Bay Area Air Quality Management District

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San Francisco, CA 94109
(415) 771-6000

Statement of Basis
for
Minor Revisions and Administrative Amendments to

MAJOR FACILITY REVIEW PERMIT

for

ConocoPhillips – San Francisco Refinery
Facility #A0016

Facility Address:
1380 San Pablo Avenue
Rodeo, CA 94572

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1380 San Pablo Avenue
Rodeo, CA 94572

June 2005

Application 10622

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, of 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 incorporate minor revisions and administrative amendments that were proposed in Application 10623. This application is attached in Appendix A. Following is a summary of the changes:

- Increase capacity and annual throughput limit of S380, Activated Carbon Silo
- Revise baghouse abatement requirements for S380, Activated Carbon Silo
- Correct ID numbers for S385, Media Filter
- Increase capacity and annual throughput limit for S387, Wet Air Regeneration
- Correct capacity and delete annual throughput limits for S1008 and S1009, Stormwater Basins
- Change service of S388, Sludge Pretreatment, to Wastewater Sludge Tank
- Change throughput limits of S195, S196, and S388, Wastewater Sludge Tanks
- Revise condition 1440 for consistency with amended Regulation 8, Rule 8

The draft changes to the permit are clearly shown in "strikeout/underline" format in this document. When the permit is finalized, the tracking marks will be removed. The changes are minor revisions because:

- The emissions increases are negligible,
- The changes are not modifications as defined by any NSPS or NESHAPS,
- There are no relaxations of monitoring, recordkeeping, or reporting,
- Permit conditions to avoid an applicable requirement have not been imposed,

- No case-by-case determination has been made,
- No establishment of or change to a facility-specific determination for ambient impacts or visibility impacts was necessary, and
- None of the changes described include the incorporation of new federal requirements into the Major Facility Permit.

This statement of basis concerns only changes to the permit that are proposed in this action. Comprehensive statements of basis were prepared for the initial issuance of the permit and for the reopening issued on December 16, 2004. 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

This section contains administrative requirements and conditions that apply to all facilities. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

No changes to Section I are proposed.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24 or S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant," as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year.

All abatement (control) devices that control permitted or significant sources are listed.

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

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
385	Media Filter (F271-F278~~F-207 A-H~~)	Wastewater		420 thousand gal/hr
388	~~Sludge Pretreatment~~ Water Treatment Sludge Tanks (T276, F205)	30 ft dia by 24 ft 12 ft dia by 24 ft		~~17.5 ton/hr~~3,500 bbl
1008	U100 Primary Stormwater Basin			2.3 E 6 gallons~~7000 gpm~~
1009	U100 Main Stormwater Basin			7.2 E 6 gallons~~7000 gpm~~

The change to the name of S385 is an administration amendment.

The changes to S388 are discussed on pages 7 through 11 of the evaluation for Application 10623, which is part of this statement of basis and is attached in Appendix A.

The changes to S1008 and S1009 are discussed on pages 5 through 7 of the evaluation for Application 10623, which is part of this statement of basis and is attached in Appendix A. The capacities of storage basins are generally defined by volume, not pumping rate.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition,

standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Some sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered a significant source pursuant to the definition in BAAQMD Rule 2-6-239.

No changes to this section are proposed in this action.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to 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.

The following changes are proposed to this section in this action. The discussion is found in Application 10623, which is part of this statement of basis and is attached in Appendix A.

Table IV- AA
Fugitive Sources: Applicable Requirements

Process Unit	BAAQMD Reg. 8-18	BAAQMD Reg. 8-28	NSPS Part 60, Subpart GGG; BAAQMD Reg. 10-59	NSPS Part 60, Subpart QQQ; BAAQMD Reg. 10-69	NSPS Part 60, Subpart VV; BAAQMD Reg. 10-52	NESHAP Part 61, Subpart J	NESHAP Part 61, Subpart FF; BAAQMD Reg. 11-12	NESHAP Part 61, Subpart V; BAAQMD Reg. 11-7	NESHAP Part 63, Subpart CC
Refinery-wide applicability	**Y**	**Y**	**N**	**N**	**N**	**N**	**Report only**	**N**	**Y**
Unit 100 (S195, S196, S324, S388, S1007~~, S 388 per Condition 1860, Part 3~~)	**Y**	**Y**	**N**	**Y**	**N**	**N**	**N**	**N**	**Y**

Table IV – B5
Source-Specific Applicable Requirements
NSPS Kb Low Vapor Pressure Permitted Fixed Roof Wastewater Sludge Tanks
S195 (Tank 501), S196 (Tank 502), S388 (Tank 276/F205)

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) EXEMPT**		
8-5-117	Exemption, Low Vapor Pressure	Y	
BAAQMD · Regulation 8, Rule 8	**Organic Compounds, Wastewater (Oil-Water Separators) (6/15/1994) REQUIREMENTS FOR SLUDGE DEWATERING UNITS**		
8-8-113	Exemption, Secondary Wastewater Treatment Processes and Stormwater Sewer Systems (segregated) are exempt from 8-8-301, 8-8-302, 8-8-306, 8-8-308	Y	
8-8-303	~~Standards:~~ Gauging and Sampling Devices	Y	
~~8-8-304~~	~~Standards: Sludge dewatering Unit~~	~~Y~~	
8-8-305	Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels	Y	
8-8-504	Monitoring and Records: Portable Hydrocarbon Detector	Y	
8-8-602	Manual of Procedures: Determination of Emissions	Y	
8-8-603	Manual of Procedures: Inspection Procedures	Y	
NESHAPS Title 40 Part 63 Subpart CC	**National Emission Standards for Hazardous Air Pollutants for Petroleum Refining (8/18/95) REQUIREMENTS FOR TANKS ALSO SUBJECT TO NSPS Kb**		
40 CFR 63.640(c)(2)	Applicability and Designation of Storage Vessels	Y	
40 CFR 63.640(n)(1)	Applicability and Designation of Affected Source Overlap for Storage Vessels--Existing Group 1 or Group 2 also subject to Kb only subject to Kb and 63.640(n)(8).	Y	

Table IV – B5
Source-Specific Applicable Requirements
NSPS Kb Low Vapor Pressure Permitted Fixed Roof Wastewater Sludge Tanks
S195 (Tank 501), S196 (Tank 502), S388 (Tank 276/F205)

