Bay Area Air Quality Management District

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Permit Evaluation
and
Statement of Basis
for
Minor Revision of

MAJOR FACILITY REVIEW PERMIT

for

Phillips 66– San Francisco Refinery
Facility #A0016

Facility Address:
1380 San Pablo Avenue
Rodeo, CA 94572

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November 2012

Application Engineer: Brenda Cabral
Site Engineer: Brian Lusher

Applications: 17466, 17632, 23293, 23726, 23984, 24530

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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 Title 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 the following regulated air pollutants: NOx, CO, SO2, PM10, POC, and ammonia.

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.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0016.

This facility received its initial Title V permit on December 1, 2003. The permit was reopened and re-issued on December 16, 2004, April 12, 2005, and November 20, 2006. Minor revisions were issued on April 12, 2005, January 5, 2006, March 2, 2006, October 15, 2007, and May 23, 2011. Significant revisions were issued on January 5, 2006, January 18, 2007, October 31, 2008, and June 18, 2009. The permit was renewed on September 1, 2011. Section X of the permit, Revision History, has a list of these revisions in chronological order.

This action makes administrative amendments and minor revisions to the renewal Title V permit. This statement of basis will include all proposed changes to the permit in strikeout/underline format. This statement of basis addresses only the proposed changes to the permit. The statement of basis for the renewal permit issued on September 1, 2011, contains the basis for most of the rest of the permit. Additional issues were addressed in the documents for the revisions listed above.

The purpose of this action is to make the following administrative amendments and minor revisions to the Title V permit:

- Minor Revision pursuant to Application 17466: Set parameter for POC for cooling towers.

- Minor Revision pursuant to Application 17632: Revise the permit to include consent decree provisions for flares.
- Minor Revision pursuant to Application 23293: Revise the permit to include the alteration of S3, Heater, which reduced the firing capacity.
- Minor Revision pursuant to Application 23726: Allow unlimited throughput of low-volatility materials at S448, Internal Floating Roof Tank.
- Minor Revision pursuant to Application 23984: Delete Federal and state greenhouse gas reporting requirements.
- Minor Revision (no application): Condition 1440, part 7b, and Condition 23125, part 14, required the facility to establish a minimum temperature for operation of A49 and A424, Thermal Oxidizers. The facility performed those tests and the temperature limits will be added in this action. Addition of parameters is considered a minor revision of the Title V permit.
- Administrative amendment pursuant to Application 24530: Change name of facility from "ConocoPhillips – San Francisco Refinery" to "Phillips 66 – San Francisco Refinery" at the request of the Applicant.
- Administrative amendments (no application) to correct the following errors:
  - ~~The Section VII table for S45 was not included in the permit issued on September 1, 2011. It will be added in this action. This is considered to be an administrative amendment because it is similar to a typo. The table will be reinstated as it existed in the permit issued on May 23, 2011.~~
  - Condition 1694, part A.6 was deleted inadvertently in the significant revision issued on June 18, 2009. This is considered to be an administrative amendment because it is similar to a typo. The condition will be reinstated as it existed in the permit issued on October 31, 2008.
  - Condition 22964, parts 2, 3, 8, and 9 were deleted inadvertently in the renewal permit issued on September 1, 2011. This is considered to be an administrative amendment because it is similar to a typo. The condition will be reinstated as it existed in the permit issued on May 23, 2011. Part 8 is already included in Table IV-Ua. Parts 2, 3, and 9 are already included in Table IV-Ub and part 2 is already included in Table VII-Ub.
  - The Section VII table for S45 was not included in the permit issued on September 1, 2011. It will be added in this action. This is considered to be an administrative amendment because it is similar to a typo. The table will be reinstated as it existed in the permit issued on May 23, 2011.
  - Table VII-U for S1001-S1003, Sulfur Recovery Units, and S301-S303, Sulfur Pits, was replaced by Table VII-Ua in the significant revision issued on June 18, 2009. Table VII-U was inadvertently added in the renewal permit issued on September 1, 2011. Table VII-U will be deleted in this action except for BAAQMD Regulation 6-311 and SIP Regulation 6-1-311, which is applicable and is included in Table IV-Ua.
- Administrative amendment (no application) to delete the following source and related abatement devices from the permit: S1001, Sulfur Recovery Unit, ~~S301, Molten Sulfur Pit,~~ A1, Sulfur Plant Tail Gas Treatment Plant, ~~A8, Stretford Evaporative Cooler,~~ and A421, Tail Gas Incinerator. The deletion of sources is an administrative amendment in accordance with BAAQMD Regulation 2-6-201.

The details of the revisions pursuant to Applications 17466, 17632, 23293, and 23726, are found in the permit evaluations for NSR Applications 17465, 17631, 23166, and 23754, which are attached in Appendices B, C, D, and E of this Statement of Basis and which form part of this Statement of Basis.

Applications 23984 and 24530 do not have corresponding NSR Applications. The purpose of Application 24530 is simply to change the name of the facility because ConocoPhillips has split into two companies. The refinery is now named "Phillip 66."

The purpose of Application 23984 is to delete the Federal and state greenhouse gas reporting requirements in Table IV- All Sources. These requirements were included in the renewal of the Title V permit that was issued on September 1, 2011.

The basis for deletion of the federal requirements is the following EPA statement on pages 56287 and 56288 of the federal register notice of October 30, 2009, that promulgated the requirements for greenhouse gas reporting:

> *Comment:* EPA also received numerous comments about whether the requirements imposed by this rule are ''applicable requirements'' under the title V operating permit program. The majority of the comments took the position that the current definitions of ''applicable requirement'' at 40 CFR 70.2 and 71.2 do not include a rule such as this, promulgated under CAA section 114(a)(1) and 208. Commenters requested that EPA confirm their interpretation of the regulations.
>
> *Response:* As currently written, the definition of ''applicable requirement'' in 40 CFR 70.2 and 71.2 does not include a monitoring rule such as today's action, which is promulgated under CAA sections 114(a)(1) and 208.

EPA concluded that greenhouse gas reporting requirements were not applicable requirements for the purposes of Title V permitting.

The basis for deletion of the state requirements is that the requirements are not enforceable by the District.

B. Facility Description

This site is an oil refinery. For a complete description, see the Statement of Basis for Application 9296.

This site, which is Site A0016, Site A0022, and Site B7419 are considered to be one facility. Site A0022, Phillips 66 Carbon Plant, is a plant that refines petroleum coke that comes from the refinery. It is owned by the same parent company and is adjacent to the refinery. B7419, Air Liquide, is a hydrogen plant that is not owned by Phillips 66, but that currently supplies all of its output to Phillips 66. Air Liquide is surrounded by the refinery.

C. Permit Content

The legal and factual basis for the permit revision follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities.

Changes to permit

There are no changes to Section I in this action.

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).

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. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A24). .

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

The sources below are the subject of this application.

