Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Permit Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT
Minor Revision

for

ConocoPhillips – San Francisco Refinery
Facility #A0016

Facility Address:
1380 San Pablo Avenue
Rodeo, CA 94572

Mailing Address:
1380 San Pablo Avenue
Rodeo, CA 94572

August 2005

Application 12995

Application Engineer: Brenda Cabral
Site Engineer: Brenda Cabral

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the "potential to emit," as defined by BAAQMD Regulation 2-6-218, more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

The District issued the initial Title V permit to this facility on December 1, 2003.

The purpose of this action is to allow a throughput increase of 6,000 barrels per day of crude oil at S350, Crude Unit.

The proposed changes to the permit are shown in "~~strikeout~~/underline" format. In this action, the District is soliciting public comment only on the revisions proposed in this action. When the permit is finalized, the tracking marks will be removed.

This statement of basis does not address the factual and legal basis for any other permit terms. These are addressed in the comprehensive statements of basis that were prepared for the initial issuance of the permit and subsequent reopenings and revisions. These are available on request.

B. Facility Description

The facility description can be found in the statement of basis that was prepared for the reopening issued on December 16, 2004. It is available on request from the Engineering Division of the District.

C. Permit Content

Additional information concerning the legal and factual basis of the Title V permit conditions is presented below. The information is organized by the relevant section of the Title V permit.

I. Standard Conditions

No changes to Section I are proposed.

II. Equipment

The following changes are proposed in this action:

Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

S#	Description	Make or Type	Model	Capacity
139	Tank 204 (also oil-water separator)	Fixed roof	Sour water, distillate oil	81 thousand bbl
140	Tank 205 (also oil-water separator)	Fixed roof	Sour water, naphtha	54 thousand bbl
350	U267 Crude Distillation Unit	Atmospheric/vacuum towers		36~~3~~,000 bbl/day
351	U267 B-601/602 Tower Pre-heaters (natural gas, refinery fuel gas)			95~~101~~ MMBTU/hr
425	Marine Loading Berth M1	2 permitted arms	Products, Crude oil	Products: 25,000 bbl/day annual average for S425, 426 total; Crude oil: 30,000 bbl/day annual average for S425, S426 total
426	Marine Loading Berth M2	4 permitted arms	Products, Crude oil	Products: 25,000 bbl/day annual average for S425, 426 total; Crude oil: 30,000 bbl/day annual average for S425, S426 total

Tanks S139 and S140 are being used as oil-water separators, so the description of the sources is changing as well as the description of the contents.

The capacity of S350, Crude Unit is being changed to 36,000 barrels per day.

The capacity of S351, Tower Preheaters, is being corrected to 95 MMbtu/hr.

A limit on crude oil receipts at the wharf is being imposed. These changes are fully discussed in the evaluation report for Application 12999, attached, which is part of this statement of basis.

III. Generally Applicable Requirements

No changes to this section are proposed in this action.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements for permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) listed following the corresponding District Rules. SIP rules are District rules that have been approved by EPA into the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portions of the SIP rule are cited separately after the District rule. The SIP portions will be federally enforceable; the non-SIP versions will not be federally enforceable, unless EPA has approved them through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions (unless they have been assigned a District permit condition number, in which case they are included as BAAQMD permit conditions). The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of changes to monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Changes to permit:

BAAQMD Condition 1694, part A.1 was split into parts A.1a and A.1b. The basis for the sources that are subject to part A.1b is BAAQMD Regulation 2-1-301. The basis for the sources that are subject to part A.1a is BAAQMD Regulation 2-1-234.3. As explained in the permit evaluation for Application 12999, attached in Appendix A, the correct basis for Sources S2-S5, S7-S22, S29-S31, S43, S44, S371, and S372 is BAAQMD Regulation 2-1-301 because these sources were physically altered when low-NOx burners were installed and received Authorities to Construct at that time.

The basis for sources S3, S7, S21, S336, S337, and S438 has not changed, but the designation of the condition part has.

Tables IV – A.1-A.23, A.25, A.26, A.31-A.33
Source-specific Applicable Requirements
S2-S5, S7-S22, S29-S31, S43, S44, S351, S371, S372

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition 1694			
Part A.1b	Heat ratings, firing limits [Basis: Regulation 2-1-301~~234.3~~]	Y	

Tables IV – A.2, A5, A.19, A.29, A.30, A.34
Source-specific Applicable Requirements
S3, S7, S21, S336, S337, S438

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition 1694			
Part A.1a	Heat ratings, firing limits [Basis: Regulation 2-1-234.1]	Y	

The permit condition for the crude distillation unit was modified to change the capacity of the crude unit and the recordkeeping. A requirement for water seals was added to the crude unit desalter drain to prevent an emissions increase at the process drain.

Table IV - O
Source-specific Applicable Requirements
S350 – U-267 CRUDE DISTILLATION UNIT

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition 383			
Part 1a	Sulfur content limit in crude [Basis: Cumulative Increase]	Y	
Part 1b	Crude analysis requirement [Basis: Cumulative Increase]	Y	
Part 2	Daily~~, average daily~~ crude feed limits [Basis: Cumulative Increase]	Y	
Part 3a	Daily~~Monthly~~ recordkeeping requirements [Basis: Cumulative Increase]	Y	
Part 3b	Records of sulfur content of crude feed [Basis: Cumulative	Y	

Table IV - O
Source-specific Applicable Requirements
S350 – U-267 CRUDE DISTILLATION UNIT

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	Increase]		
Part 4	Requirement for water seals [Basis: toxics, cumulative increase]	Y	

The applicant has proposed a limit on this source because no new ship emissions will be offset in this application. The limit will be imposed on all berths that could receive crude oil.

Table IV - S
Source-specific Applicable Requirements
S425 – MARINE LOADING BERTH M1
S426 – MARINE LOADING BERTH M2

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition 4336			
Part 1	A-420 oxidizer temperature requirements [Basis: Cumulative Increase]	Y	
Part 2	Monitoring requirements [Basis: Cumulative Increase]	Y	
Part 3	Prohibition against loading without A-420 in service [Basis: Cumulative Increase]	Y	
Part 4	Leak test requirement [Basis: Cumulative Increase]	Y	
Part 5	Maximum loading pressure relative to relief valve setpoint [Basis: Cumulative Increase]	Y	
Part 6	Throughput limit for regulated materials [Basis: Cumulative Increase]	Y	
Part 7	Limit on receipts of crude oil via tanker (ship) [Cumulative increase]	Y	
Part ~~7~~8	Recordkeeping requirement [Basis: Cumulative Increase]	Y	

The throughput limits for S123, S124, S186, and S334 are now in BAAQMD Condition 22478. Vapor pressure limits, equipment requirements and BACT requirements are also in the permit condition. The citations for 40 CFR 60, Subpart Kb, for S334 have been expanded.

Table IV – BB.13
Source-Specific Applicable Requirements
MACT ZERO-GAP EXTERNAL FLOATING ROOF TANKS
S97 (TANK 100), S100 (TANK 103), S107 (TANK 150), S110 (TANK 155), S111 (TANK 156), S112 (TANK 157), S114 (TANK 159), S115 (TANK 160), S122 (TANK 167), S123 (TANK 168), S124 (TANK 169), S128 (TANK 174), S129 (TANK 180), S150 (TANK 241), S151 (TANK 242), S177 (TANK 287), S178 (TANK 288), S186 (TANK 298), S254 (TANK 1001), S255 (TANK 1002), S256 (TANK 1003), S259 (TANK 1006)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Condition 20989, Part A	Throughput limits for sources S97, S100, S107, S110, S111, S112, S114, S115, S122, ~~S123, S124,~~ S128, S177, ~~S186,~~ S254, S255, S256, S259 [Basis: 2-1-234.3]	N	
BAAQMD Condition 20989, Part A	Throughput limits for sources S129, S150, S151, S178 [Basis: 2-1-234.3]	Y	
BAAQMD Condition 22478			
Part 1	Vapor pressure limit for S123 [Basis: cumulative increase]	Y	
Part 2	Emissions limit for S124 [Basis: cumulative increase]	Y	
Part 3	Emissions limit for S186 [Basis: cumulative increase]	Y	
Part 5	Throughput limit for S123 [Basis: cumulative increase]	Y	
Part 7	BACT equipment requirements for S123, S124, S186, and S334 [Basis: BACT, cumulative increase]	Y	
Part 8	Emission calculations for S124 and S186 [Basis: cumulative increase]	Y	

Table IV – BB.14
Source-Specific Applicable Requirements
NSPS K AND NSPS KA ZERO-GAP EXTERNAL FLOATING ROOF TANKS
NSPS K - S334 (TANK 107),
NSPS KA - S341 (TANK 208), S342 (TANK 209), S343 (TANK 210)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~NSPS Title~~ 40 ~~Part~~ CFR 60, Subpart K	**NSPS Subpart K for Tanks (4/4/1980) APPLIES TO S334 (Tank 107)**		
~~40 CFR~~ 60.110(a)	Applicability and Designation of Affected Facility; Affected facility	Y	
~~40 CFR~~ 60.110(c)(2)	Applicability and Designation of Affected Facility-->65,000 gal after 6/11/1973 and before 5/19/1978.	Y	
60.112(a)(1)	Standard for petroleum liquids above 1.5 psia and below 11.1 psia	Y	
60.113(a)	Records of petroleum liquids, period of storage, and maximum true	Y	

Table IV – BB.14
Source-Specific Applicable Requirements
NSPS K AND NSPS KA ZERO-GAP EXTERNAL FLOATING ROOF TANKS
NSPS K - S334 (TANK 107),
NSPS KA - S341 (TANK 208), S342 (TANK 209), S343 (TANK 210)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	vapor pressure		
60.113(b)	Nomographs may be used	Y	
~~**BAAQMD Condition 20989, Part A**~~	~~Throughput limits for source S334 [Basis: 2-1-234.3]~~	~~N~~	
BAAQMD Condition 22478			
Part 4	Vapor pressure limit [Basis: cumulative increase]	Y	
Part 6	Throughput limit for S334 [Basis: cumulative increase]	Y	
Part 7	BACT equipment requirements for S123, S124, S186, and S334 [Basis: BACT, cumulative increase]	Y	

The table for Tanks S139, S140, and S182 has been split into two tables because S139 and S140 are also being used as oil-water separators and so have different requirements.