40 CFR 63.640(n)(8)	Applicability and Designation of Affected Source Overlap for Storage Vessels--Additional requirements for Kb storage vessels	Y	
NSPS Title 40 Part 60 Subpart Kb	**NSPS Subpart Kb for Tanks (12/14/2000) REQUIREMENTS FOR RECORDKEEPING ONLY**		
40 CFR 60.110b(a)	Applicability and Designation of Affected Facility; Volatile organic liquid storage vessels > or = to 40 cu m, after 7/23/1984	Y	
40 CFR 60.110b(c)	Applicability and Designation of Affected Facility; Exemptions for storage vessels > or = to 75 cu m	Y	
40 CFR 60.116b(a)	Monitoring of Operations; Record retention	Y	
40 CFR 60.116b(b)	Monitoring of Operations; Permanent record requirements	Y	
40 CFR 60.116b(d)	Monitoring of Operations; 30-day notification for TVP exceedances	Y	
40 CFR 60.116b(e)	Monitoring of Operations; Determine TVP	Y	
40 CFR 60.116b(e)(3)	Monitoring of Operations; Determine TVP-other liquids	Y	
40 CFR 60.116b(f)	Monitoring of Operations; Waste storage tanks (indeterminate or variable composition)	Y	
NSPS Title 40 Part 60 Subpart QQQ	**NSPS Subpart QQQ VOC Emissions from Petroleum Refinery Wastewater Systems REQUIREMENTS FOR STORAGE VESSELS NOT SUBJECT TO NSPS Kb CONTROL REQUIREMENTS (60.112b)**		
40 CFR 60.690(a)(1)	Applicability and Designation of Affected Facility	Y	
40 CFR 60.690(a)(3)	Applicability and Designation of Affected Facility	Y	
40 CFR 60.692-1	Standards: General	Y	
40 CFR 60.692-1(a)	Standards: General	Y	
40 CFR 60.692-1(b)	Standards: General	Y	
40 CFR 60.692-3	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)(1)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)(2)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)(3)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)(4)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(a)(5)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-3(f)	Standards: Oil-Water Separators (includes storage vessels)	Y	
40 CFR 60.692-6	Standards: Delay of Repair	Y	
40 CFR 60.692-6(a)	Standards: Delay of Repair	Y	
40 CFR 60.692-6(b)	Standards: Delay of Repair	Y	
40 CFR 60.697	Recordkeeping Requirements	Y	
40 CFR 60.697(a)	Recordkeeping Requirements	Y	
40 CFR 60.697(c)	Recordkeeping Requirements	Y	
40 CFR 60.697(e)(1)	Recordkeeping Requirements	Y	
40 CFR 60.697(e)(2)	Recordkeeping Requirements	Y	
40 CFR 60.697(e)(3)	Recordkeeping Requirements	Y	
40 CFR 60.697(e)(4)	Recordkeeping Requirements	Y	
40 CFR 60.697(f)(1)	Recordkeeping Requirements	Y	

Table IV – B5
Source-Specific Applicable Requirements
NSPS Kb Low Vapor Pressure Permitted Fixed Roof
Wastewater Sludge Tanks
S195 (Tank 501), S196 (Tank 502), S388 (Tank 276/F205)

40 CFR 60.697(f)(2)	Recordkeeping Requirements	Y	
40 CFR 60.698(c)	Reporting Requirements	Y	
~~**BAAQMD Condition 1860**~~	~~**APPLICABLE TO S-388**~~		
~~Part 1~~	~~No detectable VOC emissions [Basis: Cumulative Increase]~~	~~Y~~	
~~Part 2~~	~~Requirement to vent to fuel gas recovery system [Basis: Cumulative Increase]~~	~~Y~~	
~~Part 3~~	~~Requirement to include S-388 in fugitive inspection program to verify compliance with Part 1 [Basis: Cumulative Increase]~~	~~Y~~	
BAAQMD Condition 20773			
Part 1	Requirement to verify exempt status of tank based on true vapor pressure of contents [Basis: Regulation 8-5-117, 2-6-409.2]	Y	
Part 2	Record retention requirement [Basis: Regulation 2-6-409.2]	Y	
~~**BAAQMD Condition 20989, Part A**~~	~~Throughput limits for sources S195 [Basis: 2-1-234.3]~~	~~N~~	
BAAQMD Condition 20989, Part A	Throughput limits for source <u>S195,</u> S196, S388 [Basis: 2-1-234.3]	Y	

The throughput condition for S195 is now federally enforceable, since the service has changed.

The service for S388 has changed from sludge pretreatment to sludge storage. Application 10623 proposed to delete reference of S388 from Table IV-AA, because Condition 1860 was deleted. Table IV-AA is a cross-reference between sources and various fugitive standards. This deletion is in error because the condition does not refer to 40 CFR 60, Subpart QQQ and the reference in Table IV-AA refers to Subpart QQQ. Therefore, the reference has been reinstated. Moreover, since Table IV-B5 states that Subpart QQQ applies to S194 and S195, these sources have been added to Table IV-AA. Application 10623 did not propose to delete Subpart QQQ from Table IV-B5.

<u>Other changes to permit</u>
The company code for S385, Wastewater Effluent Media Filter, was changed.

In addition to the changes proposed in Application 10623, the District has determined that because S195, S196, and S388 store slop oil as defined by BAAQMD Regulation 8-8-205, the sources are subject to BAAQMD Regulation 8-8-305, Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels, not 8-8-304, Sludge-dewatering Unit.

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

During the Title V permit development, the District reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting was added to the permit.

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 are revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

The changes in permit conditions proposed in this action are shown below. These changes are discussed fully in Application 10623, which is part of this statement of basis and is attached in Appendix A.

CONDITION 1440
APPLICATIONS 483/5504; SAN FRANCISCO REFINERY; PLANT 16
Conditions for S324, S381, S382, S383, S384, S385, S386, S387, S390, S392, S400, S401, S1007, S1008, S1009

1. S324 API Separator shall be operated such that the liquid in the main separator basin is in full contact with fixed concrete roof. This condition shall not apply during separator shutdown for maintenance. [Cumulative Increase]

2. Diversions of refinery wastewater around the Water Effluent Treating Facility to the open Storm Water Basins (S1008, S1009) shall be minimized. These diversions shall not cause a nuisance as defined in District Regulation 7 or Regulation 1-301. [Cumulative Increase]

3. Records shall be maintained of each incident in which refinery wastewater is diverted to the open storm water basins. These records shall include the reason for the diversion, the total quantity of wastewater diverted to the basins, and the approximate hydrocarbon content of the water. [Cumulative Increase]

4. The following sources shall be vapor-tight as defined in Regulation 8, Rule 8~~have no detectable VOC emissions ("no detectable VOC emissions" is defined according to EPA Test Method 21 as less than 500 ppm above background levels)~~:

   a. Doors, hatches, covers, and other openings on the S324 API Separator, forebay, outlet basin, and channel to the S1007 DAF Unit.
   b. Doors, hatches, covers, and other openings on the S1007 DAF Unit and the S400 Wet and S401 Dry Weather Sumps, except for the vent opening on these units.
   c. Any open process vessel, distribution box, tank, or other equipment downstream of the S1007 DAF Unit (S381, S382, S383, S384, S385, S386, S387, S390, S392). [Cumulative Increase]

5. Compliance with the VOC emission criteria of Part 4 shall be determined semi-annually~~every 6 months~~ and records kept of each inspection. These records shall be made available to District personnel upon request. [Cumulative Increase]

6. The maximum wastewater throughput at the S324 API Separator and S1007 DAF Unit shall not exceed 7,500 gpm during media filter backwash and 7,000 gpm during all other times for each unit. Any modifications to equipment at this facility that~~which~~ increase the annual average waste water throughput at S324 and S1007 shall first be submitted to the BAAQMD in the form of a permit application. [Cumulative Increase]