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

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
3	U230, B-201 Heater (natural gas, refinery fuel gas, naphtha)	Petro-Chem	process heater	~~62~~53 MMbtu/hr
296	C-1 Flare (main refinery flare, elevated, steam-assisted, serves S304, S305, S306)	Callidus		845 ton/hr gas handling capacity, 6.6 MMbtu/hr pilot
398	MP-30 Flare (backup refinery flare, elevated, steam-assisted, serves S304, S305, S306)	John Zink	Q5-48C	845 ton/hr gas handling capacity, 3.1 MMbtu/hr pilot
448	Tank 1007 (Blendstock Receiving)	internal floating roof	gasoline, diesel, others	243 thousand bbl
453	U236 Cooling Tower	Induced draft	Unknown	13,500 gpm
455	U240 Cooling Tower	Induced draft	Unknown	33,000 gpm
301	Molten Sulfur Pit 234	NA	NA	271 long ton/day for S301, S302, S303
302	Molten Sulfur Pit 236	NA	NA	271 long ton/day for S301, S302, S303
303	Molten Sulfur Pit 238	NA	NA	271 long ton/day for S301, S302, S303
~~1001~~	~~Sulfur Plant Unit 234 (including aux. burner)~~		~~Claus~~	~~271 long ton/day for S1001, S1002 and S1003~~
1002	Sulfur Plant Unit 236 (including aux. burner, water stripper)		Claus	201~~271~~ long ton/day for ~~S1001,~~ S1002 and S1003
1003	Sulfur Plant Unit 238 (including aux. burner)		Claus	201~~271~~ long ton/day for ~~S1001,~~ S1002 and S1003
1007	U100 Dissolved Air Flotation Unit (with fixed roof)			7,500 gpm during media filter backwash and 7,000 gpm during all other times
1010	Sulfur Plant Unit 235 (including aux. burner)		Claus	200 long ton/day

Table II B – Abatement Devices

A#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency

Table II B – Abatement Devices

A#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
~~1~~	~~Sulfur Plant Tail Gas Treatment Plant (Beavon-Stretford)~~	~~S1001 tailgas. S301~~	~~BAAQMD 9-1-313.2 and SIP 9-1-313.2~~	~~none~~	~~95% of H2S in refinery fuel gas is removed and recovered on a refinery-wide basis~~
~~1~~	~~Sulfur Plant Tail Gas Treatment Plant (Beavon-Stretford)~~	~~S1001 tailgas. S301~~	~~BAAQMD 6-1-330 and SIP 6-330~~	~~none~~	~~0.08 grain/dscf exhaust concentration of SO3 and H2SO4, expressed as 100% H2SO4~~
~~1~~	~~Sulfur Plant Tail Gas Treatment Plant (Beavon-Stretford)~~	~~S1001 tailgas. S301~~	~~40 CFR 60.104(a)(2)(i)~~	~~none~~	~~SO2 < 250 ppm at 0% O2~~
~~1~~	~~Sulfur Plant Tail Gas Treatment Plant (Beavon-Stretford)~~	~~S1001 tailgas. S302~~	~~40 CFR 63.1568(a)(1)(i)~~	~~none~~	~~SO2 < 250 ppm at 0% O2~~
8	Stretford Evaporative Cooler	S301	BAAQMD 9-1-313.2 and SIP 9-1-313.2	none	95% of H2S in refinery fuel gas is removed and recovered on a refinery-wide basis
8	Stretford Evaporative Cooler		BAAQMD 6-1-330 and SIP 6-330	none	0.08 grain/dscf exhaust concentration of SO3 and H2SO4, expressed as 100% H2SO4
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~BAAQMD 6-1-301~~ ~~SIP 6-301~~	~~none~~	~~Ringelmann 1 for < 3 min/hr~~

Table II B – Abatement Devices

A#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Limit or Efficiency
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~BAAQMD 6-1-310~~ ~~SIP 6-310~~	~~none~~	~~0.15 gr/dscf~~
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~BAAQMD 6-1-311~~ ~~SIP 6-311~~	~~none~~	~~$4.10P^{0.67}$ lb/hr, where P is process weight, ton/hr~~
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~BAAQMD 6-1-330~~ ~~SIP 6-330~~	~~none~~	~~0.08 grain/dscf exhaust concentration of SO3 and H2SO4, expressed as 100% H2SO4~~
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~40 CFR 60.104(a)(2)(i)~~	~~none~~	~~SO2 < 250 ppm at 0% O2~~
~~421~~	~~Tail Gas Incinerator (19.5 MMbtu/hr, RFG)~~	~~A1~~	~~40 CFR 63.1568(a)(1)(i)~~	~~none~~	~~SO2 < 250 ppm at 0% O2~~

Table II C – Significant Sources

The following sources are exempt from the requirement to obtain an authority to construct and permit to operate, but are defined as significant sources pursuant to BAAQMD Regulation 2-6-239.

S#	Description	Make or Type	Model	Capacity
452	U230 Cooling Tower	Induced draft	Unknown	13,800 gpm

The following sources are being added to the table of exempt sources because they are cooling towers that have applicable requirements in the permit.

Table II D – Sources Exempt from Permit Requirements

S#	Description	Basis for Exemption
456	U110 Cooling Tower	BAAQMD 2-1-128.4
457	U228 Cooling Tower	BAAQMD 2-1-128.4
458	U200 Cooling Tower	BAAQMD 2-1-128.4
500	ULSD Cooling Tower	BAAQMD 2-1-128.4

Changes to permit:

- Table II-A: The capacity of S3 has been lowered from 62 MMbtu/hr to 53 MMbtu/hr.

The basis for this change is set out in the engineering evaluation for Application 23166, which is attached in Appendix D, and forms part of this statement of basis.

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.

Unpermitted 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 significant sources pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to permit

There are no changes to Section III 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) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in 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 portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it 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. 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 monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Changes to permit:

The changes to Section IV will be presented in the following order:

- Cooling towers, S452, S453, S455, S457, S456, S458, S500
- Flares, S296, S398
- S3, Heater
- Sulfur recovery units, S1001-S1003
- S448, Tank
- Greenhouse gas requirements in Table IV-All Source

Table IV – CC.1
Source-Specific Applicable Requirements
S452, S453, S455, S457, S458, S500, COOLING TOWERS

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann #1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation (Process Weight Rate Limitation)	N	
6-1-311	General Operations	N	
6-1-401	Appearance of Emissions	N	

Table IV – CC.1
Source-Specific Applicable Requirements
S452, S453, S455, S457, S458, S500, COOLING TOWERS

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation (Process Weight Rate Limitation)	Y	
6-311	General Operations	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 8, Rule 2	**Miscellaneous Operations (7/20/05)**	Y	
8-2-301	Miscellaneous Operations	Y	
BAAQMD Condition 22121			
Part 1	Visual inspection (2-6-503)	Y	
Part 2	Chlorine content monitoring, ~~and~~ monthly VOC content determination, and definition of a hydrocarbon leak (2-6-503)	Y	
Part 3	Records of sodium hypochlorite usage (2-6-501)	Y	
Part 4	Monitoring of dissolved solids (2-6-503, Regulation 3)	Y	
Part 5	Reports of hydrocarbon leaks (1-441)	Y	
Part 6	Hydrocarbon leaks longer than 4 weeks (1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)	Y	
Part 7	Annual reporting of particulate emissions (2-1-319.1, 3)	Y	
Part 8	Records (2-6-501)	Y	

