

Note: See attachment 1 for excess emissions and CMS downtime details.

I certify that the information contained in this report is true, accurate, and complete.

Name: Jane Christman

Signature: 

Title: Director of Environmental Affairs

Date: 11/30/08



14700 Downey Avenue
P.O. Box 1418
Paramount, CA 90723
(562) 531-2060

July 30, 2007

Ms. Debbie Jordan
Director, Air Division
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: Paramount Petroleum Corporation's Semi-Annual Report NSPS Subpart J

Dear Ms. Jordan:

Paramount Petroleum Corporation (Paramount) submits the attached summary report forms (Attachment A through C) summarizing excess emissions, if any, and monitoring systems performance for affected facilities at its Refinery located at 14700 Downey Avenue, Paramount, CA 90723.

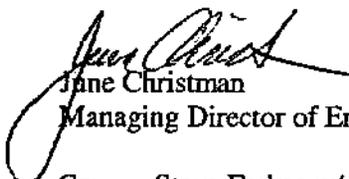
In general, fuel gas is supplied to Refinery combustion sources from either of two sources, the Crude Unit or Hydroprocessing fuel gas mix drums, D-807 and D-712, respectively. Subject FGCDs include Crude Unit heaters H-601, H-602, H-802 and H-805; all of which receive fuel from D-807 and heaters H-303, H-304, H-305, H-306, H-501/502; which receive fuel gas from D-712. The performance reports for the fuel gas H₂S CEMS for each mix drum are provided in Attachments A and B.

Attachment C is the summary report for H-907 includes total duration of excess emission and total CEMS downtime.

Paramount is in the process of implanting a project in October 2007 that will reduce the CEMS downtime. This project involves Data Acquisition System Handling (DAHS) and communication infrastructure upgrades for D-712 GC, D-807 GC and H-907 CEMS.

Please feel free to contact me with any questions you may have.

Sincerely,


Jane Christman
Managing Director of Environmental Affairs

Cc: Steve Farkas w/o attachment

File 07.705.100

ATTACHMENT A

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One -- SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 1/1/2007 to 6/30/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 160 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CEMS Certification or Audit : Applied Automation model # 1430102138 / Latest RATA: 6/14/07

Process Unit(s) Description: Crude, AB & Tank Farm heaters which combust fuel gas from fuel mix drum (D-807)

Total source operating time in reporting period: 4344 hrs.

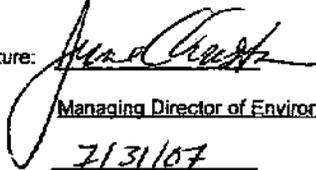
Emission data summary

CEMS performance summary

| | | | |
|--|--------------|--|----------------|
| 1. Duration of excess emissions in reporting period due to: | | 1. CEMS downtime in reporting period due to. | |
| a. Startup/shutdown | <u>NA</u> | a. Monitor equipment malfunctions. | <u>81 hrs</u> |
| b. Control equipment problems. | <u>NA</u> | b. Non-Monitor equipment malfunctions. | <u>22 hrs</u> |
| c. Process problems. | <u>NA</u> | c. Quality assurance calibration. | <u>24 hrs</u> |
| d. Other known causes. | <u>NA</u> | d. Other known causes. | <u>NA</u> |
| e. Unknown causes. | <u>NA</u> | e. Unknown causes. | <u>NA</u> |
| 2. Total duration of excess emission. | <u>0 hrs</u> | 2. Total CEMS Downtime. | <u>127 hrs</u> |
| 3. Total duration of excess emissions x (100) [Total source operating time]. | <u>0.00%</u> | 3. [Total CMS Downtime] x (100) [Total source operating time]. | <u>2.92%</u> |

I certify that the information contained in this report is true, accurate, and complete.

Name: June Christman

Signature: 

Title: Managing Director of Environmental Affairs

Date: 7/31/07

ATTACHMENT B

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One — SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 1/1/2007 to 6/30/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 160 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CEMS Certification or Audit : Applied Automation model # 1430102138 / Latest RATA: 6/05/07

Process Unit(s) Description: Reformer heaters which combust fuel gas from fuel mix drum (D-712)

Total source operating time in reporting period: 4344 hrs.

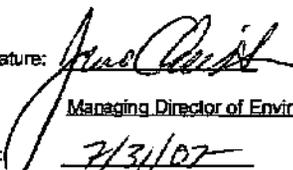
Emission data summary

CEMS performance summary

| | | | |
|--|--------------|---|------------------|
| 1. Duration of excess emissions in reporting period due to: | | 1. CEMS downtime in reporting period due to: | |
| a. Startup/shutdown | <u>NA</u> | a. Monitor equipment malfunctions. | <u>19.5 hrs</u> |
| b. Control equipment problems. | <u>NA</u> | b. Non-Monitor equipment malfunctions. | <u>NA</u> |
| c. Process problems. | <u>NA</u> | c. Quality assurance calibration. | <u>104.5 hrs</u> |
| d. Other known causes. | <u>NA</u> | d. Other known causes. | <u>NA</u> |
| e. Unknown causes. | <u>NA</u> | e. Unknown causes. | <u>NA</u> |
| 2. Total duration of excess emission. | <u>0 hrs</u> | 2. Total CEMS Downtime. | <u>124 hrs</u> |
| 3. Total duration of excess emissions x (100) [Total source operating time]. | <u>0.00%</u> | 3. [Total CEMS Downtime] x (100) [Total source operating time]. | <u>2.85%</u> |

I certify that the information contained in this report is true, accurate, and complete.

Name: June Christman

Signature: 

Title: Managing Director of Environmental Affairs

Date: 7/31/07

ATTACHMENT C

Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One — SO₂ / NO_x / TRS / H₂S / CO / Opacity)

Reporting period dates: From 1/1/2007 to 6/30/2007

Company: Paramount Petroleum Corporation

Emission Limitation : 20 ppm rolling 3 hour averages.

Address: 14700 Downey Avenue, Paramount, CA 90712

Monitor Manufacturer and Model No. Date of Latest CEMS Certification or Audit : Horiba model # ENDA 1440 / Last RATA: 2/14/2007

Process Unit(s) Description: AB Plant Incinerator (H907)

Total source operating time in reporting period: 4344 hrs.

Emission data summary

CEMS performance summary

1. Duration of excess emissions in reporting period due to:

| | |
|--------------------------------|----------|
| a. Startup/shutdown | NA |
| b. Control equipment problems. | 2.5 hrs |
| c. Process problems. | 24.5 hrs |
| d. Other known causes. | NA |
| e. Unknown causes. | NA |

2. Total duration of excess emission. 27 hrs

3. Total duration of excess emissions x (100) [Total source operating time]. 0.62%

1. CEMS downtime in reporting period due to.

| | |
|--|--------|
| a. Monitor equipment malfunctions. | 56 hrs |
| b. Non-Monitor equipment malfunctions. | NA |
| c. Quality assurance calibration. | NA |
| d. Other known causes. | NA |
| e. Unknown causes. | NA |

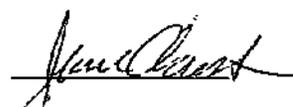
2. Total CEMS Downtime. 56 hrs

3. [Total CEMS Downtime] x (100) [Total source operating time]. 1.29%

Note: See attachment for excess emissions and CEMS downtime details.

I certify that the information contained in this report is true, accurate, and complete.

Name: Jane Christman

Signature: 