CONDITION 1860

~~Application 1660, SAN FRANCISCO Refinery, Plant 16~~
~~Conditions For S388,~~

~~1. Tank T-276 and mixer F-205 (S388) shall be gaStight,~~
~~with no detectable emissions. "Detectable Emissions"~~
~~shall be defined as organic concentration exceeding 300~~
~~ppm as methane above background.~~
~~[Cumulative Increase]~~

~~2. S388 shall be vented to the Refinery Vapor Recovery~~
~~System at all times that S388 is operating.~~
~~[Cumulative Increase]~~

~~3. S388 shall be included in the facility fugitive~~
~~emission monitoring program required by Regulation 8,~~
~~Rule 18.~~
~~[Regulation 8, Rule 18]~~

CONDITION 18251
Conditions for S380, S389

1a. Activated Carbon Silo S380 shall be vented through the A-20 baghouse whenever <u>the silo blower motor</u>~~it~~ is in service. <u>Baghouse operation is not required during unloading operations</u> <u>using only gravity feed.</u>

1b. Diatomaceous Earth Silo S389 shall be vented through the A-21 baghouse whenever it is in service. [Regulation 2-1-234]

2a. Baghouses A-20 and A-21 shall be equipped with differential pressure gauges to allow monitoring of baghouse operating condition. [Regulation 1-441]

2b. Differential pressure on baghouse A-20 shall be checked at least once per calendar quarter to verify normal operating condition. [Regulation 1-441]

2c. Differential pressure on baghouse A-21 shall be checked each time that the baghouse is operated to verify normal operating condition. [Regulation 1-441]

3. A record of all differential pressure readings for baghouses A-20 and A-21 shall be maintained in a District-approved log for at least 5 years and shall be made available to the District upon request. [Regulation 1-441]

CONDITION 20989, Part A (only revised entries are shown)
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)
~~*~~195	NA for tank	525,600~~5.0 E 4~~ bbl for S195,196,388 (combined)
196	NA for tank	525,600~~5.0 E 4~~ bbl for S195, 196, 388 (combined)
380	0.45~~0.3~~ ton/hr	3,942~~2,628~~ ton
387	Table II-A	13.14~~7.884~~ E 6 gal
388	Table II-A	525,600 bbl~~153,300 ton~~ for S195, 196, 388 (combined)
1008	Table II-A	~~3.68 E 9 gal~~
1009	Table II-A	~~3.68 E 9 gal~~

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
As described in the permit evaluation for Application 10623, the throughput for S380 has been corrected.

Table VII – B5
Applicable Limits and Compliance Monitoring Requirements
NSPS KB LOW VAPOR PRESSURE PERMITTED WASTEWATER SLUDGE TANKS
S195 (TANK 501), S196 (TANK 502), S388 (TANK 276/F205)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	PERMIT CONDITIONS						
~~**Condition 1860 applies to S-388 only**~~							
~~VOC~~	~~BAAQMD 8-8-304~~	~~Y~~		~~Combined collection/destruction efficiency of 95% by weight.~~	~~BAAQMD 8-8-602~~	~~N~~	~~Source test or EPA Method 25 or 25A~~
VOC	BAAQMD 8-8-305.1	Y		Slop oil tank vessel roof criteria; includes gap criteria	BAAQMD 8-8-305.1	periodic initially & semi-annually	visual inspection
~~VOC~~	~~BAAQMD Condition 1860, Part 1~~	~~Y~~		~~fugitive emissions (300 ppm as methane above background)~~	~~BAAQMD Condition 1860, Part 3~~	~~periodic as required by BAAQMD Regulation 8, Rule 18~~	~~VOC monitor~~
~~throughput~~	~~BAAQMD Condition 20989, Part A~~	~~N~~		~~S-195: 5.0 E-4 bbl/yr~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~Records~~
throughput	BAAQMD Condition 20989, Part A	Y		S195, S196~~, : 5.0 E-4 bbl/yr~~ S388: 525,600 bbl/yr~~153,300 ton/yr~~	BAAQMD Condition 20989, Part A	P/M	Records

Table VII – W
Applicable Limits and Compliance Monitoring Requirements
S380 – ACTIVATED CARBON SILO (P-204)

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
throughput	BAAQMD Condition 20989, Part A	Y		3,942~~2,628~~ ton/yr	BAAQMD Condition 20989, Part A	P/M	records

Table VII – G
Applicable Limits and Compliance Monitoring Requirements
S385 – WASTEWATER EFFLUENT MEDIA FILTER F271-F278~~F-207~~
S386 – PAC REGENERATION SLUDGE THICKENER F-211
S387 – WET AIR REGENERATION SYSTEM P-202
S390 – THICKENED SLUDGE STORAGE F-106
S392 – REGENERATED PAC SLURRY STORAGE F-266

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC	BAAQMD Condition 1440, Part 4.c	Y		no detectable VOC emissions	BAAQMD Condition 1440, Part 5	P/SA	VOC analyzer
Through-put	BAAQMD Condition 20989, Part A	Y		S385: 3.68 E 9 gal/yr S386: 1.6 E 7 gal/yr, S387: 13.14~~7.884~~ E 6 gal/yr S390: 7.884 E 6 gal/yr S392: 7.884 E 6 gal/yr	BAAQMD Condition 20989, Part A	P/M	records

Table VII - F
Applicable Limits and Compliance Monitoring Requirements
S1008 PRIMARY STORMWATER BASIN
S1009 MAIN STORMWATER BASIN

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~~		~~3.68 E 9 gal/yr each for S-1008, S-1009~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~records~~

Other changes to permit

In addition to the changes proposed in Application 10623, the District has determined that because S195, S196, and S388 store slop oil as defined by BAAQMD Regulation 8-8-205, the sources are subject to BAAQMD Regulation 8-8-305, Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels, not 8-8-304, Sludge-dewatering Unit. The standard contains appropriate monitoring for compliance.

The company code for S385, Wastewater Effluent Media Filter, was changed. This is an administrative amendment.

VIII. Test Methods

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.

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.

APPENDIX A

Permit Evaluation for Application 10623

ENGINEERING EVALUATION
CONOCOPHILLIPS SAN FRANCISCO REFINERY; PLANT 16
APPLICATION 10623

1.0 BACKGROUND

ConocoPhillips has applied to make several permit revisions, and administrative amendments and minor modifications to the facility Major Facility Permit. These changes are related to facility wastewater treatment sources, and are discussed in detail, with an assessment of emission impacts, in Section 2.0.

2.0 Emission Increases and Changes to Major Facility Permit

2.1 Increase S-380 Capacity and Annual Throughput Limit

S-380 is a silo that stores powdered activated carbon (PAC) that is used for odor control at the wastewater treatment system. PAC is mixed with the effluent from the DAF Unit, and then removed from the effluent stream along with other solids in the form of sludge at the wastewater clarifiers. S-380 is currently subject to Condition 20989, which lists the PAC processing capacity of S-380 as 600 lb/hr, and also lists a maximum annual throughput of 2,628 ton/yr. This maximum annual throughput was derived from the hourly capacity by assuming 8,760 hr/yr of operation at full capacity, and is not based on system design or historical operation. The capacity and annual throughput in Condition 20989 were imposed by the District as part of the Title V permit in December 2003. The capacity of 600 lb/hr was taken from the equipment capacity that was listed in a permit application form for S-380 that was submitted in 1987 for Application 483. No throughput limit was assigned to S-380 in Application 483 because the odor-control subsystem was installed in order to resolve nuisance odors at the wastewater treatment system and because S-380 emissions were considered negligible.