Table IV – CC.2
Source-Specific Applicable Requirements
S456, COOLING TOWER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann #1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation (Process Weight Rate Limitation)	N	
6-1-311	General Operations	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation (Process Weight Rate Limitation)	Y	
6-311	General Operations	Y	
6-401	Appearance of Emissions	Y	

Table IV – CC.2
Source-Specific Applicable Requirements
S456, COOLING TOWER

BAAQMD Regulation 8, Rule 2	**Miscellaneous Operations (7/20/05)**	Y	
8-2-301	Miscellaneous Operations	Y	
BAAQMD Condition 22122			
Part 1	Visual inspection (2-6-503)	Y	
Part 2	Monitoring of dissolved solids (2-6-503, Regulation 3)	Y	
Part 3	~~Reports of~~ Definition of and testing for hydrocarbon leaks (1-441)	Y	
Part 4	Provisions for retesting, reporting of hydrocarbon leaks (1-441)		
Part ~~4~~5	Hydrocarbon leaks longer than 4 weeks (1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)	Y	
Part ~~5~~6	Annual reporting of particulate emissions (Regulation 2-6-501, 3)	Y	
Part ~~6~~7	Records (2-6-501)	Y	

Following are the changes to the Section IV tables for the flares. BAAQMD Regulation 6-1-401 and SIP Regulation 6-401, omitted in error, have been added. The changes in the permit condition have been added. The text of the permit condition is shown in Section C.VI, Permit Conditions, of this Statement of Basis.

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
District Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 12, Rule 11	**Flare Monitoring at Petroleum Refineries (06/04/03)**		
12-11-401	Flare Data Reporting Requirements	N	
12-11-402	Flow Verification Report	N	
12-11-501	Vent Gas Flow Monitoring	N	
12-11-502	Vent Gas Composition Monitoring	N	
12-11-502.3	Vent Gas Composition Monitoring	N	
12-11-503	Pilot Monitoring	N	
12-11-504	Pilot and Purge Gas Monitoring	N	
12-11-505	Recordkeeping Requirements	N	
12-11-506	General Monitoring Requirements	N	
12-11-506.1	Periods of Inoperation of Vent Gas Monitoring	N	
12-11-507	Video Monitoring	N	
BAAQMD Regulation 12, Rule 12	**Flares at Petroleum Refineries (04/05/06)**		

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
12-12-301	Flare Minimization	N	
12-12-401	Flare Minimization Plan Requirements	N	
12-12-402	Submission of Flare Minimization Plans	N	
12-12-403	Review and Approval of Flare Minimization Plans	N	
12-12-404	Update of Flare Minimization Plans	N	
12-12-405	Notification of Flaring	N	
12-12-406	Determination and Reporting of Cause	N	
12-12-408	Designation of Confidential Information	N	
12-12-501	Water Seal Integrity Monitoring	N	
40 CFR Part 60 Subpart A	**New Source Performance Standards – General Provisions (01/18/08)**	**Y**	
60.1	Applicability	Y	
60.2	Definitions	Y	
60.3	Units and abbreviations	Y	
60.4	Address	Y	
60.5	Determination of construction or modification	Y	
60.6	Review of plans	Y	
60.7	Notification and record keeping	Y	
60.8	Performance tests	Y	
60.9	Availability of information	Y	
60.10	State authority	Y	
60.11	Compliance with standards and maintenance requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumstances	Y	
60.14	Modifications	Y	
60.15	Reconstruction	Y	
60.16	Priority list	Y	
60.17	Incorporation by reference	Y	
60.19	General notification and reporting requirements	Y	
NSPS 40 CFR 60 Subpart J	**Standards of Performance for Petroleum Refineries (9/21/06)**		
60.104	Standards for Sulfur Oxides: Compliance Schedule	Y	
60.104(a)(1)	Exempt from fuel gas H2S limit if the flare is used only for startup, shutdown, upset, or emergency malfunction gas	Y	

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
40 CFR 60, Subpart VV; BAAQMD Regulation 10-52	**Standards of Performance for Equipment Leaks (Fugitive Emission Sources) (8/18/95); BAAQMD Standards of Performance for New Stationary Sources (12/20/95)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4(c)	Leakage routed to control device	Y	
60.482-10	Standards: Closed vent systems and control devices	Y	
NSPS Part 60 Subpart VVa; BAAQMD Regulation 10-52	**Applies to S307 and S434, Cracking Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (11/16/07); BAAQMD Standards of Performance for New Stationary Sources (12/20/95) (Applies to equipment in VOC service)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4a	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4a(c)	Leakage routed to control device	Y	
60.482.10a	Standards: Closed vent systems and control devices	Y	
BAAQMD Condition 18255			
Part 3	Flaring event definition [Basis: 2-6-409.2]	Y	
Part 4	Flaring event inspection procedure [Basis: 6-301, 2-1-403]	Y	
Part 5	Flaring event compliance criteria [Basis: 2-6-403]	Y	
Part 6	Flaring event records [Basis: 2-6-501, 2-6-409.2]	Y	
Part 8	Requirement for flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 139(a)]	Y	
Part 9	Periodic maintenance of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 148]	Y	
Part 10	Temporary bypass of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 149]	Y	
Part 12	Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses [Basis: Consent Decree Case No. 05-0258, paragraphs 152, 167]	Y	