Table IV – BB.15a
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
S139 (Tank 204), S140 (Tank 205)~~, S182 (Tank 294)~~

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 8, Rule 5	**Organic Compounds, Storage of Organic Liquids (11/27/02) REQUIREMENTS FOR FIXED ROOF TANKS**		
8-5-111	Limited Exemption, Tank Removal From and Return to Service	Y	
8-5-111.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO	Y	
8-5-111.1.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; 3 day prior notification	Y	
8-5-111.1.2	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; Telephone notification	Y	
8-5-111.2	Limited Exemption, Tank Removal From and Return to Service; Compliance before notification	Y	
8-5-111.4	Limited Exemption, Tank Removal From and Return to Service; Use of vapor recovery	Y	
8-5-111.5	Limited Exemption, Tank Removal From and Return to Service; Minimization of emissions	Y	
8-5-111.6	Limited Exemption, Tank Removal From and Return to Service; Written notice of completion not required	Y	
8-5-111.7	Limited Exemption, Tank Removal From and Return to Service; Compliance with Section 8-5-328	Y	
8-5-112	Limited Exemption, Tanks in Operation	Y	

Table IV – BB.15a
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
S139 (Tank 204), S140 (Tank 205), ~~S182 (Tank 294)~~

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-5-112.1	Limited Exemption, Tanks in Operation; Notice to the APCO	Y	
8-5-112.1.1	Limited Exemption, Tanks in Operation; Notice to the APCO; 3 day prior notification	Y	
8-5-112.1.2	Limited Exemption, Tanks in Operation; Notice to the APCO; Telephone notification	Y	
8-5-112.2	Limited Exemption, Tanks in Operation; Compliance and certification before commencement of work	Y	
8-5-112.3	Limited Exemption, Tanks in Operation; No product movement; minimization of emissions	Y	
8-5-112.4	Limited Exemption, Tanks in Operation; Exemption does not exceed 7 days	Y	
8-5-301	Storage Tank Control Requirements (internal floating roof, external floating roof, or approved emission control system)	Y	
8-5-303	Requirements for Pressure Vacuum Valves	Y	
8-5-303.1	Requirements for Pressure Vacuum Valves; Set pressure	Y	
8-5-303.2	Requirements for Pressure Vacuum Valves; Installation, maintenance, operation	Y	
8-5-306	Requirements for Approved Emission Control Systems	Y	
8-5-328	Tank Degassing Requirements	Y	
8-5-328.1	Tank Degassing Requirements; Tanks > 75 cubic meters	Y	
8-5-328.1.2	Tank Degassing Requirements; Tanks > 75 cubic meters; Concentration of <10,000 ppm as methane after degassing	Y	
8-5-328.2	Tank degassing requirements; Ozone excess day prohibition	Y	
8-5-403	Inspection Requirements for Pressure Vacuum Valves	Y	
8-5-404	Certification	Y	
8-5-501	Records	Y	
8-5-501.1	Records; Type and amounts of liquid; true vapor pressure; Retain 24 months	Y	
8-5-503	Portable hydrocarbon detector	Y	
8-5-602	Analysis of Samples, True Vapor Pressure	Y	
8-5-603	Determination of emissions	Y	
8-5-603.1	Determination of Emissions; Organic compounds specified in 8-5-306	Y	
8-5-604	Determination of Applicability	Y	
8-5-605	Pressure Vacuum Valve Gas Tight Determination	Y	
BAAQMD · Regulation 8, Rule 8	**Organic Compounds, Wastewater (Oil-Water Separators) (9/15/2004)**		
8-8-302	Wastewater Separators Larger than or Equal to 18.9 Liters per Second	N	
8-8-302.3	Requirements for separators with fixed roofs and control device	Y	
8-8-303	Gauging and Sampling Devices	Y	
8-8-503	Inspection and Repair Records	Y	
8-8-504	Portable Hydrocarbon Detector	Y	
8-8-505	Records for Wastewater Collection System Components at Petroleum Refineries	N	
8-8-603	Inspection procedures	N	
SIP Regulation 8, Rule 8	**Organic Compounds, Wastewater (Oil-Water Separators) (8/29/94)**		

Table IV – BB.15a
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
S139 (Tank 204), S140 (Tank 205)~~, S182 (Tank 294)~~

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-8-505	Records for Wastewater Collection System Components at Petroleum Refineries	N	
NESHAPS Title 40 Part 63 Subpart CC	**National Emission Standards for Hazardous Air Pollutants for Petroleum Refining (8/18/95) EXEMPTION FOR TANKS VENTED TO FUEL GAS SYSTEM**		
40 CFR 63.640(c)(2)	Applicability and Designation of Storage Vessels	Y	
40 CFR 63.640(d)(5)	Exemption for emission points routed to fuel gas system	Y	
NSPS Title 40 Part 60 Subpart K	**NSPS Subpart K for Tanks (4/4/1980) EXEMPTION FOR TANKS NOT CONTAINING PETROLEUM LIQUIDS (Applicable to S139 only)**		
40 CFR 60.111(b)	Definitions: Petroleum liquids	Y	
~~**BAAQMD Condition 13184**~~	~~**APPLICABLE TO S182**~~		
~~Part 1~~	~~Requirement to vent emissions to fuel gas system [Basis: Cumulative Increase]~~	~~Y~~	
BAAQMD Condition 20989, Part A	Throughput limits for sources S139, S140 [Basis: 2-1-234.3]	**N**	

Table IV – BB.15b
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
~~S139 (Tank 204), S140 (Tank 205),~~ S182 (Tank 294)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 8, Rule 5	**Organic Compounds, Storage of Organic Liquids (11/27/02) REQUIREMENTS FOR FIXED ROOF TANKS**		
8-5-111	Limited Exemption, Tank Removal From and Return to Service	Y	
8-5-111.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO	Y	
8-5-111.1.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; 3 day prior notification	Y	
8-5-111.1.2	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; Telephone notification	Y	
8-5-111.2	Limited Exemption, Tank Removal From and Return to Service; Compliance before notification	Y	
8-5-111.4	Limited Exemption, Tank Removal From and Return to Service; Use of vapor recovery	Y	
8-5-111.5	Limited Exemption, Tank Removal From and Return to Service; Minimization of emissions	Y	

Table IV – BB.15b
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
~~S139 (Tank 204), S140 (Tank 205),~~ S182 (Tank 294)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
8-5-111.6	Limited Exemption, Tank Removal From and Return to Service; Written notice of completion not required	Y	
8-5-111.7	Limited Exemption, Tank Removal From and Return to Service; Compliance with Section 8-5-328	Y	
8-5-112	Limited Exemption, Tanks in Operation	Y	
8-5-112.1	Limited Exemption, Tanks in Operation; Notice to the APCO	Y	
8-5-112.1.1	Limited Exemption, Tanks in Operation; Notice to the APCO; 3 day prior notification	Y	
8-5-112.1.2	Limited Exemption, Tanks in Operation; Notice to the APCO; Telephone notification	Y	
8-5-112.2	Limited Exemption, Tanks in Operation; Compliance and certification before commencement of work	Y	
8-5-112.3	Limited Exemption, Tanks in Operation; No product movement; minimization of emissions	Y	
8-5-112.4	Limited Exemption, Tanks in Operation; Exemption does not exceed 7 days	Y	
8-5-301	Storage Tank Control Requirements (internal floating roof, external floating roof, or approved emission control system)	Y	
8-5-303	Requirements for Pressure Vacuum Valves	Y	
8-5-303.1	Requirements for Pressure Vacuum Valves; Set pressure	Y	
8-5-303.2	Requirements for Pressure Vacuum Valves; Installation, maintenance, operation	Y	
8-5-306	Requirements for Approved Emission Control Systems	Y	
8-5-328	Tank Degassing Requirements	Y	
8-5-328.1	Tank Degassing Requirements; Tanks > 75 cubic meters	Y	
8-5-328.1.2	Tank Degassing Requirements; Tanks > 75 cubic meters; Concentration of <10,000 ppm as methane after degassing	Y	
8-5-328.2	Tank degassing requirements; Ozone excess day prohibition	Y	
8-5-403	Inspection Requirements for Pressure Vacuum Valves	Y	
8-5-404	Certification	Y	
8-5-501	Records	Y	
8-5-501.1	Records; Type and amounts of liquid; true vapor pressure; Retain 24 months	Y	
8-5-503	Portable hydrocarbon detector	Y	
8-5-602	Analysis of Samples, True Vapor Pressure	Y	
8-5-603	Determination of emissions	Y	
8-5-603.1	Determination of Emissions; Organic compounds specified in 8-5-306	Y	
8-5-604	Determination of Applicability	Y	
8-5-605	Pressure Vacuum Valve Gas Tight Determination	Y	
NESHAPS Title 40 Part 63 Subpart CC	**National Emission Standards for Hazardous Air Pollutants for Petroleum Refining (8/18/95) EXEMPTION FOR TANKS VENTED TO FUEL GAS SYSTEM**		
40 CFR 63.640(c)(2)	Applicability and Designation of Storage Vessels	Y	
40 CFR 63.640(d)(5)	Exemption for emission points routed to fuel gas system	Y	
~~**NSPS Title 40 Part 60 Subpart K**~~	~~**NSPS Subpart K for Tanks (4/4/1980) EXEMPTION FOR TANKS NOT CONTAINING PETROLEUM**~~		

Table IV – BB.15b
Source-Specific Applicable Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
~~S139 (Tank 204), S140 (Tank 205),~~ S182 (Tank 294)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	~~**LIQUIDS (Applicable to S139 only)**~~		
~~40 CFR 60.111(b)~~	~~Definitions: Petroleum liquids~~	~~Y~~	
BAAQMD Condition 13184	**APPLICABLE TO S182**		
Part 1	Requirement to vent emissions to fuel gas system [Basis: Cumulative Increase]	Y	
~~**BAAQMD Condition 20989, Part A**~~	~~Throughput limits for sources S139, S140 [Basis: 2-1-234.3]~~	~~N~~	

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 that provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;

10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and

10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

No changes to this section are proposed in this action.

VI. Permit Conditions

Each permit condition is identified with a unique numerical identifier, up to five digits.

All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all 'strike-out' language will be deleted and all "underline" language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order

of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

The proposed changes to permit conditions are in the evaluation report for Application 12999, which is attached and which is part of this statement of basis. Several conditions will appear in this statement of basis for clarity.

Condition 383

This condition applies to S350, Crude Unit. As shown below, the throughput has been changed to 36,000 on a calendar day basis. The annual average will be deleted. Since they now have a daily limit, recordkeeping has been changed to a daily basis. To prevent an emissions increase from the desalter drain, a control requirement has been placed on the drain.