Title: Managing Director of Environmental Affairs

Date: 7/3/07

**2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2007

| Source/Receptor Area No. Location | Station No. State District Code Code | | Carbon Monoxide ^{a)} | | Ozone | | | | | | | | | | Nitrogen Dioxide ^{d)} | | | Sulfur Dioxide ^{e)} | | | | | | |
|--------------------------------------|--|-------|-------------------------------|-------------------------|-------------------------|------------------|--------------------------|--------------------------|---------------------------------|--|----------------------------|-------------------|--------------------|-------------------|--------------------------------|------------------|-------------------------|---------------------------------|------------------|--------------------------|---------------------------|---------------------------------|---------------------|--|
| | | | No. Days of Data | Mx. Conc. in ppm 1-hour | Max Conc. in ppm 8-hour | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. in ppm 8-hour | Health Advisory ≥ 0.15 ppm 1-hour | No. Days Standard Exceeded | | | | | No. Days of Data | Max Conc. in ppm 1-hour | Annual Average AAM Conc. in ppm | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 24-hour | Annual Average AAM Conc. in ppm | | |
| | | | | | | | | | | | Federal ^{b)} | | | | | | | | | | | | State ^{c)} | |
| | | | | | | | | | | | > 0.12 ppm 1-hour | > 0.08 ppm 8-hour | > 0.075 ppm 8-hour | > 0.09 ppm 1-hour | > 0.070 ppm 8-hour | | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 70087 | 087 | 359 | 3 | 2.2 | 355 | 0.115 | 0.102 | 0.072 | 0 | 0 | 2 | 3 | 3 | 6 | 360 | 0.10 | 0.0299 | 351 | 0.01 | 0.003 | 0.0009 | |
| 2 | Northwest Coastal LA County | 70091 | 091 | 365 | 3 | 2.0 | 360 | 0.117 | 0.087 | 0.067 | 0 | 0 | 1 | 2 | 2 | 2 | 353 | 0.08 | 0.0200 | -- | -- | -- | -- | |
| 3 | Southwest Coastal LA County | 70111 | 820 | 361 | 3 | 2.4 | 361 | 0.087 | 0.074 | 0.066 | 0 | 0 | 0 | 0 | 0 | 1 | 331* | 0.08 | 0.0140 | 361 | 0.02 | 0.009 | 0.0028 | |
| 4 | South Coastal LA County 1 | 70072 | 072 | 347* | 3 | 2.6 | 365 | 0.099 | 0.073 | 0.056 | 0 | 0 | 0 | 0 | 1 | 1 | 365 | 0.11 | 0.0207 | 365 | 0.11 | 0.011 | 0.0027 | |
| 4 | South Coastal LA County 2 | 70110 | 077 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 6 | West San Fernando Valley | 70074 | 074 | 358 | 4 | 2.8 | 358 | 0.129 | 0.104 | 0.092 | 0 | 1 | 8 | 28 | 21 | 43 | 358 | 0.08 | 0.0186 | -- | -- | -- | -- | |
| 7 | East San Fernando Valley | 70069 | 069 | 365 | 4 | 2.8 | 365 | 0.116 | 0.096 | 0.088 | 0 | 0 | 6 | 13 | 13 | 19 | 363 | 0.09 | 0.0289 | 365 | 0.01 | 0.003 | 0.0010 | |
| 8 | West San Gabriel Valley | 70088 | 088 | 365 | 3 | 2.3 | 365 | 0.149 | 0.100 | 0.089 | 0 | 3 | 6 | 11 | 13 | 21 | 365 | 0.09 | 0.0246 | -- | -- | -- | -- | |
| 9 | East San Gabriel Valley 1 | 70060 | 060 | 365 | 3 | 1.8 | 365 | 0.158 | 0.112 | 0.096 | 1 | 3 | 13 | 20 | 22 | 28 | 365 | 0.12 | 0.0253 | -- | -- | -- | -- | |
| 9 | East San Gabriel Valley 2 | 70591 | 591 | 365 | 2 | 2.0 | 364 | 0.147 | 0.116 | 0.104 | 0 | 3 | 14 | 26 | 25 | 40 | 365 | 0.11 | 0.0227 | -- | -- | -- | -- | |
| 10 | Pomona/Walnut Valley | 70075 | 075 | 365 | 3 | 2.0 | 365 | 0.153 | 0.108 | 0.102 | 1 | 2 | 10 | 18 | 19 | 25 | 365 | 0.10 | 0.0318 | -- | -- | -- | -- | |
| 11 | South San Gabriel Valley | 70185 | 085 | 365 | 5 | 2.9 | 364 | 0.135 | 0.100 | 0.079 | 0 | 2 | 2 | 5 | 6 | 9 | 361 | 0.11 | 0.0249 | -- | -- | -- | -- | |
| 12 | South Central LA County | 70084 | 084 | 365 | 8 | 5.1 | 365 | 0.102 | 0.077 | 0.056 | 0 | 0 | 0 | 1 | 1 | 2 | 365 | 0.10 | 0.0291 | -- | -- | -- | -- | |
| 13 | Santa Clarita Valley | 70090 | 090 | 361 | 2 | 1.2 | 357 | 0.135 | 0.110 | 0.101 | 0 | 2 | 16 | 44 | 31 | 64 | 339* | 0.08 | 0.0196 | -- | -- | -- | -- | |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 30177 | 3177 | 360 | 6 | 2.9 | 365 | 0.152 | 0.107 | 0.082 | 1 | 1 | 2 | 8 | 7 | 9 | 365 | 0.08 | 0.0219 | -- | -- | -- | -- | |
| 17 | Central Orange County | 30178 | 3176 | 346* | 4 | 2.9 | 365 | 0.127 | 0.099 | 0.073 | 0 | 1 | 1 | 1 | 2 | 7 | 359 | 0.10 | 0.0208 | -- | -- | -- | -- | |
| 18 | North Coastal Orange County | 30195 | 3195 | 362 | 5 | 3.1 | 362 | 0.082 | 0.072 | 0.065 | 0 | 0 | 0 | 0 | 0 | 2 | 362 | 0.07 | 0.0132 | 358 | 0.01 | 0.004 | 0.0010 | |
| 19 | Saddleback Valley | 30002 | 3812 | 364 | 3 | 2.2 | 365 | 0.108 | 0.089 | 0.080 | 0 | 0 | 2 | 5 | 5 | 10 | -- | -- | -- | -- | -- | -- | -- | |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Norco/Corona | 33155 | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 | Metropolitan Riverside County 1 | 33144 | 4144 | 364 | 4 | 2.9 | 365 | 0.131 | 0.111 | 0.099 | 0 | 2 | 15 | 46 | 31 | 69 | 364 | 0.07 | 0.0206 | 323* | 0.02 | 0.002 | 0.0017 | |
| 23 | Metropolitan Riverside County 2 | 33146 | 4146 | 365 | 4 | 2.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 | Mira Loma | 33165 | 5214 | 359 | 3 | 2.1 | 360 | 0.118 | 0.104 | 0.092 | 0 | 0 | 10 | 23 | 16 | 48 | 349* | 0.07 | 0.0181 | -- | -- | -- | -- | |
| 24 | Perris Valley | 33149 | 4149 | -- | -- | -- | 365 | 0.139 | 0.116 | 0.103 | 0 | 4 | 37 | 73 | 66 | 88 | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Lake Elsmore | 33158 | 4158 | 365 | 2 | 1.4 | 359 | 0.130 | 0.108 | 0.097 | 0 | 3 | 19 | 35 | 26 | 55 | 358 | 0.06 | 0.0174 | -- | -- | -- | -- | |
| 29 | Banning Airport | 33164 | 4164 | -- | -- | -- | 365 | 0.129 | 0.113 | 0.095 | 0 | 1 | 12 | 43 | 28 | 63 | 363 | 0.08 | 0.0147 | -- | -- | -- | -- | |
| 30 | Coachella Valley 1** | 33137 | 4137 | 365 | 2 | 0.8 | 365 | 0.126 | 0.101 | 0.097 | 0 | 1 | 20 | 58 | 29 | 83 | 365 | 0.06 | 0.0103 | -- | -- | -- | -- | |
| 30 | Coachella Valley 2** | 33155 | 4157 | -- | -- | -- | 365 | 0.106 | 0.094 | 0.087 | 0 | 0 | 6 | 29 | 8 | 48 | -- | -- | -- | -- | -- | -- | -- | |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 36175 | 5175 | 365 | 2 | 1.7 | 365 | 0.145 | 0.115 | 0.112 | 0 | 7 | 18 | 35 | 32 | 55 | 327* | 0.10 | 0.0276 | -- | -- | -- | -- | |
| 33 | Southwest San Bernardino Valley | 36025 | 5817 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Central San Bernardino Valley 1 | 36197 | 5197 | 359 | 3 | 1.8 | 359 | 0.144 | 0.122 | 0.112 | 0 | 9 | 19 | 43 | 40 | 60 | 358 | 0.09 | 0.0239 | 359 | 0.01 | 0.004 | 0.0019 | |
| 34 | Central San Bernardino Valley 2 | 36203 | 5203 | 365 | 4 | 2.3 | 365 | 0.153 | 0.121 | 0.117 | 1 | 8 | 24 | 51 | 48 | 74 | 351 | 0.08 | 0.0245 | -- | -- | -- | -- | |
| 35 | East San Bernardino Valley | 36204 | 5204 | -- | -- | -- | 365 | 0.149 | 0.124 | 0.112 | 0 | 7 | 25 | 58 | 54 | 79 | -- | -- | -- | -- | -- | -- | -- | |
| 37 | Central San Bernardino Mountains | 36181 | 5181 | -- | -- | -- | 365 | 0.171 | 0.137 | 0.126 | 4 | 13 | 59 | 93 | 67 | 115 | -- | -- | -- | -- | -- | -- | -- | |
| 38 | East San Bernardino Mountains | 36001 | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| DISTRICT MAXIMUM | | | | 8 | 5.1 | | 0.171 | 0.137 | 0.126 | 4 | 13 | 59 | 93 | 67 | 115 | | 0.12 | 0.0318 | | 0.11 | 0.011 | 0.0028 | | |
| SOUTH COAST AIR BASIN | | | | 8 | 5.1 | | 0.171 | 0.137 | 0.126 | 5 | 18 | 79 | 108 | 96 | 128 | | 0.12 | 0.0318 | | 0.11 | 0.011 | 0.0028 | | |

Appendix N

ppm - Parts Per Million parts of air, by volume.

AAM - Annual Arithmetic Mean

-- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative.

** Salton Sea Air Basin.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded.

The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. U.S. EPA has revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm, effective May 27, 2008.

c) - The 8-hour average California ozone standard of 0.070 ppm was established effective May 17, 2006.

d) - The federal standard is annual arithmetic mean NO₂ > 0.0534 ppm. California Air Resources Board has revised the NO₂ 1-hour state standard from 0.25 ppm to 0.18 ppm and has established a new annual standard of 0.030 ppm, effective March 20, 2008.

e) - The state standards are 1-hour average SO₂ > 0.25 ppm and 24-hour average SO₂ > 0.04 ppm. The federal standards are annual arithmetic mean SO₂ > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO₂ standards were not exceeded.



**South Coast
Air Quality Management District**
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/teleweb/areamap.aspx>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

**2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2007

| Source/Receptor Area No. Location | Station No. | | Suspended Particulates PM10 ^{f)} | | | | | Fine Particulates PM2.5 ^{g)} | | | | | Particulates ^{h)} | | Lead ^{h)} | | Sulfate ^{h)} | | | | |
|--------------------------------------|----------------------------------|---------------|---|---|-------------------------------------|------------------------------|--|---------------------------------------|---|--|--|--|--|------------------|---|--|--|--|---|--|----------|
| | State Code | District Code | No. Days of Data | Max. Conc. in µg/m ³ 24-hour | No. (%) Samples Exceeding Standards | | Annual Average Conc. (AAM) µg/m ³ | No. Days of Data | Max. Conc. in µg/m ³ 24-hour | 98 th Percentile Conc. in µg/m ³ 24-hour | No. (%) Samples Exceeding Federal Standard | | Annual Average Conc. (AAM) µg/m ³ | No. Days of Data | Max. Conc. in µg/m ³ 24-hour | Annual Average Conc. (AAM) µg/m ³ | Max. Monthly Average Conc. µg/m ³ | Max. Quarterly Average Conc. µg/m ³ | Max. Conc. in µg/m ³ 24-hour | %Samples Exceeding State Standard ≥ 25 µg/m ³ 24-hour | |
| | | | | | Federal > 150 µg/m ³ | State > 50 µg/m ³ | | | | | Current > 35 ^{j)} µg/m ³ | Old > 65 ^{j)} µg/m ³ | | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 70087 | 087 | 56 | 78 | 0 | 5(9) | 33.3 | 324 | 64.2 | 51.2 | 20(0.6) | 0 | 16.8 | 58 | 194 | 73.5 | 0.04 | 0.03 | 10.5 | 0 |
| 2 | Northwest Coastal LA County | 70091 | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 57 | 180 | 57.6 | -- | -- | 9.7 | 0 |
| 3 | Southwest Coastal LA County | 70111 | 820 | 56 | 96 | 0 | 2(4) | 27.7 | -- | -- | -- | -- | -- | 55 | 286 | 51.8 | 0.02 | 0.01 | 10.5 | 0 | |
| 4 | South Coastal LA County 1 | 70072 | 072 | 57 | 75+ | 0+ | 5(9)+ | 30.2+ | 332 | 82.9 | 40.8 | 12(3.6) | 1(0.3) | 14.6 | 59 | 732 | 76.5 | 0.02 | 0.01 | 11.1 | 0 |
| 4 | South Coastal LA County 2 | 70110 | 077 | 56 | 123+ | 0+ | 17(30)+ | 41.7+ | 326 | 68.0 | 33.7 | 6(1.8) | 1(0.3) | 13.7 | 58 | 694 | 79.4 | 0.02 | 0.01 | 11.7 | 0 |
| 6 | West San Fernando Valley | 70074 | 074 | -- | -- | -- | -- | -- | 95 | 43.3 | 33.4 | 1(1.1) | 0 | 13.1 | -- | -- | -- | -- | -- | -- | -- |
| 7 | East San Fernando Valley | 70069 | 069 | 54 | 109 | 0 | 11(20) | 40.0 | 98 | 56.5 | 47.7 | 9(9.2) | 0 | 16.8 | -- | -- | -- | -- | -- | -- | -- |
| 8 | West San Gabriel Valley | 70088 | 088 | -- | -- | -- | -- | -- | 108 | 68.9 | 45.4 | 3(2.8) | 1(0.9) | 14.3 | 56 | 123 | 46.3 | -- | -- | 22.4 | 0 |
| 9 | East San Gabriel Valley 1 | 70060 | 060 | 55 | 83+ | 0+ | 11(20)+ | 35.6+ | 292* | 63.8 | 49.3 | 19(6.5) | 0 | 15.9 | 58 | 243 | 77.8 | -- | -- | 37.0++ | 1(1.7)++ |
| 9 | East San Gabriel Valley 2 | 70591 | 591 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 70075 | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11 | South San Gabriel Valley | 70185 | 085 | -- | -- | -- | -- | -- | 101 | 63.6 | 49.5 | 5(5.0) | 0 | 16.7 | 55 | 196 | 76.0 | 0.05 | 0.02 | 25.4++ | 1(1.7)++ |
| 12 | South Central LA County | 70084 | 084 | -- | -- | -- | -- | -- | 106 | 49.0 | 46.1 | 4(3.8) | 0 | 15.9 | 59 | 327 | 78.8 | 0.03 | 0.02 | 12.5 | 0 |
| 13 | Santa Clarita Valley | 70090 | 090 | 57 | 131+ | 0+ | 5(9)+ | 29.9+ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 30177 | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Central Orange County | 30178 | 3176 | 58 | 75+ | 0+ | 5(9)+ | 31.0+ | 336 | 79.4 | 46.5 | 14(4.2) | 1(0.3) | 14.5 | -- | -- | -- | -- | -- | -- | -- |
| 18 | North Coastal Orange County | 30195 | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Saddleback Valley | 30002 | 3812 | 57 | 74 | 0 | 3(5) | 23.0 | 98 | 46.9 | 35.0 | 2(2.0) | 0 | 11.3 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | |
| 22 | Norco/Corona | 33155 | 4155 | 58 | 93+ | 0+ | 10(17)+ | 39.6+ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 33144 | 4144 | 116 | 118+ | 0+ | 66(57)+ | 54.6+ | 295* | 75.7 | 54.3 | 33(11.2) | 3(1.0) | 19.1 | 57 | 237 | 111.0 | 0.02 | 0.01 | 13.0 | 0 |
| 23 | Metropolitan Riverside County 2 | 33146 | 4146 | -- | -- | -- | -- | -- | 101 | 68.6 | 57.3 | 8(7.9) | 1(1.0) | 18.1 | 60 | 674 | 88.9 | 0.02 | 0.01 | 9.3 | 0 |
| 23 | Mira Loma | 33165 | 5214 | 56 | 142 | 0 | 41(73) | 68.5 | 110 | 69.7 | 60.1 | 13(11.8) | 1(0.9) | 21.0 | -- | -- | -- | -- | -- | -- | -- |
| 24 | Perris Valley | 33149 | 4149 | 57 | 120+ | 0+ | 32(56)+ | 54.8+ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 33158 | 4158 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 | Banning Airport | 33164 | 4164 | 48* | 78 | 0 | 7(15) | 33.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 1** | 33137 | 4137 | 54 | 83 | 0 | 6(11) | 30.5 | 104 | 32.5 | 20.5 | 0 | 0 | 8.7 | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 2** | 33155 | 4157 | 84* | 146+ | 0+ | 51(61)+ | 53.5+ | 97 | 26.8 | 26.5 | 0 | 0 | 9.8 | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 36175 | 5175 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 60 | 206 | 63.5 | 0.02 | 0.01 | 7.6 | 0 |
| 33 | Southwest San Bernardino Valley | 36025 | 5817 | 58 | 115+ | 0+ | 14(24)+ | 43.4+ | 102 | 72.8 | 53.0 | 6(5.9) | 1(1.0) | 17.9 | -- | -- | -- | -- | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 36197 | 5197 | 56 | 111+ | 0+ | 33(59)+ | 54.9+ | 107 | 77.5 | 64.9 | 10(9.3) | 2(1.9) | 19.0 | 58 | 242 | 96.2 | -- | -- | 20.3 | 0 |
| 34 | Central San Bernardino Valley 2 | 36203 | 5203 | 57 | 136+ | 0+ | 28(49)+ | 51.4+ | 99 | 72.1 | 68.4 | 11(11.1) | 3(3.0) | 18.3 | 59 | 536 | 106.9 | 0.04 | 0.02 | 13.6 | 0 |
| 35 | East San Bernardino Valley | 36204 | 5204 | 60 | 97 | 0 | 19(32) | 39.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 36181 | 5181 | 54 | 89 | 0 | 2(4) | 27.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 36001 | 5818 | -- | -- | -- | -- | -- | 54 | 45.4 | 34.0 | 1(1.9) | 0 | 10.4 | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | | | 146+ | 0+ | 66+ | 68.5+ | | 82.9 | 68.4 | 33 | 3 | 21.0 | | 732 | 111.0 | 0.05 | 0.03 | 37.0 | 1++ |
| SOUTH COAST AIR BASIN | | | | | 142+ | 0+ | 79+ | 68.5+ | | 82.9 | 68.4 | 48 | 8 | 21.0 | | 732 | 111.0 | 0.05 | 0.03 | 37.0 | 1++ |