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 13	Tail Gas Root Cause Analysis [Basis: Consent Decree Case No. 05-0258, paragraph 152]	Y	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
District Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 12, -Rule 11	**Flare Monitoring at Petroleum Refineries (06/04/03)**		
12-11-401	Flare Data Reporting Requirements	N	
12-11-402	Flow Verification Report	N	
12-11-501	Vent Gas Flow Monitoring	N	
12-11-502	Vent Gas Composition Monitoring	N	
12-11-502.3	Vent Gas Composition Monitoring	N	
12-11-503	Pilot Monitoring	N	
12-11-504	Pilot and Purge Gas Monitoring	N	
12-11-505	Recordkeeping Requirements	N	
12-11-506	General Monitoring Requirements	N	
12-11-506.1	Periods of Inoperation of Vent Gas Monitoring	N	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
12-11-507	Video Monitoring	N	
BAAQMD Regulation 12, Rule 12	**Flares at Petroleum Refineries (04/05/06)**		
12-12-301	Flare Minimization	N	
12-12-401	Flare Minimization Plan Requirements	N	
12-12-402	Submission of Flare Minimization Plans	N	
12-12-403	Review and Approval of Flare Minimization Plans	N	
12-12-404	Update of Flare Minimization Plans	N	
12-12-405	Notification of Flaring	N	
12-12-406	Determination and Reporting of Cause	N	
12-12-408	Designation of Confidential Information	N	
12-12-501	Water Seal Integrity Monitoring	N	
40 CFR Part 60 Subpart A	**New Source Performance Standards – General Provisions (01/18/08)**	**Y**	
60.1	Applicability	Y	
60.2	Definitions	Y	
60.3	Units and abbreviations	Y	
60.4	Address	Y	
60.5	Determination of construction or modification	Y	
60.6	Review of plans	Y	
60.7	Notification and record keeping	Y	
60.8	Performance tests	Y	
60.9	Availability of information	Y	
60.10	State authority	Y	
60.11	Compliance with standards and maintenance requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumstances	Y	
60.14	Modifications	Y	
60.15	Reconstruction	Y	
60.16	Priority list	Y	
60.17	Incorporation by reference	Y	
60.19	General notification and reporting requirements	Y	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
NSPS 40 CFR 60 Subpart J	**Standards of Performance for Petroleum Refineries (9/21/06)**		
60.104	Standards for Sulfur Oxides: Compliance Schedule	Y	
60.104(a)(1)	Exempt from fuel gas H2S limit if the flare is used only for startup, shutdown, upset, or emergency malfunction gas	Y	
40 CFR 60, Subpart VV; BAAQMD Regulation 10-52	**Standards of Performance for Equipment Leaks (Fugitive Emission Sources) (8/18/95); BAAQMD Standards of Performance for New Stationary Sources (12/20/95)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4(c)	Leakage routed to control device	Y	
60.482-10	Standards: Closed vent systems and control devices	Y	
NSPS Part 60 Subpart VVa; BAAQMD Regulation 10-52	**Applies to S307 and S434, Cracking Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (11/16/07); BAAQMD Standards of Performance for New Stationary Sources (12/20/95) (Applies to equipment in VOC service)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4a	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4a(c)	Leakage routed to control device	Y	
60.482.10a	Standards: Closed vent systems and control devices	Y	
BAAQMD Condition 18255			
Part 3	Flaring event definition [Basis: 2-6-409.2]	Y	
Part 4	Flaring event inspection procedure [Basis: 6-301, 2-1-403]	Y	
Part 5	Flaring event compliance criteria [Basis: 2-6-403]	Y	
Part 6	Flaring event records [Basis: 2-6-501, 2-6-409.2]	Y	
Part 9	Periodic maintenance of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 148]	Y	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 10	Temporary bypass of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 149]	Y	
Part 11	Elimination of routes of routine flaring [Basis: Consent Decree Case No. 05-0258, paragraph 139(c)]	Y	
Part 12	Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses [Basis: Consent Decree Case No. 05-0258, paragraphs 152, 167]	Y	
Part 13	Tail Gas Root Cause Analysis [Basis: Consent Decree Case No. 05-0258, paragraph 152]	Y	

Following are the changes in Section IV for S3, Unit 234, B-201 Heater. The changes are to the permit conditions at the end of the table.

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 1	**General Provisions and Definitions (7/09/08)**		
1-521	Monitoring May Be Required	Y	
1-523	Parametric Monitoring and Recordkeeping Procedures	N	
1-523.1	Parametric monitor periods of inoperation	Y	
1-523.2	Limits on periods of inoperation	Y	
1-523.3	Reports of Violations	N	
1-523.4	Records	Y	
1-523.5	Maintenance and calibration	N	
SIP Regulation 1	**General Provisions and Definitions (6/28/99)**		
1-523	Parametric Monitoring and Recordkeeping Procedures	Y-note 1	
1-523.3	Reports of Violations	Y[1]	
BAAQMD Regulation 6,	**Particulate Matter, General Requirements (12/05/07)**		

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Rule 1			
6-1-301	Ringelmann #1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310.3	Particulate Weight Limitation; Heat Transfer Operation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310.3	Particulate Weight Limitation; Heat Transfer Operation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 9, Rule 10	**Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators, and Process Heaters in Petroleum Refineries (7/17/02)**		
9-10-110.5	Exemptions: Fired on non-gaseous fuel when natural gas is unavailable for use	N	
9-10-301	Emission Limit for Facility, NOx: 0.033 lb NOx/MMbtu	N	
9-10-301.1	...Start-up/Shutdown Contribution	N	
9-10-301.2	...Out-of-Service Units Contribution	N	
9-10-301.3	...Test-firing on Non-gaseous fuel Contribution	N	
9-10-303	Federal Facility-wide NOx emission rate limit	Y	
9-10-305	CO emission limit	N	
9-10-502	Monitoring	Y	
9-10-502.1	CEMS for NOx, CO, and O2, or equivalent monitoring	Y	
9-10-502.2	Fuel flowmeters	Y	
9-10-504	Recordkeeping	N	
9-10-504.1	Records	N	
9-10-505	Reporting	N	
9-10-601	Determination of NOx	N	
9-10-602	Determination of CO and Stack Gas O2	N	
9-10-603	Compliance Determination	Y	
SIP Regulation 9, Rule 10	**Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators, and Process Heaters in Petroleum Refineries (4/2/08)**		
9-10-504	Recordkeeping	Y	
9-10-504.1	Records	Y	
9-10-505	Reporting	Y	

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
9-10-601	Determination of NOx	Y	
40 CFR 60, Subpart A	**General Provisions (1/18/08)**		
60.7(b)	Records	Y	
60.7(c)	Notification and recordkeeping for continuous monitoring	Y	
60.7(d)	Summary reports	Y	
60.7(e)	Reduction of frequency of summary reports	Y	
60.7(f)	Records	Y	
60.7(g)	Alternative Notification	Y	
60.7(h)	Specific Provisions	Y	
60.8	Performance Tests	Y	
60.11	Compliance with Standards and Maintenance Requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.13	Monitoring requirements	Y	
60.13(a)	Continuous monitoring systems subject to Appendix B, and Appendix F, (if used to demonstrate compliance with continuous emission limits), of Part 60	Y	
60.13(b)	Continuous monitoring systems and devices operational prior to performance tests required by 60.8	Y	
60.13(d)(1)	Continuous monitoring system zero and span calibration requirements	Y	
60.13(e)	Continuous monitoring system minimum frequency of operation	Y	
60.13(e)(2)	Continuous monitoring system minimum frequency of operation for non-opacity-measuring devices	Y	
60.13(f)	Continuous monitoring system installation location requirement	Y	
NSPS 40 CFR 60, Subpart J	**Standards of Performance for Petroleum Refineries (9/21/06)**		
60.100	Applicability	Y	
60.104	Standards for Sulfur Oxides: Compliance Schedule	Y	
60.104(a)(1)	fuel gas H2S concentration limited to 230 mg/dscm (0.10 gr/dscf) except for gas burned as a result of process upset or gas burned at flares from relief valve leaks or other emergency malfunctions	Y	
60.105	Monitoring of Emissions and Operations	Y	
60.105(a)(4)	monitoring requirement for H2S (dry basis) in fuel gas prior to combustion (in lieu of separate combustion device exhaust SO2 monitors as required by 60.105(a)(3))	Y	

