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APPLICATION PROCESSING AND CALCULATIONS

PERMIT TO CONSTRUCT

COMPANY NAME: PARAMOUNT PETROLEUM CORP
ID No. 800183

MAILING ADDRESS: 14700 Downey Ave
Paramount, CA 90723

EQUIPMENT LOCATION: 14700 Downey Ave
Paramount, CA 90723

CONTACT PERSON: Kathryn Gleeson
(562) 748-4613

EQUIPMENT DESCRIPTION

Additions to the Facility Permit are noted in underlines and deletions are noted in ~~strikeouts~~.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 10: STORAGE TANKS					
System 1: FIXED ROOF TANKS					
STORAGE TANK, FIXED ROOF, NO. 776, ASPHALT, WITH <u>A 2-HP MIXER AND HEATING COILS</u> , 770 BBL <u>DIAMETER: 15 FT 6 IN;</u> <u>HEIGHT: 24 FT 6 IN</u> A/N: 419600- <u>543851</u> Permit to Construct Issued:	D271				A63.5 <u>C1.x1</u> <u>C6.x1</u> D12.8 D323.3 E448.1 <u>E448.x</u> H23.14 K67.2
STORAGE TANK, HEATED, NO. T-5005, ASPHALT, <u>WITH A 3-HP IN TANK MIXER, AND HEATING COILS</u> , 5000 BBL; DIAMETER: 34 FT 7 IN; HEIGHT: 30 FT 5 IN A/N: 403574- <u>543853</u> Permit to Construct Issued:	D298	C773			<u>C1.x3</u> <u>C6.13</u> D12.8 D323.2 E448.1 <u>E448.x</u> K67.2
MIST ELIMINATOR, D-754, FIBER MESH FILTER ELEMENT, WITH A PRESSURE VALVE, COMMON TO TANKS T-5001, T-5002, T-5003, T-5004 & T-5005	C773	D294, D295, D296, D297, D298, C774			D12.10



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
A/N: 403457					
CARBON ADSORBER, 4 TOTAL, CONNECTED IN PARALLEL, 180 LBS EACH A/N: 403469	C774	C773			D90.5 E128.1 E153.x
STORAGE TANK, NO. T-10003, ASPHALT, WITH A 5-HP IN TANK MIXER AND HEATING COILS, 10000 BBL; DIAMETER: 53 FT 10 IN; HEIGHT: 23 FT 8 IN A/N: 403565 543852 Permit to Construct Issued:	D302	C771			C1.x2 C6.x3 D12.8 D323.2 E448.1 K67.2
STORAGE TANK, HEATED, NO. T-10004, ASPHALT, WITH A 5-HP IN TANK MIXER, AND HEATING COILS, AND A PRE- KNOCKOUT SEPARATOR, 10000 BBL; DIAMETER: 44 FT 4 IN; HEIGHT: 36 FT 9 IN A/N: 403574- 543854 Permit to Construct Issued:	D303	C771			C1.15 C6.11 D323.2
STORAGE TANK, NO. T-20002, ASPHALT, STEAM HEATED, WITH A 10-HP IN TANK MIXER, AND TWO PRE-KNOCKOUT SEPARATORS, 20000 BBL; DIAMETER: 60 FT; HEIGHT: 39 FT 11 IN A/N: 403568- 543855 Permit to Construct Issued:	D304	C771			C1.x4 C6.x3 D12.8 D323.2 E448.1 E448.x K67.2
MIST ELIMINATOR, D-751, FIBER MESH FILTER ELEMENT, WITH A PRESSURE VALVE, COMMON TO TANKS T-3501, T- 5501, T-10003, T-10004, T-20001 & T-20002 A/N: 403457	C771	D293, D301, D302, D303, D304, D323, C772			D12.10
CARBON ADSORBER, 8 TOTAL, CONNECTED IN PARALLEL, 180 200 LBS EACH A/N: 403457	C772	C771			D90.5, E128.1, E153.2



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
STORAGE TANK, NO. T-35001, ASPHALT, HEATING COILS, WITH SUCTION HEATER, 35000 BBL; DIAMETER: 80 FT; HEIGHT: 40 FT A/N: 419625- 543856 Permit to Construct Issued:	D305	CX1			<u>C1.x5</u> <u>C6.x3</u> <u>D323.3</u> <u>E448.1</u> <u>E448.x</u> <u>K67.2</u>
<u>KNOCKOUT POT, WITH DEMISTER</u> A/N: 419625- 543856 Permit to Construct Issued:	CX1	CX2			<u>D12.2</u>
<u>CARBON ADSORBER, THREE SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: 419625- 543856 Permit to Construct Issued:	CX2	CX1			<u>D90.5</u> <u>E128.1</u> <u>E153.2</u>
STORAGE TANK, NO. T-50005, FUEL OIL, ASPHALT, WITH A 20-HP IN TANK MIXER SUCTION HEATER AND HEATING COILS, VENTED TO A FIBER GLASS FILTER, 50000 BBL; DIAMETER: 80 FT; HEIGHT: 56FT A/N: 417404- 543857 Permit to Construct Issued:	307				<u>C1.x4</u> <u>C6.x2</u> <u>C6.9</u> <u>E448.x</u> <u>D323.2</u> <u>K67.2</u>
<u>FILTER, FIBERGLASS, KNOCKOUT POT, WITH DEMISTER</u> A/N: 419625- 543857 Permit to Construct Issued:	C308	D307, CX3			<u>D12.2</u>
<u>CARBON ADSORBER, THREE SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: 419625- 543857 Permit to Construct Issued:	CX3	C308			<u>D90.5</u> <u>E128.1</u> <u>E153.2</u>
STORAGE TANK, NO. T-50006, ASPHALT, WITH A 20-HP IN TANK MIXER, SUCTION HEATER AND HEATING COILS, 50000 BBL; DIAMETER: 80 FT; HEIGHT: 56FT A/N: 417405- 543858	D309	C310			<u>C1.x4</u> <u>C6.9</u> <u>C6.x2</u> <u>E448.x</u> <u>D323.2</u> <u>K67.2</u>



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Permit to Construct Issued:					
<u>FILTER, FIBERGLASS KNOCKOUT POT, WITH DEMISTER</u> A/N: <u>419625- 543858</u> Permit to Construct Issued:	C310	D309,CX4			D12.2
<u>CARBON ADSORBER, THREE SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: <u>419625- 543858</u> Permit to Construct Issued:	CX4	C310			D90.5 E128.1 E153.2
STORAGE TANK, FIXED ROOF, NO. T-100001, ASPHALT, <u>WITH A 40-HP IN TANK MIXER, SUCTION HEATER AND HEATING COILS</u> , 100000 BBL; DIAMETER: 113 FT; HEIGHT: 56 FT A/N: <u>462763- 543859</u> Permit to Construct Issued:	D311	CX5			C1.x4 C6.x1 D323.2 E448.x K67.2
<u>KNOCKOUT POT, WITH DEMISTER</u> A/N: <u>419625- 543859</u> Permit to Construct Issued:	CX5	CX6, D311			D12.2
<u>CARBON ADSORBER, SIX SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: <u>419625- 543859</u> Permit to Construct Issued:	CX6	CX5			D90.5 E128.1 E153.2
STORAGE TANK, FIXED ROOF, NO. T-100002, ASPHALT, <u>WITH A 40-HP IN TANK MIXER, SUCTION HEATER AND HEATING COILS</u> , 100000 BBL; DIAMETER: 113 FT; HEIGHT: 56 FT A/N: <u>462764 543866</u> Permit to Construct Issued:	D312	CX7			C1.x4 C6.x D323.2 E448.x K67.2
<u>KNOCKOUT POT, WITH DEMISTER</u> A/N: <u>419625- 543866</u> Permit to Construct Issued:	CX7	CX8, D312			D12.2



Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
<u>CARBON ADSORBER, THREE SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: 419625- 543866 Permit to Construct Issued:	<u>CX8</u>	<u>CX7</u>			<u>D90.5</u> <u>E128.1</u> <u>E153.2</u>
STORAGE TANK, FIXED ROOF, NO. T-150002, GAS OIL, ASPHALT, WITH <u>SEPARATOR, DEMISTER, HEATING COILS</u> AND STEAM SUCTION HEATER, 150000 BBL; DIAMETER: 140 FT; HEIGHT: 56 FT A/N: 417128 543860 Permit to Construct Issued:	D328	<u>CX9</u>			A63.5 B22.1 <u>C1.x4</u> <u>C6.x1</u> D12.2 D323.2 <u>E448.x</u> H23.14 K67.2
<u>KNOCKOUT POT, WITH DEMISTER</u> A/N: 419625- 543860 Permit to Construct Issued:	<u>CX9</u>	<u>CX10</u>			<u>D12.2</u>
<u>CARBON ADSORBER, THREE SETS OF CARBON IN PARALLEL, EACH SET WITH TWO 200-LB CARBON DRUMS IN SERIES</u> A/N: 419625- 543860 Permit to Construct Issued:	<u>CX10</u>	<u>CX9, D328</u>			<u>D90.5</u> <u>E128.1</u> <u>E153.2</u>
Process 8: LOADING/UNLOADING FACILITIES					
System 12: FUEL OIL/GAS OIL TANK TRUCK LOADING RACK NO. 14					
LOADING ARM, TANK TRUCK, TOP, GAS OIL, FUEL OIL, <u>ASPHALT</u> DIAMETER: 3 4 IN A/N: 467206- 543862 Permit to Construct Issued:	D230	<u>CX11</u>			C1.2
<u>MIST ELIMINATOR, CECO FILTER, MODEL DLM161, 660 CFM, WITH PREFILTER, NESTED DESIGN MAIN FILTER, WIDTH: 2 FT; HEIGHT: 1 FT 8 IN; LENGTH: 6 FT 10 IN</u> A/N: 547383 Permit to Construct Issued:	<u>CX11</u>	<u>D230</u>			<u>D12.4</u> <u>E224.1</u>



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
System 25: ORGANIC TANK/RAIL CAR LOADING/UNLOADING FACILITY, SPURS 1 & 2 S1.10, S31.x					
LOADING ARM, RAIL CAR, TANK CAR, SPURS 1 & 2, ASPHALT, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, 12 TOTAL; DIAMETER: 4 IN A/N: 480474- 543863 Permit to Construct Issued:	D206	C599			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: 477241 Permit to Construct Issued:	C599	D206 D210 C531			D12.4 E224.1
LOADING ARM, RAIL CAR, TANK CAR, SPURS 1 & 2, ASPHALT, FUEL OIL, GAS OIL, DISTILLATE, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 480474- 543863 Permit to Construct Issued:	D210	C599			
LOADING ARM, RAIL CAR, TANK CAR, SPURS 1 & 2, SPENT CAUSTIC, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, BOTTOM LOADING, 1 TOTAL; DIAMETER: 4 IN A/N: 480474- 543863 Permit to Construct Issued:	D253			S COMPOUND: 500PPMV (5) [RULE 407, 4-2-1982]	
UNLOADING ARMS, TANK CAR, SPURS 1 & 2, ASPHALT, CRUDE OIL, WITH FLEXIBLE HOSE, 16 TOTAL; DIAMETER: 4 IN; A/N: 480474- 543863 Permit to Construct Issued:	DX1				



Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 516447-535697 Permit to Construct Issued:	D706				H23.2
System 29: ORGANIC TANK/RAIL CAR LOADING/UNLOADING FACILITY, SPUR 3					
LOADING ARM, RAIL CAR, TANK CAR, SPUR 3, GASOIL, SWIVEL TYPE WITH LOADING VALVES AND DROP TUBE, 4 TOTAL; DIAMETER: 4 IN A/N: 535697-543864 Permit to Construct Issued:	D855				C1.43
UNLOADING ARM, TANK/RAIL CAR, SPUR 3, GASOIL, CRUDE OIL, <u>ASPHALT</u> 4 TOTAL; DIAMETER: 4 IN A/N: 535697-543864 Permit to Construct Issued:	D892				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 516447-535697 Permit to Construct Issued:	D856				H23.2

CONDITIONS

S1.10 The operator shall limit the throughput to no more than 666,667 barrel(s) in any one calendar month.

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

The operator shall limit the spent caustic loading to no more than 900 barrels in any one month.

The operator shall limit the distillate and fuel oil loading to no more than 5,000 barrels in any one 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 rail car, total quantity (in barrels) of the commodity/product that is loaded into each tank rail car, and total quantity

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(in barrels) of all commodities/products loaded through the loading rack each month.

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

S4.3 The following condition(s) shall apply to all affected devices listed under Section H of this system for fugitive emissions of volatile organic compounds (VOC):

The following conditions shall apply to the gas oil loading equipment only.

All valves shall be physically identified in the field with special marking that distinguish the components from BACT components.

Non-bellows seal valves and other non-valve fugitive components shall not have detectable leaks exceeding 5 ppm. A detectable leak greater than 5 ppm shall be repaired within 14 calendar days after detection of the leak.

All non-bellows seal valves shall be inspected monthly using EPA Method 21. The operator may begin quarterly inspections, upon District approval, after two consecutive monthly inspections in which only two per cent or less of non-bellows seal valves are found to have detectable leaks above 5 ppm.

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(b)(2)-Offset, 5-10-1996; Rule 1303(b)(2)-Offset, 12-6-2002]
[System subject to this condition: Process 8, System 29]

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, 5-6-12005]
[System subject to this condition: Process 10, System 1]

S31.5 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 535697 543864 (Unloading Facility Only):

All open-ended lines shall be equipped with cap, blind flange, plug, or a second valve.

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All new light liquid pumps shall utilize double seals.

All new valves in VOC service, except those specifically exempted by Rule 1173, shall be bellows seal valves, except as approved by the District, in the following applications: control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard, retrofits/special applications with space limitations, and valves not commercially available.

All new valves and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter “N”), and shall be noted in the records.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Reference Method 21.

If 98.0 percent or greater of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppmv for light liquid and 100 ppm for heavy liquid for two consecutive months, then the operator may change to a quarterly inspection program with the approval of the District.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate of less than 500 ppmv for light liquid and 100 ppm for heavy liquid.

All components in VOC service a leak greater than 500 ppm for light liquid and 100 ppm for heavy liquid but less than 1,000 ppm measured as 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 8, System 29]

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

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
Visible emissions	Less than or equal to 0 Percent opacity

[40CFR60 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]

B22.1 The operator shall not use this equipment with materials having a(n) true vapor pressure of 0.5 psia or greater under actual operating conditions.

[Rule 1301, 12-7-1995]

[Devices subject to this condition: D315, D316, D318, D319, D320, D321, D322, D324, D325, D326, D328]

C1.2 The operator shall limit the loading rate to no more than 420,000 gallons per day.

This condition shall not apply whenever the loading materials have a vapor pressure below 0.01 psia.

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

[Devices subject to this condition: D230]

C1.15 The operator shall limit the throughput to no more than 292,650 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 quick brown fox jumps over a lazy dog. The quick brown fox jumps over a lazy dog. The quick brown fox jumps

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

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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: D303]

C1.x1 The operator shall limit the throughput to no more than 10,000 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, in accordance to Condition E448.x.

[Rule 1303(b)(2)- Offset, 5-10-1996; Rule 1303(b)(2)- Offset, 12-6-2002]
[Devices subject to this condition: D271]

C1.x2 The operator shall limit the throughput to no more than 271,242 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, in accordance to Condition E448.x.

[Rule 1303(b)(2)- Offset, 5-10-1996; Rule 1303(b)(2)- Offset, 12-6-2002]
[Devices subject to this condition: D302]

C1.x3 The operator shall limit the throughput to no more than 147,548 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, in accordance to Condition E448.x.

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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: D298]

C1.x4 The operator shall limit the throughput to no more than 360,000 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, in accordance to Condition E448.x.

[Rule 1303(b)(2)- Offset, 5-10-1996; Rule 1303(b)(2)- Offset, 12-6-2002]
[Devices subject to this condition: D304, D305, D307, D309, D311, D312, D328]

C1.43 The operator shall limit the throughput to no more than 400,000 barrel(s) in any one calendar month.

For the purpose of this condition, throughput shall be defined as the amount of gas oil loaded in Tank/Rail Car Spur 3.

To comply with this condition, the operator shall keep record, in a manner approved by the District, for the following parameter(s) or item(s): Date, time and total quantity (in barrels) of gas oil that is loaded and total quantity of gas oil loaded through the loading racks during each month.