1a. The owner/operator of S350 (Crude Unit 267) shall not process crude oil at S350 with a sulfur content in excess of 1.5 wt %. [Cumulative Increase]

1b. The owner/operator shall sample and analyze the crude feed to S350 to determine the sulfur content each time a new tanker shipment or pipeline delivery of crude is introduced into the S350 feed tanks. [Cumulative Increase]

2. The owner/operator of S350 shall not exceed an S350 feed rate of 36,000~~30,000 bbl per day on a 12 month rolling average basis. The S350 feed rate shall never exceed 33,000~~ bbl on any calendar day. The 36,000~~33,000~~ bbl/day limit ~~and 30,000 bbl/day 12 month rolling average limit are~~ is an absolute limit~~s~~ and may not be corrected for instrument error. [Cumulative Increase]

3. The owner/operator of S350 shall maintain ~~monthly~~ daily records of "calendar day" throughput ~~and "12 month rolling average" throughput at S350~~ in a District-approved log. The owner/operator shall also maintain records of all sulfur content analyses required by Part 1b. These records shall be kept for at least five years and shall be made available to the District upon request. [Cumulative Increase]

4. The owner/operator shall install water seals (or equivalent controls) on the desalter process drain system for S350 that comply with the requirements of BAAQMD Regulation 8-8-312 prior to increasing the daily throughput to 36,000 bbl/day as allowed by part 2. [Toxics, cumulative increase]

Condition 1694

The basis for BAAQMD Condition 1694, part A.1 was BAAQMD Regulation 2-1-234. During the analysis for this application, it was determined that the facility replaced the burners for a number of the heaters for the sources downstream of S350, Crude Unit, to comply with BAAQMD Regulation 9, Rule 10, Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators, and Process Heaters in Petroleum Refineries. The facility received Authorities to Construct for the changes approved in Applications 2454, 18696, and 19318.

Therefore, BAAQMD Condition 1694, part A.1 has been split into parts A.1a and A.1b. The heaters with the new ultra-low-NOx burners have been moved to part A.1b with the basis of BAAQMD Regulation 2-1-301. The heaters have the following source numbers: S2, S4, S5, S8-S20, S22, S29-S31, S43, S44, S371, and S372. This change has been made with the facility's consent.

S351, the heater for the crude unit, was also moved to part A.1b. This heater was permitted in 1984 in Application 30417 at 95 MMbtu/hr, so it is not a "grandfathered" source. The burners were not replaced for BAAQMD Regulation 9, Rule 10. There have been no modifications. The Title V permit has a throughput of 101 MMbtu/hr, which is in error. The throughput will be corrected to 95 MMbtu/hr in this action with the facility's consent.

Condition 4336

The facility has stated that all of the additional crude will be received by pipeline, not by ship, so there will be no additional ship emissions. Ship emissions are considered part of the facility in accordance with BAAQMD Regulation 2-1-213 and are subject to offsets. Cargo carriers are exempt from BACT pursuant to BAAQMD Regulations 2-2-206 and 2-2-244.

To ensure that ship emissions do not increase, the facility has proposed a throughput limit on crude oil receipts via ship of 30,000 bbls/day on an annual average. This is equivalent to the throughput of the crude unit before the increase, and was allowed before the modification because there was no previous limit on crude oil receipts via ship.

Monthly recordkeeping of crude received via ship was also added.

Condition 20989

This condition has throughput conditions for various sources that did not have throughput limits imposed during the original permitting. Some of these sources are grandfathered, which means that they were built before 1979. Four tanks on the list will be considered modified: S123, S124, S186, and S334. An emissions increase has been calculated and offsets have been provided. These tanks will be deleted from BAAQMD Condition 20989 and a new condition will be assigned. These tanks will throughput limits and vapor pressure limits. Three of them will have BACT equipment requirements and the fourth will have equipment requirements to ensure that the tank is as represented in the application. The new condition is shown below:

CONDITION 22478

For Sources S123 (Tank 168), S124 (Tank 169), S186 (Tank 298), and S334 (Tank 107)

1. The owner/operator shall ensure that S123 contains only petroleum liquid with a true vapor pressure less than or equal to 1.5 psia. [Cumulative Increase]

2. The owner/operator shall ensure that the emissions of S124 do not exceed 6,815 lb VOC in any consecutive 12-month period. S124 shall only contain petroleum liquids. [Cumulative Increase]

3. The owner/operator shall ensure that the emissions of S186 do not exceed 2,231 lb VOC in any consecutive 12-month period. S186 shall only contain petroleum liquids. [Cumulative Increase]

4. The owner/operator shall ensure that S334 contains only crude oil or a less volatile petroleum liquid with a true vapor pressure less than or equal to 6.75 psia. [Cumulative Increase]

5. The owner/operator shall ensure that the throughput of petroleum liquids at S123 does not exceed 3,000,000 barrels/yr. [Cumulative Increase]

6. The owner/operator shall ensure that the throughput of crude oil or other petroleum liquids at S334 does not exceed 5,000,000 barrels/yr. [Cumulative Increase]

7. The owner/operator shall equip S123, S124, S186, and S334 with a BAAQMD approved roof with mechanical shoe primary seal and zero gap secondary seal meeting the design criteria of BAAQMD Regulation 8, Rule 5. The owner/operator shall ensure that there are no ungasketed roof penetrations, no slotted pipe guide poles unless equipped with float and wiper seals, and no adjustable roof legs unless fitted with vapor seal boots or equivalent. [BACT, cumulative increase]

8. The owner/operator shall calculate the emissions of S124 and S186 on a calendar month basis using the AP-42 equations. The owner/operator shall use actual throughputs, actual vapor pressures, and actual temperature data for each month. The owner/operator shall calculate the emissions for the last 12-month period on a monthly basis. The calculations shall be complete within a calendar month after the end of each monthly period. [Cumulative increase]

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements that apply to each source. The summary includes a citation for each monitoring requirement, frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

Changes to permit:

See Section C.IV of this statement of basis for the explanation of the changes to the following tables for process heaters.

Tables VII – A.1-A.23, A.25, A.26, A.31-A.33
Source-specific Applicable Requirements
S2-S5, S7-S22, S29-S31, S43, S44, S351, S371, S372

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Heat input	BAAQMD Condition 1694, Part A.1b	Y		Various	BAAQMD Condition 1694, Part A.5	P/D	records

Tables VII – A.2, A5, A.19, A.29, A.30, A.34
Source-specific Applicable Requirements
S3, S7, S21, S336, S337, S438

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Heat input	BAAQMD Condition 1694, Part A.1a	Y		Various	BAAQMD Condition 1694, Part A.5	P/D	records

See Section C.IV of this statement of basis for the explanation of the changes to the following table for the crude distillation unit.

Table VII – O
Applicable Limits and Compliance Monitoring Requirements
S350 – U-267 CRUDE DISTILLATION UNIT

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
POC	BAAQMD 8-10-301	Y		abatement of emissions from process vessel depressurization is required until pressure is reduced to less than 1000 mm Hg	8-10-401.2 (SIP) and 8-10-501 & 502 (non-SIP)	P/E	Records
SO2	BAAQMD Condition 383, Part 1a	Y		crude oil sulfur content limit (1.5 weight%) (only until modified in accordance with A/C 5814)	BAAQMD Condition 383, Part 1b	P/E	analysis
Through-put	BAAQMD Condition 383, Part 2	Y		~~33,000 bbl/day, 30,000 bbl/day annual average (only until modified in accordance with A/C 5814)~~ 36,000 bbl/day	BAAQMD Condition 383, Part 3a	P/D~~M~~	records

The applicant has proposed a limit on this source because no new ship emissions will be offset in this application. The limit will be imposed on all berths that could receive crude oil.

Table VII - S
Applicable Limits and Compliance Monitoring Requirements
S425 – MARINE LOADING BERTH M1
S426 – MARINE LOADING BERTH M2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
POC	BAAQMD Condition 4336, Part 6	Y		25,000 bbl/day of gasoline, naphtha and C5/C6 compounds	BAAQMD Condition 4336, Part ~~7~~8	P/D	loading records
Through-put	BAAQMD Condition 4336, Part 7	Y		30,000 bbl/day of crude oil received on an annual average basis	BAAQMD Condition 4336, Part 8	P/D	loading records

Table VII - S
Applicable Limits and Compliance Monitoring Requirements
S425 – MARINE LOADING BERTH M1
S426 – MARINE LOADING BERTH M2

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Through-put	BAAQMD Condition 20989, Part A	Y		2.8 E 6 bbl/yr	BAAQMD Condition 20989, Part A	P/M	records

The throughput limits for S123, S124, S186, and S334 are now in BAAQMD Condition 22478. Vapor pressure limits, equipment requirements and BACT requirements are also in the permit condition. The citations for 40 CFR 60, Subpart Kb, for S334 have been expanded.

Table VII – BB.13
Applicable Limits and Compliance Monitoring Requirements
MACT ZERO-GAP EXTERNAL FLOATING-ROOF TANKS
S97 (TANK 100), S100 (TANK 103), S107 (TANK 150), S110 (TANK 155), S111 (TANK 156), S112 (TANK 157), S114 (TANK 159), S115 (TANK 160), S122 (TANK 167), S123 (TANK 168), S124 (TANK 169), S128 (TANK 174), S129 (TANK 180), S150 (TANK 241), S151 (TANK 242), S177 (TANK 287), S178 (TANK 288), S186 (TANK 298), S254 (TANK 1001), S255 (TANK 1002), S256 (TANK 1003), S259 (TANK 1006)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Regulation 8, Rule 5: Organic Compounds - STORAGE OF ORGANIC LIQUIDS LIMITS AND MONITORING FOR EXTERNAL FLOATING-ROOF TANKS						
VOC	BAAQMD 8-5-301	Y		Record of liquids stored and true vapor pressure	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records
VOC	BAAQMD 8-5-320	Y		Floating roof fitting closure standards; includes gasketed covers	BAAQMD 8-5-401.2	P/SA	Measurement and visual inspection
VOC	BAAQMD 8-5-321	Y		Primary rim-seal standards; includes gap criteria	BAAQMD 8-5-401.1	P/SA and every time a seal is replaced	Seal inspection
VOC	BAAQMD 8-5-322	Y		Secondary rim-seal standards; includes gap criteria	BAAQMD 8-5-401.1	P/SA and every time a seal is replaced	Seal inspection