µg/m³ - Micrograms per cubic meter of air.

AAM = Annual Arithmetic Mean

-- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative.

** Salton Sea Air Basin.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked effective December 17, 2006. State standard is annual average (AAM) > 20 µg/m³.

j) - U.S. EPA has revised the federal 24-hour PM2.5 standard from 65 µg/m³ to 35 µg/m³; effective December 17, 2006.

k) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³.

l) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average > 1.5 µg/m³.

+ - The following PM10 data samples were excluded from compliance consideration in accordance with the EPA Exceptional Event Regulation: 210 and 157 µg/m³ on March 22 and April 6, respectively, at Coachella Valley 2 (high wind events); 167 µg/m³ on April 12 at Perris Valley (high wind event); 165 and 155 µg/m³ on July 5 at East San Gabriel 1 and Central San Bernardino Valley 1, respectively (fireworks displays); and high concentrations throughout the District on October 21, with a maximum concentration of 559 µg/m³ at Metropolitan Riverside County 1 (high wind and wildfire event).

++ - High sulfate concentrations were recorded on July 5, 2008, due to the 4th of July fireworks displays.



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**2006 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2006

| Source/Receptor Area No. Location | Station No. | Carbon Monoxide ^{a)} | | | Ozone ^{b)} | | | | | | | | Nitrogen Dioxide ^{c)} | | | Sulfur Dioxide ^{d)} | | | | | | |
|--------------------------------------|----------------------------------|-------------------------------|--------------------------|--------------------------|---------------------|--------------------------|--------------------------|--------------------------|-----------------------------|------------------|------------------|----------------|--------------------------------|------------------|--------------------------|------------------------------|------------------------------|------------------|--------------------------|---------------------------|------------------------------|--------|
| | | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. 8-hour | No. Days Standard Exceeded | | | | | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 24-hour | Annual Average AAM Conc. ppm | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 24-hour | Annual Average AAM Conc. ppm | |
| | | | | | | | | | Health Advisory ≥ 0.15 | Federal > 0.12 | Federal > 0.08 | State > 0.09 | State > 0.07 | | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 362 | 3 | 2.6 | 362 | 0.11 | 0.079 | 0.077 | 0 | 0 | 0 | 8 | 4 | 360 | 0.11 | 0.06 | 0.0288 | 365 | 0.03 | 0.006 | 0.0019 |
| 2 | Northwest Coastal LA County | 091 | 365 | 3 | 2.0 | 365 | 0.10 | 0.074 | 0.069 | 0 | 0 | 0 | 3 | 0 | 365 | 0.08 | 0.05 | 0.0173 | -- | -- | -- | -- |
| 3 | Southwest Coastal LA County | 820 | 363 | 3 | 2.3 | 360 | 0.08 | 0.066 | 0.062 | 0 | 0 | 0 | 0 | 0 | 351 | 0.10 | 0.05 | 0.0155 | 363 | 0.02 | 0.006 | 0.0020 |
| 4 | South Coastal LA County 1 | 072 | 360 | 4 | 3.4 | 364 | 0.08 | 0.058 | 0.058 | 0 | 0 | 0 | 0 | 0 | 357 | 0.10 | 0.05 | 0.0215 | 364 | 0.03 | 0.010 | 0.0012 |
| 4 | South Coastal LA County 2 | 077 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | West San Fernando Valley | 074 | 365 | 5 | 3.4 | 361 | 0.16 | 0.108 | 0.105 | 1 | 6 | 17 | 32 | 39 | 363 | 0.07 | 0.04 | 0.0174 | -- | -- | -- | -- |
| 7 | East San Fernando Valley | 069 | 365 | 4 | 3.5 | 365 | 0.17 | 0.128 | 0.099 | 2 | 6 | 12 | 25 | 23 | 365 | 0.10 | 0.05 | 0.0274 | 360 | 0.01 | 0.004 | 0.0006 |
| 8 | West San Gabriel Valley | 088 | 360 | 4 | 2.8 | 365 | 0.15 | 0.117 | 0.095 | 1 | 5 | 7 | 25 | 24 | 365 | 0.12 | 0.06 | 0.0245 | -- | -- | -- | -- |
| 9 | East San Gabriel Valley 1 | 060 | 365 | 2 | 1.7 | 364 | 0.17 | 0.120 | 0.091 | 2 | 7 | 10 | 23 | 19 | 365 | 0.11 | 0.07 | 0.0258 | -- | -- | -- | -- |
| 9 | East San Gabriel Valley 2 | 591 | 363 | 2 | 2.0 | 363 | 0.18 | 0.128 | 0.107 | 2 | 10 | 15 | 37 | 31 | 362 | 0.10 | 0.06 | 0.0206 | -- | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 075 | 365 | 3 | 2.1 | 365 | 0.15 | 0.128 | 0.109 | 2 | 9 | 16 | 32 | 30 | 365 | 0.10 | 0.06 | 0.0307 | -- | -- | -- | -- |
| 11 | South San Gabriel Valley | 085 | 232* | 3* | 2.7* | 250* | 0.13* | 0.095* | 0.080* | 0* | 1* | 3* | 9* | 5* | 204* | 0.10* | 0.06* | 0.0283* | -- | -- | -- | -- |
| 12 | South Central LA County | 084 | 365 | 8 | 6.4 | 365 | 0.09 | 0.066 | 0.064 | 0 | 0 | 0 | 0 | 0 | 363 | 0.14 | 0.08 | 0.0306 | -- | -- | -- | -- |
| 13 | Santa Clarita Valley | 090 | 363 | 2 | 1.3 | 359 | 0.16 | 0.120 | 0.112 | 1 | 20 | 40 | 62 | 64 | 359 | 0.08 | 0.04 | 0.0184 | -- | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | 362 | 6 | 3.0 | 362 | 0.15 | 0.114 | 0.092 | 1 | 3 | 4 | 8 | 9 | 361 | 0.09 | 0.05 | 0.0224 | -- | -- | -- | -- |
| 17 | Central Orange County | 3176 | 365 | 5 | 3.0 | 365 | 0.11 | 0.088 | 0.072 | 0 | 0 | 1 | 5 | 3 | 343 | 0.11 | 0.06 | 0.0197 | -- | -- | -- | -- |
| 18 | North Coastal Orange County | 3195 | 365 | 4 | 3.0 | 365 | 0.07 | 0.064 | 0.062 | 0 | 0 | 0 | 0 | 0 | 361 | 0.10 | 0.05 | 0.0145 | 353 | 0.01 | 0.004 | 0.0013 |
| 19 | Saddleback Valley | 3812 | 365 | 2 | 1.8 | 356 | 0.12 | 0.105 | 0.092 | 0 | 0 | 6 | 13 | 17 | -- | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Norco/Corona | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 365 | 3 | 2.1 | 365 | 0.15 | 0.116 | 0.113 | 1 | 8 | 30 | 45 | 59 | 365 | 0.08 | 0.05 | 0.0199 | 365 | 0.01 | 0.004 | 0.0013 |
| 23 | Metropolitan Riverside County 2 | 4146 | 365 | 4 | 2.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Mira Loma | 5214 | 364 | 4 | 2.7 | 364 | 0.16 | 0.119 | 0.107 | 1 | 4 | 25 | 39 | 48 | 332 | 0.08 | 0.05 | 0.0194 | -- | -- | -- | -- |
| 24 | Perris Valley | 4149 | -- | -- | -- | 351 | 0.17 | 0.122 | 0.114 | 3 | 12 | 53 | 76 | 84 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 4158 | 362 | 1 | 1.0 | 362 | 0.14 | 0.109 | 0.102 | 0 | 3 | 24 | 40 | 58 | 352 | 0.07 | 0.05 | 0.0151 | -- | -- | -- | -- |
| 29 | Banning Airport | 4164 | -- | -- | -- | 357 | 0.14 | 0.115 | 0.104 | 0 | 8 | 44 | 57 | 78 | 355 | 0.11 | 0.04 | 0.0161 | -- | -- | -- | -- |
| 30 | Coachella Valley 1** | 4137 | 365 | 2 | 1.0 | 361 | 0.13 | 0.109 | 0.101 | 0 | 2 | 23 | 37 | 67 | 359 | 0.09 | 0.05 | 0.0103 | -- | -- | -- | -- |
| 30 | Coachella Valley 2** | 4157 | -- | -- | -- | 364 | 0.10 | 0.089 | 0.087 | 0 | 0 | 7 | 4 | 29 | -- | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 360 | 3 | 1.8 | 365 | 0.17 | 0.130 | 0.114 | 2 | 14 | 25 | 50 | 54 | 337 | 0.10 | 0.07 | 0.0310 | -- | -- | -- | -- |
| 33 | Southwest San Bernardino Valley | 5817 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 365 | 3 | 2.0 | 361 | 0.16 | 0.123 | 0.116 | 1 | 12 | 29 | 47 | 49 | 362 | 0.09 | 0.06 | 0.0270 | 365 | 0.01 | 0.003 | 0.0019 |
| 34 | Central San Bernardino Valley 2 | 5203 | 364 | 3 | 2.3 | 362 | 0.15 | 0.127 | 0.119 | 3 | 10 | 29 | 52 | 57 | 362 | 0.09 | 0.05 | 0.0252 | -- | -- | -- | -- |
| 35 | East San Bernardino Valley | 5204 | -- | -- | -- | 365 | 0.16 | 0.135 | 0.125 | 5 | 11 | 36 | 60 | 64 | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | -- | -- | -- | 365 | 0.16 | 0.142 | 0.112 | 2 | 9 | 59 | 71 | 96 | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | 8 | 6.4 | | 0.18 | 0.142 | 0.125 | 5 | 20 | 59 | 76 | 96 | | 0.14 | 0.08 | 0.0310 | | 0.03 | 0.010 | 0.0020 | |
| SOUTH COAST AIR BASIN | | | 8 | 6.4 | | 0.18 | 0.142 | 0.125 | 10 | 35 | 86 | 102 | 121 | | 0.14 | 0.08 | 0.0310 | | 0.03 | 0.010 | 0.0020 | |

ppm - Parts Per Million parts of air, by volume.

AAM = Annual Arithmetic Mean

-- Pollutant not monitored.

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded.

The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005.