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.105(e)(3)(ii)	Excess H2S emission definitions for 60.7(c)	Y	
60.106(a)	Test methods and procedures	Y	
60.106(e)(1)	Method 11 shall be used to verify compliance with 60.104(a)(1)	Y	
NSPS 40 CFR 60, Appendix A	**Appendix A to Part 60 – Test Methods**	Y	
NSPS 40 CFR 60 Appendix B	**Performance Specifications**		
Performance Specification 7	H2S continuous emission monitoring systems	Y	
BAAQMD Condition 1694			
~~Part A.1a~~	~~Heat ratings, firing limits [Basis: Regulation 2-1-234.3]~~	~~Y~~	
Part A.1b	Heat ratings, firing limits [Basis: Regulation 2-1-301]	Y	~~Upon replacement of burners~~
Part A.2a	Fuel restrictions [Basis: Regulation 2, Rule 1]	Y	
Part A.2b	Visible emission monitoring for liquid-fired sources during tube cleaning [Basis: Regulation 2-6-409.2]	Y	
Part A.2c	Visible emissions monitoring for liquid-fired sources [Basis: Regulation 2-6-409.2]	Y	
Part A.3a	TRS testing requirement [Basis: SO2 Bubble]	Y	
Part A.3b	TRS reporting requirements [Basis: SO2 Bubble]	Y	
Part A.4	SO2 emission limit [Basis: SO2 Bubble]	Y	
Part A.5	Records [Basis: Regulation 2, Rule 1; SO2 Bubble; Regulation 2-6-409.2]	Y	
Part F.2	Annual fuel firing limit at S2, S3, S4, S5, S7 [Basis: Cumulative Increase]	Y	
Part F.3	Monthly fuel firing records [Basis: Cumulative Increase]	Y	
BAAQMD Condition 21235			
Part 1	Sources subject to Regulation 9-10–301 and 9-10-305 [Basis: Regulation 9-10-301, 9-10-305]	Y	

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 2	O2 CEM requirement [Basis: Regulation 9-10-502]	Y	
Part 3	"NOx Box" requirement for sources without NOx CEMs [Basis: Regulation 9-10-502]	Y	
Part 4	"NOx Box" development procedure [Basis: Regulation 9-10-502]	Y	
Part 5	"NOx Box" parameters [Basis: Regulation 9-10-502]	Y	
Part 6a	Allowed "NOx Box" deviations [Basis: Regulation 9-10-502]	Y	
Part 6b	"NOx Box" deviation reporting requirement [Basis: Regulation 9-10-502]	Y	
Part 7	NOx, CO, O2 source test requirement for sources without NOx CEMs [Basis: Regulation 9-10-502]	Y	
Part 9	CO, O2 CEM requirement [Basis: Regulation 9-10-502, 1-522]	Y	
Part 10	Recordkeeping requirement [Basis: Regulation 9-10-504]	Y	
Part 11	Compliance demonstration with Alternative Compliance Plan [Basis: Regulation 2-9-303, 9-10-301]	N	
Part 12	Quarterly report showing amount of IERC's used during previous quarter, IERC's used during current ACP period, projection of IERC's required and certification that the facility possesses IERC's equal to the amount projected [Basis: Regulation 2-9-502.3]	N	
Part 13	Annual reconciliation report and surrendering of banking certificate(s) [Basis: Regulation 2-9-502.4]	N	
Part 14	ACP renewal request [Basis: Regulation 2-9-502.2]	N	
Part 15	Recordkeeping requirement [Basis: Regulation 2-9-502.2]	N	

An excerpt of Table IV-Ua is shown below.

Table IV – Ua
Source-specific Applicable Requirements
~~S1001 – SULFUR PLANT UNIT 234 ,~~ S1002 – SULFUR PLANT UNIT 236
S1003 – SULFUR PLANT UNIT 238, S301 – MOLTEN SULFUR PIT 234
S302 – MOLTEN SULFUR PIT 236 AND S303 – MOLTEN SULFUR PIT 238

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~BAAQMD Regulation 1~~	~~General Provisions and Definitions (7/9/08)~~		
~~1-520~~	~~Continuous Emission Monitoring~~	~~Y~~	
~~1-520.8~~	~~Monitors pursuant to Regulation 10~~	~~Y~~	

Table IV – Ua
Source-specific Applicable Requirements
~~S1001 – SULFUR PLANT UNIT 234 ,~~ S1002 – SULFUR PLANT UNIT 236
S1003 – SULFUR PLANT UNIT 238, S301 – MOLTEN SULFUR PIT 234
S302 – MOLTEN SULFUR PIT 236 AND S303 – MOLTEN SULFUR PIT 238

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~1-522~~	~~Continuous Emission Monitoring and Recordkeeping Procedures~~		
~~1-522.1~~	~~- approval of plans and specifications~~	~~Y~~	
~~1-522.2~~	~~- scheduling requirements~~	~~Y~~	
~~1-522.3~~	~~- CEM performance testing~~	~~Y~~	
BAAQMD Condition 19278			
Part 3	Annual source test to verify SO3 and H2SO4 exhaust concentrations. [Basis: Regulation 6-330]	Y	
Part 4	Visible emissions monitoring for particulate [Basis: Regulation 2-6-503]	Y	
Part 5	Source test within 90 days of issuance of Major Facility Review permit pursuant to Application 10994; Annual testing [2-6-503]	Y	
Part 6	Throughput limits [Cumulative Increase]	Y	
BAAQMD Condition 21099	**APPLIES TO S1002, S1003 ONLY**		
Part 1	Light hydrocarbon control valve requirements [Basis: BACT]	Y	
Part 2	Light hydrocarbon flange/connector requirements [Basis: BACT]	Y	
Part 3	Centrifugal compressor requirements [Basis: BACT]	Y	
Part 4	Light hydrocarbon centrifugal pump requirements [Basis: BACT]	Y	
Part 5	Monitoring and repair program requirement [Basis: BACT]	Y	
Part 6	ULSD project component count report requirement [Basis: BACT, Cumulative Increase, Toxic Management Policy]	Y	
BAAQMD Condition 22964	**APPLIES TO S301, S302, S303**		
Part 1	Throughput limit for S301, S302, S303 [Cumulative Increase]	Y	
Part 4	Abatement requirement for S301 [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR 60.104(a)(2)(i)]	Y	
Part 5	Abatement requirement for S302 [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR	Y	

Table IV – Ua
Source-specific Applicable Requirements
~~S1001 – SULFUR PLANT UNIT 234 ,~~ S1002 – SULFUR PLANT UNIT 236
S1003 – SULFUR PLANT UNIT 238, S301 – MOLTEN SULFUR PIT 234
S302 – MOLTEN SULFUR PIT 236 AND S303 – MOLTEN SULFUR PIT 238

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	60.104(a)(2)(i)]		
Part 6	Abatement requirement for S303 [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR 60.104(a)(2)(i)]	Y	
Part 7	Maintenance allowance for sulfur pits [Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07]	Y	
Part 8	Recordkeeping [Cumulative Increase]	Y	