Rule 1303(b)(2)- Offset, 5-10-1996; Rule 1303(b)(2)- Offset, 12-6-2002]
[Devices subject to this condition: D855]

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~~ demister.

[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

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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]

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.

The operator shall record the parameter being measured at least once per 12 hour shift.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]
 [Devices subject to this condition: D298, D579]

C6.x1 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.

The operator shall record the parameter being measured at least once per 12 hour shift.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]
 [Devices subject to this condition: D271, D311, D312, D328]

C6.x2 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 375 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.

The operator shall record the parameter being measured at least once per 12 hour shift.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]
 [Devices subject to this condition: D307, D309]

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C6.x3 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.

The operator shall record the parameter being measured at least once per 12 hour shift.

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

[Devices subject to this condition: D302, D304, D305]

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 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.

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

[Devices subject to this condition: D275, D276, C308, C310, CX1, CX5, CX7, CX9, D328]

D12.4 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the pre-filter of 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,

[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]

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[Devices subject to this condition: C575, C576, C596, C597, C598, C599, CX11]

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, ~~D274~~, D275, D276, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, ~~D298~~, D299, D300, D301, ~~D302~~, ~~D304~~, D323]

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]

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) of 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, CX2, CX3, CX4, CX6, CX8, CX10]

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.

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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 Emissions 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]

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

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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 Emissions 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;
- 3) Description of any corrective actions taken to abate visible emissions;
- 4) Date and time visible emission was abated; and
- 5) 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: D92, D176, D177, D178, D267, D268, D269, D270, D271, D272, D278, D279, D280, D281, D282, D283, D284, D286, D292, D299, D3001, D305, D327, D523, D525]

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]

[Devices subject to this condition: C770, C772, C797, C832, CX2, CX3, CX4, CX6, CX8, CX10]

E153.x 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 100 ppm at the outlet of the carbon adsorber.

Hydrocarbon monitoring reading shall be conducted in accordance to Condition

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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: CX2, CX3, CX4, CX6, CX8, CX10]

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: C81, C86, C88, C90, D181, CX11, C599]

E448.1 The operator shall comply with the following requirements:

Asphalt stored in or pumped into this tank shall not exceed 350 degrees Fahrenheit or shall be handled in a manner approved by the Executive Officer that does not violate Rule 401.

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

[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, D323]

E448.x The operator shall comply with the following requirements:

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.

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In the event of a failure or routine maintenance of the ATLG, the ATLG shall 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 form 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: D271, D298, D304, D305, D307, D309, D311, D312, D28]

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, 2-6-2009]

[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, D715, D718, D816, D817, D818, D819, D821, D822, D823, D824, D825, D826, D827, D828, D831, D893]

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

Contaminant	Rule	Rule/Subpart
PM	40CFR60, SUBPART	UU

[40CFR60 Subpart UU, 8-5-1983]

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

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Throughput and vapor pressure of stored liquid.

[Rule 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; Rule 401, 11-9-2001; Rule 1178, 4-7-2006]

[Devices subject to this condition: D263, D264, D267, D268, D269, D270, D271, D272, D275, D276, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D305, D306, D307, D309, D311, D312, D315, D316, D318, D319, D320, D321, D322, D323, D324, D325, D326, D327, D328, D329, D330, D334, D336, D338, D339, D340, D341, D342, D343, D344, D345, D346, D347, D348, D351, D353, D354, D355, D356, D357, D378]

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BACKGROUND

Paramount Petroleum Corporation (Paramount) operates a petroleum refinery located at 14700 Downey Avenue in the city of Paramount in the southern portion of Los Angeles County. Paramount processes crude oil into a variety of products including specialized road and roofing asphalts, diesel fuel, jet fuel, gasoline and gasoline components. Emission sources at the refinery include combustion sources (heaters, boilers, and IC engines), fugitive components (pumps, valves, flanges, compressors, drains, etc.), cooling towers, storage tanks, flares and loading/unloading facilities. The South Coast Air Quality Management District (AQMD) identification number for the facility is 800183.

Paramount is proposing to increase the efficiency of its asphalt loading/unloading and storage facilities. Paramount is also taking this opportunity to consolidate previous applications made for modifications to some of the subject tanks. This project does not involve any increase in crude oil capacity at the refinery.

AQMD received the application package on October 31, 2012. Additional permit application was received on February 14, 2013 to complete the package. Paramount submitted supplemental information from December 7, 2012 to April 2, 2013. On May 1, 2013, Paramount withdrew A/N 543865 due to change in scope of the project. On July 10, 2013, Paramount submitted a revised CEQA Applicability Form indicating that a CEQA document was prepared with the City of Paramount as Lead Agency conducting an Initial Study and Mitigated Negative Declaration.

Table 1 lists permit processing tracking information and fees. The master file for this project evaluation is A/N 543851. All of the documentation referenced in the attachments of this evaluation is only contained in the folder for A/N 543851.

Table 1: Permit Administration & Application Tracking Information

	<i>A/N</i>	<i>Equipment Description</i>	<i>Permit Action</i>	<i>Status/ Type</i>	<i>BCAT/ CCAT</i>	<i>Previous A/N</i>	<i>Fee Paid</i>
1	543851	Storage Tank T-776, D271	Add mixer	20/50	214910	419600 Active	\$3,262.34
2	543852	Storage Tank T-10003, D302	Add mixer	20/50	214911	403565 Active	\$5,160.09
3	543853	Storage Tank T-5005, D298	Add mixer	20/50	214911	403574 Active	\$5,160.09
4	543854	Storage Tank T-10004, D303	Add mixer	20/50	214911	403566 Active	\$5,160.09
5	543855	Storage Tank T-20002, D304	Add mixer	20/50	214911	403568 Active	\$5,160.09
6	543856	Storage Tank T-35001, D305	Add suction heater and demister and carbon drums. Correct tank dimensions	20/50	214911	419625 Active	\$5,160.09



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	<i>A/N</i>	<i>Equipment Description</i>	<i>Permit Action</i>	<i>Status/ Type</i>	<i>BCAT/ CCAT</i>	<i>Previous A/N</i>	<i>Fee Paid</i>
7	543857	Storage Tank T-50005, D307	Add mixer, suction heater and demister and carbon drums. Correct tank dimensions	20/50	214911	417104 Active	\$3,440.06
8	543858	Storage Tank T-50006, D309	Add mixer, suction heater and demister and carbon drums	20/50	214911	417105 Active	\$1,720.03
9	543859	Storage Tank T-100001, D311	Add mixer, suction heater, heating coils and demister and carbon drums.	20/50	214911	162763 Active	\$3,440.06
10	543860	Storage Tank T-150002, D328	Add heating coils demister and carbon drums	20/50	214911	417128 Active	\$3,440.06
11	543862	Loading Arm, Tank Truck	Add loading of asphalt and CECO filter and carbon drums	20/50	343104	167206 Active	\$8,187.90
12	543863	Loading Arm Rail Car	Add unloading of asphalt	20/50	343104	480174 Active	\$5,160.09
13	543864	Loading Arm, Rail Car	Add unloading of asphalt	20/50	343104	535697 Active	\$5,160.09
14*	543865	Tank Truck Unloading Rack	New unloading for asphalt	20/10	299125	N/A	\$5,160.09
15	543866	Storage Tank T-100002, D312	Add mixer, suction heater, heating coils and demister and carbon drums	20/50	214911	162764 Active	\$1,720.03
16	543892	Title V Revision	De Minimis Permit Revision	21/85	555009	N/A	\$1,789.12
17	547383	Mist Eliminator/ CECO Filter	New control system for Process 8 System 12	20/10	30	N/A	\$2,174.89

*Paramount withdrew this application on May 1, 2013. A/N 543865 will therefore be canceled.

COMPLIANCE RECORD REVIEW

A review of the AQMD Compliance Database showed 34 Notices of Violation (NOV) and Notices to Comply (NC) issued to Paramount in the past five years (08/01/08 – 08/01/13). All notices are either closed or in compliance status. The Stipulated Orders for Abatement (SOFA) are closed. Paramount is on a schedule to compliance on the Variance Cases.