The 8-hour average California ozone standard of 0.07 ppm was established effective May 17, 2006.

c) - The state standard is 1-hour average NO₂ > 0.25 ppm. The federal standard is annual arithmetic mean NO₂ > 0.0534 ppm. Air Resources Board has approved to lower the NO₂ 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. The revisions are expected to become effective later in 2007.

d) - The state standards are 1-hour average SO₂ > 0.25 ppm and 24-hour average SO₂ > 0.04 ppm. The federal standards are annual arithmetic mean SO₂ > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.30 ppm. The federal and state SO₂ standards were not exceeded.



**South Coast
Air Quality Management District**
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/clemweb/areamap.aspx>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

**2006 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2006

| Source/Receptor Area No. Location | Station No. | Suspended Particulates PM10 ^(a) | | | | | Fine Particulates PM2.5 ^(b) | | | | | Particulates TSP ^(c) | | | Lead ^(d) | | Sulfate ^(e) | | |
|--------------------------------------|----------------|--|--|--|---|--|--|--|---|---|---|--|------------------|--|--|---|---|--|---|
| | | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard | | Annual Average Conc. $\mu\text{g}/\text{m}^3$ (AAM) ^(h) | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | 98th Percentile Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard | | Annual Average Conc. $\mu\text{g}/\text{m}^3$ (AAM) ⁽ⁱ⁾ | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average Conc. $\mu\text{g}/\text{m}^3$ (AAM) ^(j) | Max. Monthly Average Conc. $\mu\text{g}/\text{m}^3$ (Conc. k) | Max. Quarterly Average Conc. $\mu\text{g}/\text{m}^3$ (Conc. k) | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard $\geq 25 \mu\text{g}/\text{m}^3$ 24-hour |
| | | | | Federal $> 150 \mu\text{g}/\text{m}^3$ 24-hour | State $> 50 \mu\text{g}/\text{m}^3$ 24-hour | | | | | Federal $> 35 \mu\text{g}/\text{m}^3$ 24-hour | Federal $> 65 \mu\text{g}/\text{m}^3$ 24-hour | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | |
| 1 Central LA | 087 | 59 | 59 | 0 | 3(5.1) | 30.3 | 330 | 56.2 | 38.9 | 11(3.3) | 0 | 15.6 | 59 | 109 | 63.3 | 0.02 | 0.01 | 18.2 | 0 |
| 2 Northwest Coastal LA County | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 56 | 76 | 40.2 | -- | -- | 12.2 | 0 |
| 3 Southwest Coastal LA County | 820 | 51 | 45 | 0 | 0 | 26.5 | -- | -- | -- | -- | -- | -- | 56 | 84 | 43.1 | 0.01 | 0.01 | 13.6 | 0 |
| 4 South Coastal LA County 1 | 072 | 61 | 78 | 0 | 6(9.8) | 31.1 | 290* | 58.5* | 34.9* | 5(1.7)* | 0* | 14.2* | 62 | 157 | 62.9 | 0.01 | 0.01 | 17.8 | 0 |
| 4 South Coastal LA County 2 | 077 | 58 | 117 | 0 | 19(32.7) | 45.0 | 320 | 53.6 | 35.3 | 6(1.9) | 0 | 14.5 | 59 | 192 | 71.1 | 0.01 | 0.01 | 18.8 | 0 |
| 6 West San Fernando Valley | 074 | -- | -- | -- | -- | -- | 92 | 44.1 | 32.0 | 1(1.1) | 0 | 12.9 | -- | -- | -- | -- | -- | -- | -- |
| 7 East San Fernando Valley | 069 | 54 | 71 | 0 | 10(18.5) | 35.6 | 104 | 50.7 | 43.4 | 6(5.8) | 0 | 16.6 | -- | -- | -- | -- | -- | -- | -- |
| 8 West San Gabriel Valley | 088 | -- | -- | -- | -- | -- | 113 | 45.9 | 32.1 | 1(0.9) | 0 | 13.4 | 60 | 123 | 42.8 | -- | -- | 28.7 | 1(1.7) |
| 9 East San Gabriel Valley 1 | 060 | 58 | 81 | 0 | 7(12.1) | 31.9 | 278* | 52.8* | 38.5* | 8(2.9)* | 0* | 15.5* | 59 | 142 | 68.4 | -- | -- | 20.8 | 0 |
| 9 East San Gabriel Valley 2 | 591 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 Pomona/Walnut Valley | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11 South San Gabriel Valley | 085 | -- | -- | -- | -- | -- | 116 | 72.2 | 43.1 | 7(6) | 1(0.9) | 16.7 | 58 | 768 | 79.3 | 0.03 | 0.02 | 28.6 | 1(1.7) |
| 12 South Central LA County | 084 | -- | -- | -- | -- | -- | 107 | 55.0 | 44.5 | 4(3.7) | 0 | 16.7 | 58 | 147 | 68.4 | 0.02 | 0.02 | 24.1 | 0 |
| 13 Santa Clarita Valley | 090 | 58 | 53 | 0 | 1(1.7) | 23.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | |
| 16 North Orange County | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 Central Orange County | 3176 | 56 | 104 | 0 | 7(12.5) | 33.4 | 330 | 56.2 | 40.5 | 8(2.4) | 0 | 14.1 | -- | -- | -- | -- | -- | -- | -- |
| 18 North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 Saddleback Valley | 3812 | 50 | 57 | 0 | 1(2.0) | 22.8 | 106 | 47.0 | 25.7 | 1(0.9) | 0 | 11.0 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | |
| 22 Norco/Corona | 4155 | 57 | 74 | 0 | 10(17.5) | 36.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 Metropolitan Riverside County 1 | 4144 | 118 | 109 | 0 | 71(60.2) | 54.4 | 300 | 68.5 | 53.7 | 32(10.7) | 1(0.3) | 19.0 | 59 | 169 | 91.2 | 0.01 | 0.01 | 10.8 | 0 |
| 23 Metropolitan Riverside County 2 | 4146 | -- | -- | -- | -- | -- | 105 | 55.3 | 47.7 | 9(8.6) | 0 | 17.0 | 59 | 131 | 72.9 | 0.01 | 0.01 | 9.9 | 0 |
| 24 Mira Loma | 5214 | 59 | 124 | 0 | 41(69.5) | 64.0 | 113 | 63.0 | 52.5 | 14(12.4) | 0 | 20.6 | -- | -- | -- | -- | -- | -- | -- |
| 24 Perris Valley | 4149 | 54 | 125 | 0 | 19(35.2) | 45.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 Lake Elsinore | 4158 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 Banning Airport | 4164 | 55 | 75 | 0 | 8(14.6) | 31.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 Coachella Valley 1** | 4137 | 57 | 73+ | 0+ | 2(3.5)+ | 24.5+ | 111 | 24.8 | 15.9 | 0 | 0 | 7.7 | -- | -- | -- | -- | -- | -- | -- |
| 30 Coachella Valley 2** | 4157 | 115 | 122+ | 0+ | 57(49.6)+ | 52.7+ | 107 | 24.3 | 19.1 | 0 | 0 | 9.5 | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | |
| 32 Northwest San Bernardino Valley | 5175 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 58 | 105 | 54.6 | 0.01 | 0.01 | 9.1 | 0 |
| 33 Southwest San Bernardino Valley | 5817 | 62 | 78 | 0 | 17(27.4) | 42.3 | 107 | 53.7 | 41.5 | 7(6.5) | 0 | 18.5 | -- | -- | -- | -- | -- | -- | -- |
| 34 Central San Bernardino Valley 1 | 5197 | 60 | 142 | 0 | 31(51.7) | 53.5 | 112 | 52.6 | 43.8 | 7(6.3) | 0 | 17.6 | 59 | 190 | 101.0 | -- | -- | 10.3 | 0 |
| 34 Central San Bernardino Valley 2 | 5203 | 57 | 92 | 0 | 24(42.1) | 46.0 | 102 | 55.0 | 48.4 | 8(7.8) | 0 | 17.8 | 54 | 174 | 87.0 | 0.02 | 0.01 | 11.0 | 0 |
| 35 East San Bernardino Valley | 5204 | 60 | 103 | 0 | 12(20.0) | 36.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 Central San Bernardino Mountains | 5181 | 58 | 63 | 0 | 1(1.7) | 26.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | 42* | 40.1* | 40.1* | 1(2.4)* | 0* | 11.2* | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | 142+ | 0+ | 71 | 64.0 | | 72.2 | 53.7 | 32 | 1 | 20.6 | | 768 | 101.0 | 0.03 | 0.02 | 28.7 | 1 |
| SOUTH COAST AIR BASIN | | | 142+ | 0+ | 75 | 64.0 | | 72.2 | 53.7 | 32 | 1 | 20.6 | | 768 | 101.0 | 0.03 | 0.02 | 28.7 | 1 |

$\mu\text{g}/\text{m}^3$ - Micrograms per cubic meter of air

AAM - Annual Arithmetic Mean

-- Pollutant not monitored

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

e) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

f) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day,

and Station Number 5818 where samples were taken every 6 days.

g) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

h) - Federal annual PM10 standard (AAM $> 50 \mu\text{g}/\text{m}^3$) was revoked effective December 17, 2006. State standard is annual average (AAM) $> 20 \mu\text{g}/\text{m}^3$.

i) - U.S. EPA has revised the federal 24-hour PM2.5 standard from $65 \mu\text{g}/\text{m}^3$ to $35 \mu\text{g}/\text{m}^3$; effective December 17, 2006.

j) - Federal PM2.5 standard is annual average (AAM) $> 15 \mu\text{g}/\text{m}^3$. State standard is annual average (AAM) $> 12 \mu\text{g}/\text{m}^3$.

k) - Federal lead standard is quarterly average $> 1.5 \mu\text{g}/\text{m}^3$; and state standard is monthly average $\geq 1.5 \mu\text{g}/\text{m}^3$. No location exceeded lead standards.

Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were $0.24 \mu\text{g}/\text{m}^3$ and $0.22 \mu\text{g}/\text{m}^3$, respectively, both recorded at Central Los Angeles.

+ - The data for the samples collected on a high-wind day (July 16, 2006) at Palm Springs (226 $\mu\text{g}/\text{m}^3$ and 313 $\mu\text{g}/\text{m}^3$, respectively) were excluded in accordance with EPA's Natural Events Policy.



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**2005 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