Table IV – BB.9B
Source-Specific Applicable Requirements
NSPS KB ZERO-GAP INTERNAL FLOATING ROOF TANK
BUT WITH NSPS KB AND BAAQMD 8-5 FLEXIBILITY
S448 (TANK 1007)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
S448 will be subject to the requirements of Table IV-BB.9A when storing materials subject to NSPS Kb and BAAQMD 8-5. S448 will be subject to the requirements of Table IV-BB.9B when storing materials exempt from NSPS Kb and BAAAMD 8-5.			
BAAQMD Condition 12133			
Part 1	Throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted. [Basis: Cumulative Increase]	Y	
Part 2	Requirements for tank openings [Basis: Cumulative Increase]	Y	
Part 3	Monthly throughput records [Basis: Cumulative Increase]	Y	
Part 4	Alternate Operating Scenario	Y	
Part 4a	Log of the stored material [Basis: 40 CFR 70.6(a)(9), BAAQMD Regulation 2-6-409.7]	Y	
Part 4b	Notification requirement for refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	Y	
Part 4c	Inspection requirement prior to refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	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	

Table IV – All Sources
Facility-Specific Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~CA Code of Regulations, Title 17, Subchapter 10, Article 2~~	~~Mandatory Greenhouse Gas Emissions Reporting~~		
~~§ 95101(b)(2)~~	~~Applicability~~	~~N~~	
~~Subarticle 1~~	~~General Requirements for the Mandatory Reporting of Greenhouse Gas Emissions~~		
~~§ 95102~~	~~Definitions~~	~~N~~	
~~§ 95103(a)~~	~~General Greenhouse Gas Reporting Requirements~~	~~N~~	
~~§ 95103(a)(1)~~	~~Report Content~~	~~N~~	
~~§ 95103(a)(2)~~	~~Stationary Sources~~	~~N~~	
~~§ 95103(b)~~	~~Reporting Schedule – Existing Facilities~~	~~N~~	
~~§ 95103(c)~~	~~Verification – Existing Facilities~~	~~N~~	
~~§ 95104~~	~~Greenhouse Gas Emissions Data Report~~	~~N~~	
~~§ 95104(a)~~	~~Emissions Data Report~~	~~N~~	
~~§ 95104(b)~~	~~Maintaining the GHG Inventory Program~~	~~N~~	
~~§ 95104(c)~~	~~Data Completeness~~	~~N~~	
~~§ 95104(d)~~	~~Revisions~~	~~N~~	
~~§ 95105~~	~~Document Retention and Record Keeping Requirements~~	~~N~~	
~~§ 95106~~	~~Confidentiality~~	~~N~~	
~~§ 95107~~	~~Enforcement~~	~~N~~	
~~§ 95108~~	~~Severability~~	~~N~~	
~~§ 95113~~	~~Data Requirements and Calculation Methods for Petroleum Refineries~~	~~N~~	
~~§ 95113(a)~~	~~Greenhouse Gas Emissions Data Report~~	~~N~~	
~~§ 95113(b)~~	~~Calculation of Process Emissions~~	~~N~~	
~~§ 95113(c)~~	~~Calculation of Fugitive Emissions~~	~~N~~	
~~§ 95113(d)~~	~~Calculation of Emissions from Flares and other Control Devices~~	~~N~~	
~~§ 95114~~	~~Data Requirements and Calculation Methods for Hydrogen Plants~~	~~N~~	
~~§ 95114(a)~~	~~Greenhouse Gas Emissions Data Report~~	~~N~~	
~~§ 95114(b)~~	~~Calculation of CO2 Stationary Combustion and Process Emissions~~	~~N~~	
~~Subarticle 3~~	~~Calculation Methods Applicable To Multiple Types of Facilities~~		
~~§ 95125~~	~~Additional Calculation Methods~~	~~N~~	
~~Subarticle 4~~	~~Requirements for Verification of Greenhouse Gas Emissions Data Reports and Requirements Applicable to Emissions Data Verifiers~~		

Table IV – All Sources
Facility-Specific Generally Applicable Requirements

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
~~§ 95130~~	~~Requirements for Verification of Emissions Data Reports~~	~~N~~	
~~**40 CFR Part 98**~~	~~**Mandatory Greenhouse Gas Reporting**~~	~~**Y**~~	
~~Subpart A~~	~~General Provisions~~	~~Y~~	
~~Subpart C~~	~~General Stationary Fuel Combustion Sources~~	~~Y~~	
~~Subpart Y~~	~~Petroleum Refineries~~	~~Y~~	
~~Subpart MM~~	~~Suppliers of Petroleum Products~~	~~Y~~	

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which 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."

The District is proposing no changes to the schedule of compliance section in this action.

VI. Permit Conditions

The Major Facility Review permit contains conditions that 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.

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

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

All changes to existing permit conditions that are proposed in this action 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.

Changes to permit:
The changes to the permit conditions will be presented in the following order:

- Cooling towers, S452, S453, S455, S457, S456, S458, S500
- Flares, S296, S398
- S3, Heater
- Sulfur ~~recovery units~~pits, S301~~1001~~-S~~1003~~303
- S448, Tank
- S1007, DAF
- S1010, Sulfur Recovery Unit

Condition 22121 ----------

For Sources S452, S453, S455, S457, S458, S500, Cooling Towers (Applications 10349, ~~and~~ 14112 and 17465)

1. The owner/operator shall take a sample and perform a visual inspection of the cooling tower water at each cooling tower above on a daily basis to check for signs of hydrocarbon in the cooling water. (Regulation 2-6- 503)

2. The owner/operator shall take a sample of the cooling tower water 3 times per week at each cooling tower above and analyze for chlorine content as an indicator of hydrocarbon leakage into the cooling water. On a monthly basis, the owner/operator shall sample the water in the inlet line and in the return line of each cooling tower and determine the VOC content in each line using EPA laboratory method 8015. Any period of sampling when the difference between the return and supply sample VOC concentrations ~~are~~ ***is*** greater than or equal to 84 ppb is considered a hydrocarbon leak.- (Regulation 2-6-503)

3. The owner/operator shall maintain daily records of sodium hypochlorite usage at each cooling tower above. (Regulation 2-6-503)

4. The owner/operator shall sample the cooling tower water at each cooling tower at least once per month and subject the sample to a District approved laboratory analysis to determine its total dissolved solids content. (basis: Regulations 2-6-503, Regulation 3)

5. If the monitoring in part 1 or part 2 indicates that there is a hydrocarbon leak into the cooling water, the owner/operator shall retest two times to confirm that there is a hydrocarbon leak. If the VOC concentrations in the second and third leak tests are less than 84 ppb, the owner/operator shall revert to monthly testing. However, if the VOC concentrations in the second and third leak tests are greater than or equal to 84 ppb, the owner/operator shall submit a

report to the Enforcement and the Engineering divisions at the District. The owner/operator shall perform weekly testing until VOC levels are below 84 ppb for two consecutive weeks. The owner/operator shall submit reports on a weekly basis until the monitoring indicates that no hydrocarbon leaks into the cooling water. (Regulation 1-441)