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PERMIT HISTORY

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

STORAGE TANK T-776, Dev D271, A/N 543851,

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
167857		D01131	07/31/1988	Permit to Operate for an existing storage tank operating without a permit (PO no PC). No record of storage tank form submitted by facility. No emission calculations done. According to engineering evaluation, emission from this tank is negligible. No throughput or temperature limits on the permit.
419600		F68782	09/30/2004	Administrative change to reinstate the original language of the condition in the command and control permit. Condition E448.1 replaced Condition C6.7. No throughput or temperature limits on the permit. The 350°F temperature limit on the permit applies only when Rule 401 is violated.

STORAGE TANK T-10003, Dev D302, A/N 543852

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
167870		D01408	08/06/1988	Permit to Operate for an existing storage tank operating without a permit (PO no PC). No record of storage tank form submitted by facility. No emission calculations done. According to engineering evaluation, emission from this tank is negligible. No throughput or temperature limits on the permit.
403565		F74452	04/07/2005	Installed control device (demister and carbon). No throughput or temperature limits on the permit.

STORAGE TANK T-5005, Dev D298, A/N 543853

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
C05476		P67442	06/15/1976	Original permit. No copy found.
104305		M32886	04/24/1984	Change of ownership from Pacific Oasis to Paramount. No throughput or temperature limits on the permit. 1.5 psia vapor pressure limit on the permit.

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<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
403574		F74459	03/30/2005	Modified control device (add demister and carbon). No throughput or temperature limits on the permit. No VOC ppm limit on the carbon.

STORAGE TANK T-10004, Dev 303 A/N 543854

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
120833		M45539	08/30/1985	Application to permit asphalt tank previously exempt from permitting. No emission calculations done. No throughput or temperature limits on the permit.
356819		N/A	N/A	Canceled. Superseded by A/N 403566
403566		F74451	03/30/2005	Modified control device. 2,000,000 barrels/yr throughput limit and 500°F temperature limit on permit.

STORAGE TANK T-20002, Dev D304, A/N 543855

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
120838		M45541	08/30/1985	Original permit (PO no PC). No record of storage tank form submitted by facility.
403568		F74454	03/30/2005	Installed control device (demister and carbon). No throughput or temperature limits on the permit.

STORAGE TANK T-35001, Dev D305, A/N 543856

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
120837		M45540	08/30/1985	Original permit (PO no PC)
419625		F68799	09/30/2004	Administrative change to reinstate the original language of the condition in the command and control permit. Condition E448.1 replaced Condition C6.7. No throughput limit on the permit. The 350°F temperature limit on the permit applies only when Rule 401 is violated.
439060		N/A	N/A	PO no PC for installing carbon drums; Canceled and superseded by new application to change configuration of carbon drums.

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STORAGE TANK T-50005, Dev D307, A/N 543857

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
173742		D44420	12/08/1991	Original permit. Previously exempt from permit requirements. On June 3, 1988, Rule 219 was amended to include this tank in the permit system. Used to store fuel oil only.
267844		D62012	09/14/1992	The tank was placed in asphalt and fuel service and vented to fiberglass filter. No emission calculations done. No throughput or temperature limits on the permit.
417104		F68726	05/29/2004	Administrative change to include an internal heater. No throughput or temperature limits on the permit.
364570		N/A	N/A	PO no PC for installing carbon drums; Canceled and superseded by new application to change configuration of carbon drums.

STORAGE TANK T-50006, Dev D309, A/N 543858

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
173744		D44422	12/08/1991	Original permit. Previously exempt from permit requirements. On June 3, 1988, Rule 219 was amended to include this tank in the permit system.
267845		D62013	09/14/1992	The tank was placed in asphalt and fuel service and vented to fiberglass filter. No emission calculations done. No throughput or temperature limits on the permit.
417105		F68727	05/29/2004	Administrative change to include an internal heater. No throughput or temperature limits on the permit.
364570		N/A	N/A	PO no PC for installing carbon drums; Canceled and superseded by new application to change configuration of carbon drums.

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STORAGE TANK T-100001, Dev D311, A/N 543859

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
162763		D06008	02/28/1989	Original permit (PO no PC)
342895		N/A	N/A	PO no PC for installing mist eliminator; Canceled and superseded by new application for installing carbon drums.
421656		N/A	N/A	PO no PC for installing carbon drums; Canceled and superseded by new application to change configuration of demister and carbon drums.

STORAGE TANK T-150002, Dev D328, A/N 543860

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
167879		D01496	08/07/1988	Original permit
335494		F11885	02/10/1998	Install separator and demister.
417128		F68717	04/13/2004	Administrative change to correct dimensions of tank.

LOADING ARM, TANK TRUCK, PROCESS 8, SYSTEM12, A/N 543862

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
167206		D01463	8/05/1988	Original permit. Throughput limit on the permit of 420,000 gallons/day loading rate.

LOADING ARM, RAIL CAR, PROCESS 8, SYSTEM 25, A/N 543863

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
		P26082	Not found	Records incomplete. Some records indicate this rack has been in existence since the 1950s.
C00744		M02302	08/1978	Records incomplete.
104010		R-M32810	09/16/1983	Change of ownership from Douglas Oil Company to Paramount Petroleum.
122275	5/84	M50895	09/14/1986	Changed out some pump motors.
154199	11/86	M59329	11/1987	Removed eleven loading arms.
215868	5/90	D39867	07/25/1991	Installed a caustic loading arm.
357033		F24915	03/09/2000	Permit to operate for connecting the rack to a CECO filter (C599), which was installed

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<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
				without a permit. It was previously permitted to vent to a different mist eliminator. The connection was made without a permit.
480174	11/03/2009	G25331	6/25/2013	For connection of the loading rack (through the existing CECO filter (C599) to the AB Stills Incinerator.

LOADING ARM, RAIL CAR, PROCESS 8, SYSTEM 29, A/N 543864

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
516447	3/9/2011			Install a new rail car loading racks for gas oil
535697	8/22/2012			Install unloading arms for crude oil and gas oil.

STORAGE TANK T-100002, Dev D312, A/N 543866

<i>Permit to Construct</i>		<i>Permit to Operate</i>		<i>Description of Permitting Activity</i>
<i>A/N</i>	<i>Issue Date</i>	<i>No</i>	<i>Issue Date</i>	
162764		D06007	02/28/1989	Original permit (PO no PC)
342895		N/A	N/A	PO no PC for installing mist eliminator; Canceled and superseded by new application for installing carbon drums.
421656		N/A	N/A	PO no PC for installing carbon drums; Canceled and superseded by new application to change configuration of demister and carbon drums.

PROJECT DESCRIPTION and EMISSIONS CALCULATIONS

Paramount has numerous asphalt storage tanks and a number of asphalt loading/unloading racks for both tank trucks and rail cars throughout its refinery. Described below are modifications to eleven (11) fixed roof asphalt storage tanks by the installation of mixers, heaters and controls and modification to two loading racks.

Asphalt Storage Tanks

The storage tanks have fixed roofs. Paramount is proposing the following modification:

- A mixer will be installed on Tank T-776 (Dev D271).
- A mixer will be installed on Tank T-5005 (Dev D298). Heating coils are already present on the tank and will be added to the equipment description.
- A mixer will be installed on Tank T-10003 (Dev D302).
- A mixer will be installed on Tank T-10004 (Dev D303).

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- A mixer will be installed on Tank T-20002 (Dev D 304).
- A suction heater will be installed on Tank T-35001 (Dev D305). A demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.
- A mixer and suction heater will be installed on tank T-50005 (Dev D307). Add dimensions of tank to the equipment description. A demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.
- A mixer and suction heater will be installed on tank T-50006 (Dev D309). Add dimensions of tank to the equipment description. A demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.
- A mixer and suction heater will be installed on tank T-100001 (Dev D311). A demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.
- A mixer and heating coils will be installed on tank T-100002 (Dev D312). A suction heater, demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.
- Heating coils will be installed on tank T-150002 (Dev D328). A demister with knockout pot and three sets of two carbon drums in series will be added to the equipment description.