2005

| Source/Receptor Area No. Location | Station No. | Carbon Monoxide | | | | | Ozone | | | | | | | | Nitrogen Dioxide | | | Sulfur Dioxide | | | | |
|--------------------------------------|----------------------------------|------------------|--------------------------|--------------------------|--|--------------------------|------------------|--------------------------|--------------------------|---------------------------------|--|---|---|---|------------------|--|--|------------------|--|---|---|-------|
| | | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | No. Days Standard Exceeded ^{a)} | | No. Days of Data | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. in ppm 8-hour | Health Advisory ≥ 0.15 ppm 1-hour | No. Days Standard Exceeded | | | No. Days of Data | Max. Conc. in ppm 1-hour ^{d)} | Annual Average ^{d)} AAM Conc. ppm | No. Days of Data | Max. Conc. in ppm 1-hour ^{e)} | Max. Conc. in ppm 24-hour ^{e)} | | |
| | | | | | Federal ≥ 9.5 ppm 8-hour | State > 9.0 ppm 8-hour | | | | | | Federal ^{b)} > 0.12 ppm 1-hour | Federal ^{b)} > 0.08 ppm 8-hour | State ^{c)} > 0.09 ppm 1-hour | | | | | | | State ^{c)} > 0.07 ppm 8-hour | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 365 | 4 | 3.1 | 0 | 0 | 365 | 0.121 | 0.098 | 0.072 | 0 | 0 | 1 | 2 | 2 | 364 | 0.13 | 0.0278 | 357 | 0.07 | 0.010 |
| 2 | Northwest Coastal LA County | 091 | 365 | 3 | 2.1 | 0 | 0 | 361 | 0.114 | 0.090 | 0.077 | 0 | 0 | 1 | 7 | 5 | 365 | 0.08 | 0.0178 | -- | -- | -- |
| 3 | Southwest Coastal LA County | 820 | 365 | 3 | 2.1 | 0 | 0 | 365 | 0.086 | 0.076 | 0.068 | 0 | 0 | 0 | 0 | 1 | 365 | 0.09 | 0.0134 | 365 | 0.04 | 0.012 |
| 4 | South Coastal LA County 1 | 072 | 365 | 4 | 3.5 | 0 | 0 | 365 | 0.091 | 0.068 | 0.059 | 0 | 0 | 0 | 0 | 0 | 365 | 0.14 | 0.0241 | 365 | 0.04 | 0.010 |
| 4 | South Coastal LA County 2 | 077 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | West San Fernando Valley | 074 | 350 | 5 | 3.5 | 0 | 0 | 365 | 0.138 | 0.113 | 0.098 | 0 | 2 | 12 | 30 | 29 | 365 | 0.09 | 0.0202 | -- | -- | -- |
| 7 | East San Fernando Valley | 069 | 363 | 4 | 3.4 | 0 | 0 | 365 | 0.142 | 0.108 | 0.081 | 0 | 2 | 2 | 13 | 12 | 365 | 0.09 | 0.0294 | 361 | 0.01 | 0.006 |
| 8 | West San Gabriel Valley | 088 | 363 | 4 | 2.8 | 0 | 0 | 363 | 0.145 | 0.114 | 0.086 | 1 | 2 | 5 | 13 | 12 | 363 | 0.10 | 0.0241 | -- | -- | -- |
| 9 | East San Gabriel Valley 1 | 060 | 365 | 3 | 1.7 | 0 | 0 | 365 | 0.145 | 0.122 | 0.087 | 1 | 4 | 6 | 20 | 14 | 365 | 0.09 | 0.0251 | -- | -- | -- |
| 9 | East San Gabriel Valley 2 | 591 | 358 | 2 | 1.9 | 0 | 0 | 363 | 0.160 | 0.130 | 0.099 | 2 | 8 | 13 | 31 | 29 | 360 | 0.09 | 0.0224 | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 075 | 365 | 4 | 2.5 | 0 | 0 | 361 | 0.140 | 0.112 | 0.086 | 0 | 4 | 11 | 26 | 18 | 365 | 0.08 | 0.0312 | -- | -- | -- |
| 11 | South San Gabriel Valley | 085 | 113* | 3* | 2.4* | 0* | 0* | 116* | 0.077* | 0.065* | 0.051* | 0* | 0* | 0* | 0* | 0* | 116* | 0.09* | 0.0308* | -- | -- | -- |
| 12 | South Central LA County | 084 | 365 | 7 | 5.9 | 0 | 0 | 365 | 0.111 | 0.081 | 0.083 | 0 | 0 | 0 | 1 | 1 | 360 | 0.11 | 0.0312 | -- | -- | -- |
| 13 | Santa Clarita Valley | 090 | 365 | 2 | 1.3 | 0 | 0 | 364 | 0.173 | 0.141 | 0.118 | 5 | 11 | 47 | 65 | 69 | 347 | 0.087 | 0.0190 | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | 365 | 7 | 3.1 | 0 | 0 | 365 | 0.094 | 0.075 | 0.067 | 0 | 0 | 0 | 0 | 1 | 361 | 0.09 | 0.0249 | -- | -- | -- |
| 17 | Central Orange County | 3176 | 365 | 4 | 3.3 | 0 | 0 | 365 | 0.095 | 0.077 | 0.075 | 0 | 0 | 0 | 1 | 4 | 365 | 0.09 | 0.0211 | -- | -- | -- |
| 18 | North Coastal Orange County | 3195 | 364 | 5 | 3.2 | 0 | 0 | 338 | 0.085 | 0.073 | 0.068 | 0 | 0 | 0 | 0 | 0 | 355 | 0.09 | 0.0131 | 359 | 0.01 | 0.008 |
| 19 | Saddleback Valley | 3812 | 365 | 2 | 1.6 | 0 | 0 | 365 | 0.125 | 0.085 | 0.078 | 0 | 1 | 1 | 3 | 6 | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Norco/Corona | 4155 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 363 | 3 | 2.5 | 0 | 0 | 358 | 0.144 | 0.129 | 0.105 | 0 | 3 | 33 | 48 | 62 | 365 | 0.08 | 0.0222 | 365 | 0.02 | 0.011 |
| 23 | Metropolitan Riverside County 2 | 4146 | 365 | 4 | 2.4 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Mira Loma | 5212 | 362 | 3 | 2.1 | 0 | 0 | 358 | 0.135 | 0.116 | 0.105 | 0 | 3 | 25 | 34 | 51 | 346 | 0.08 | 0.0160 | -- | -- | -- |
| 24 | Perris Valley | 4149 | -- | -- | -- | -- | -- | 365 | 0.126 | 0.103 | 0.082 | 0 | 1 | 3 | 11 | 18 | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 4158 | 365 | 2 | 1.0 | 0 | 0 | 365 | 0.148 | 0.119 | 0.097 | 1 | 4 | 15 | 37 | 46 | 365 | 0.07 | 0.0142 | -- | -- | -- |
| 29 | Banning Airport | 4164 | -- | -- | -- | -- | -- | 359 | 0.144 | 0.132 | 0.119 | 0 | 10 | 39 | 47 | 66 | 329 | 0.07 | 0.0148 | -- | -- | -- |
| 30 | Coachella Valley 1** | 4137 | 364 | 2 | 0.8 | 0 | 0 | 363 | 0.139 | 0.118 | 0.108 | 0 | 4 | 35 | 41 | 63 | 352 | 0.10 | 0.0120 | -- | -- | -- |
| 30 | Coachella Valley 2** | 4157 | -- | -- | -- | -- | -- | 365 | 0.114 | 0.095 | 0.092 | 0 | 0 | 18 | 18 | 36 | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | 364 | 3 | 1.8 | 0 | 0 | 365 | 0.149 | 0.121 | 0.101 | 1 | 8 | 15 | 34 | 34 | 364 | 0.10 | 0.0313 | -- | -- | -- |
| 33 | Southwest San Bernardino Valley | 5817 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 365 | 3 | 2.1 | 0 | 0 | 355 | 0.150 | 0.128 | 0.113 | 2 | 9 | 23 | 49 | 47 | 361 | 0.10 | 0.0310 | 365 | 0.01 | 0.004 |
| 34 | Central San Bernardino Valley 2 | 5203 | 356 | 4 | 2.4 | 0 | 0 | 361 | 0.163 | 0.129 | 0.114 | 4 | 9 | 31 | 54 | 58 | 361 | 0.008 | 0.0259 | -- | -- | -- |
| 35 | East San Bernardino Valley | 5204 | -- | -- | -- | -- | -- | 364 | 0.146 | 0.123 | 0.113 | 1 | 6 | 24 | 36 | 45 | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | -- | -- | -- | -- | -- | 354 | 0.182 | 0.145 | 0.130 | 7 | 18 | 69 | 80 | 102 | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | | 7 | 5.9 | 0 | 0 | | 0.182 | 0.145 | 0.130 | 7 | 18 | 69 | 80 | 102 | | 0.14 | 0.0313 | | 0.07 | 0.012 |
| SOUTH COAST AIR BASIN | | | | 7 | 5.9 | 0 | 0 | | 0.182 | 0.145 | 0.130 | 11 | 30 | 84 | 102 | 120 | | 0.14 | 0.0313 | | 0.07 | 0.012 |

ppm - Parts Per Million parts of air, by volume.

AAM = Annual Arithmetic Mean

-- Pollutant not monitored.

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

For comparison of data with the federal 8-hour CO standard (9 ppm), 8-hour averages with one decimal place should be rounded to integers.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2004.

c) - Air Resources Board has established a new 8-hour average California ozone standard of 0.07 ppm effective May 17, 2005.

d) - The state standard is 1-hour average NO₂ > 0.25 ppm. The federal standard is annual arithmetic mean NO₂ > 0.0534 ppm.

e) - The state standards are 1-hour average SO₂ > 0.25 ppm and 24-hour average SO₂ > 0.04 ppm. The federal standards are annual arithmetic mean SO₂ > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.



**South Coast
Air Quality Management District**
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/telemweb/areamap.aspx>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

**2005 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

| 2005 Source/Receptor Area No. Location | | Station No. | Suspended Particulates PM10 ^{f)} | | | | | Suspended Particulates PM2.5 ^{g)} | | | | | Particulates TSP ^{h)} | | | Lead ^{h)} | | Sulfate ^{h)} | |
|--|----------------------------------|----------------|---|--|--|-------------------------------------|---|--|--|---------------------------------------|-------------------------------------|---|--------------------------------|--|---|--|--|--|---|
| | | | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard | | Annual Average ⁱ⁾ Conc. $\mu\text{g}/\text{m}^3$ AAM | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard | | Annual Average ^{j)} Conc. $\mu\text{g}/\text{m}^3$ AAM | No. Days of Data | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average Conc. $\mu\text{g}/\text{m}^3$ AAM | Max. Monthly Average Conc. $\mu\text{g}/\text{m}^3$ k) | Max. Quarterly Average Conc. $\mu\text{g}/\text{m}^3$ k) | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | No. (%) Samples Exceeding Standard State $\mu\text{g}/\text{m}^3$ |
| | | | | | Federal > 150 $\mu\text{g}/\text{m}^3$ | State > 50 $\mu\text{g}/\text{m}^3$ | | | | Federal > 65 $\mu\text{g}/\text{m}^3$ | State > 25 $\mu\text{g}/\text{m}^3$ | | | | | | | | |
| LOS ANGELES COUNTY | | | | | | | | | | | | | | | | | | | |
| 1 | Central LA | 087 | 61 | 70 | 0 | 4(6.6) | 29.6 | 334 | 73.7 | 53.2 | 2(0.6) | 18.1 | 66 | 141 | 66.7 | 0.02 | 0.02 | 14.2 | 0 |
| 2 | Northwest Coastal LA County | 091 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 59 | 89 | 41.6 | -- | -- | 11.7 | 0 |
| 3 | Southwest Coastal LA County 2 | 820 | 54 | 44 | 0 | 0 | 22.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | South Coastal LA County 1 | 072 | 59 | 66 | 0 | 5(8.5) | 29.6 | 324 | 53.9 | 41.4 | 0 | 16.0 | 61 | 112 | 55.5 | 0.01 | 0.01 | 18.8 | 0 |
| 4 | South Coastal LA County 2 | 077 | 59 | 131 | 0 | 18(30.5) | 43.4 | 344 | 60.8 | 37.8 | 0 | 14.7 | -- | -- | -- | -- | -- | -- | -- |
| 6 | West San Fernando Valley | 074 | -- | -- | -- | -- | -- | 104 | 39.6 | 35.8 | 0 | 13.9 | -- | -- | -- | -- | -- | -- | -- |
| 7 | East San Fernando Valley | 080 | 61 | 92 | 0 | 5(8.2) | 34.3 | 108 | 83.2 | 50.8 | 0 | 17.9 | -- | -- | -- | -- | -- | -- | -- |
| 8 | West San Gabriel Valley | 088 | -- | -- | -- | -- | -- | 113 | 62.9 | 43.1 | 0 | 15.1 | 58 | 89 | 44.6 | -- | -- | 11.2 | 0 |
| 9 | East San Gabriel Valley 1 | 080 | 55 | 76 | 0 | 12(21.8) | 35.1 | 292* | 132.7* | 53.2* | 1(0.3)* | 17.0* | 58 | 142 | 70.9 | -- | -- | 10.2 | 0 |
| 9 | East San Gabriel Valley 2 | 591 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Pomona/Walnut Valley | 075 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11 | South San Gabriel Valley | 085 | -- | -- | -- | -- | -- | 76* | 58.2* | 54.0* | 0* | 17.0* | 39* | 104* | 66.4* | 0.03 | 0.03 | 9.9 | 0 |
| 12 | South Central LA County | 084 | -- | -- | -- | -- | -- | 114 | 54.6 | 48.5 | 0 | 17.5 | 57 | 118 | 67.4 | 0.03 | 0.02 | 17.3 | 0 |
| 13 | Santa Clarita Valley | 090 | 60 | 55 | 0 | 1(1.7) | 25.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| ORANGE COUNTY | | | | | | | | | | | | | | | | | | | |
| 16 | North Orange County | 3177 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Central Orange County | 3176 | 61 | 65 | 0 | 3(4.9) | 28.2 | 333 | 54.7 | 41.9 | 0 | 14.7 | -- | -- | -- | -- | -- | -- | -- |
| 18 | North Coastal Orange County | 3195 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Saddleback Valley | 3812 | 55 | 41 | 0 | 0 | 19.0 | 113 | 36.4 | 31.4 | 0 | 10.7 | -- | -- | -- | -- | -- | -- | -- |
| RIVERSIDE COUNTY | | | | | | | | | | | | | | | | | | | |
| 22 | Norco/Corona | 4155 | 58 | 79 | 0 | 5(8.6) | 31.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Metropolitan Riverside County 1 | 4144 | 123 | 123 | 0 | 69(56.1) | 52.0 | 334 | 98.7 | 58.4 | 4(1.2) | 21.0 | 59 | 173 | 96.7 | 0.02 | 0.02 | 10.3 | 0 |
| 23 | Metropolitan Riverside County 2 | 4146 | -- | -- | -- | -- | -- | 110 | 95.0 | 41.0 | 1(0.9) | 18.0 | 60 | 125 | 75.8 | 0.01 | 0.01 | 10.3 | 0 |
| 23 | Mira Loma | 6212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Perris Valley | 4149 | 60 | 80 | 0 | 19(31.7) | 39.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | Lake Elsinore | 4158 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 | Banning Airport | 4164 | 58 | 76 | 0 | 2(3.4) | 26.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 1** | 4137 | 59 | 66 | 0 | 2(3.4) | 25.9 | 83* | 26.2* | 25.0* | 0* | 8.4* | -- | -- | -- | -- | -- | -- | -- |
| 30 | Coachella Valley 2** | 4157 | 115 | 106 | 0 | 39(34.2) | 45.7 | 104 | 44.4 | 25.0 | 0 | 10.6 | -- | -- | -- | -- | -- | -- | -- |
| SAN BERNARDINO COUNTY | | | | | | | | | | | | | | | | | | | |
| 32 | Northwest San Bernardino Valley | 5175 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 57 | 94 | 53.4 | 0.02 | 0.02 | 8.4 | 0 |
| 33 | Southwest San Bernardino Valley | 5817 | 60 | 74 | 0 | 19(31.7) | 40.8 | 110 | 87.8 | 49.6 | 1(0.9) | 18.8 | -- | -- | -- | -- | -- | -- | -- |
| 34 | Central San Bernardino Valley 1 | 5197 | 60 | 108 | 0 | 29(48.3) | 50.0 | 109 | 96.8 | 48.2 | 1(0.9) | 18.9 | 61 | 295 | 100.2 | -- | -- | 10.4 | 0 |
| 34 | Central San Bernardino Valley 2 | 5203 | 60 | 72 | 0 | 23(38.3) | 42.3 | 109 | 108.3 | 43.4 | 1(0.9) | 17.4 | 60 | 175 | 87.1 | 0.02 | 0.01 | 10.9 | 0 |
| 35 | East San Bernardino Valley | 6204 | 58 | 61 | 0 | 12(20.7) | 33.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Central San Bernardino Mountains | 5181 | 56 | 49 | 0 | 0 | 25.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | East San Bernardino Mountains | 5818 | -- | -- | -- | -- | -- | 51 | 38.8 | 38.8 | 0 | 12.1 | -- | -- | -- | -- | -- | -- | -- |
| DISTRICT MAXIMUM | | | | 131 | 0 | 89 | 52.0 | | 132.7 | 58.4 | 4 | 21.0 | | 295 | 100.2 | 0.03 | 0.03 | 17.3 | 0 |
| SOUTH COAST AIR BASIN | | | | 131 | 0 | 89 | 52.0 | | 132.7 | 58.4 | 6 | 21.0 | | 295 | 100.2 | 0.03 | 0.03 | 17.3 | 0 |