6. If the monitoring in part 1 or part 2 indicates a hydrocarbon leak for longer than 4 weeks, the owner/operator shall estimate the daily amount of VOC emitted using the following procedure. The owner/operator shall sample the water in the inlet line and in the return line and determine the VOC content in each line using EPA laboratory method 8015. This analysis shall be performed each week until VOC levels return to normal. The owner/operator shall report the VOC estimates to the Enforcement and the Engineering divisions at the District on a monthly basis. If a hydrocarbon leak occurs at Sources S452, S457, S458, or S500, the owner/operator shall use the VOC estimates to confirm that no more than 5 tons VOC per year was emitted at any source. If more than 5 tons VOC per year is emitted at S452, S457, S458, or S500, the facility shall submit an application for a District permit within 90 days of determining that the source is subject to District permits. (Regulations 1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)

7. The owner/operator shall use the total dissolved solids monitoring to estimate annual emissions of particulate from the cooling towers. The estimated annual emissions shall be reported to the Engineering Divisions by June 30th of each year as part of the annual update. The owner/operator shall use this estimate to confirm that S452 has not emitted more than 5 tons particulate per year. (Regulation 1-441, 2-6- 416.2, 2-6-501)

8. The owner/operator shall maintain the following records for five years from the date of record:

a. Records of daily visual inspection
b. Records of chlorine content 3 times per week
c. Records of monthly usage of sodium hypochlorite
d. Records of monthly determination of total dissolved solids
e. Records of any indications of hydrocarbon leaks
f. Records of any analyses of VOC content in cooling tower inlet and outlet
(Regulation 2-6-501)

Condition 22122 has been amended slightly for clarity. Part 1 defined a hydrocarbon leak as an 84 ppb difference between the return and supply and part 3 stated that the monitoring in part 2 could indicate a hydrocarbon leak, but testing for hydrocarbon in a manner that would detect a leak in units of ppb was not required.

Part 3 has been amended to require testing if visual inspections indicates the presence of hydrocarbon in the water and includes the definition of a leak. A new Part 4 now describes the required monitoring if a leak is detected. The original parts 4 and 5 have been renumbered. Part 7 was included in the original Application 10349, but was inadvertently dropped when the condition was incorporated into the permit on November 20, 2006. This is similar to a typo, so it is considered to be an administrative amendment. This recordkeeping was included in Table CC.2 November 20, 2006 as Condition 22122, part 6.

~~Part 1 has been split into two parts: 1a requiring visual inspection and 1b defining the hydrocarbon leak. A requirement for monthly hydrocarbon testing has been added to part 2. Parts 3 and 4 now refer to part 2.~~

Condition 22122 ----------

For Source S456, Cooling Tower (Application 10349, 17465, and 17466)

1. The owner/operator shall take a sample and perform a visual inspection of the cooling tower water on a daily basis to check for signs of hydrocarbon in the cooling water. (Regulation 2-6-503)

2. The owner/operator shall sample the cooling tower water at least once per month and subject the sample to a District approved laboratory analysis to determine its total dissolved solids content. (basis: Regulations 2-6-503, Regulation 3)

3. If the monitoring in part 1 indicates ~~that there is a~~ the visual presence of hydrocarbon leak in~~to~~ the cooling water, the owner/operator sample the water in the inlet line and in the return line of the cooling tower and determine the VOC content using EPA laboratory method 8015. Any period of sampling when the difference between the return and supply VOC concentrations is greater than or equal to 84 ppb is considered a hydrocarbon leak. ~~shall submit a report to the Enforcement and the Engineering divisions at the District. The owner/operator shall submit reports on a weekly basis until the monitoring indicates that no hydrocarbon leaks into the cooling water.~~ (Regulation 1-441)

4. If the monitoring in part 1 indicates that there is a hydrocarbon leak into the cooling tower, the owner/operator shall retest two times to confirm that there is a hydrocarbon leak. If the VOC concentrations in the second and third leak tests are less than 84 ppb, the owner/operator shall revert to monthly testing. However, if the VOC concentrations in the second and third leak tests are greater than or equal to 84 ppb, the owner/operator shall submit a report to the Enforcement and the Engineering divisions at the District. The owner/operator shall perform weekly testing until VOC levels are below 84 ppb for two consecutive weeks. The owner/operator shall submit reports on a weekly basis until the monitoring indicates no hydrocarbon leaks into the cooling tower. (Regulation 1-441)

~~4~~5. If the monitoring in part ~~1~~4 indicates a hydrocarbon leak for longer than 4 weeks, the owner/operator shall estimate the daily amount of VOC emitted using the following procedure. The owner/operator shall sample the water in the inlet line and in the return line and determine the VOC content in each line using EPA laboratory method 8015. This analysis shall be performed each week until VOC levels return to normal. The owner/operator shall report the VOC estimates to the Enforcement and the Engineering divisions at the District on a monthly basis. If a hydrocarbon leak occurs, the owner/operator shall use the VOC estimates to confirm that no more than 5 tons VOC per year was emitted at the source. If more than 5 tons VOC per year is emitted at the source, the facility shall submit an application for a District permit within 90 days of determining that the source is subject to District permits. (Regulations 1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)

~~5~~6. The owner/operator shall use the total dissolved solids monitoring to estimate annual emissions of particulate from the cooling tower. The estimated annual emissions shall be reported to the Engineering Divisions by June 30th of each year as part of the annual update. The owner/operator shall use this estimate to confirm that the cooling tower has not emitted more than 5 tons particulate per year. (Regulation 1-441, 2-6-416.2, 2-6-501)

7. The owner/operator shall maintain the following records for five years from the date of record:

a. Records of daily visual inspection
b. Records of monthly determination of total dissolved solids
c. Records of any indications of hydrocarbon leaks
d. Records of any analyses of VOC content in cooling tower inlet and outlet

(Regulation 2-6-501)

CONDITION 18255
FOR SOURCES S296 AND S398, FLARES

1. Deleted Application 12601.

2. Deleted Application 12601.

3. For the purposes of these conditions, a flaring event is defined as a flow rate of vent gas flared in any consecutive 15 minutes period that continuously exceeds 330 standard cubic feet per minute (scfm). If during a flaring event, the vent gas flow rate drops below 330 scfm and then increases above 330 scfm within 30 minutes, that shall still be considered a single flaring event, rather than two separate events. For each flaring event during daylight hours (between sunrise and sunset), the owner/operator shall inspect the flare within 15 minutes of determining the flaring event, and within 30 minutes of the last inspection thereafter, using video monitoring or visible inspection following the procedure described in Part 4. [Regulation 2-6-409.2]

4. The owner/operator shall use the following procedure for the initial inspection and each 30-minute inspection of a flaring event.
   a. If the owner/operator can determine that there are no visible emissions using video monitoring, then no further monitoring is necessary for that particular inspection.
   b. If the owner/operator cannot determine that there are no visible emissions using video monitoring, the owner/operator shall conduct a visual inspection outdoors using either:
      i. EPA Reference Method 9; or
      ii. Survey the flare by selecting a position that enables a clear view of the flare at least 15 feet, but not more than 0.25 miles, from the emission source, where the sun is not directly in the observer's eyes.
   c. If a visible emission is observed, the owner/operator shall continue to monitor the flare for at least 3 minutes, or until there are no visible emissions, whichever is shorter.