Uncontrolled emissions from these tanks are calculated using EPA TANKS 4.0.9d program using the Antoine's equation, <http://www.epa.gov/ttn/chief/ap42/ch11/bgdocs/b11s01.pdf>, pages 4-124 to 4-126

- Vapor molecular weight of asphalt: 105 lb/lb-mol
- Liquid molecular weight of asphalt: 1000 lb/lb-mol
- Liquid density: 9.22 lb/gal
- Antoine's constant (using °K) values of 75350.06 for "A" and 9.00346 for "B"

All the subject storage tanks are post NSR since permits were issued or modified after 1976 as shown in the Permit History section of this report. Since baseline emissions were not calculated in the previous application, baseline throughput and temperature limits from documents submitted and requested by Paramount are used for Storage Tank T-776 (Dev D271). For Storage Tank T-5005 (Dev D298), Storage Tank T-10003 (Dev D302) and Storage Tank T-20002 (Dev D304), the baseline emissions are recalculated using new vapor pressure data from the Residual Storage Vapor Pressure (RSVP) test method approved by the District and the EPA in June, 2006. This test result is discussed on page 30 of this report. For Storage Tank T-10004 (Dev D303), the existing permit throughput limit is used for baseline emissions. For Storage Tank T-35001 (Dev D305), Storage Tank T-50005 (Dev D307), Storage Tank T-50006 (Dev D309), Storage Tank T-100001 (Dev D311), Storage Tank T-100002 (Dev D312) and Storage Tank T-150002 (Dev D328), the potential to emit baseline emissions were used Per Rule 1306(f): Emissions Calculations for Air Pollution Controls, since the modification to these tanks consist of adding pollution control. Emissions Calculations Report Print-Out for the uncontrolled emissions using EPA TANKS 4.0.9d Program is included in this folder. Table 2 summarizes the control for each tank with the proposed permit throughput and temperature limits.

Emissions from the tanks are controlled with demister/carbon adsorption system which reduces emissions and odors. The emissions from the fugitive components being installed (mixers, heating coils, suction heaters) are calculated based on emission factors derived from the Correlation Equation Method (AQMD's Guidelines for Fugitive Emissions Calculations, June 2003, Method 2, <http://www.aqmd.gov/aer/Updates/GuideFugitiveEmisCalcu.pdf>). There will be a minimal increase in



fugitive emissions as summarized below in Table 3. Controlled and uncontrolled emissions are summarized in Table 6.

Table 2: Storage Tanks Permit Limits

	A/N	Equipment Description	Control Type	Current Permit Limits		Proposed Permit Limits	
				Throughput, barrels/mo	Temperature °F	Throughput, barrels/mo	Temperature °F
1	543851	Storage Tank T-776, D271	None	None	None	10,000	350
2	543852	Storage Tank T-10003, D302	Mist Eliminator and Carbon drums	None	None	271,242	400
3	543853	Storage Tank T-5005, D298	Mist Eliminator and Carbon drums	None	None	147,548	450
4	543854	Storage Tank T-10004, D303	Mist Eliminator and Carbon drums	166,667	450	292,650	450
5	543855	Storage Tank T-20002, D304	Mist Eliminator and Carbon drums	None	None	360,000	400
6	543856	Storage Tank T-35001, D305	Demister and Carbon drums	None	None	360,000	400
7	543857	Storage Tank T-50005, D307	Demister and Carbon drums	None	None	360,000	375
8	543858	Storage Tank T-50006, D309	Demister and Carbon drums	None	None	360,000	375
9	543859	Storage Tank T-100001, D311	Demister and Carbon drums	None	None	360,000	350
10	543860	Storage Tank T-150002, D328	Demister and Carbon drums	None	None	360,000	350
11	543866	Storage Tank T-100002, D312	Demister and Carbon drums	None	None	360,000	350

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Table 3: Fugitive Components Count and Emissions for Storage Tanks

	<i>A/N</i>	<i>Equipment Description</i>	<i>No. of New Components to be Installed (2)</i>	<i>Correlation Equation Factor, 100 ppm Screening Value (lb/yr)</i>	<i>Emissions lbs/day</i>
1	543851	Storage Tank T-776, D271	1 (Fitting for Mixer)	3.23	0.01
2	543852	Storage Tank T-10003, D302	1 (Fitting for Mixer)	3.23	0.01
3	543853	Storage Tank T-5005, D298	1 (Fitting for Mixer)	3.23	0.01
4	543854	Storage Tank T-10004, D303	1 (Fitting for Mixer)	3.23	0.01
5	543855	Storage Tank T-20002, D304	1 (Fitting for Mixer)	3.23	0.01
6	543856	Storage Tank T-35001, D305	1 (Fitting for Suction Heater)	3.23	0.01
7	543857	Storage Tank T-50005, D307	2 (Fittings for Mixer and Suction Heater)	3.23	0.02
8	543858	Storage Tank T-50006, D309	2 (Fittings for Mixer and Suction Heater)	3.23	0.02
9	543859	Storage Tank T-100001, D311	2 (Fittings for Mixer and Heating Coils)	3.23	0.02
10	543860	Storage Tank T-150002, D328	1 (Fitting for Heating Coils)	3.23	0.01
11	543866	Storage Tank T-100002, D312	2 (Fittings for Mixer and Heating Coils)	3.23	0.02

Asphalt Tank Truck Loading/Unloading Racks

The 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. Piping that is connected to the hood transports vapors to the CECO filter. A description of these CECO filters is contained in this engineering folder. A blower is located downstream of the CECO filter such that it is pulling a suction on the CECO filter and vapor

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collection hood. The blower turns on automatically whenever the loading arm is lowered down into the truck. Paramount is proposing to construct/modify:

- Process 8, System 12 – Add asphalt loading at this rack in addition to gas oil and fuel oil. Add a CECO filter to control emissions. This loading rack has a permit limit of 420,000 gallons per day. Previous calculation indicates 0.55 lb/day VOC emissions. The assumed organic compound control efficiency for the CECO filter is 95%. There will be a decrease of 0.52 lb/day of VOC.

Asphalt Rail Car Loading/Unloading Racks

Paramount’s rail car loading racks are located next to tracks, or “spurs” off of the main railroad track once it enters the refinery. Some of the spurs are for storage of railcars in preparation for loading or unloading. Existing loading and unloading facilities are located in between Spur 1 and Spur 2 and next to Spur 3. Once the railcars are loaded or unloaded, they are pushed back onto the main track for shipping. Paramount is proposing to construct/modify:

- Process 8, System 25 – Add unloading arms for asphalt and crude. Only fugitive emissions for the new unloading arms are being calculated in this engineering evaluation since the emissions for the unloading of materials are accounted for under permits for the storage tanks to which they are unloaded. Paramount provided the list of fugitive components. Three bellow-sealed valves will be installed and the rest will be non-bellows due to space constraint. Paramount indicated it will attempt to fit bellow-sealed valves into the project wherever possible. The fugitive emissions are calculated based on emission factors derived from the Correlation Equation Method (AQMD’s Guidelines for Fugitive Emissions Calculations, June 2003, Method 2, <http://www.aqmd.gov/aer/Updates/GuideFugitiveEmisCalcu.pdf>). There will be an increase of 2.30 lbs/day of VOC as shown in Table 5 Administratively, the language “Spurs 1 & 2” will be added to the equipment description for clarity.
- Process 8, System 29 – Add asphalt to the commodity that may be unloaded at this rack in addition to the currently permitted gas oil and crude oil. There will be no change in the throughput limit for this system and there would be no new fugitive components to be installed.

Asphalt Vapor Pressure for Rule 463 Applicability

All of the subject storage tanks and loading racks store load or unload 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 and EPA approval for SIP rule application on June 21, 2006. A summary of the results of Paramount’s vapor pressure testing is contained in Table 4.

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Table 4: RSVP Method Testing Results

<i>Paramount Base Product</i>	<i>Asphalt Type</i>	<i>Vapor Pressure (psia @ storage temp)</i>	
		<i>450°F</i>	<i>500°F</i>
MAC 10	Asphalt Cement		0.64
MAC 10	Asphalt Cement		0.53
MAC 10	Asphalt Cement	0.36	
MAC 10	Asphalt Cement	0.33	
708 Saturant	Air Blown		0.05
708 Saturant	Air Blown		0.16
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 RSVP Method confirms that the vapor pressure of asphalt at 450°F is low (far below the Rule 463 control threshold of 0.5 psia).

VOC and PM Emissions

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 eliminator is 95% and the control efficiency for the carbon adsorbers is 95%. The exact breakdown of gaseous VOC and condensable organic emissions is not known for each of the asphalt products. A significant portion of the condensable organics can be classified as either PM 10 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.