Table VII – BB.13
Applicable Limits and Compliance Monitoring Requirements
MACT ZERO-GAP EXTERNAL FLOATING-ROOF TANKS
S97 (TANK 100), S100 (TANK 103), S107 (TANK 150), S110 (TANK 155), S111 (TANK 156), S112 (TANK 157), S114 (TANK 159), S115 (TANK 160), S122 (TANK 167), S123 (TANK 168), S124 (TANK 169), S128 (TANK 174), S129 (TANK 180), S150 (TANK 241), S151 (TANK 242), S177 (TANK 287), S178 (TANK 288), S186 (TANK 298), S254 (TANK 1001), S255 (TANK 1002), S256 (TANK 1003), S259 (TANK 1006)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC	BAAQMD 8-5-328.1.2	Y		Concentration of < 10,000 ppm as methane after degassing	BAAQMD 8-5-503	periodic each time emptied & degassed	Portable hydrocarbon detector
VOC		Y		Certification reports on tank inspections and source tests	BAAQMD 8-5-404 8-5-405	periodic after each tank inspection and source test	Reports
VOC		Y		Records of tank seal replacement	BAAQMD 8-5-501.2	periodic after each tank seal replacement	Records
VOC		Y		Determination of applicability	BAAQMD 8-5-604	P/E	look-up table or sample analysis
The following apply only to S107 (Tank 150), S110 (Tank 155), S115 (Tank 160), S123 (Tank 168), S128 (Tank 174), S129 (Tank 180), and S178 (Tank 288)							
VOC	BAAQMD 8-5-303.1	Y		Pressure vacuum valve set pressure within 10% of maximum allowable working pressure of the tank, or at least 0.5 psig	BAAQMD 8-5-403	P/SA	visual inspection
VOC	BAAQMD 8-5-303.2	Y		Pressure vacuum valve must be gas-tight: < 500 ppm (as methane) above background	BAAQMD 8-5-403 8-5-503 8-5-605	P/SA	Method 21 portable hydrocarbon detector
The following apply only to S107 (Tank 150), S110 (Tank 155), S115 (Tank 160), S123 (Tank 168), S128 (Tank 174), S129 (Tank 180), and S178 (Tank 288)							
NESHAPS CC	**40 CFR 63 Subpart CC – NESHAPS for Petroleum Refineries** **40 CFR 63 Subpart G – SOCMI HON** **LIMITS AND MONITORING FOR EXTERNAL FLOATING ROOF TANKS**						
HAP	40 CFR 63.646(f)	Y		Deck fitting closure standards	40 CFR 63.646 (a) & (e) 63.120 (b)(10)	periodic initially & each time emptied & degassed	visual inspection

Table VII – BB.13
Applicable Limits and Compliance Monitoring Requirements
MACT ZERO-GAP EXTERNAL FLOATING-ROOF TANKS
S97 (TANK 100), S100 (TANK 103), S107 (TANK 150), S110 (TANK 155), S111 (TANK 156), S112 (TANK 157), S114 (TANK 159), S115 (TANK 160), S122 (TANK 167), S123 (TANK 168), S124 (TANK 169), S128 (TANK 174), S129 (TANK 180), S150 (TANK 241), S151 (TANK 242), S177 (TANK 287), S178 (TANK 288), S186 (TANK 298), S254 (TANK 1001), S255 (TANK 1002), S256 (TANK 1003), S259 (TANK 1006)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
HAP	40 CFR 63.646(a) 63.120 (b)(3)&(5)	Y		Primary rim-seal standards; includes gap criteria	40 CFR 63.646(a) 63.120 (b)(1) & (2)	periodic initially & at 5 yr intervals	measurement and visual inspection
HAP	40 CFR 63.646(a) 63.120 (b)(4)&(6)	Y		Secondary rim-seal standards; includes gap criteria	40 CFR 63.646(a) 63.120 (b)(1) & (2)	periodic initially & annually	measurement and visual inspection
BAAQMD Permit	**PERMIT CONDITIONS**						
VOC	BAAQMD Condition 22478, Part 2	Y		S124: 6,815 lb/12-month period	BAAQMD Condition 22478, Part 8	P/M	Records and calculations
	BAAQMD Condition 22478, Part 3	Y		S186: 2,231 lb/12-month period	BAAQMD Condition 22478, Part 8	P/M	Records and calculations
throughput	BAAQMD Condition 20989, Part A	N		S97: 1.1 E 7 bbl/yr S100: 4.38 E 6 bbl/yr S107: 8.76 E 6 bbl/yr S110: 1.40 E 7 bbl/yr S111: 1.31 E 7 bbl/yr S112: 1.49 E 7 bbl/yr S114: 1.31 E 7 bbl/yr S115: 4.38 E 6 bbl/yr S122: 4.38 E 6 bbl/yr ~~S123: 5.1 E 6 bbl/yr~~ ~~S124: 4.38 E 6 bbl/yr~~ S128: 5.1 E 6 bbl/yr S177: 2.63 E 7 bbl/yr ~~S186: 4.38 E 6 bbl/yr~~ S254: 7.01 E 7 bbl/yr S255: 7.01 E 7 bbl/yr S256: 7.01 E 7 bbl/yr S259: 7.01 E 7 bbl/yr	BAAQMD Condition 20989, Part A	P/M	Records

Table VII – BB.13
Applicable Limits and Compliance Monitoring Requirements
MACT ZERO-GAP EXTERNAL FLOATING-ROOF TANKS
S97 (TANK 100), S100 (TANK 103), S107 (TANK 150), S110 (TANK 155), S111 (TANK 156), S112 (TANK 157), S114 (TANK 159), S115 (TANK 160), S122 (TANK 167), S123 (TANK 168), S124 (TANK 169), S128 (TANK 174), S129 (TANK 180), S150 (TANK 241), S151 (TANK 242), S177 (TANK 287), S178 (TANK 288), S186 (TANK 298), S254 (TANK 1001), S255 (TANK 1002), S256 (TANK 1003), S259 (TANK 1006)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
throughput	BAAQMD Condition 20989, Part A	Y		S129: 4.6 E 6 bbl/yr S150: 4.38 E 7 bbl/yr S151: 4.38 E 7 bbl/yr S178: 3.50 E 7 bbl/yr	BAAQMD Condition 20989, Part A	P/M	records
throughput	BAAQMD Condition 22478, Part 5	Y		S123: 5.1 E 6 bbl/yr	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records
Vapor pressure	BAAQMD Condition 22478, Part 1	Y		S123: < 3.4 psia	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records

Table VII – BB.14
Applicable Limits and Compliance Monitoring Requirements
NSPS K AND NSPS KA ZERO-GAP EXTERNAL FLOATING ROOF TANKS
NSPS K - S334 (TANK 107),
NSPS KA - S341 (TANK 208), S342 (TANK 209), S343 (TANK 210)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Regulation 8, Rule 5: Organic Compounds - STORAGE OF ORGANIC LIQUIDS LIMITS AND MONITORING FOR EXTERNAL FLOATING-ROOF TANKS						
VOC	BAAQMD 8-5-301	Y		Record of liquids stored and true vapor pressure	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records
VOC	BAAQMD 8-5-320	Y		Floating roof fitting closure standards; includes gasketed covers	BAAQMD 8-5-401.2	P/SA	Measurement and visual inspection

Table VII – BB.14
Applicable Limits and Compliance Monitoring Requirements
NSPS K AND NSPS KA ZERO-GAP EXTERNAL FLOATING ROOF TANKS
NSPS K - S334 (TANK 107),
NSPS KA - S341 (TANK 208), S342 (TANK 209), S343 (TANK 210)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC	BAAQMD 8-5-321	Y		Primary rim-seal standards; includes gap criteria	BAAQMD 8-5-401.1	P/SA and every time a seal is replaced	Seal inspection
VOC	BAAQMD 8-5-322	Y		Secondary rim-seal standards; includes gap criteria	BAAQMD 8-5-401.1	P/SA and every time a seal is replaced	Seal inspection
VOC	BAAQMD 8-5-328.1.2	Y		Concentration of < 10,000 ppm as methane after degassing	BAAQMD 8-5-503	periodic each time emptied & degassed	Portable hydrocarbon detector
VOC		Y		Certification reports on tank inspections and source tests	BAAQMD 8-5-404 8-5-405	periodic after each tank inspection and source test	Reports
VOC		Y		Records of tank seal replacement	BAAQMD 8-5-501.2	periodic after each tank seal replacement	Records
VOC		Y		Determination of applicability	BAAQMD 8-5-604	P/E	look-up table or sample analysis
NESHAPS CC, NSPS K (note 2), and NSPS Ka (note 3)	**40 CFR 63 Subpart CC – NESHAPS for Petroleum Refineries** **40 CFR 63 Subpart G – SOCMI HON** **40 CFR 60 Subpart K – NSPS for Petroleum Storage Vessels** **40 CFR 60 Subpart Ka – NSPS for Petroleum Storage Vessels** **LIMITS AND MONITORING FOR EXTERNAL FLOATING ROOF TANKS**						
HAP	40 CFR 63.640(n)(5) 63.646(f)	Y		Deck fitting closure standards	40 CFR 63.640(n)(5) 63.646 (a) & (e) 63.120 (b)(10)	periodic initially & each time emptied & degassed	visual inspection
HAP	40 CFR 63.640(n)(5) 63.646(a) 63.120 (b)(3)&(5)	Y		Primary rim-seal standards; includes gap criteria	40 CFR 63.640(n)(5) 63.646(a) 63.120 (b)(1) & (2)	periodic initially & at 5 yr intervals	measurement and visual inspection

Table VII – BB.14
Applicable Limits and Compliance Monitoring Requirements
NSPS K AND NSPS KA ZERO-GAP EXTERNAL FLOATING ROOF TANKS
NSPS K - S334 (TANK 107),
NSPS KA - S341 (TANK 208), S342 (TANK 209), S343 (TANK 210)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
HAP	40 CFR 63.640(n)(5) 63.646(a) 63.120 (b)(4)&(6)	Y		Secondary rim-seal standards; includes gap criteria	40 CFR 63.640(n)(5) 63.646(a) 63.120 (b)(1) & (2)	periodic initially & annually	measurement and visual inspection
BAAQMD Permit	**PERMIT CONDITIONS**						
throughput	BAAQMD Condition 20989, Part A	Y		S341: 4.38 E 7 bbl/yr S342: 4.38 E 7 bbl/yr S343: 4.38 E 7 bbl/yr	BAAQMD Condition 20989, Part A	P/M	Records
~~throughput~~	~~BAAQMD Condition 20989, Part A~~	~~N~~		~~S334: 6.51 E 6 bbl/yr~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~records~~
throughput	BAAQMD Condition 22478, Part 8	Y		S334: 6.51 E 6 bbl/yr	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records
Vapor pressure	BAAQMD Condition 22478, Part 4	Y		S334: < 5.8 psia	BAAQMD 8-5-501.1	periodic initially and upon change of service	Records

2. Tanks subject to 40 CFR 63 Subpart CC (MACT) and NSPS K are subject only to MACT per 63.640(n)(5). Source S334 (Tank 107) is subject to NSPS K and MACT.
3. Tanks subject to 40 CFR 63 Subpart CC (MACT) and NSPS Ka are subject only to MACT per 63.640(n)(5). Sources S341 (Tank 208), S342 (Tank 209), and S343 (Tank 210) are subject to NSPS Ka and MACT.