$\mu\text{g}/\text{m}^3$ - Micrograms per cubic meter of air.

AAM - Annual Arithmetic Mean

AGM - Annual Geometric Mean

-- Pollutant not monitored.

* Less than 12 full months of data. May not be representative.

** Salton Sea Air Basin.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 8 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal PM10 standard is annual average (AAM) > 50 $\mu\text{g}/\text{m}^3$. State standard is annual average (AAM) > 20 $\mu\text{g}/\text{m}^3$ (changed from AGM > 30 $\mu\text{g}/\text{m}^3$, effective July 5, 2003).

j) - Federal PM2.5 standard is annual average (AAM) > 15 $\mu\text{g}/\text{m}^3$. State standard is annual average (AAM) > 12 $\mu\text{g}/\text{m}^3$ (state standard was established on July 5, 2003).

k) - Federal lead standard is quarterly average > 1.5 $\mu\text{g}/\text{m}^3$; and state standard is monthly average > 1.5 $\mu\text{g}/\text{m}^3$. No location exceeded lead standards.

Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.44 $\mu\text{g}/\text{m}^3$ and 0.34 $\mu\text{g}/\text{m}^3$, respectively, both recorded at Central Los Angeles.



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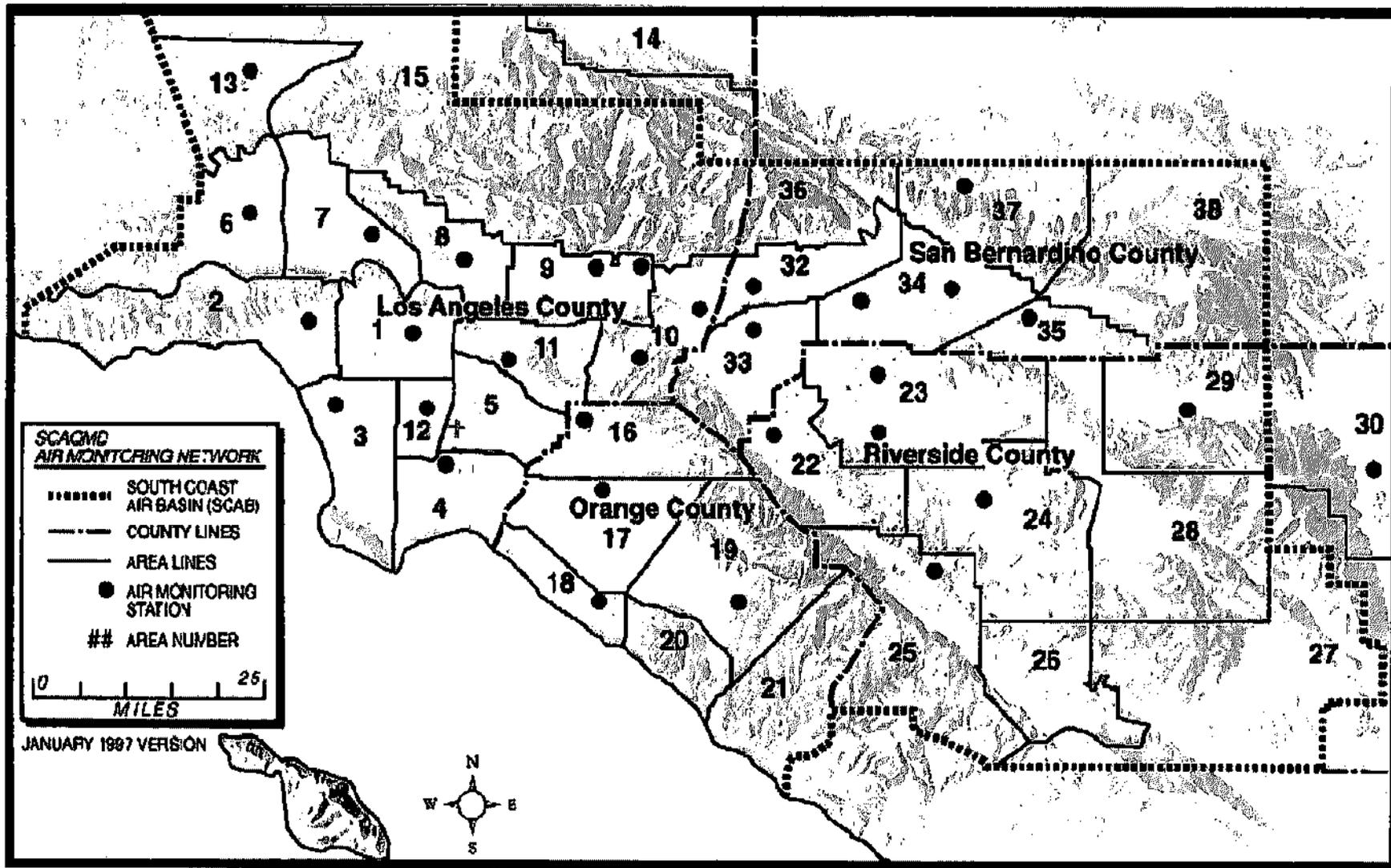


Figure 6
South Coast Air Basin and Adjoining Areas of Salton Sea and Mojave Desert
Air Basins and Monitoring Stations

11/04/08
16:37:29

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Paramount H-907 at 18 MMBtu/hr

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .324000
STACK HEIGHT (M) = 11.9000
STK INSIDE DIAM (M) = .9100
STK EXIT VELOCITY (M/S) = 15.8335
STK GAS EXIT TEMP (K) = 433.0000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 21820.000 (ACFM)

BUOY. FLUX = 10.393 M**4/S**3; MOM. FLUX = 35.120 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

| DIST (M) | CONC (UG/M**3) | STAB | U10M (M/S) | USTK (M/S) | MIX HT (M) | PLUME HT (M) | SIGMA Y (M) | SIGMA Z (M) | DWASH |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|----------------|----------------|-------|
| 10. | .0000 | 1 | 1.0 | 1.0 | 320.0 | 132.72 | 6.17 | 5.80 | NO |
| 100. | 11.87 | 4 | 15.0 | 15.7 | 4800.0 | 18.93 | 15.75 | 13.86 | NO |
| 200. | 9.957 | 4 | 5.0 | 5.2 | 1600.0 | 35.65 | 31.48 | 27.97 | NO |
| 300. | 7.962 | 4 | 3.5 | 3.7 | 1120.0 | 45.82 | 46.38 | 41.38 | NO |
| 400. | 6.799 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 43.56 | 29.47 | NO |
| 500. | 8.796 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 52.43 | 33.80 | NO |
| 600. | 9.822 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 61.17 | 37.96 | NO |
| 700. | 10.15 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 69.72 | 41.93 | NO |
| 800. | 10.05 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 78.07 | 45.72 | NO |
| 900. | 9.714 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 86.23 | 49.34 | NO |
| 1000. | 9.270 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 94.19 | 52.81 | NO |
| 1100. | 8.785 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 101.96 | 56.13 | NO |
| 1200. | 8.295 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 109.55 | 59.33 | NO |
| 1300. | 7.822 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 116.97 | 62.41 | NO |
| 1400. | 7.376 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 124.22 | 65.38 | NO |
| 1500. | 6.959 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 131.32 | 68.26 | NO |
| 1600. | 6.575 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 138.26 | 71.04 | NO |
| 1700. | 6.220 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 145.06 | 73.75 | NO |
| 1800. | 5.894 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 151.73 | 76.37 | NO |
| 1900. | 5.595 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 158.26 | 78.93 | NO |
| 2000. | 5.319 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 164.67 | 81.42 | NO |
| 2100. | 5.066 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 170.96 | 83.84 | NO |

| | | | | | | | | | |
|--------|-------|---|-----|-----|---------|--------|---------|---------|----|
| 2200. | 4.833 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 177.14 | 86.21 | NO |
| 2300. | 4.617 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 183.21 | 88.52 | NO |
| 2400. | 4.418 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 189.18 | 90.79 | NO |
| 2500. | 4.234 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 195.04 | 93.00 | NO |
| 2600. | 4.062 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 200.81 | 95.17 | NO |
| 2700. | 3.903 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 206.49 | 97.30 | NO |
| 2800. | 3.755 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 212.07 | 99.39 | NO |
| 2900. | 3.617 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 217.58 | 101.43 | NO |
| 3000. | 3.488 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 223.00 | 103.45 | NO |
| 3500. | 2.952 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 248.98 | 113.02 | NO |
| 4000. | 2.551 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 273.29 | 121.89 | NO |
| 4500. | 2.243 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 296.20 | 130.20 | NO |
| 5000. | 1.998 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 317.90 | 138.03 | NO |
| 5500. | 1.800 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 338.54 | 145.46 | NO |
| 6000. | 1.637 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 358.25 | 152.54 | NO |
| 6500. | 1.500 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 377.14 | 159.32 | NO |
| 7000. | 1.384 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 395.29 | 165.83 | NO |
| 7500. | 1.284 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 412.78 | 172.09 | NO |
| 8000. | 1.197 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 429.66 | 178.15 | NO |
| 8500. | 1.121 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 446.00 | 184.00 | NO |
| 9000. | 1.054 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 461.84 | 189.68 | NO |
| 9500. | .9945 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 477.21 | 195.20 | NO |
| 10000. | .9412 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 492.17 | 200.57 | NO |
| 15000. | .6115 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 623.82 | 248.00 | NO |
| 20000. | .4522 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 733.49 | 287.77 | NO |
| 25000. | .3585 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 829.29 | 322.68 | NO |
| 30000. | .2969 | 6 | 1.0 | 1.1 | 10000.0 | 64.80 | 915.38 | 354.18 | NO |
| 40000. | .2491 | 4 | 1.0 | 1.0 | 320.0 | 130.64 | 1552.60 | 1553.53 | NO |
| 50000. | .2215 | 4 | 1.0 | 1.0 | 320.0 | 130.64 | 1746.07 | 1750.33 | NO |