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Activated Carbon Adsorber Replacement and Breakthrough

The maximum discharge VOC concentration to give 95% VOC control for the demister and 95% control for the carbon adsorption, using the data of the storage tank with highest vapor pressure is:

$$(0.36 \text{ psia}) * (1 - 0.95) * (1 - 0.95) * (1,000,000) / 14.7 \text{ psia} = 61 \text{ ppmv}$$

The carbon replacement breakthrough is 61 ppmv VOC, for the worst case scenario. A permit condition requiring **carbon replacement within 24 hours at 100 ppmv VOC** will be imposed so all the carbon venting systems have the same replacement criterion. **The 100-ppm limit is also consistent with Rule 1173 leak limit for heavy liquid fugitive components to be repaired, replaced or removed within seven days.**

To determine carbon replacement period, it is assumed that the equilibrium adsorptivity of the carbon equals to 0.20 lb VOC per lb carbon. The worst case scenario of the highest uncontrolled emission of 57.78 lbs/day (Table 6) with a pre-control of 95% efficiency from the demister with three sets of two carbon drums in series with 200 lbs of carbon/drum is used instead of the 100 ppm emission control.

$$(200 \text{ lbs carbon}) * (0.2 \text{ lbs VOC/ lb carbon}) / (57.78 \text{ lbs/day} * (1 - 0.95)) = 13.84 \text{ days}$$

A permit condition requiring activated carbon monitoring schedule of once a week, during filling of tank if one is being conducted, will be imposed so all the carbon venting systems have the same monitoring schedule.



**Table 5: Fugitive Components Count and Emissions for
Asphalt and Crude Rail Car Unloading Rack, Spurs 1 & 2, P8S25**

Source Unit		Service	No of Existing Components (1)	No. of New Components to be Installed (2)	Correlation Equation Factor, 100 ppm Screening Value	Pre-Modification Emissions (lbs/year)	Post Modification Emissions (lbs/year)
Valves	Sealed Bellows	All		3			0.00
	SCAQMD Approved I & M Program	Gas / Vapor					
		Light Liquid (3)		24	4.55		109.10
	Heavy Liquid (4)						
Pumps	Sealless Type	Light Liquid (3)					
	Double Mechanical Seals or Equivalent Seals	Light Liquid (3)					
	Single Mechanical Seals	Heavy Liquid (4)		1	17.21		17.21
Compressors		Gas / Vapor					
Flanges (ANSI 16.5-1988)	Light Liquid (3)			78	6.99		545.23
	Heavy Liquid (4)						
Connectors	Light Liquid (3)			51	2.86		145.93
	Heavy Liquid (4)						
Pressure Relief Valves		All					
Process Drains with P-Trap or Seal Pot		All					
Other (including fittings, hatches, sight-glasses, and meters)		All		1	9.09		9.09
Total Emissions (lbs/year)							827
Emissions Increase (lbs/day)							2.30

- (1) Any component existing prior to the modification.
- (2) Any new component proposed to be installed due to the modification; this also includes new components to be installed to replace existing components.
- (3) Light liquid and gas/liquid streams: Liquid or gas/liquid stream with a vapor pressure greater than that of kerosene (>0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by volume.
- (4) Heavy liquid: streams with a vapor pressure equal to or less than that of kerosene (<0.1 psia @ 100°F or 689 Pa @ 38°C), based on the most volatile class present at 20% by volume.



Table 6: Summary of Emissions

	<i>A/N</i>	<i>Equipment Description</i>	<i>R1, lbs/day (1)</i>	<i>R2 lbs/day (2)</i>	<i>FE lbs/day (3)</i>	<i>Pre-Mod lbs/day (4)</i>	<i>Post-Mod lbs/day (5)</i>	<i>Emission Increase lbs/day</i>
1	543851	Storage Tank T-776, D271	0.44	0.44	0.01	0.44	0.45	+0.01
2	543852	Storage Tank T-10003, D302	26.48	13.82	0.01	13.82	13.83	+0.01
3	543853	Storage Tank T-5005, D298	40.87	7.52	0.01	7.52	7.53	+0.01
4	543854	Storage Tank T-10004, D303	81.06	14.91	0.01	57.69	14.92	-42.77
5	543855	Storage Tank T-20002, D304	42.30	18.35	0.01	18.35	18.36	+0.01
6	543856	Storage Tank T-35001, D305	57.78	18.35	0.01	57.78	18.36	-39.42
7	543857	Storage Tank T-50005, D307	40.60	18.35	0.02	40.60	18.37	-22.23
8	543858	Storage Tank T-50006, D309	40.60	18.35	0.02	40.60	18.37	-22.23
9	543859	Storage Tank T-100001, D311	37.14	18.35	0.02	37.14	18.37	-18.77
10	543860	Storage Tank T-150002, D328	43.75	18.35	0.01	43.75	18.36	-25.39
11	543862	Loading Arm, Tank Truck	0.55	0.001	N/A	0.55	0.02	-0.53
12	543863	Loading Arm Rail Car, Process 8, System 25	2.30	2.30	N/A	1.14	3.44	+2.30
13	543864	Loading Arm, Rail Car, Process 8, System 29	1.65	1.65	N/A	1.65	1.65	0.00
14	543866	Storage Tank T-100002, D312	37.14	18.35	0.02	37.14	18.37	-18.77
15	543892	Title V Revision	N/A	N/A	N/A	N/A	N/A	N/A

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	A/N	Equipment Description	R1, lbs/day (1)	R2 lbs/day (2)	FE lbs/day (3)	Pre-Mod lbs/day (4)	Post-Mod lbs/day (5)	Emission Increase lbs/day
16	547383	Mist Eliminator/ CECO Filter	0.00	0.00	N/A	0.00	0.00	0.00

- (1) Uncontrolled emissions using EPA TANKS 4.0.9d Program. Emissions Calculations Reports are included in this folder
- (2) Controlled emissions at 100 ppm emission limit

$$\text{lbs/day} = \frac{\text{ppm} \times \text{MW, lb/lb-mole} \times \text{bbls/mo} \times 42 \text{ gals/bbl} \times 12 \text{ months/30days}}{10^6 \times 379 \text{ cf/mole} \times 7.48 \text{ gal/cf}}$$

where:

- ppm = VOC concentration (100 ppm)
- MW_{VOC} = MolecularWeight of VOC (86)
- bbls/mo = tank's throughput limit

- (3) Fugitive Emissions from Tables 3 & 5
- (4) Pre-modification baseline emissions
- (5) Post-mod = Controlled emissions + fugitive emissions

RISK ASSESSMENT: Tier 1: Screening Emission Levels

The Multiple Pollutant Screening Level Procedure of Tier 1 is used to determine whether or not detailed risk analysis will be required. The nearest worker and residential receptor location of 25 meters is used.

Table 7: Screening for Carcinogenic and Chronic Compounds for Railcar Asphalt and Crude Loading/Unloading Rack, P8S25

Toxic Air Contaminant (TAC)	Wt % (1)	VOC Increase/yr (2)	Qyear (3)	PSL (4)	PSI (5)
Hexane	1.97E-00	827.00	16.29	2.31E+05	7.05E-05
Benzene	1.25E-01	827.00	1.03	1.14E+00	9.03E-01
Toluene	1.38E-01	827.00	1.11	9.92E+03	1.11E-04
Xylene	4.46E-02	827.00	0.37	2.31E+04	1.60E-05
Ethyl Benzene	8.53E-03	827.00	0.07	6.61E+04	1.06E-06
				Σ PSI	9.03E-01

- (1) Provided by Paramount, Crude Speciation Data (included in the applicant's submittal)
- (2) See Table 5 of this report (lbs/yr)
- (3) Annual emissions of each TAC (Qyear), lbs/yr

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- (4) Pollutant Screening Level (PSL), the nearest worker and residential receptor location of 25 meters is used as contained in Table 1A of Attachment L, Risk Assessment Procedures, Version 7.0, <http://www.aqmd.gov/prdas/pdf/1401AttL7Dec2012.pdf> (Revised December 7, 2012)
- (5) Pollutant Screening Index = Q/PSL

Table 8: Screening for Acute Compounds for Railcar Asphalt and Crude Unloading Rack, P8S25