The table for Tanks S139, S140, and S182 has been split into two tables because S139 and S140 are also being used as oil-water separators and so have different requirements.

BAAQMD Regulation 8, Rule 8, Wastewater Collection and Separation Systems requires no monitoring for separators with fixed roofs and an abatement device. Since these units are vented to the fuel gas recovery system, monitoring of destruction efficiency is not feasible. However, it is reasonable to assume that destruction efficiency will be over 98%. The monitoring of P/V valves required by BAAQMD Regulation 8, Rule 5, to which the tanks are also subject, will assure that fugitive emissions are low.

Table VII – BB.15a
Applicable Limits and Compliance Monitoring Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
S139 (Tank 204), S140 (Tank 205), ~~S182 (Tank 294)~~

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Regulation 8, Rule 5: Organic Compounds - STORAGE OF ORGANIC LIQUIDS LIMITS AND MONITORING FOR CVS & CONTROL DEVICES						
VOC	BAAQMD 8-5-301	Y		Record of liquids stored and true vapor pressure	BAAQMD 8-5-501.1	periodic initially and upon change of service	records
VOC	BAAQMD 8-5-303.1	Y		Pressure vacuum valve set pressure within 10% of maximum allowable working pressure of the tank, or at least 0.5 psig	BAAQMD 8-5-403	P/SA	visual inspection
VOC	BAAQMD 8-5-303.2	Y		Pressure vacuum valve must be gas-tight: < 500 ppm (as methane) above background	BAAQMD 8-5-403 8-5-503 8-5-605	P/SA	Method 21 portable hydrocarbon detector
VOC	BAAQMD 8-5-306	Y		Control device standards; includes 95% efficiency requirement	BAAQMD 8-5-603.1	not specified	MOP Volume IV ST-4
VOC	BAAQMD 8-5-328.1.2	Y		Organic concentration in tank <10,000 ppm as methane after cleaning	BAAQMD 8-5-503	periodic each time emptied & degassed	portable hydrocarbon detector
VOC		Y		Determination of applicability	BAAQMD 8-5-604	P/E	look-up table or sample analysis
	BAAQMD Regulation 8, Rule -8 – Organic Compounds – Wastewater (Oil Water Separators)						
VOC	BAAQMD 8-8-302.3		Y	95% collection and destruction of VOC, by weight		N	
NONE	**40 CFR 63 Subpart CC – NESHAPS for Petroleum Refineries Exempt per 63.640(d)(5). Emission point routed to fuel gas system.**						
BAAQMD Permit	**PERMIT CONDITIONS**						

Table VII – BB.15a
Applicable Limits and Compliance Monitoring Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
S139 (Tank 204), S140 (Tank 205)~~, S182 (Tank 294)~~

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
~~**The following applies to S182 only**~~							
~~VOC~~	~~BAAQMD Condition 13184, Part 1~~	~~Y~~		~~Requirement to vent working emissions to fuel gas system~~		~~N~~	
~~**The following applies to S139 and S140 only**~~							
throughput	BAAQMD Condition 20989, Part A	N		S139: 2.74 E 6 bbl/yr S140: 2.74 E 6 bbl/yr	BAAQMD Condition 20989, Part A	P/M	records

Table VII – BB.15b
Applicable Limits and Compliance Monitoring Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
~~S139 (Tank 204), S140 (Tank 205),~~ S182 (Tank 294)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	BAAQMD Regulation 8, Rule 5: Organic Compounds - STORAGE OF ORGANIC LIQUIDS LIMITS AND MONITORING FOR CVS & CONTROL DEVICES						
VOC	BAAQMD 8-5-301	Y		Record of liquids stored and true vapor pressure	BAAQMD 8-5-501.1	periodic initially and upon change of service	records
VOC	BAAQMD 8-5-303.1	Y		Pressure vacuum valve set pressure within 10% of maximum allowable working pressure of the tank, or at least 0.5 psig	BAAQMD 8-5-403	P/SA	visual inspection
VOC	BAAQMD 8-5-303.2	Y		Pressure vacuum valve must be gas-tight: < 500 ppm (as methane) above background	BAAQMD 8-5-403 8-5-503 8-5-605	P/SA	Method 21 portable hydrocarbon detector
VOC	BAAQMD 8-5-306	Y		Control device standards; includes 95% efficiency requirement	BAAQMD 8-5-603.1	not specified	MOP Volume IV ST-4
VOC	BAAQMD 8-5-328.1.2	Y		Organic concentration in tank <10,000 ppm as methane after cleaning	BAAQMD 8-5-503	periodic each time emptied & degassed	portable hydrocarbon detector

Table VII – BB.15b
Applicable Limits and Compliance Monitoring Requirements
MACT FIXED ROOF TANKS WITH VAPOR RECOVERY TO FUEL GAS
~~S139 (Tank 204), S140 (Tank 205),~~ S182 (Tank 294)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC		Y		Determination of applicability	BAAQMD 8-5-604	P/E	look-up table or sample analysis
NONE	**40 CFR 63 Subpart CC – NESHAPS for Petroleum Refineries Exempt per 63.640(d)(5). Emission point routed to fuel gas system.**						
BAAQMD Permit	**PERMIT CONDITIONS**						
~~The following applies to S182 only~~							
VOC	BAAQMD Condition 13184, Part 1	Y		Requirement to vent working emissions to fuel gas system		N	
~~The following applies to S139 and S140 only~~							
~~throughput~~	~~BAAQMD Condition 20989, Part A~~	~~N~~		~~S139: 2.74 E 6 bbl/yr S140: 2.74 E 6 bbl/yr~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~records~~

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements. If a rule or permit condition requires ongoing testing, the requirement will also appear in Section VI of the permit.

No changes to the test method section are proposed.

IX. Permit Shield:

No changes to permit shields are proposed in this revision.

X. Revision History

The revision history will be updated when the minor revision is issued.

XI. Glossary

No changes to the glossary are proposed in this revision.

D. Alternate Operating Scenarios

No alternate operating scenario has been requested for this facility.

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APPENDIX A

ENGINEERING EVALUATION FOR APPLICATION 12999

ENGINEERING EVALUATION
CONOCOPHILLIPS SAN FRANCISCO REFINERY; PLANT 16
APPLICATION 12999

BACKGROUND

ConocoPhillips has submitted an application to increase the daily average throughput of crude oil at S350, Crude Unit, from 30,000 barrels per day to 36,000 barrels per day. The application states that this change in mode of operation will be accomplished without any physical modification to equipment.

The additional crude oil will be shipped to the facility via pipeline. This evaluation assumes, as represented by ConocoPhillips, that there will be no increase in ship emissions; accordingly, a throughput limit will be imposed on crude received from ships.

The crude oil is separated into different fractions: light naphtha, medium naphtha, light diesel, heavy diesel, gas oil and resid. These fractions are processed further at the following process units: S300, Delayed Coker; S305, Prefractionator; S306, Platforming; S307, Unicracking; S318 Gasoline/Mid Barrel Blending; S319, Gasoline Fractionating; S432, Deisobutanizer; and S460, Diesel Hydrotreater.

The following heaters are associated with the sources above:

S300 heaters	
S29	U200, B-5 Heater
S30	U200, B-101 Heater
S31	U200, B-501 Heater
S36	U200, B-102 Heater
S43	U200, B-202 Heater
S44	U200, B-201 PCT Reboil Furnace
S304 heaters	
S2	U229, B-301 Heater
S305 heater	
S3	U230, B-201 Heater
S306 heaters	
S4	U231, B-101 Heater
S5	U231, B-102 Heater
S7	U231, B-103 Heater
S307 heaters	
S8	U240, B-1 Boiler
S9	U240, B-2 Boiler
S10	U240, B-101 Heater
S11	U240, B-201 Heater
S12	U240, B-202 Heater
S13	U240, B-301 Heater
S14	U240, B-401 Heater
S308 heaters	
S15	U244, B-501 Heater
S16	U244, B-502 Heater
S17	U244, B-503 Heater

S18	U244, B-504 Heater
S19	U244, B-505 Heater
S20	U244, B-506 Heater
S21	U244, B-507 Heater
S309 heater	
S22	U248, B-606 Heater
S350 heater	
S351	U267 B-601/602 Tower Preheater
S370 heaters	
S371	U228 B-520 (Adsorber Feed) Furnace
S372	U228 B-521 (Hydrogen Plant) Furnace
S460 Heater	
S461	U250, B-701 Heater

Throughput limits at these heaters will not be modified because, as CP represents, they will be operated at levels that do not exceed current permitted levels. The District will revise the basis for the throughput limits for a number of these units, however. Many of the heaters were modified in the late 90's, when the burners were replaced with ultra-low NOx burners to comply with Regulation 9, Rule 10, but the basis for the throughput limits was not revised at that time. With the facility's concurrence, the District will correct the basis for the throughput limits for the modified burners from BAAQMD Regulation 2-1-234 to 2-1-301.

The throughput limit for S351 will be corrected to 95 MMbtu/hr, with the facility's concurrence. This throughput was set in Application 30417 in 1984 and was mistakenly changed in the Title V permit. The basis for the limit will be changed to "2-1-301."

Four tanks that were previously grandfathered are affected by this throughput increase. These are: S123, S124, S186, and S334. The first three hold intermediates. The last holds crude oil. The facility will provide offsets for the difference between the actual emissions based on the previous three years and the permitted limit. The basis for the limits will be changed from BAAQMD Regulation 2-1-234 to cumulative increase.

This is a minor revision of the Major Facility Review permit for the following reasons:

- The change is not considered a major modification for Federal NSR or PSD.
- The change is not considered a modification for NSPS or NESHAPS.
- There is no significant change or relaxation of monitoring.
- No term is established to allow the facility to avoid an applicable requirement.
- No case-by-case determination has been made.
- No facility-specific determination for ambient impacts, visibility analysis, or increment analysis on portable sources has been made.
- No new federal requirement has been imposed.

EMISSION CALCULATIONS

Tanks

The facility submitted the following emissions increase data for the tanks, S123, S124, S186, and S334. The second column represents the estimated actual emissions of

VOC averaged over the past three years calculated in accordance with BAAQMD Regulations 2-2-604 and 2-2-605. The third column represents the estimated potential emissions of VOC at the permitted throughput limit in BAAQMD Condition 20989, part A, which is in the fourth column.

Source #	Actual Emissions lb/yr	Potential Emissions lb/yr	Permitted Throughput barrels/year
S123	444	1117	3000000
S124	6462	6815	3000000
S186	1552	2231	1000000
S334	3012	3460	5000000

The increase in VOC emissions at the tanks is 2,153 lb/yr. The detailed calculations are found in the permit application file.