The applicant claims that the 1987 data form for S-380 was in error, and that the capacity of the equipment, as constructed, was in fact 50% higher than the form indicated (900 lb/hr, 3,942 ton/yr), based on the capacity of the rotary valve that feeds carbon from the silo. The applicant has provided design data for this rotary valve (copy attached), verifying a nominal capacity of at least 900 lb/hr.

Changes to equipment capacity and allowed throughput may result either directly or indirectly in emission increases. Direct emissions from S-380 occur when the silo is loaded or when the PAC is "fluffed" as needed to prevent excessive PAC settling, since these operations require the silo blower to operate, causing air and some amount of particulate to be emitted through the baghouse filters. Thus, if the increase in PAC processing capacity and annual throughput resulted in an increase in silo loading activity or fluffing activity, then a direct particulate emission increase would occur. Indirect emission increases may occur to the extent that the increase in PAC processing capacity and annual throughput allows other facility sources to produce more emissions. For example, if the overall processing rate of crude oil is currently limited by the generation of odorous wastewater, such that greater use of PAC to control odors would allow greater crude oil processing, then an indirect emission increase would occur at any sources that had been "de-bottlenecked".

S-380 can hold 25 tons of PAC. The most recent annual permit renewal submittal that included S-380 indicated that only 80 tons of PAC was used in 2001. This is about 3% of the current maximum annual throughput. Therefore, assuming that the design data provided for the silo rotary valve is accurate, it appears that the applicant's interest is primarily to correct the valve capacity, and secondarily to make the maximum annual throughput consistent with the corrected capacity and not necessarily to increase the maximum annual throughput. An attempt could be made to establish an annual throughput limit that corresponds to historical PAC annual usage. However, as demonstrated by the fact that no throughput limit was imposed for PAC when S-380 was originally permitted, S-380 operates as part of an odor abatement system, and the interests of the District are better served by allowing use of PAC as necessary to control odors, rather than by limiting the throughput of PAC.

In order to prevent unnecessary direct particulate emissions at S-380, a proposed revision to Condition 18251 is discussed in Section 2.1 that would prohibit unnecessary operation of the S-380 blower. As far as indirect emissions are concerned, there is no evidence that the current annual PAC throughput limit is a bottleneck on any refinery production operations. Instead, the limited throughput data available for S-380 indicates that the refinery uses only a small fraction of the amount currently allowed. As noted above, the change to the maximum annual throughput is proposed for consistency. Therefore, the S-380 capacity will be changed to the proposed rate of 0.45 ton/hr, with the corresponding annual throughput of 3,942 ton/yr, with no additional emissions attributed to the silo or to related equipment or operations. The citation of this annual throughput limit in Table VII-W will also be changed.

The revisions to Condition 20989 are shown in Section 3.0. The revisions to Table VII-W are as follows: (only revised entries are shown)

Table VII – W
Applicable Limits and Compliance Monitoring Requirements
S-380 – ACTIVATED CARBON SILO (P-204)

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
throughput	BAAQMD Condition 20989, Part A	Y		3,942~~2,628~~ ton/yr	BAAQMD Condition 20989, Part A	P/M	records

This is a minor modification to the Major Facility Permit only since the limits in Condition 20989 were established for Title V monitoring.

2.2 Revise Baghouse Abatement Requirements for S-380 Silo

The applicant has proposed to revise Condition 18251, Part 1a (copy attached) to specify that the baghouse that abates the S-380 carbon silo must operate only during silo loading operations and when the silo blower motor is used to "fluff" the carbon to prevent compression of the carbon, but not for normal gravity-feed operation from the silo. This condition currently requires baghouse operation at all times.

When particulate sources are abated by baghouses, the emission rate to the atmosphere is determined by the operating time of the baghouse and the grain loading level of the baghouse filter elements. If the baghouse is operated when material or air is not being introduced into the abated source, then the resulting emissions represent "excess emissions" and not a reduction in emissions. Thus, a baghouse should only be operated when it is required to abate emissions. Condition 18251, Part 1a requires operation of the A-20 baghouse whenever the S-380 silo "is in service". In order to prevent unnecessary emissions, the applicant has proposed to amend this condition to require operation of A-20 only when S-380 is being loaded, or when the silo blower motor is operated to "fluff" the activated carbon. These are the only circumstances that force air out of the silo and therefore the only times that A-20 should operate. This change will be made with no additional emissions attributed to the silo.

The revisions to Condition 18251 are shown in Section 3.0.

This is a minor modification to the Major Facility Permit and an NSR modification because Condition 18251, Part 1a was established in the context of an NSR permit application.

2.3 Correct ID Numbers for S-385 Filters

The applicant has proposed to change the identification numbers assigned to the S-385 media filters (Major Facility Permit Tables II-A, IV-G and VII-G). The applicant has changed these identifying numbers since the filters were first permitted.

The revisions to Tables II-A, IV-G and VII-G (the revision to S-387 throughput is discussed in Section 2.4) are as follows: (only revised entries are shown)

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
385	Media Filter (F271-F278~~F-207 A-H~~)	Wastewater		420 thousand gal/hr

Table IV – G
Source-specific Applicable Requirements – Miscellaneous Wastewater Sources
Subject to Condition 1440
S-385 – WASTEWATER EFFLUENT MEDIA FILTER F271-F278~~F-207~~
S-386 – PAC REGENERATION SLUDGE THICKENER F-211
S-387 – WET AIR REGENERATION SYSTEM P-202
S-390 – THICKENED SLUDGE STORAGE F-106
S-392 – REGENERATED PAC SLURRY STORAGE F-266

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date

Table VII – G
Applicable Limits and Compliance Monitoring Requirements
S-385 – WASTEWATER EFFLUENT MEDIA FILTER F271-F278~~F-207~~
S-386 – PAC REGENERATION SLUDGE THICKENER F-211
S-387 – WET AIR REGENERATION SYSTEM P-202
S-390 – THICKENED SLUDGE STORAGE F-106
S-392 – REGENERATED PAC SLURRY STORAGE F-266

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC	BAAQMD Condition 1440, Part 4.c	Y		no detectable VOC emissions	BAAQMD Condition 1440, Part 5	P/SA	VOC analyzer
Through-put	BAAQMD Condition 20989, Part A	Y		S-385: 3.68 E 9 gal/yr S-386: 1.6 E 7 gal/yr, S-387: 13.14~~7.884~~ E 6 gal/yr S-390: 7.884 E 6 gal/yr S-392: 7.884 E 6 gal/yr	BAAQMD Condition 20989, Part A	P/M	records

This is an administrative amendment of the Major Facility Permit.

2.4. Increase S-387 Capacity and Annual Throughput Limit

The applicant has proposed to change hourly and annual throughput limits for the S-387 wet air regeneration unit in Condition 20989 to correspond to the design basis for this unit.