<i>Toxic Air Contaminant (TAC)</i>	<i>Wt % (1)</i>	<i>Total VOC Emissions/hr (2)</i>	<i>Qhr (3)</i>	<i>PSL (4)</i>	<i>PSI (5)</i>
Benzene	1.25E-01	0.094	1.17E-06	7.39E-01	1.58E-04
Toluene	1.38E-01	0.094	1.29E-06	1.85E+01	7.00E-06
Xylene	4.46E-02	0.094	4.19E-07	1.10E+01	3.88E-06
				Σ PSL	1.58E-04

- (1) Provided by Paramount, Crude Speciation Data (included in the applicant's submittal)
- (2) See Table 5 of this report (lbs/day divided by 24)
- (3) Total hourly emissions of each TAC (Qhour), lbs/hr
- (4) Pollutant Screening Level (PSL), the nearest worker and residential receptor location of 25 meters is used as contained in Table 1A of Attachment L, Risk Assessment Procedures, Version 7.0, <http://www.aqmd.gov/prdas/pdf/1401AttL7Dec2012.pdf> (Revised December 7, 2012)
- (5) Pollutant Screening Index = Q/PSL

Both the cumulative cancer/chronic risk and cumulative acute risk are well below 1; therefore no further risk screening assessment is required. It is noted here that a Tier 2 MICR analysis was also conducted by Paramount using the Lynwood station, a residential and worker receptor distance of 25 meters, and a point source operating 24 hours/day, 365 days/yr. The calculations show a worker MICR of 2.23×10^{-11} and a residential MICR of 1.14×10^{-10} .

RULES EVALUATION

PART 1: SCAQMD REGULATIONS

Rule 212 Standards for Approving and Issuing Public Notice (Amended Nov 14, 1997)
This rule requires public noticing for a modification or a new source located within 1000 feet of a school, if the project results in an increase in toxic air contaminant emissions resulting in exposure to a Maximum Individual Cancer Risk (MICR) of 1×10^{-6} or greater during a lifetime (70 years), or if the project results in an emissions increase exceeding limits stated in Rule 212(g). The project is not within 1000 feet of a school (refinery map showing the location of the project is included in the applicant's submittal), the increase in MICR associated with the project is less than 1×10^{-6} , and the project is not expected to result in an increase in criteria pollutant emissions exceeding limits stated in section

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212(g). Therefore, public notice will not be required and compliance with Rule 212 is assured.

Rule 401 Visible Emissions (Amended Nov. 9, 2001)

Operation of the subject storage tanks, loading and unloading facility is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

Rule 402 Nuisance (Adopted May 7, 1976)

Operation of the subject storage tanks, loading and unloading facility is not expected to result in a public nuisance. Therefore, compliance with this rule is expected.

Rule 462 Organic Liquid Loading (Amended May 14, 1999)

This rule is intended to control emissions of volatile organic compounds from facilities that load organic liquids with a vapor pressure of 1.5 psia or greater under actual loading conditions into any tank truck, trailers or railroad tank car. Since the vapor pressure of asphalt, gas oil and fuel oil is well below 1.5 psia under actual loading conditions, this rule does not apply.

Rule 463 Organic Liquid Storage (Amended November 4, 2011)

This rule is applicable to storage tanks with a storage volume of greater than 19,815 gallons (9471.8 barrels), which store organic liquids. An organic liquid is defined as any liquid containing VOCs. All the subject tanks store organic liquids and have storage capacities greater than 19,815 gallons (9471.8 barrels).

The primary requirements of this rule are specified in 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, the subject tanks are permitted to store asphalt at a maximum temperature of 450°F. As discussed earlier, vapor pressure test data submitted by Paramount using RSVP Method shows that the vapor pressure is less than 0.5 psia at 450°F. Therefore, the requirements of 463(c) do not apply.

The reporting and recordkeeping requirements of 463(f)(2) and 463(f)(3) apply to all the subject storage tanks. Continued compliance is expected.

Reg IX Standards of Performance for New Stationary Sources

40 CFR 60, Subpart Kb: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after July 23, 1984 (Amended October 15, 2003)

According to § 60.110b(b), This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ (950 bbls) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (0.5 psia) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa. As discussed earlier, the vapor pressure of asphalt at 450°F is far below the

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control threshold of 0.5 psia. This subpart, therefore, does not apply to the subject storage tanks.

40 CFR 60 Subpart GGGa: Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (Amended June 2, 2008)

This regulation is applicable to affected facilities in refineries that begin construction after November 7, 2006 per §60.590a. The following are affected facilities under this subpart:

- Compressors
- The group of all equipment within a process unit

As per §60.591a, the definition of “Process Unit” includes product transfer racks; however, this definition has been stayed until further notice and the definition of “Process Unit” shown in §60.590a(e) governs. Process unit is defined in §60.590a(e) as components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. Based on this definition, product transfer racks are not considered a process unit, so this subpart does not apply to the components associated with the loading and unloading process.

40 CFR 60, Subpart UU: Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (October 17, 2000)

This subpart applies to new construction or modification to air blowing stills and asphalt tanks per §60.470. The asphalt blowing stills are currently subject to this subpart, but are not a part of these project applications.

This NSPS is not applicable to the asphalt storage tanks since there has not been a “modification” or “reconstruction” under the definitions in 40CFR60.

According to EPA Applicability Determination Control No. 9700157, the NSPS applicability (under the MODIFICATION provisions of Part 60, A) is evaluated at the time of a physical or operational change based on a comparison of hourly potential emissions before and after the change. Since there is no change in the maximum processing and storage capacity of the tanks, there will be no change in the hourly potential emissions before and after the change. This project does not constitute a “modification” and thus does not trigger applicability of an NSPS standard.

Additionally, this project is not considered “reconstruction” per 40 CFR 60.15 that may render the storage tanks to be an affected facility. “Reconstruction” is defined as the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility and it is technically and economically feasible to meet the applicable standards set forth in this part. This project involves piping, several knock-out pots and carbon drums, the cost of which is far less than the 50% of the replacement value of the storage tanks.

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Note that Storage Tanks T-776 And tank T-150002 have been subject to this subpart. Continued compliance is expected.

Reg X National Emission Standards for Hazardous Air Pollutants (Amended April 4, 2008)
 There are currently no NESHAP standards that apply to the storage tanks, loading and unloading facility as outlined in the District's Regulation X.

Reg XI Source Specific Standards

Rule 1173: Fugitive Emissions of Volatile Organic Compound (Amended February 6, 2009)

The fugitive components of the tank truck/rail car loading/unloading facilities are subject to this rule. With proper implementation of the applicant's extensive inspection program, no violation is expected. The facility submits Rule 1173 Quarterly Report to the SCAQMD.

Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Refineries (Amended April 7, 2006)

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

Rule 1178(i)(3) states that 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 T_{Adj} as determined by ASTM Method D-86 of:

$$T_{Adj} = 300 \text{ }^\circ\text{F} + T_l - T_a$$

Where:

T_l = Liquid Storage Temperature (°F)

T_a = Ambient Temperature (°F) = 70°F

ASTM Method D-86, <https://law.resource.org/pub/us/cfr/ibr/003/astm.d86.2007.pdf>, is designed for the analysis of distillate fuels; it is not applicable to products containing appreciable quantities of residual material. The test method determines quantitatively the boiling range characteristics of: light and middle distillates, automotive spark-ignition engine fuels, aviation gasolines, turbine fuels, regular and low sulfur diesel fuels, special petroleum spirits, naphthas, white spirits, kerosene, and Grades and 2 burner fuels. Since this test method cannot be used to test asphalt materials due to high quantities of residual material, it is determined that tanks storing asphalt are not subject to this rule.

Reg XIII New Source Review (NSR)

Rule 1303: Requirements (Amended Dec. 6, 2002)

This rule allows the Executive Officer to deny a Permit to Construct for any new,

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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.

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

BACT is required for any increase in emissions that exceeds 1.0 lb/day on a maximum daily basis. As discussed in the Emissions Calculation Section of this evaluation, there will be an increase of 2.30 lbs/day in fugitive VOC emissions for the loading/unloading facility. The use of BACT fugitive components such as bellow-sealed valves and compliance with Rule 1173 are BACT for fugitive components. Paramount will install BACT fugitive components and will continue to comply with the requirements of Rule 1173. Compliance is expected.

Note that according to rule interpretation from Kurt Wiese on August 1, 2006, BACT applies only to the equipment being modified. Thus, BACT is evaluated for the fugitive components only that will be installed in the unloading facility and not the entire permit unit.