The facility has calculated the following increases in toxic air contaminants (TAC) for the tanks based on the concentrations of TACs in the intermediates and crude oil. In every case, the increases are below the levels that trigger a risk screen.

TAC	Emissions lb/yr	Trigger lb/yr
Benzene	5.65	6.4
Ethylbenzene	4.04	77,000
Hexane	25.51	270,000
Naphthalene	0.01	5.3
Toluene	45.76	12,000
Xylene (Total)	25,646	27,000

The permit conditions for S123 and S334 will limit vapor pressure and throughput to ensure that the emissions of these tanks remain as represented in this evaluation based on data submitted by the applicant.

Because the vapor pressure varies in Tanks S124 and S186, the applicant has requested emission limits equivalent to the calculations above. The permit conditions will contain emission limits along with a requirement to calculate the emissions on a monthly basis based on actual throughputs, vapor pressure, and ambient temperatures using the AP-42 equations.

Crude Unit

The additional emissions from the crude unit desalter drain were considered. Before the crude is piped into the atmospheric distillation tower, it is washed with water in the desalter. This water enters a sump that empties into a sewer. Since a 20% increase in crude flow is proposed, there would be a 20% increase in water used, which would cause an increase in VOC emissions from the process drain. The facility proposes to control the sump and drain with covers. EPA's Waters9 program was used to estimate worst-case emissions. The facility has stated that the calculated emissions (and

therefore emissions decrease) are overstated, because the program assumes that the sump is originally 100% uncovered, while the sump is actually 10% uncovered.

The worst-case emissions before control were 3,900 lb VOC/yr and 918 lb benzene/yr. The estimated decrease is 3,200 lb VOC/yr and 755 lb benzene/yr. Since this estimated emissions decrease is uncertain, it cannot be banked or used for contemporaneous offsets.

The emissions from the fugitive components (valves, flanges, pumps, compressors) at this unit are not expected to change due to the throughput increase.

Other process units

The process units downstream from the crude unit will also experience a throughput increase: S300, Delayed Coker; S305, Prefractionator; S306, Platforming; S307, Unicracking; S318 Gasoline/Mid Barrel Blending; S319, Gasoline Fractionating; S432, Deisobutanizer; and S460, Diesel Hydrotreater. However, no increase in emissions is expected because the emissions from the fugitive components at this unit are constant and do not change due to throughput increases. These units will operate within current permitted limits.

The emissions from the fugitive components (valves, flanges, pumps, compressors) at this unit are not expected to change due to the throughput increase.[KW1]

Sour water stripping and sulfur recovery units (SRUs)

Sour water from the crude unit is sent to sources S139 (Tank 204) and S140 (Tank 205). These tanks are mistakenly identified only as storage tanks for distillate oil and naphtha. In fact, the tanks actually act as oil-water separators, skimming oil off the surface of the water and sending it to the coker. These tanks are abated by the fuel gas system.

Before the water is sent to S139 and S140, VOC has been removed in separators (called accumulator and seal oil drum) between the crude unit and the tanks. An additional separator for VOC removal is between the tanks and the sour water strippers.

The facility has stated that all VOC in the sour water is removed before the water goes to the sour water strippers (which steam-strip ammonia and hydrogen sulfide from the water and send the ammonia and hydrogen sulfide to the SRUs). Therefore, there should be no increase in VOC or CO emissions from the SRUs. The SRUs will continue to operate below their sulfur production and SO2 limits.

The facility has also stated that an increase in ammonia emissions is not expected.

Shipping

The facility has proposed no increase in shipping emissions for this application. The additional crude will be delivered by pipeline. The facility asserted that the last large crude oil throughput increase, which was evaluated in Application 5814, contained no increase in ship traffic to deliver crude oil. To ensure that there is no increase, a permit condition limit will be imposed to limit deliveries of crude oil by ship.

CUMULATIVE INCREASE AND OFFSETS

The net increase is 2,153 lb/yr (0.1.077 ton/yr) of POC. The facility will supply POC emission offset credits at a ratio of 1.15:1 or 1.238 ton/yr. The cumulative increase at the facility will remain at 0. The offsets will come from Certificate 921.

TOXIC RISK MANAGEMENT

This application will not be subject to BAAQMD Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants, because it will not cause an increase in toxic air contaminants that exceeds the exemption triggers in Table 2-5-1 of that rule.

STATEMENT OF COMPLIANCE

BACT

Tank S124 will have a permitted emission level that is higher than 10 lb/day. Tank S334 has average emissions of 9.5 lb/day and may be presumed to emit more than 10 lbs on some days. Therefore, Tanks S124 and S334 are subject to the BACT requirement in BAAQMD Regulation 2-2-301.

The annual estimated emissions for Tank S186 are 2231 lb VOC/yr; 2116 lbs are considered standing losses and 115 lb are considered working losses. Therefore, the tank has an average of 6.1 lb of standing losses per day. The volume of the tank is 47,000 barrels. The expected throughput will be 1,000,000 barrels/yr, which is equivalent to 21 turnovers. One turnover would be equivalent to 5.5 lbs and could occur in one day. During high temperatures, the working loss could be higher. Therefore, the worst-case emissions for this tank could be over 10 lb/day, and this tank is subject to BAAQMD Regulation 2-2-301.

The annual estimated emissions for Tank S123 are 1,117 lb VOC/yr; 835 lbs are considered standing losses and 282 lb are considered working losses. Therefore, the tank has an average of 2.3 lb of standing losses per day. The volume of the tank is 75,000 barrels. The permitted throughput will be 3,000,000 barrels/yr, which is equivalent to 40 turnovers. One turnover would be equivalent to 7.1 lbs and could occur in one day. During high temperatures, the working loss could be higher. Therefore, the worst-case emissions for this tank could be over 10 lb/day, and this tank is also subject to BAAQMD Regulation 2-2-301.

The tanks are welded external floating roof tanks with steel pontoon type roof. The primary seal is a mechanical shoe type. The secondary seal is rim-mounted. The guidepoles are unslotted with deck cover gaskets and pole wipers. They do not have floats.

BACT 1 is an additional vapor recovery system with an overall system efficiency equal to or greater than 98%. The emissions from these tanks are so low that an additional vapor recovery system would not be cost-effective.

BACT2 for the tanks above as determined by the District's BACT/TBACT workbook is: BAAQMD approved roof w/liquid mounted primary seal and zero gap secondary seal meeting the design criteria of BAAQMD Regulation 8, Rule 5; and no ungasketed roof penetrations, no slotted pipe guide poles unless equipped with float and wiper seals, and no adjustable roof legs unless fitted with vapor seal boots or equivalent. This level of BACT will be required in a permit condition except for the requirement for liquid mounted primary seals.

District staff has determined that metallic shoe seals are preferred over resilient toroid seals ("liquid-mounted seals") because of greater durability and reliability. Liquid-mounted seals may develop leaks and fail due to adhesion or other issues.

The District's recommendation is that metallic shoe seal that extend into the liquid surface be considered to meet BACT. Based on the above, BACT is determined to be met by the proposed metallic shoe seals.

The crude unit will not be subject to BACT because it will not have an emissions increase.

The District assumes, based on information provided by the facility, that there will be no emissions increases at the SRUs.

CEQA

This project is exempt from CEQA pursuant to BAAQMD Regulation 2-1-312.11.2 because full offsets will be provided in accordance with Regulation 2, Rule 2, and there will be no other significant environmental effect; and pursuant to 2-1-312.11.4, because a risk screen was not triggered.

The facility has submitted an Appendix H form that shows no significant effect. Except for early control (all waste-water components must be vapor-tight by 1/1/06 pursuant to Regulation 8-8-312) of the process drain at S350, no equipment will be modified.

The facility has stated that ship emissions will not increase and has accepted a limit on crude oil received through the wharf.

NSPS

Sources S123, S124, and S186 are not subject to 40 CFR 60, Subparts K, Ka, or Kb, due to the date of construction. Although the emissions will increase at these tanks, it is not considered an increase for the purposes of these standards because EPA has determined in the May 17, 1999 letter from Gerald Potamis of EPA Region 1 to Paul Flaherty of Arthur D. Little (attached) that switching from one petroleum fluid to another is not a modification pursuant to 40 CFR 60.14. Therefore, these tanks will not be subject to New Source Performance Standards.

S334 is subject to 40 CFR 60, Subpart K, based on the date of construction. This standard already appears in the Major Facility Review permit. The citation will be

expanded in the Title V permit to include 60.112, Standard for Volatile Organic Compounds, and 60.113, Monitoring of Operations.

There is no specific NSPS for the Crude Unit.

Tanks S139 and S140, which are being used as oil-water separators, will not be subject to 40 CFR 60, Subpart QQQ because they were built before 1987[KW2].

NESHAPS

No new NESHAPS is triggered.

PSD

The emissions increase does not trigger PSD.

Regulation 8, Rule 8, Oil Water Separators

S139 and S140 are subject to BAAQMD Regulation 8, Rule 8. They are in compliance with Section 8-8-302.3 because they are vented to vapor recovery with a combined collection and destruction efficiency of at least 95% by weight.

PERMIT CONDITIONS

CONDITION 383 [Revisions are in accordance with ~~A/C~~ Applications 5814 and 12999.]

CONDITIONS FOR S350

1a. The owner/operator of S350 (Crude Unit 267) shall not process crude oil at S350 with a sulfur content in excess of 1.5 wt %. [Cumulative Increase]

1b. The owner/operator shall sample and analyze the crude feed to S350 to determine the sulfur content each time a new tanker shipment or pipeline delivery of crude is introduced into the S350 feed tanks. [Cumulative Increase]

2. The owner/operator of S350 shall not exceed an S350 feed rate of 36,000~~30,000 bbl per day on a 12 month rolling average basis. The S350 feed rate shall never exceed 33,000~~ bbl on any calendar day. The 36,000~~33,000~~ bbl/day limit ~~and 30,000 bbl/day 12 month rolling average limit are~~ is an absolute limit~~s~~ and may not be corrected for instrument error. [Cumulative Increase]

3. The owner/operator of S350 shall maintain ~~monthly~~ daily records of "calendar day" throughput ~~and "12 month rolling average" throughput at S350~~ in a District-approved log. The owner/operator shall also maintain records of all sulfur content analyses required by Part 1b. These records shall be kept for at least five years and shall be made available to the District upon request. [Cumulative Increase]

4. The owner/operator shall install water seals (or equivalent controls) on the desalter process drain system for S350 that comply with the requirements of BAAQMD

Regulation 8-8-312 prior to increasing the daily throughput to 36,000 bbl/day as allowed by part 2. [Toxics, cumulative increase]

CONDITION 1694

CONDITIONS FOR COMBUSTION SOURCES AND SO2 CAP, EXCEPT FOR GAS TURBINES AND DUCT BURNERS

A. Heater Firing Rate Limits and General Requirements

1a. Each heater listed below shall not exceed the indicated daily firing rate limit (based on higher heating value of fuel), which are considered maximum sustainable firing rates. The indicated hourly firing rate is the daily limit divided by 24 hours and is the basis for permit fees and is the rate listed in the District database.