The S-387 wet air regeneration (WAR) unit is part of the WAR sludge treatment system. S-387 is a continuously-operated, 1,000-gallon enclosed process unit where spent activated carbon used in wastewater treatment is electrically heated to drive off adsorbed organic compounds. The off-gas from S-387 is vented to and treated at the S-381 and S-382 aeration tanks. The original data form (copy attached) for S-387 and the resulting permit (Application 483) indicate that this unit had a capacity of 15 gpm, although the basis for this capacity is not discussed and is unknown. The applicant now indicates that the true capacity of S-387 is the capacity of the original positive displacement feed pump for this source (25 gpm or 1,500 gal/hr), which also represents the continuous operating rate of this unit. Because there is no evidence that the feed pump or other parts of S-387 have been physically modified, it will be assumed that the original maximum operating rate was an error and this rate will be changed to the proposed rate of 1,500 gal/hr, with the corresponding annual throughput of 13.14 E 6 gal/yr, with no additional emissions attributed to S-387 silo or to related equipment or operations. The citation of this annual throughput limit in Table VII-G will also be changed.

The revisions to Condition 20989 are shown in Section 3.0.

The revisions to Table VII-G are shown in Section 2.3.

This is a minor modification to the Major Facility Permit only since the limits in Condition 20989 were established for Title V monitoring.

2.5 Delete Capacity and Annual Throughput Limits for Stormwater Basins

The applicant has proposed to delete the capacity and the annual throughput limits for the S-1008 and S-1009 stormwater basins in Condition 20989 and Table II-A of the Major Facility Permit.

The S-1008 and S-1009 stormwater basins are not used for production purposes. Instead, they provide emergency water-handling capacity in the event the dry weather sump and wet weather sump are filled and exceed their pumping capacity, or if one of the sump pumps fails, or if the equalization tanks reach their capacity. The normal use of the stormwater basins occurs when the wet weather sump overflows. Excess water flows through a 78,000 gpm underground line to the 2.3 million gallon S-1008 stormwater basin. When S-1008 is filled, it overflows to the 7.2 million gallon S-1009 stormwater basin through a weir with a capacity in excess of 78,000 gpm.

Table II-A of the Major Facility Permit indicates that both S-1008 and S-1009 have a capacity of 7,000 gpm, with a corresponding annual throughput limit of 3.68 E 9 gallons in Condition 20989. The 7,000 gpm limit was taken from the existing District database records for these sources. The basis for this data is unknown and the original data forms for these sources indicate that the capacity of these sources is “unknown”. The annual limit simply assumes continuous operation at 7,000 gpm for a year.

The applicant has proposed to eliminate the limits in Table II-A and Condition 20989 because S-1008 and S-1009 handle only emergency water flows, because Condition 1440 Part 2 (copy attached) requires that the facility minimize use of S-1008 and S-1009, and because the flow through these devices, although fixed by design, is not directly measurable.

Because the current 7,000 gpm capacity does not correspond to any known operating parameter for S-1008 or S-1009, this limit and the corresponding annual throughput limit in Condition 20989 will be deleted. In its place, the volumetric capacity of S-1008 and S-1009 will be added to Table II-A, with no annual throughput limit and no additional emissions attributed to either source. The citation of these annual throughput limits in Table VII-F will also be changed.

The revisions to Condition 20989 are shown in Section 3.0.

The revisions to Tables II-A (only the entries for S-1008 and S-1009 are shown) and VII-F are as follows:

Table VII - F
Applicable Limits and Compliance Monitoring Requirements
S-1008 PRIMARY STORMWATER BASIN
S-1009 MAIN STORMWATER BASIN

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~~		~~3.68 E 9 gal/yr each for S-1008, S-1009~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~records~~

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
1008	U100 Primary Stormwater Basin			2.3 E 6 gallons~~7000 gpm~~
1009	U100 Main Stormwater Basin			7.2 E 6 gallons~~7000 gpm~~

This is a minor modification to the Major Facility Permit only since the limits in Condition 20989 were established for Title V monitoring.

2.6 Change S-388 Service and S-195, S-196 Capacity and throughput Limits

The applicant has proposed to replace the individual annual throughput limits for S-195, S-196 and S-388 in Condition 20989 with a combined throughput limit since all three sources are proposed to handle the same sludge; the service for S-388 is proposed to change sludge from treatment to sludge storage.

This item includes two modifications: 1) changing the service of S-388 from sludge treatment (as described in Application 1660) to sludge storage, and 2) changing and combining the throughput limits for S-195, S-196 and S-388 since they will be in the same service.

a) S-388 Service Change

Currently, S-195, S-196 and S-388 are identified as having the same applicable requirements in Table IV-B5 of the facility Title V permit, except for the three requirements in Condition 1860 (copy attached) that are specific to S-388. ConocoPhillips has proposed to delete Condition 1860 because it applies to the original service for this source.

The evaluation for Application 1666 indicated that emissions from S-388 in its original service were negligible. At S-388, sludge was heated and mixed while its pH was adjusted with either an acid or caustic solution, and the vessel was vented to the refinery fuel gas collection system. S-388 is not currently in service and only operated in its permitted service from 1989 until 1991, and has not operated since.

Because the tanks in this service are unheated, they are not vented to the refinery fuel gas collection system. The sludge that is currently processed at S-195 and S-196, and that will now be processed at S-388, consists of a mixture of water and sediment from the S-324 API separator and S-1007 DAF unit, and used flocculent from the top of the DAF. This mixture consists of approximately 75% water and is required to have a vapor pressure no higher than 0.5 psia because the Title V permit lists S-195, S-196 and S-388 as exempt from the requirements of Regulation 8, Rule 5 based on the exemption for low vapor pressure in 8-5-117.

The S-324 API separator has a wastewater capacity limited by Condition 1440, Part 6 (copy attached), and an annual wastewater throughput limited by Condition 20989, Part A. Because it operates in series with S-324, the S-1007 DAF is subject to the same wastewater capacity and annual throughput limits as S-324. The throughput of sediment and flocculent from these sources is indirectly limited because the throughput of wastewater is limited by these conditions. If the addition of S-388 into sludge storage service represented the elimination of a bottleneck on wastewater treatment capacity, then it would be appropriate to quantify and charge emissions from the resulting increase in wastewater processing. However, this does not appear to be the case because the refinery operated at capacity for several months this year with only a single sludge storage tank in service (S-196 has been out of service for several months and S-388 has not operated since 1991). Therefore, it appears that addition of S-388 as a parallel storage unit simply provides additional operational flexibility. When the low vapor pressure of the sludge is considered, along with the existing indirect limits on sludge throughput, the additional of S-388 to sludge storage service in parallel with S-195 and S-196 will be considered to result in a negligible increase in emissions and Condition 1860 will be deleted. References to this condition in Tables IV-AA (only citation of S-388 is shown), IV-B5 and VII-B5 (only permit condition citations are shown) will also be deleted:

Table IV- AA Fugitive Sources: Applicable Requirements									
Process Unit	**BAAQMD Reg. 8-18**	**BAAQMD Reg. 8-28**	**NSPS Part 60, Subpart GGG; BAAQMD Reg. 10-59**	**NSPS Part 60, Subpart QQQ; BAAQMD Reg. 10-69**	**NSPS Part 60, Subpart VV; BAAQMD Reg. 10-52**	**NESHAP Part 61, Subpart J**	**NESHAP Part 61, Subpart FF; BAAQMD Reg. 11-12**	**NESHAP Part 61, Subpart V; BAAQMD Reg. 11-7**	**NESHAP Part 63, Subpart CC**
Unit 100 (S-324, S-1007~~, S-388 per Condition 1860, Part 3~~)	**Y**	**Y**	**N**	**Y**	**N**	**N**	**N**	**N**	**Y**

Table IV – B5
Source-Specific Applicable Requirements
NSPS Kb Low Vapor Pressure Permitted Fixed Roof Wastewater Sludge Tanks
S-195 (Tank 501), S-196 (Tank 502), S-388 (Tank 276/F205)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~**BAAQMD Condition 1860**~~	~~**APPLICABLE TO S-388**~~		
~~Part 1~~	~~No detectable VOC emissions [Basis: Cumulative Increase]~~	~~Y~~	
~~Part 2~~	~~Requirement to vent to fuel gas recovery system [Basis: Cumulative Increase]~~	~~Y~~	
~~Part 3~~	~~Requirement to include S-388 in fugitive inspection program to verify compliance with Part 1 [Basis: Cumulative Increase]~~	~~Y~~	
BAAQMD Condition 20773			
Part 1	Requirement to verify exempt status of tank based on true vapor pressure of contents [Basis: Regulation 8-5-117, 2-6-409.2]	Y	
Part 2	Record retention requirement [Basis: Regulation 2-6-409.2]	Y	
BAAQMD Condition 20989, Part A	Throughput limits for sources S-195 [Basis: 2-1-234.3]	N	
BAAQMD Condition 20989, Part A	Throughput limits for source S-196, S-388 [Basis: 2-1-234.3]	Y	

In Table VII-B5, the changes to throughput limits are discussed in Section 2.6.b.

Table VII – B5
Applicable Limits and Compliance Monitoring Requirements
NSPS KB LOW VAPOR PRESSURE PERMITTED WASTEWATER SLUDGE TANKS
S-195 (TANK 501), S-196 (TANK 502), S-388 (TANK 276/F205)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	PERMIT CONDITIONS						
~~**Condition 1860 applies to S-388 only**~~							
~~VOC~~	~~BAAQMD Condition 1860, Part 1~~	~~Y~~		~~fugitive emissions (300 ppm as methane above background)~~	~~BAAQMD Condition 1860, Part 3~~	~~periodic as required by BAAQMD Regulation 8, Rule 18~~	~~VOC monitor~~
~~throughput~~	~~BAAQMD Condition 20989, Part A~~	~~N~~		~~S-195: 5.0 E 4 bbl/yr~~	~~BAAQMD Condition 20989, Part A~~	~~P/M~~	~~Records~~
throughput	BAAQMD Condition 20989, Part A	Y		S-195, S-196~~, : 5.0 E 4 bbl/yr~~ S-388: 525,600 bbl/yr~~153,300 ton/yr~~	BAAQMD Condition 20989, Part A	P/M	Records

The S-388 service change and the deletion of Condition 1860 are NSR modifications and minor modifications of the Major Facility Permit.

b) S-195, S-196, S-388 Throughput Limit Change

ConocoPhillips has also proposed to change the existing throughput limits for S-195, S-196 and S-388 as follows:

Source	Existing Limit Condition 20989, Part A	Proposed Limit Condition 20989, Part A
195	5.0 E 4 bbl/yr	525,600 bbl/yr total for S-195, 196 and 388
196	5.0 E 4 bbl/yr	525,600 bbl/yr total for S-195, 196 and 388
388	NA (note 1)	525,600 bbl/yr total for S-195, 196 and 388

Notes:

1. Although S-388 has an existing throughput limit of 153,300 ton/yr in Condition 20989, this limit represents a process (sludge pretreatment) that has not been performed since 1991 and that will no longer be performed. Therefore, this limit does not represent an existing allowance to process sludge in the proposed service.

This table seems to indicate that over a tenfold increase in sludge storage is proposed. The original date form for both S-195 and S-196 indicate that each tank has a maximum operating rate of 1 ton/hr and an operating schedule of 8,760 hr/yr, resulting in an annual throughput of 17,520,000 lb/yr at each tank. The 50,000 bbl/yr limit in Condition 20989 was based on this

value by converting this weight limit to a volume limit, with an assumed sludge density equal to that of water:

(17,520,000 lb/yr)/((8.34 lb/gal)(42 gal/bbl)) = 50,020 bbl/yr

ConocoPhillips has indicated that the original 1 ton/yr capacity basis for S-195 and S-196 was based on the weight of dry sludge rather than as a mixture containing 75% water by volume, which is the typical composition in these tanks. The original data forms do not specify whether the limit applies to wet or dry sludge. If the limit did apply to dry sludge, then the associated limit for wet sludge would be:

(50,000 bbl/yr)/(1 – 0.75) = 200,000 bbl/yr at each tank
400,000 bbl/yr at both tanks

However, ConocoPhillips indicates (9/20/04 letter) that the proposed throughput (525,600 bbl/yr) is based on the historical combined flowrates of API and DAF sediment and DAF flocculent averaged for the wet and dry seasons.

The S-195 and S-196 sludge storage tanks have never been formally evaluated in the context of a permit application because they were in service when the District permit program was instituted, and they have not been modified. However, when a major upgrade of the facility wastewater treatment system was proposed in Application 483, including the 44,000 gallon S-386 sludge thickener tank and the 38,000 gallon S-390 thickened sludge storage tank, emissions from these sources were determined to be negligible. U.S. EPA's AP-42, Chapter 5.1 ("Petroleum Refining"), provides no emission factors for sludge operations, but cites Chapter 4.3 ("Wastewater Treatment, Collection and Storage") as a source of additional information. However, this chapter also does not provide data for sludge from refinery API and DAF operations. Because of the lack of emission data, and the low vapor pressure requirement at tanks S-195, S-196 and S-388, these sources will be assumed to have negligible emissions, and the proposed total throughput limit of 525,600 bbl/yr will be assigned in Condition 20989, and will not be considered to result in additional emissions at any source. The citation of the annual throughput limits for S-195, S-196 and S-388 in Table VII-B5 will also be changed. Because the new annual limit has been established in this evaluation, the limit for S-195 will now be considered federally-enforceable (limits for S-196 and S-388 were already designated federally-enforceable).

The revisions to Table VII-B5 are shown in Section 2.6.a.

The revisions to Condition 20989 are shown in Section 3.0.

This is a minor modification to the Major Facility Permit only since the limits in Condition 20989 were established for Title V monitoring.

2.7 Revise Condition 1440 for Consistency With Amended Regulation 8, Rule 8

The applicant has proposed to revise monitoring language of Condition 1440, Part 5 (copy attached) for consistency with amended Regulation 8, Rule 8 for leaks at various wastewater sources (S-324, S-1007, S-400, S-401, S-381 through S-387, S-390, S-392).