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
85. 11.89 4 10.0 10.4 3200.0 23.88 18.70 17.30 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

| DIST (M) | CONC (UG/M**3) | STAB | U10M (M/S) | USTK (M/S) | MIX HT (M) | PLUME HT (M) | SIGMA Y (M) | SIGMA Z (M) | DWASH |
|----------|----------------|------|------------|------------|------------|--------------|-------------|-------------|-------|
| 10. | .0000 | 1 | 1.0 | 1.0 | 320.0 | 132.72 | 6.17 | 5.80 | NO |
| 90. | 11.79 | 3 | 10.0 | 10.4 | 3200.0 | 23.88 | 19.55 | 18.10 | NO |
| 110. | 11.55 | 4 | 15.0 | 15.7 | 4800.0 | 18.93 | 17.29 | 15.22 | NO |
| 80. | 11.83 | 3 | 10.0 | 10.4 | 3200.0 | 23.88 | 17.42 | 16.10 | NO |
| 70. | 11.02 | 3 | 10.0 | 10.4 | 3200.0 | 23.88 | 15.28 | 14.10 | NO |

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

| CALCULATION PROCEDURE | MAX CONC (UG/M**3) | DIST TO MAX (M) | TERRAIN HT (M) |
|--------------------------|-----------------------|--------------------|-------------------|
| ----- SIMPLE TERRAIN | ----- 11.89 | ----- 85. | ----- 0. |

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Paramount H-907 @ 30 MMBtu/hr

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .544000
STACK HEIGHT (M) = 11.9000
STK INSIDE DIAM (M) = .9100
STK EXIT VELOCITY (M/S) = 26.3915
STK GAS EXIT TEMP (K) = 433.0000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 36370.000 (ACFM)

BUOY. FLUX = 17.323 M**4/S**3; MOM. FLUX = 97.573 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

| DIST (M) | CONC (UG/M**3) | STAB | U10M (M/S) | USTK (M/S) | MIX HT (M) | PLUME HT (M) | SIGMA Y (M) | SIGMA Z (M) | DWASH |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|----------------|----------------|-------|
| 10. | .0000 | 1 | 1.0 | 1.0 | 320.0 | 189.14 | 8.39 | 8.13 | NO |
| 100. | 13.16 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 15.74 | 13.85 | NO |
| 200. | 11.45 | 4 | 8.0 | 8.4 | 2560.0 | 33.67 | 31.17 | 27.62 | NO |
| 300. | 9.123 | 4 | 5.0 | 5.2 | 1600.0 | 46.74 | 46.44 | 41.44 | NO |
| 400. | 7.511 | 4 | 3.5 | 3.7 | 1120.0 | 61.67 | 61.10 | 54.79 | NO |
| 500. | 9.213 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 53.31 | 35.15 | NO |
| 600. | 11.04 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 61.92 | 39.16 | NO |
| 700. | 12.06 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 70.38 | 43.02 | NO |
| 800. | 12.49 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 78.66 | 46.72 | NO |
| 900. | 12.52 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 86.76 | 50.27 | NO |
| 1000. | 12.31 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 94.68 | 53.68 | NO |
| 1100. | 11.94 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 102.41 | 56.95 | NO |
| 1200. | 11.51 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 109.97 | 60.10 | NO |
| 1300. | 11.03 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 117.36 | 63.15 | NO |
| 1400. | 10.55 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 124.59 | 66.09 | NO |
| 1500. | 10.08 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 131.67 | 68.93 | NO |
| 1600. | 9.623 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 138.60 | 71.69 | NO |
| 1700. | 9.189 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 145.38 | 74.37 | NO |
| 1800. | 8.779 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 152.03 | 76.98 | NO |
| 1900. | 8.393 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 158.56 | 79.51 | NO |
| 2000. | 8.032 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 164.95 | 81.98 | NO |
| 2100. | 7.694 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 171.24 | 84.39 | NO |

| | | | | | | | | | |
|--------|-------|---|-----|-----|---------|-------|--------|--------|----|
| 2200. | 7.377 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 177.40 | 86.75 | NO |
| 2300. | 7.082 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 183.46 | 89.05 | NO |
| 2400. | 6.805 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 189.42 | 91.30 | NO |
| 2500. | 6.547 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 195.28 | 93.50 | NO |
| 2600. | 6.305 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 201.04 | 95.66 | NO |
| 2700. | 6.077 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 206.71 | 97.77 | NO |
| 2800. | 5.864 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 212.29 | 99.85 | NO |
| 2900. | 5.664 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 217.79 | 101.89 | NO |
| 3000. | 5.476 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 223.21 | 103.89 | NO |
| 3500. | 4.684 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 249.16 | 113.42 | NO |
| 4000. | 4.080 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 273.46 | 122.27 | NO |
| 4500. | 3.608 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 296.36 | 130.55 | NO |
| 5000. | 3.229 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 318.05 | 138.36 | NO |
| 5500. | 2.920 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 338.68 | 145.78 | NO |
| 6000. | 2.663 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 358.38 | 152.84 | NO |
| 6500. | 2.447 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 377.26 | 159.61 | NO |
| 7000. | 2.262 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 395.41 | 166.10 | NO |
| 7500. | 2.103 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 412.89 | 172.36 | NO |
| 8000. | 1.964 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 429.77 | 178.41 | NO |
| 8500. | 1.842 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 446.10 | 184.26 | NO |
| 9000. | 1.734 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 461.94 | 189.93 | NO |
| 9500. | 1.638 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 477.31 | 195.44 | NO |
| 10000. | 1.552 | 6 | 1.0 | 1.1 | 10000.0 | 74.62 | 492.26 | 200.80 | NO |

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
103. 13.18 4 20.0 20.9 6400.0 20.18 16.35 14.39 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

| DIST (M) | CONC (UG/M**3) | STAB | U10M (M/S) | USTK (M/S) | MIX HT (M) | PLUME HT (M) | SIGMA Y (M) | SIGMA Z (M) | DWASH |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|----------------|----------------|-------|
| 10. | .0000 | 1 | 1.0 | 1.0 | 320.0 | 189.14 | 8.39 | 8.13 | NO |
| 20. | .2203E-07 | 3 | 10.0 | 10.4 | 3200.0 | 29.47 | 4.58 | 4.22 | NO |
| 30. | .4955E-02 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 4.83 | 4.24 | NO |
| 40. | .3679 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 6.40 | 5.62 | NO |
| 50. | 2.332 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 7.97 | 7.00 | NO |
| 60. | 5.688 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 9.53 | 8.37 | NO |
| 70. | 8.996 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 11.09 | 9.75 | NO |
| 80. | 11.36 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 12.64 | 11.12 | NO |
| 90. | 12.67 | 4 | 20.0 | 20.9 | 6400.0 | 20.18 | 14.19 | 12.49 | NO |

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

| CALCULATION PROCEDURE | MAX CONC (UG/M**3) | DIST TO MAX (M) | TERRAIN HT (M) |
|--------------------------|-----------------------|--------------------|-------------------|
| SIMPLE TERRAIN | 13.18 | 103. | 0. |

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **



South Coast Air Quality Management District



21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • <http://www.aqmd.gov>

December 20, 2001
S/T File: RC 99020 (MOD)
(RECLAIM CEMS Modification/
Recertification REF: rc01033)

Mr. Doug Thompson
Paramount Petroleum Company
14700 Downey Avenue
Paramount, CA 90723

**Subject: Recertification of RECLAIM CEMS, following Modification:
Paramount Petroleum Company (FacID: 800183)
Incinerator H-907 (Device C531)**

Dear Mr. Thompson:

This letter serves as an official "Notification of Recertification" for the RECLAIM CEMS (excluding the RTU) serving the equipment specified in the attached document, "REGULATION XX RECLAIM CEMS RECERTIFICATION, FOLLOWING MODIFICATION OF CERTIFIED CEMS." Recertification means that the AQMD has evaluated information and test report(s) submitted by Paramount Petroleum Company, pursuant to RECLAIM CEMS "Technical Guidance Document R-002", and Rule 2012, Chapter 2 and associated attachments, and has determined that testing was conducted in accordance with the requirements specified in the above referenced documents, and that the modified RECLAIM CEMS fully complied with those testing requirements. The referenced testing was completed on September 28, 2001, by Delta Air Quality Services.

The recertification of the RECLAIM CEMS was required as a result of the following modification(s):

| <u>CEMS Component</u> | <u>Required Modification</u> | <u>Reason</u> |
|-----------------------|--|--|
| • NOx Analyzer | Change range of existing analyzer from 0-200 ppm to 0-100 ppm. | Monitored NOx concentration sometimes outside analyzer reportable range. |
| • SOx Analyzer | Change range of existing dual-range analyzer from 0-360 ppm & 0-1800 ppm to 0-100 ppm. | Process control modification (addition of SO ₂ scrubber) lowered SOx emissions. Monitored SOx concentration consistently less than analyzer reportable range. |
| • Stack Flow | Change range of existing flowmeter from 0-14.3 to 0-25 MSCFM. | Process modifications. |
| • Programming Logic | Change to emission calculations, reporting logic, etc. | SOx analyzer shall report conc. measurements <10 ppm at default 10 ppm lower limit value, based on re-certification testing results. |



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| | | | |
|-----------------------|----------|---|--------------------|
| Facility I.D. | 800183 | Recertification Date: | September 28, 2001 |
| Equipment Device I.D. | CS31 | (Modification to Final Certification Granted May 19, 2000) | |
| Control Device I.D. | | | |
| Source Test I.D. | RC 99020 | | |

REGULATION XX RECLAIM CEMS RECERTIFICATION, FOLLOWING MODIFICATION OF CERTIFIED CEMS

Specific Device-Based Information and Conditions

(This document must be displayed on or near strip chart recorder,
along with original CEMS Certification dated July 18, 1995)

| | |
|---------------------------|-----------------------------|
| Name of Facility | Paramount Petroleum Company |
| Recertification Test Date | September 28, 2001 |
| Test Operating Load | Batch Operation |
| Equipment Description | AB Plant Incinerator H-907 |
| Equipment Location | Same |
| Mailing Address | 14700 Downey Avenue |
| | Same |

- A.** The component(s) described below incorporate the present modification(s) to the CEMS which received Final Certification or Approval on May 19, 2000, and they may not be changed or modified again without prior District approval. (Unauthorized modification to the component(s) shown below may void CEMS certification, and result in non-compliance with District RECLAIM Rules 2011 & 2012. Be sure the information below is correct. Contact your District Source Testing representative if there are any questions):

Gaseous Emission Measurement Analyzer:

| Gaseous Component Monitored | Manufacturer | Model No. | Serial No. | Method of Detection | Certified Range(s) (alternate range) |
|-----------------------------|--------------|-----------|------------|---------------------|--------------------------------------|
| NO _x (Dry) | Horiba | ENDA-1440 | 0521 | NDIR | 0 - 100 ppm |
| SO _x (Dry) | Horiba | ENDA-1440 | 0521 | NDIR | 0 - 100 ppm |
| O ₂ (Dry) | Horiba | ENDA-1440 | 0521 | Magneto-Pneumatic | 0 - 25 % |
| O ₂ (Wet) | Thermox | 2000 | C130404-1 | Zirconium Oxide | 0 - 25 % |

Fuel or Flue Gas Flow Measurement Analyzer

| Instrument Type | Manufacturer | Model No. | Serial No. | Range |
|---|--------------|------------------|------------|--------------|
| Stack Flow: Averaging Pitot Tube, Differential Pressure Transducer, Type "K" Temperature Sensor | Air Monitor | MASS-tron II/CEM | B20334 | 0 - 25 MSCFM |

4. SO_x CEMS Reportable Values

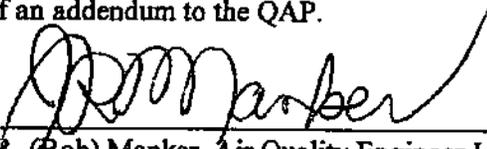
Paramount Petroleum Company's SO_x CEMS has been successfully recertified on a lower range of measurement (0-100 ppm) using the "Supplemental and Alternative CEMS Performance Requirements for Low SO_x Concentrations" (modified high-level spiking procedure only²), Attachment F of the Protocol for Rule 2011, subject to the following restrictions and specifications:

- SO_x concentrations measured <10 ppm shall be reported at the defaulted lower limit of the SO_x analyzer range, or 10 ppm (resultant SO_x mass emissions shall be calculated based on this default concentration value).
- If subsequent periodic CEMS assessments include this spiking protocol as modified for this initial re-certification, an "SO₂ conservation test"³ shall be performed to verify spiked results.
- For high or low level spiking purposes, a spiking port in the CEMS sample line shall be permanently mounted, expressly for this purpose.
- Paramount Petroleum Company shall modify the CEMS DAS/PLC software programming for the SO_x CEMS to report all measured SO_x concentrations <10 ppm at the defaulted lower certified limit of the analyzer (10 ppm). Resultant SO_x mass emissions calculations shall also be based on the defaulted lower certified limit of the SO_x analyzer (10 ppm).