1303(b)(1) Modeling

According to Rule 1303 Appendix A, modeling for VOC is not required.

1303(b)(2) Emission Offsets

Offsets are required according to District policy if project emission increases, including sum of all emission increases from all applications for that project are more than 0.5 lb/day for all non-attainment air contaminant and their precursors (excludes CO). Offset ratios shall be 1.2 to 1.0 for Emission Reduction Credits (ERC). As shown in Table 6, there is a 2.34 lbs/day increase in VOC emissions. Paramount will provide ERC in the amount of 3 lbs/day ($2.34 \times 1.2 = 2.81 \sim 3.0$) to offset project emission increase.

1303(b)(3) Sensitive Zone Requirements

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

1303(b)(4) Facility Compliance

The facility is in compliance with all applicable rules and regulations of the District.

1303(b)(5) Major Polluting Facilities

(A) Alternative Analysis: The facility 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 the project. Paramount complies with this requirement through 1303(b)(5)(D)(i).

(B) Statewide Compliance: The facility must demonstrate that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by the facility in the State of California are subject to emission limitations and

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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 providing the District with a Statewide Compliance Certification.

(C) Protection of Visibility: This requirement does not apply since there is no increase in PM or NOx emissions.

(D) Compliance Through California Environmental Quality Act: The CEQA Applicability Form (400-CEQA) initially submitted by Paramount indicated that the project does not have any impacts which trigger the preparation of a CEQA document; therefore a CEQA analysis was not required. However, on July 10, 2013, Paramount submitted a revised CEQA Applicability Form indicating that a CEQA document was prepared that specifically evaluates this project. The Mitigated Negative Declaration and Initial Study conducted by the City of Paramount as Lead Agency are included in this engineering evaluation package. Paramount will provide to the District a copy of the signed Notice of Determination prior to the issuance of these permits.

Rule 1313(g): Emission Limitation Permit Conditions (Amended Dec. 7, 1995)
 Every permit has monthly maximum emissions from the permitted source. Compliance is expected.

Reg XIV Toxics and Other Non-Criteria Pollutants

1401(d)(1) MICR and Cancer Burden

The cumulative increase in MICR shall not result in an increased MICR greater than one in one million, if the permit is constructed without T-BACT and greater than ten in one million if the permit unit is constructed with T-BACT. As shown in the Risk Assessment, MICR is very well below the specified limit.

1401(d)(2) Chronic Hazard Index

The cumulative increase in total chronic HI for any target organ system shall not exceed 1.0 at any receptor location. As shown in the Risk Assessment, Table 7, chronic hazard index is very well below the specified limit.

1401(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. The total emissions shall be calculated according to 1401(f)(4) based on maximum hourly basis from permit conditions which directly limit the emissions. As shown in the Risk Assessment, Tables 8, acute hazard index is very well below the specified limit.

1401(d)(4) Risk per Year

The risk per year shall not exceed 1/70 of the maximum allowable risk specified in (d)(1)(A) or (d)(1)(B). Since the MICR is less than 1 in a million, the facility complies with this requirement.

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1401(d)(5) Operating conditions imposed pursuant to Rule 1401, which prohibit or limit the use or emission of toxic air contaminants, shall apply only to those toxic air contaminants listed in the version of Rule 1401 applicable at the time the permit conditions were imposed. There is no permit conditions prohibiting or limiting the use of toxic air contaminants for the subject storage tanks.

1401(d)(6) Federal New Source Review for Toxics
 Section 112 of the federal Clean Air Act (CAA) defines major source as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant (HAP) or 25 tons per year or more of any combination of hazardous air pollutants (HAPs). Since Paramount does not emit more than 10 tons annually of a listed HAP or more than 25 tons annually of a combination of HAPs, it is not subject to this requirement.

Reg XVII Prevention of Significant Deterioration (PSD)

This regulation sets forth preconstruction review requirements for stationary sources to ensure that air quality in clean air areas does not significantly deteriorate while maintaining a margin for future industrial growth.

The SCAQMD is presently considered in attainment for the following criteria pollutants: NO₂, SO₂, CO and Lead; thus these pollutants are subject to PSD regulations.

According to the guidance provided in Mohsen Nazemi’s email dated August 14, 2007, the AQMD has signed a new Limited PSD Delegation agreement with EPA effective July 25, 2007. Therefore, effective July 25, 2007, the AQMD has PSD responsibility for all new PSD sources and all modifications to existing PSD sources where the applicant is requesting to use the existing Regulation XVII to determine PSD applicability for a modification and not the recent calculation methodology adopted by the EPA as part of the NSR Reform.

The requirements of this regulation are not applicable for the proposed changes covered in this engineering evaluation since there is no net increase in annual emissions of any of the attainment air contaminant.

Reg XX Regional Clean Air Incentives Market (RECLAIM)

There are no NO_x or SO_x emissions associated with the subject storage tanks, loading and unloading facility; therefore, this regulation does not apply.

Reg XXX Title V Permits

Rule 3005: Permit Revisions (Amended March 16, 2001)

The permit for this project will be issued as a “de minimis significant permit revision” of the Title V permit as defined in Rule 3000(b)(6), because the cumulative emission increase is not greater than the following threshold:

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<u>Air Contaminant</u>	<u>Daily Maximum in lbs/day</u>
HAP	30
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220

The Table 9 below shows that the cumulative emission increase is not greater than the threshold; therefore the requirements of this rule have been met. The revision will be applicable to a 45-day EPA review.

Table 9: De Minimis Emissions Accumulation for Paramount Refinery
(Initial Title V Issuance to Latest Revision, March 19, 2009 – July 24, 2013)

<i>Air Contaminant</i>	<i>Current, lbs/day</i>	<i>Additional due to this project, lbs/day</i>	<i>Total, lbs/day</i>
HAP	0.00	0.00	0.00
VOC	1.72	2.34	4.06
NOx	0.59	0.00	0.59
PM10	0.02	0.00	0.02
SOx	0.03	0.00	0.03
CO	0.50	0.00	0.50

Rule 3006: Public Participation (Amended November 14, 1997)

Since the permit for this project will be issued as a “de minimis significant permit revision” of the Title V permit, it will not be subject to public notice requirements of this rule.

PART 2: STATE REGULATIONS

CEQA

California Environmental Quality Act

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) initially submitted by Paramount indicated that the project does not have any impacts which trigger the preparation of a CEQA document; therefore a CEQA analysis was not required. However, on July 10, 2013, Paramount submitted a revised CEQA Applicability Form indicating that a CEQA document was prepared that specifically evaluates this project. The Mitigated Negative Declaration and Initial Study conducted by the City of Paramount as Lead Agency are included in this engineering evaluation package. Paramount will provide to the District a copy of the signed Notice of

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Determination prior to the issuance of these permits.

PART 3: FEDERAL REGULATIONS

40 CFR 63 Subpart CC: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Petroleum Refineries

§63.640 Applicability and designation of affected source (Amended May 25, 2001)

The refining process units and equipment located at the Paramount Refinery are subject to the requirements of this subpart addressing:

- miscellaneous process vents
- storage vessels
- wastewater streams,
- loading, and
- equipment leaks

Paramount has provided data to the District to show that Paramount Refinery is not a 'major' HAP source, which is defined as a source emitting 10 tpy of any single HAP or 25 tpy of all HAPs combined. As an 'area source' HAP source emitting less than these thresholds, the facility is not subject to any major source Maximum Achievable Control Technology (MACT) Standards, including 40CFR63 Subpart CC, except for the reporting and recordkeeping requirements of 40CFR61 Subpart FF-National Emission Standard for Benzene Waste Operation. The Subpart FF requirements have been incorporated into the Title V permit as facility condition F52.2. Compliance is expected.

40 CFR 63 Subpart AAAAAAA: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing

§63.11559 Applicability (Adopted December 2, 2009)

As an 'area source' HAP source, the collection of the air blowing stills located at the Paramount Refinery is subject to the requirements of this subpart. The air blowing stills are not a part of these project applications, therefore this subpart does not apply.

Note: Federal Rules 40CFR60 Subpart GGGa and Subpart UU are evaluated under Regulation IX above.

CONCLUSION AND RECOMMENDATION

The construction and operation of the subject storage tanks, loading and unloading facilities are expected to comply with all applicable District, State and Federal Rules and Regulations. Therefore, issuance of Permits to Construct is recommended.