Condition 1440, Part 4 requires that sources S-324, S-1007, S-400, S-401, S-381 through S-387, S-390 and S-392 have no detectable VOC emissions in accordance with EPA Test Method 21. Part 5 requires verification every 6 months. On September 15, 2004, Regulation 8, Rule 8, to which these sources are subject, was amended to add a requirement for an inspection and maintenance program in Section 8-8-402. This I&M program requires semi-annual inspections (8-8-402.4) and also uses EPA Test Method 21 as the standard for identifying leaks. Condition 1440 instituted an I&M program for these sources several years in advance of Regulation 8, Rule 8. However, now that Regulation 8, Rule 8 has been amended, there is little value to having two independent I&M programs with the same standards. Therefore, the language of Condition 1440, Parts 4 and 5 will be amended so that the requirements of this condition are satisfied by the I&M program required by Regulation 8, Rule 8.

The revisions to Condition 1440 are shown in Section 3.0.

This is a minor modification to the Major Facility Permit and an NSR modification because Condition 1440 was established in the context of an NSR permit application.

3.0 CHANGES TO PERMIT CONDITIONS

In addition to the changes to tables in the Major Facility Permit described in Section 2.0, the following changes are required to Permit Conditions:

3.1 CONDITION 20989, Part A (only revised entries are shown)

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 limit	hourly / daily throughput limit	annual throughput (any consecutive 12-month period unless otherwise specified)
*195	NA for tank	525,600~~5.0 E 4~~ bbl for S-195,196,388 (combined)
196	NA for tank	525,600~~5.0 E 4~~ bbl for S-195,196,388 (combined)
380	0.45~~0.3~~ ton/hr	3,942~~2,628~~ ton
387	Table II-A	13.14~~7.884~~ E 6 gal
388	Table II-A	525,600 bbl~~153,300 ton~~ for S-195,196, 388 (combined)
1008	Table II-A	~~3.68 E 9 gal~~
1009	Table II-A	~~3.68 E 9 gal~~

3.2 CONDITION 18251

Conditions for S-380, S-389

1a. Activated Carbon Silo S-380 shall be vented through the A-20 baghouse whenever the silo blower motor~~it~~ is in service. Baghouse operation is not required during unloading operations
Using only gravity feed.

1b. Diatomaceous Earth Silo S-389 shall be vented through the A-21 baghouse whenever it is in service. [Regulation 2-1-234]

2a. Baghouses A-20 and A-21 shall be equipped with differential pressure gauges to allow monitoring of baghouse operating condition. [Regulation 1-441]

2b. Differential pressure on baghouse A-20 shall be checked at least once per calendar quarter to verify normal operating condition. [Regulation 1-441]

2c. Differential pressure on baghouse A-21 shall be checked each time that the baghouse is operated to verify normal operating condition. [Regulation 1-441]

3. A record of all differential pressure readings for baghouses A-20 and A-21 shall be maintained in a District-approved log for at least 5 years and shall be made available to the District upon request. [Regulation 1-441]

3.3 CONDITION 1860

~~Application 1660, SAN FRANCISCO Refinery, Plant 16 Conditions For S-388,~~

~~1. Tank T-276 and mixer F-205 (S-388) shall be gas tight, with no detectable emissions. "Detectable Emissions" shall be defined as organic concentration exceeding 300 ppm as methane above background.~~
~~[Cumulative Increase]~~

~~2. S-388 shall be vented to the Refinery Vapor Recovery System at all times that S-388 is operating.~~
~~[Cumulative Increase]~~

~~3. S-388 shall be included in the facility fugitive emission monitoring program required by Regulation 8, Rule 18.~~
~~[Regulation 8, Rule 18]~~

3.4 CONDITION 1440

APPLICATIONS 483/5504; SAN FRANCISCO REFINERY; PLANT 16
Conditions for S-324, S-381, S-382, S-383, S-384, S-385, S-386, S-387, S-390, S-392, S-400, S-401 S-1007, S-1008, S-1009

1. S-324 API Separator shall be operated such that the liquid in the main separator basin is in full contact with fixed concrete roof. This condition shall not apply during separator shutdown for maintenance.
[Cumulative Increase]

2. Diversions of refinery wastewater around the Water Effluent Treating Facility to the open Storm Water Basins (S-1008, S-1009) shall be minimized. These diversions shall not cause a nuisance as defined in District Regulation 7 or Regulation 1-301.
[Cumulative Increase]

3. Records shall be maintained of each incident in which refinery wastewater is diverted to the open storm water basins. These records shall include the reason for the diversion, the total quantity of wastewater diverted to the basins, and the approximate hydrocarbon content of the water. [Cumulative Increase]

4. The following sources shall be vapor-tight as defined in Regulation 8, Rule 8~~have no detectable VOC emissions ("no detectable VOC emissions" is defined according to EPA Test Method 21 as less than 500 ppm above background levels)~~:

   a. Doors, hatches, covers, and other openings on the S-324 API Separator, forebay, outlet basin, and channel to the S-1007 DAF Unit.
   b. Doors, hatches, covers, and other openings on the S-1007 DAF Unit and the S-400 Wet and S-401 Dry Weather Sumps, except for the vent opening on these units.
   c. Any open process vessel, distribution box, tank, or other equipment downstream of the S-1007 DAF Unit (S-381, S-382, S-383, S-384, S-385, S-386, S-387, S-390, S-392). [Cumulative Increase]

5. Compliance with the VOC emission criteria of Part 4 shall be determined semi-annually~~every 6 months~~ and records kept of each inspection. These records shall be made available to District personnel upon request.
[Cumulative Increase]

6. The maximum wastewater throughput at the S-324 API Separator and S-1007 DAF Unit shall not exceed 7,500 gpm during media filter backwash and 7,000 gpm during all other times for each unit. Any modifications to equipment at this facility which increase the annual average waste water throughput at S-324 and S-1007 shall first be submitted to the BAAQMD in the form of a permit application. [Cumulative Increase]

4.0 DEMONSTRATION OF MINOR REVISION OR ADMINISTRATIVE AMENDMENT

This evaluation will demonstrate that the proposed changes to the Major Facility Permit constitute either administrative amendments or minor revisions of that permit. The definition of a minor revision to a major facility permit appears in Regulation 2, Rule 6:

2-6-215 **Minor Permit Revision:** Any revision to a federally enforceable condition on a major facility review permit which:
215.1 is not a significant permit revision; and
215.2 is not an administrative permit amendment.
215.3 Deleted

Thus, a minor revision is any revision that is neither significant nor administrative. These definitions follow:

2-6-201 **Administrative Permit Amendment:** A non-substantive amendment to a major facility review permit. The following amendments are administrative amendments: changes in recordkeeping format that are not relaxations of applicable requirements, the correction of typographical errors, changes in permit format that are not alterations of applicable requirements, changes in source descriptions that are not alterations of applicable requirements, changes in the descriptions of applicable requirements that add detail but do not affect substantive requirements, deletion of requirements containing sunset dates that have passed, the identification of administrative changes at a facility (such as a replacement of the facility's responsible official or a change in ownership or operational control of the facility which involves no physical or operational changes to the facility), the deletion of sources, the approval of a District rule into the SIP, the imposition of more frequent emission monitoring requirements, and changes to applicable requirements and related monitoring that are not federally enforceable.