District Firing Source Number	Refinery ID Number	Daily Firing Limit (MM BTU/day)	Hourly Rate (MM BTU/hr)
~~S2~~	~~U229/B301~~	~~528~~	~~22~~
S3	U230/B201	1,488	62
~~S4~~	~~U231/B101~~	~~2,304~~	~~96~~
~~S5~~	~~U231/B102~~	~~2,496~~	~~104~~
S7	U231/B103	1,536	64
~~S8~~	~~U240/B1~~	~~6,144~~	~~256~~
~~S9~~	~~U240/B2~~	~~1,464~~	~~61~~
~~S10~~	~~U240/B101~~	~~5,352~~	~~223~~
~~S11~~	~~U240/B201~~	~~2,592~~	~~108~~
~~S12~~	~~U240/B202~~	~~1,008~~	~~42~~
~~S13~~	~~U240/B301~~	~~4,656~~	~~194~~
~~S14~~	~~U240/B401~~	~~13,344~~	~~556~~
~~S15 thru S19~~	~~U244/B501 thru B505~~	~~5,754~~	~~239.75~~
~~S20~~	~~U244/B506~~	~~552~~	~~23~~
S21	U244/B507	194.4	8.1
~~S22~~	~~U248/B606~~	~~744~~	~~31~~
~~S29~~	~~U200/B5~~	~~2,472~~	~~103~~
~~S30~~	~~U200/B101~~	~~1,200~~	~~50~~
~~S31~~	~~U200/B501~~	~~480~~	~~20~~
~~S43~~	~~U200/B202~~	~~5,520~~	~~230~~
~~S44~~	~~U200/B201~~	~~1,104~~	~~46~~
S336	U231/B104	2,664	111
S337	U231/B105	816	34
~~S351~~	~~U267~~	~~2,424~~	~~101~~
~~S371/372~~	~~U228/B520 and B521~~	~~1,392~~	~~58~~
S438	U110	5,040	210

[Regulation 2-1-234.3]

1b. Each heater listed below shall not exceed the indicated daily firing rate limit (based on higher heating value of fuel), which are considered maximum sustainable firing rates. The indicated hourly firing rate is the daily limit divided by 24 hours and is the basis for permit fees and is the rate listed in the District database.

District Source Number	Refinery ID Number	Daily Firing Limit (MM BTU/day)	Hourly Firing Rate (MM BTU/hr)
S2	U229/B301	528	22
S4	U231/B101	2,304	96
S5	U231/B102	2,496	104
S8	U240/B1	6,144	256
S9	U240/B2	1,464	61
S10	U240/B101	5,352	223
S11	U240/B201	2,592	108
S12	U240/B202	1,008	42
S13	U240/B301	4,656	194
S14	U240/B401	13,344	556
S15 thru S19	U244/B501 thru B505	5,754	239.75
S20	U244/B506	552	23
S22	U248/B606	744	31
S29	U200/B5	2,472	103
S30	U200/B101	1,200	50
S31	U200/B501	480	20
S43	U200/B202	5,520	230
S44	U200/B201	1,104	46
S351	U267	~~2,424~~2,280	~~101~~95
S371/372	U228/B520 and B521	1,392	58
		[Regulation 2-1-301]	

CONDITION 4336

CONDITIONS FOR S425, S426, MARINE LOADING BERTHS

1. For each loading event of "regulated organic liquid", the A-420 shall be operated with a temperature of at least 1300 degrees F during the first 15 minutes of the loading operation. After the initial 15 minutes of loading, the A-420 temperature shall be at least 1400 degrees F. [Cumulative Increase]

2. Instruments shall be installed and maintained to monitor and record the following:

   a. Static pressure developed in the marine tank vessel
   b. A-420 temperature.
   c. Hydrocarbons and flow to determine mass emissions or a concentration measurement alone if it is demonstrated to the satisfaction of the APCO that concentration alone allows verification of compliance, or
   d. Any other device that verifies compliance, with prior approval from the APCO.

   [Cumulative Increase]

3. A "regulated organic liquid" shall not be loaded from this facility into a marine tank vessel within the District whenever A-420 is not fully operational. A-420 must be maintained to be leak free, gas tight, and in good working order. For the purposes of this condition, "operational" shall mean the system is achieving the reductions required by Regulation 8, Rule 44; "regulated organic liquids" include

gasoline, gasoline blendstocks, aviation gasoline and JP-4 aviation fuel and crude oil. [Cumulative Increase]

4. A leak test shall be conducted on all vessels loading under positive pressure prior to loading more than 20% of the cargo. The leak test shall include all vessel relief valves, hatch cover, butterworth plates, gauging connections, and any other potential leak points.
[Cumulative Increase]

5. Loading pressure shall not exceed 80% of the lowest relief valve set pressure of the vessel being loaded. [Cumulative Increase]

6a. No more than 25,000 barrels per day of gasoline, naphtha and C5/C6 shall be shipped across the wharf on an annual average basis.
[Cumulative Increase]

a. When barges are used to ship gasoline, naphtha or C5/C6, the volume of these materials shipped during any reporting period is to be multiplied by a factor of 1.66 and included in the shipping totals to determine compliance with the throughput limits.
b. When barges are used to lighter crude oil, the volume of oil lightered during any reporting period shall be multiplied by a factor of 0.42 and included in the shipping totals to determine compliance with the throughput limits. The vessel Exxon Galveston is considered a ship for the purposes of this condition.

6b. The maximum loading rate at any time at both S425 and S426 shall not exceed 20,000 barrels per hour to prevent overloading the A-420 oxidizer.

7. The owner/operator ~~of S-350~~ shall not receive more than 30,000 bbl per day crude oil ~~exceed a U-267 processing rate of crude oil~~ delivered by tanker or ship ~~of 30,000 bbl per day~~ on a 12 month rolling average basis. (Cumulative increase, 2-1-403)

8~~7~~. All throughput records required to verify compliance with Parts 6 and 7, including hourly loading rate records (total for S425, S426), monthly crude oil receipt records, and maintenance records required for A-420, which are subject to Regulation 8, Rule 44, shall be kept on site for at least 5 years and made available to the District upon request. [Cumulative Increase]

CONDITION 20989
A. THROUGHPUT LIMITS

The following limits are imposed through this permit in accordance with Regulation 2-1-234.3. Sources require BOTH hourly/daily and annual throughput limits (except for tanks and similar liquid storage sources, and small manually operated sources such as cold cleaners which require only annual limits). Sources with previously imposed hourly/daily AND annual throughput limits are not listed below; the applicable limits are given in the specific permit conditions listed above in this section of the permit. Also, where hourly/daily capacities are listed in Table II-A, these are considered enforceable limits for sources that have a New Source Review permit. Throughput limits imposed in this section and hourly/daily capacities listed in Table II-A are not federally enforceable for grandfathered sources. Grandfathered sources are indicated with an asterisk in the

source number column in the following table. Refer to Title V Standard Condition J for clarification of these limits.

In the absence of specific recordkeeping requirements imposed as permit conditions, monthly throughput records shall be maintained for each source.

source number	hourly/daily throughput limit	annual throughput limit (any consecutive 12-month period unless otherwise specified)
15	Table II-A	19.9 E 6 therm total at S15 through S19
16	Table II-A	19.9 E 6 therm total at S15 through S19
17	Table II-A	19.9 E 6 therm total at S15 through S19
18	Table II-A	19.9 E 6 therm total at S15 through S19
19	Table II-A	19.9 E 6 therm total at S15 through S19
20	Table II-A	1.9 E 6 therm
21	Table II-A	0.7 E 6 therm
22	Table II-A	2.6 E 6 therm
29	Table II-A	8.6 E 6 therm
30	Table II-A	4.2 E 6 therm
31	Table II-A	1.7 E 6 therm
43	Table II-A	19.1 E 6 therm
44	Table II-A	3.8 E 6 therm
*97	NA for tank	1.1 E 7 bbl
*100	NA for tank	4.38 E 6 bbl
101	NA for tank	3.68 E 9 gal
102	NA for tank	3.68 E 9 gal
106	NA for tank	3.68 E 9 gal
*107	NA for tank	8.76 E 6 bbl
*110	NA for tank	1.40 E 7 bbl
*111	NA for tank	1.31 E 7 bbl
*112	NA for tank	1.49 E 7 bbl
*113	NA for tank	1.49 E 7 bbl
*114	NA for tank	1.31 E 7 bbl
*115	NA for tank	4.38 E 6 bbl
*117	NA for tank	8.76 E 5 bbl
*118	NA for tank	15,000 bbl
*121	NA for tank	3.52 E 4 bbl
*122	NA for tank	4.38 E 6 bbl
~~*123~~	~~NA for tank~~	~~5.1 E 6 bbl~~
~~*124~~	~~NA for tank~~	~~4.38 E 6 bbl~~
*125	NA for tank	1.05 E 7 bbl
*126	NA for tank	1.05 E 7 bbl
*128	NA for tank	5.1 E 6 bbl
129	NA for tank	4.6 E 6 bbl
133	NA for tank	8.76 E 5 bbl
*134	NA for tank	1.31 E 7 bbl

source number	hourly/daily throughput limit	annual throughput limit (any consecutive 12-month period unless otherwise specified)
*139	NA for tank	2.74 E 6 bbl
*140	NA for tank	2.74 E 6 bbl
150	NA for tank	4.38 E 7 bbl
151	NA for tank	4.38 E 7 bbl
*177	NA for tank	2.63 E 7 bbl
178	NA for tank	3.50 E 7 bbl
183	NA for tank	4.38 E 5 bbl
184	NA for tank	4.38 E 6 bbl
~~*186~~	~~NA for tank~~	~~4.38 E 6 bbl~~
*193	NA for tank	100 bbl
*194	NA for tank	100 bbl
*195	NA for tank	5.0 E 4 bbl
196	NA for tank	5.0 E 4 bbl
*216	NA for tank	4.6 E 6 bbl
*238	NA for tank	1.00 E 6 bbl
*239	NA for tank	8.76 E 6 bbl
*254	NA for tank	7.01 E 7 bbl
*255	NA for tank	7.01 E 7 bbl
*256	NA for tank	7.01 E 7 bbl
*257	NA for tank	7.01 E 7 bbl
*258	NA for tank	7.01 E 7 bbl
*259	NA for tank	7.01 E 7 bbl
*261	NA for tank	7.01 E 7 bbl
294	20 gpm	400,000 gallons
*301	Table II-A	89,425 long ton for S301, 302, 303 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
*302	Table II-A	89,425 long ton for S301, 302, 303 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
*303	Table II-A	89,425 long ton for S301, 302, 303 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
304 (until modified in accordance with A/C 5814, then deleted from this table)	Table II-A	3.47 E 6 bbl
305	Table II-A	10.22 E 6 bbl
306	Table II-A	7.67 E 6 bbl
307	Table II-A	1.533 E 7 bbl
*308	Table II-A	5.87 E 6 bbl
*309	Table II-A	6.11 E 6 bbl
*318	Table II-A	3.3 E 7 bbl