5. Quality Assurance Program (QAP)

The QAP shall be updated when CEMS component(s) modifications, changes to maintenance procedures, changes to responsible company personnel dictate; or as required by the District. A formalized update of the QAP shall be submitted to the District in the form of an addendum to the QAP.

Evaluated By: _____


J.R. (Bob) Manker, Air Quality Engineer I
Monitoring & Source Testing & Engineering
(909) 396-(909) 396-2245 FAX (909) 396-2099
bmanker@aqmd.gov

Dated: December 20, 2001

rc01033ReMOD_ParaH907

² In this instance, CO dilution tracking was not possible due to in-stack CO baseline fluctuations. Therefore, the SO₂ was used for the purposes of both spiking and determining dilution. This deviation from the accepted spiking protocol cannot be used to actually report and quantify SO₂ concentrations <10% of the analyzer full-scale.

³ A mid-range SO₂ cal gas standard having a concentration consistent with the target spike to be achieved shall be injected at the sample probe to demonstrate complete sample recovery.



South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • <http://www.aqmd.gov>

May 19, 2000
S/T File:RC 99020
(Final Certification)

Doug Thompson
Paramount Petroleum Company
14700 Downey Avenue
Paramount, CA 90723

Subject: Final Certification of RECLAIM CEMS: Incinerator H-907

Dear Mr. Doug Thompson:

The South Coast Air Quality Management District appreciates the diligent and cooperative efforts you have shown in support of RECLAIM (Regional Clean Air Incentive Market) Regulation XX, throughout the implementation of your CEMS (Continuous Emission Monitoring System) program at Paramount Petroleum Company.

I have completed the evaluation of your RECLAIM Cycle certification report (please refer to the accompanying attachments for specific information and conditions). The evaluation was made to determine if final certification could be granted based on the monitoring requirements of the applicable protocols found in District Regulation XX, Appendix A.

This letter serves as an official notification of final certification for those CEMS (excluding the RTU) at your facility serving the devices described in the accompanying attachment, "REGULATION XX RECLAIM CEMS FINAL CERTIFICATION: Specific Device-Based Information and Conditions". If the CEMS information in the accompanying attachments is not accurate, please notify me as soon as possible at (909) 396-2245. Also, please remember to notify the District for direction, prior to replacement or modification of the described CEMS or the device(s) that it serves, since such modifications may change the compliance status of the affected CEMS. Again, thank you for your continued cooperation and support.

Sincerely,

J.R. (Bob) Manker, Air Quality Engineer I
Monitoring & Source Test Engineering

Attachment
JH:SM:JRM

cc: John Higuchi
Steven Marinoff

Dave Schwien
Jay Chen

Danny Luong
George Haddad
Jim Molde



South Coast Air Quality Management District



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(909) 396-2000 • <http://www.aqmd.gov>

| | | | |
|----------------------|----------|------------------|--------------|
| Facility ID: | 800183 | Date: | May 19, 2000 |
| Equipment Device ID: | C531 | Final Test Date: | July 8, 1999 |
| Control Device ID: | NA | | |
| Source Test ID: | RC 99020 | | |

**REGULATION XX RECLAIM CEMS FINAL CERTIFICATION:
Specific Device-Based Information and Conditions**
(This document must be displayed on or near strip chart recorder)

| | | |
|--------------------------|--|------------------|
| Name of Facility: | Paramount Petroleum Company | |
| Certification Test Date: | | |
| Test Operating Load: | 75 % Load | (14-15 MMBTU/Hr) |
| Equipment Description: | Incinerator H-907 (C531) | (18 MMBTU/Hr) |
| Mailing Address: | 14700 Downey Avenue Paramount, CA 90723 | |
| Equipment Location: | Same as above | |

- A. The components described below comprise the "CEMS" which has been granted Final Certification or Approval and they may not be changed or modified without prior District approval. (Unauthorized modification to the components shown below may void CEMS certification, and result in non-compliance with District RECLAIM Rules 2011 & 2012. Be sure the information below is correct. Contact your District Source Testing representative if there are any questions):

Gaseous Emission Measurement Analyzer:

| Gaseous Component Monitored | Manufacturer | Model No. | Serial No. | Method of Detection | Certified Range(s) (alternate range) |
|-----------------------------|--------------|-----------|------------|------------------------|--------------------------------------|
| NOx (Dry) | Horiba | ENDA-1400 | 0521 | NDIR | 0 - 200 ppm |
| SOx (Dry) | Horiba | ENDA-1400 | 0521 | NDIR (Auto Ranging) | 0 - 360 ppm & 0 - 1800 ppm |
| O ₂ (Dry) | Horiba | ENDA-1400 | 0521 | Magneto-Pneumatic | 0 - 25 % |
| O ₂ (Wet) | Thermox | 2000 | 130404-1 | ElectroChemical | 0 - 25 % |

Fuel or Flue Gas Flow Measurement Analyzer

| Instrument Type | Manufacturer | Model No. | Serial No. |
|---|--------------|------------------|------------|
| Stack Flow (S-Type Pitot tube) & Pressure Transmitter | Air Monitor | MASS-tron II/CEM | B20334 |
| Type "K" Thermocouple | Air Monitor | NA | NA |

The facility must elect which BAF(s) to apply to the approved CEMS emission calculations upon completion of the CEMS Final Certification, and all subsequent periodic CEMS assessments shall have BAF(s) reported in the same manner. According to Paramount Petroleum Company, the initial BAF(s) to be applied to approved emission calculations (until successful completion of the next regularly-scheduled RATA) are:

| Monitoring Parameter | Initial Bias Adjustment Factor (BAF) |
|--------------------------------|--------------------------------------|
| Stack Gas Flow Rate: | 1.00 |
| NO _x Concentration: | 1.00 |
| SO _x Concentration: | 1.00 |

All subsequent periodic CEMS assessments shall include BAF(s) for the above Monitoring Parameters, for the purpose of correcting approved emission calculations.

Prior to conducting, and during each subsequent periodic CEMS assessment, Paramount Petroleum Company shall remove the BAF(s) from the approved CEMS emission calculation (or reset to "1.00") for all tests and calculations. New BAF(s) may only be re-applied as described above, upon successful completion of testing.

C. The CEMS described above is subject to the following conditions:

1. AutoRanging SO_x CEMS

The SO_x CEMS dedicated to Incinerator H-907 at Paramount Petroleum Company has an autoranging feature allowing it to operate on two different monitoring ranges when required. The autoranging crossover threshold must be such that all monitored SO_x concentrations fall within 10-95% of range full-scale reading, or "Missing Data" provisions shall apply.

During all subsequent periodic CEMS assessments, Paramount Petroleum Company shall assure that the autoranging feature of the SO_x CEMS is disabled during the test period, and the nine-run RATA shall be conducted on a single range³. The remaining range, if it is also to be certified as monitoring and reporting valid emission data, shall have linearity and calibration error tests performed in lieu of a full RATA.

2. Record Keeping and Reporting

Paramount Petroleum Company shall maintain all facility CEMS as required by Rules 2011(g) and 2012(i), and the CEMS measured variables and the reported variables must satisfy the requirements of Rule 2011, Table 2011-1; and Rule 2012, Table 2012-1.

³ Selection of primary range is not important, as long as alternate range also has required QA/QC conducted.

APPENDIX P



14700 Downey Avenue
P.O. Box 1418
Paramount, CA 90723
(562) 531-2060

May 11, 2009

South Coast Air Quality Management District
Engineering/Compliance – Refinery, Energy & RECLAIM
21865 East Copley Drive
Diamond Bar, CA 91765
Attn: Ms. Angelita Alfonso

Subject: H-402 Source Control and H-907 Odor Control Projects
Demonstration of Statewide Compliance
Paramount Refinery Facility ID 800183

Based on reasonable inquiry and to the best of my knowledge and belief, the major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned by Paramount Petroleum Corporation (Paramount) in the State of California as listed below are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act.

Paramount Refinery, 14700 Downey Avenue, Paramount, CA 90723
Edgington Oil Company, 2400 E. Artesia Blvd., Long Beach, CA 90805
Alon USA Bakersfield, 1201 China Grade Loop, Bakersfield, CA 93308
Elk Grove Refinery, 10090 Waterman Road, Elk Grove, CA 95624
Lakewood Tank Farm, 2920 E. 56th Way, Long Beach, CA 90712
Mojave Terminal, 1873 Purdy Road, Mojave, Ca 93501

Attachment 1 which summaries recent variances, Order for Abatement and NOV's for Paramount's refinery is provided for your information. Also, enclosed are Form 400A and Paramount's check for \$843.83, the balance necessary for you to process a facility permit amendment for a Title V facility.

Please contact June Christman at 562-748-4704 if you have any questions regarding this letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jimmy Crosby'.

Jimmy Crosby
VP of Refining and Supply

Attachment I
Paramount Petroleum Corporation
Compliance Summary

| NOV/NTC/Case Number | Description | Current Activities | Status |
|--------------------------------------|--|---|--|
| SAO 2914-72 | Crude Unit Heater Duty – SCR Installations | H-101/102/501/502 SCR is last project under SAO. | Paramount has satisfied the requirements of this SAO. The H-101/102/501/502 SCR was installed and placed in operation on 2/16/09. |
| SAO 2914-90 | H-402 NSPS Sub J Fuel Gas Standard Applicability | Concurrently permitting project, prepping for field work. | In compliance with SAO – open. Petition for extension filed 5/7/09. H-402 Source Reduction Project will resolve this SAO. |
| SAO 2914-91 | Clean Fuels Leakless Valves | None | Paramount has satisfied the requirements of this SAO |
| NOV P45644 | Reformer By-pass Stacks | None | NOV settlement response sent to the District 11/4/08. Violation corrected, bypass stacks closed. Variance 2914-96 granted to allow limited use of bypass stacks through 6/15/10. |
| NOV P53502 | Flare Recorder Malfunction | None | Settled, alleged violation corrected. |
| Variance 2914-87 | Flare CEMS | Completing Increments of Progress | Complete by 10/9/09. In compliance with variance conditions. |
| Variance 2914-93 Variance 2914-96 | Reformer By-pass Stacks | Pursuing rule amendment | Original variance (2914-93) to perform turnaround work with by-passes open is complete and variance has ended. Variance 2914-96 allows |

| | | | |
|-------------------|---|--|---|
| | | | limited use of bypass stacks through 6/15/10. |
| Variance 2914-94 | Turnaround work on wastewater system. | None | Work completed, variance terminated. |
| NOV P53506 | Public Nuisance | None | Alleged violation corrected |
| Variance 2914-95 | Flare Gas Recovery System (FGRS) Startup | None | FGRS operating, variance terminated. |
| NOV P53507 | Public Nuisance | None | Alleged violation corrected |
| NOV P53510 | Public Nuisance | None | Alleged violation corrected |
| Variance 2914-100 | Operate H-501/502 without SCR while repairs are made. | Repairing heaters H-101/102 and common SCR to H-101/102/501/502. | Regular variance hearing scheduled for 6/11/09. In compliance with variance conditions. |