The equipment identification number changes described for S-385 in section 2.3 are an administrative amendment.

2-6-226 **Significant Permit Revision:** Any revision to a federally enforceable condition contained in a major facility review permit that can be defined as follows:
226.1 The incorporation of a change considered a major modification under 40 CFR Parts 51 (NSR) or 52 (PSD);
226.2 The incorporation of a change considered a modification under 40 CFR Parts 60 (NSPS), 61 (NESHAPS), or Section 112 of the Clean Air Act (HAP);
226.3 Any significant change or relaxation of any applicable monitoring, reporting or recordkeeping condition;
226.4 The establishment of or change to a permit term or condition allowing a facility to avoid an applicable requirement, including:
4.1 a federally enforceable emission limit assumed in order to avoid classification as a modification under any provision of Title I of the federal Clean Air Act, or

4.2 an alternative hazardous air pollutant emission limit pursuant to Section 112(i)(5) of the Clean Air Act;

226.5 The establishment of or change to a case-by-case determination of any emission limit or other standard;

226.6 The establishment of or change to a facility-specific determination for ambient impacts, visibility analysis, or increment analysis on portable sources; or

226.7 The incorporation of any requirement promulgated by the U. S. EPA under the authority of the Clean Air Act provided that three or more years remain on the permit term.

The remaining changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 are not significant revisions and therefore are minor modifications.

Each of these items is addressed here:

226.1 Because the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 involve either negligible or no emission increases, the proposed amendments do not constitute a major modification for NSR or PSD.

226.2 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 involve a modification under any NSPS, NESHAP or MACT standard. The change in service for S-388 in Section 2.6.a will not change the applicable requirements for that source.

226.3 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 include any relaxations of monitoring, reporting or recordkeeping requirements. For S-1008 and S-1009, the 3.68 E 9 gal/yr throughput limit was eliminated because it was determined to be erroneous and inappropriate. For S-388, Condition 1860, including emission limits and monitoring was eliminated because this source has changed service and Condition 1860 no longer applies.

226.4 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 allow a source to avoid an applicable requirement. For S-1008 and S-1009, the 3.68 E 9 gal/yr throughput limit was eliminated because it was determined to be erroneous and inappropriate. For S-388, Condition 1860, including emission limits and monitoring was eliminated because this source has changed service and Condition 1860 no longer applies.

226.5 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 include a change to or establishment of a case-by-case determination of an emission limit or other standard. For S-195, S-196, S-380, S-387 and S-388, existing throughput limits were corrected.

226.6 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 include the establishment of or change to a facility-specific determination for ambient impacts or visibility impacts.

226.7 None of the changes described in Sections 2.1, 2.2, 2.4, 2.5, 2.6.a, 2.6.b and 2.7 include the incorporation of a new federal requirements into the Major Facility Permit.

Therefore, the proposed revision is not a significant revision of the Major Facility Permit and the changes may be considered either administrative amendments or minor permit revisions.

5.0 CEQA and Other Regulations

5.1 CEQA

Only the NSR modifications described in Sections 2.2, 2.6.a and 2.7 will be considered potentially subject to CEQA. The other changes reflect only corrections to the Major Facility Permit and not physical or operational modifications or changes to permit conditions established in the context of NSR permit applications.

For S-380 (Section 2.2) and S-195, S-196 and S-388 (Section 2.6a), this application is considered to be ministerial under the District's CEQA guidelines (Regulation 2-1-311) and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 3.1 and 4.1.

The amendments to Condition 1440 (Section 2.7), do not reflect any physical or operational changes and will not result in any change in leak standard or monitoring. Wording has simply been changed to ensure consistency with the language in amended Regulation 8, Rule 8. As such, these amendments are categorically exempt from CEQA in accordance with Regulation 2-1-312.11 because they could not result in any significant environmental effect.

5.2 Other Requirements

The S-388 tank is proposed to change service from a sludge treatment tank to a sludge storage tank for a mixture of water and sediment from the S-324 API separator and S-1007 DAF unit, and used flocculent from the top of the DAF. This mixture is "slop oil" as defined in Regulation 8, Rule 8:

> **8-8-205 Oil-Water Separator Slop Oil:** Floating oil, flocculant sludge, and solids which accumulate in an oil-water separator or air flotation unit.

This rule defines a slop oil vessel as follows:

> **8-8-213 Oil-Water Separator Slop Oil Vessel:** Any vessel which, as its sole function, treats or dewaters oil-water separator slop oil.

It appears that S-388 is not a slop oil vessel because it does not perform treatment or dewatering. However, the rule also includes the following requirement:

8-8-305 Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels: A person shall not store any oil-water separator and/or air flotation unit sludges in an oil-water separator slop oil vessel unless such oil-water separator slop oil vessel is equipped with one of the following:

305.1 A solid, gasketed, fixed cover totally enclosing the vessel liquid contents, with all cover openings closed, except when the opening is being used for inspection, maintenance, or wastewater sampling. The cover may include an atmospheric vent or a pressure/vacuum valve. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps greater than 0.32 cm (0.125 inch) occur in the roof or between the roof and wall; and that the access doors and other openings are closed and gasketed properly; or

305.2 An organic compound vapor recovery system with a combined collection and destruction efficiency of at least 70 percent, by weight.

This section clearly indicates that slop oil vessels may have storage functions. Therefore, S-388 will be subject to these requirements, as are S-195 and S-196.

5.0 RECOMMENDATION

Waive Authority to Construct and issue Permit to Operate to ConocoPhillips for:

S-388 Sludge Storage Tank: change service and delete Condition 1860 in Tables IV-AA, IV-B5 and VII-B5 of the Major Facility Permit, and revise annual throughput limit in Condition 20989 and Table VII-B5 of the Major Facility Permit

Issue modified conditions (after EPA comment period) for:

S-324, S-1007, S-400, S-401, S-381 through S-387, S-390, S-392

Wastewater Sources: revise Condition 1440 to be consistent with Regulation 8, Rule 8

S-380 Activated Carbon Silo: revise annual throughput limit in Condition 20989 and Table VII-W of the Major Facility Permit, revise abatement requirements in Condition 18251

S-387 Wet Air Regeneration: revise hourly and annual throughput limits in Condition 20989 and Table VII-G of the Major Facility Permit

S-195, S-196 Sludge Storage Tanks: revise annual throughput limit in Condition 20989 and Table VII-B5 of the Major Facility Permit

S-1008, 1009 Stormwater Basins: delete annual throughput limit in Condition 20989 and Table VII-F of the Major Facility Permit, and revise capacity in Table II-A of the Major Facility Permit

Submit amendments to U.S. EPA to the Major Facility Permit for ConocoPhillips, including the minor modifications and administrative amendments described in Sections 2.1 through 2.7 and 3.1 through 3.4.

By: _____

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