source number	hourly/daily throughput limit	annual throughput limit (any consecutive 12-month period unless otherwise specified)
*319	Table II-A	3.51 E 6 bbl
324	Table II-A	3.68 E 9 gallons
~~*334~~	~~NA for tank~~	~~6.51 E 6 bbl~~
336	Table II-A	9.2 E 6 therm
337	Table II-A	2.8 E 6 therm
*338	Table II-A	6.6 E 10 ft3
*339	Table II-A	5.26 E 7 bbl
340	NA for tank	7.67 E 6 bbl
341	NA for tank	4.38 E 7 bbl
342	NA for tank	4.38 E 7 bbl
343	NA for tank	4.38 E 7 bbl
351	Table II-A	8.4 E 6 therm
360	NA for tank	2.78 E 6 bbl
370	Condition 12121	4.03 E6 bbl
371	Table II-A	4.8 E6 therm for S371/372
372	Table II-A	4.8 E6 therm for S371/372
380	0.3 ton/hr	2,628 ton
381	420,000 gal/hr	3.68 E 9 gal
382	420,000 gal/hr	3.68 E 9 gal
383	420,000 gal/hr	3.68 E 9 gal
384	420,000 gal/hr	3.68 E 9 gal
385	Table II-A	3.68 E 9 gal
386	3600 gal/hr	3.2 E 7 gal
387	Table II-A	7.884 E 6 gal
388	Table II-A	153,300 ton
389	0.21 ton/hr	1840 ton
390	N/A for tank	7.884 E 6 gal
392	N/A for tank	7.884 E 6 gal
400	N/A for sump	3.68 E 9 gal
401	N/A for sump	3.68 E 9 gal
425	Table II-A	25,000 bbl/day at S425 and S426 (annual average)
426	Table II-A	25,000 bbl/day at S425 and S426 (annual average)
432	Table II-A	2.8 E6 bbl
435	Table II-A	6.6 E 6 bbl
436	Table II-A	4.7 E 6 bbl
437	Table II-A	9.1 E 9 ft3
462	Table II-A	1.533 E 9 ft3
463	Table II-A	365,000 bbl
*1001	Table II-A	89,425 long ton for S1001, 1002, 1003 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
*1002	Table II-A	89,425 long ton for S1001,

source number	hourly/daily throughput limit	annual throughput limit (any consecutive 12-month period unless otherwise specified)
		1002, 1003 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
*1003	Table II-A	89,425 long ton for S1001, 1002, 1003 (98,915 long ton after S1002, 1003 modified in accordance with A/C 5814
1007	Table II-A	3.68 E 9 gal
1008	Table II-A	3.68 E 9 gal
1009	Table II-A	3.68 E 9 gal

CONDITION 22478

For Sources S123 (Tank 168), S124 (Tank 169), S186 (Tank 298), and S334 (Tank 107)

1. The owner/operator shall ensure that S123 contains only petroleum liquid with a true vapor pressure less than or equal to 1.5 psia. [Cumulative Increase]

2. The owner/operator shall ensure that the emissions from S124 do not exceed 6,815 lb VOC in any consecutive 12-month period. S124 shall only contain petroleum liquids. [Cumulative Increase]

3. The owner/operator shall ensure that the emissions from S186 do not exceed 2,231 lb VOC in any consecutive 12-month period. S186 shall only contain petroleum liquids. [Cumulative Increase]

4. The owner/operator shall ensure that S334 contains only crude oil or a less volatile petroleum liquid with a true vapor pressure less than or equal to 6.75 psia. [Cumulative Increase]

5. The owner/operator shall ensure that the throughput of petroleum liquids at S123 does not exceed 3,000,000 barrels/yr. [Cumulative Increase]

6. The owner/operator shall ensure that the throughput of crude oil or other petroleum liquids at S334 does not exceed 5,000,000 barrels/yr. [Cumulative Increase]

7. The owner/operator shall equip S123, S124, S186, and S334 with a BAAQMD approved roof with mechanical shoe primary seal and zero gap secondary seal meeting the design criteria of BAAQMD Regulation 8, Rule 5. The owner/operator shall ensure that there are no ungasketed roof penetrations, no slotted pipe guide poles unless equipped with float and wiper seals, and no adjustable roof legs unless fitted with vapor seal boots or equivalent. [BACT, cumulative increase]

8. The owner/operator shall calculate the emissions of S124 and S186 on a calendar month basis using the AP-42 equations. The owner/operator shall use actual throughputs, actual vapor pressures, and actual temperature data for each

month. The owner/operator shall calculate the emissions for the last 12-month period on a monthly basis. The calculations shall be complete within a calendar month after the end of each monthly period. [Cumulative increase]

RECOMMENDATION

Waive the authority to construct and issue a permit to operate for the following sources:

- S123, Tank 168, 75,000 bbl external floating roof tank containing petroleum liquids
- S124, Tank 169, 75,000 bbl external floating roof tank containing petroleum liquids
- S186, Tank 298, 47,000 bbl external floating roof tank containing petroleum liquids
- S334, Tank 107, 180,000 bbl external floating roof tank containing crude oil
- S350, U267, Crude Distillation Unit, 36,000 bbl/day maximum, including atmospheric column, vacuum column, and desalter

Amend the permit conditions as shown above.

By: _____

Brenda Cabral **Date**
Senior Air Quality Engineer

APPENDIX 1

5/17/99 Letter from Gerald Polamis of EPA Region 1 to Paul Flaherty of Arthur D. Little

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U.S. Environmental Protection Agency Applicability Determination Index

Control Number: 0200044

Category: NSPS
EPA Office: Region 1
Date: 05/17/1999
Title: Modification of Petroleum Storage Vessels
Recipient: Paul Flaherty
Author: Gerald POTAMIS

Subparts: Part 60, A, General Provisions

References: 60.14

Abstract:

Q1. Does a change in liquid service of a storage vessel at a facility from a low vapor pressure material (stormwater or diesel fuel) to a high vapor pressure material (crude oil or gasoline) constitute a modification under 40 CFR 60.14?

A1. In recent determinations, EPA found the activity of a petroleum vessel storage facility changing the type of petroleum product stored (i.e., diesel fuel to gasoline) was equivalent to the use of an alternative fuel and exempted from the definition of modification as provided in 40 CFR Sec. 60.14(e)(4). These determinations were based on the assumption that petroleum products were essentially equivalent and therefore, any petroleum storage vessel could reasonably accommodate an alternative petroleum product. Please note that EPA's determinations only pertained to petroleum storage vessels. A storage vessel converting from water or other non- petroleum liquid storage over to petroleum storage would not be exempted from the NSPS modification definition. With regards to the example, EPA would find the activity of a vessel changing from diesel fuel storage to gasoline storage was not a modification as defined in 40 CFR 60.14 and therefore the vessel would not be subject to the NSPS, Subpart Kb.

Q2. What are the specific criteria for determining whether a vessel was designed to accommodate an alternative use? If the original construction specification are not available - how is such a determination made?

A2. EPA did not develop any specific criteria for determining if a fuel storage vessel could accommodate an alternative petroleum material in these determinations. As described previously, EPA's determinations centered on assuming that petroleum products are similar and that a petroleum storage vessel could reasonablely accommodate different types of petroleum products. However, if EPA did receive a request for a determination on a specific storage vessel significantly altering its design to accommodate an alternative petroleum product, EPA may adjust its determination considering the specific facts of the case.

Letter:

May 7, 1999

Paul E. Flaherty
Arthur D. Little, Inc.
Acorn Park
Cambridge, Massachusetts 02140-2390

Dear Mr. Flaherty:

Thank you for your letter dated August 24, 1998 requesting EPA applicability guidance and clarification regarding the New Source Performance Standard (NSPS), Subparts K, Ka, and Kb. The letter requests guidance, through a series of questions, on whether the conversion of a storage vessel that formally stored diesel fuel to crude oil or gasoline constituted a modification under 40 CFR 60.14. Our answers are provided below.

Question 1a and 1b. Change in a liquid service of a storage vessel: In recent determinations, EPA found the activity of a petroleum vessel storage facility changing the type of petroleum product stored (i.e., diesel fuel to gasoline) was equivalent to the use of an alternative fuel and exempted from the definition of modification as provided in 40 CFR Sec. 60.14(e)(4). These determinations were based on the assumption that petroleum products were essentially equivalent and therefore, any petroleum storage vessel could reasonably accommodate an alternative petroleum product. Please note that EPA's determinations only pertained to petroleum storage vessels. A storage vessel converting from water or other non-petroleum liquid storage over to petroleum storage would not be exempted from the NSPS modification definition.

With regards to the problem described in 1b, EPA would find the activity of a vessel changing from diesel fuel storage to gasoline storage was not a modification as defined in 40 CFR 60.14 and therefore the vessel would not be subject to the NSPS, Subpart Kb.

Question 2a and 2b. Development of criteria used to determine accommodation: EPA did not develop any specific criteria for determining if a fuel storage vessel could accommodate an alternative petroleum material in these determinations. As describe previously, EPA's determinations centered on the assuming that petroleum products are similar and that a petroleum storage vessel could reasonablely accommodate different types of petroleum products. However, if EPA did receive a request for a determination on a specific storage vessel significantly altering its design to accommodate an alternative petroleum product, EPA may adjust its determination considering the specific facts of the case.

EPA was also requested to determine if installation of an internal floating roof was considered an NSPS modification. In this case, EPA considered the floating roof to be a pollution control device and exempt from the definition of an NSPS modification (ref: 40 CFR Sec. 60.14(e)(5)). If you have any questions concerning this matter, please contact Allen Jarrell of my staff at (617) 918-1314.

Sincerely,

Gerald C. POTAMIS, P.E.
Manager, Air Permits Program