d. The owner/operator shall repeat the inspection procedure for the duration of the flaring event, or until a violation is documented in accordance with Part 5. After a violation is documented, no further inspections are required until the beginning of a new calendar day. [Regulation 6-1-301, 2-1-403]

5. The owner/operator shall comply with one of the following requirements if visual inspection is used:
a. If EPA Method 9 is used, the owner/operator shall comply with Regulation 6-1-301 when operating the flare.
b. If the procedure of Part 4.b.ii is used, the owner/operator shall not operate a flare that has visible emissions for three consecutive minutes.
[Regulation 2-6-403]

6. The owner/operator shall keep records of all flaring events, as defined in Part 3. The owner/operator shall include in the records the name of the person performing the visible emissions check, whether video monitoring or visual inspection (EPA Method 9 or visual inspection procedure of Part 4) was used, the results of each inspection, and whether any violation of this condition (using visual inspection procedure in Part 4) or Regulation 6-1-301 occurred (using EPA Method 9). [Regulation 2-6-501; 2-6-409.2]

7. Deleted Application 12601.

8. The owner/operator shall operate and maintain a flare gas recovery system to control continuous or routing combustion in the Refinery Main Flare (S296). Use of a flare gas recovery system on a flare obviates the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 CFR 60.105(a)(4) and 60.7. [Consent Decree Case No. 05-0258, paragraph 139(a)]

9. Recognizing that periodic maintenance may be required for properly designed and operated flare gas recovery systems, Phillips 66 will take all reasonable measure to minimize emissions while such periodic maintenance is being performed. Nothing in this part shall exempt the source from compliance with other applicable State and Local requirements. [Consent Decree Case No. 05-0258, paragraph 148]

10. The flare gas recovery system may be temporarily bypassed in the event of an emergency or in order to ensure safe operation of refinery processes. Nothing in this part shall exempt the source from compliance with other applicable State and Local requirements. [Consent Decree Case No. 05-0258, paragraph 149]

11. Phillips 66 shall eliminate the routes of continuous or intermittent, routinely-generated fuel gases to the MP-30 Flare (S398) and operate the flare such that it receives only process upset gases, fuel gas released as a result of relief valve leakage or gases released due to other emergency malfunctions.

12. Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses
The facility shall investigate the cause of acid gas and hydrocarbon flaring incidents, take reasonable steps to correct the conditions that have caused or contributed to such flaring incidents, and minimize such flaring incidents.

For purposes of this specific part, acid gas flaring shall mean the continuous or intermittent combustion of acid gas and/or sour water stripper gas. Hydrocarbon flaring shall mean the continuous or intermittent combustion of refinery-generated gases, except for acid gas and/or sour water stripper gas and/or tail gas, that results in the emission of sulfur dioxide equal to, or greater than 500 pounds in a 24 hour period; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in a 24 hour period and flaring continues into subsequent, contiguous, non-overlapping 24 hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one flaring incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the flaring incident.

The owner/operator shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the root cause and all contributing causes of the flaring incident(s). For purposes of this specific condition, Root Cause shall mean the primary cause(s) of a flaring incident(s) as determined through a process of investigation. To the extent that a flaring incident has as its root cause the bypass of a flare gas recovery system for safety or maintenance, the owner/operator is only required to keep a record of the date, time and duration of the event. A single Root Cause analysis may be used for root causes that occur routinely. Where the owner/operator has previously analyzed hydrocarbon incidents related to startup and shutdown, it may refer to those analyses when evaluating later incidents. Records of such investigations and corrective actions shall be kept onsite and shall be made available to District staff upon request. [Consent Decree Case No. 05-0258, paragraphs 152, 167]

13. Tail Gas RCA
Tail gas flaring shall mean combustion of tail gas that either is: (i) combusted in a flare and results in 500 pounds or more of SO2 emissions in any 24 hour period; or (ii) Combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO2 emissions in any 24 hour period. Only those time periods which are in excess of a SO2 concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO2 emissions from the incinerator; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in a 24 hour period and flaring continues into subsequent, contiguous, non-overlapping 24 hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one flaring incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the flaring incident.

The owner/operator shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of the flaring

incident(s). For purposes of this specific condition, Root Cause shall mean the primary cause(s) of a flaring incident(s) as determined through a process of investigation. To the extent that a flaring incident has as its root cause the bypass of a flare gas recovery system for safety or maintenance, the owner/operator is only required to keep a record of the date, time and duration of the event. A single Root Cause analysis may be used for root causes that occur routinely. Where the owner/operator has previously analyzed hydrocarbon incidents related to startup and shutdown, it may refer to those analyses when evaluating later incidents. Records of such investigations and corrective actions shall be kept onsite and shall be made available to District staff upon request.. [Consent Decree Case No. 05-0258, paragraph 152]

Following are the changes to the conditions for S3, Heater. Only Sections A, B, F, and G of Condition 1694 are shown, since these are the sections that concern S3. Sections A.1a and A.1b were written to show that S3 would be subject to A.1a before the burners were replaced and to A.1b after the burners were replaced. Since the burners have been replaced, these changes will be made final. Part A.6 was inadvertently dropped in the permit issued on June 18, 2009, and is being reinstated.

Condition 1694

This condition was amended by Applications 13424~~, and~~ 19360, and 23166.

Conditions For Combustion sources and SO2 Cap, Except For Gas Turbines, Duct Burners, Engines, and S45, Heater (U246 B801/B802)

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 Source ID	Refinery Number	Daily Firing Rate (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
~~S3~~	~~U230/B201~~	~~1,488~~	~~62~~
~~[S3 will be deleted from 1a when John Zink burners are replaced with Callidus burners. Application #23166]~~			
S7	U231/B103	1,536	64
S21	U244/B507	194.4	8.1
S336	U231/B104	2,664	111
S337	U231/B105	816	34

[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 Number	Refinery Number	Daily Firing Rate (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
S2	U229/B301	528	22
S3	U230/B201	1,272	53 ~~[Effective when John Zink burners are replaced with Callidus burners. Application #23166]~~
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	U244/B501	5,754	239.75
S16	U244/B502	5,754	239.75
S17	U244/B503	5,754	239.75
S18	U244/B504	5,754	239.75
S19	U244/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
S336	U231/B104	2,664	111
S337	U231/B105	816	34
S351	U267	2,280	95
S371	U228/B520	1,392	58
S372	U228/B521	1,392	58

S8 will be removed from service within 90 days of the date that the NOx offsets pursuant to Application 13424 must be supplied pursuant to BAAQMD Regulation 2-2-410.

[Regulation 2-1-301]

1c. 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 ID Number	Refinery Source ID Number	Daily Firing Rate (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
S438	U110	6,000	250

[Cumulative Increase]

2a. All sources shall use only refinery fuel gas and natural gas as fuel, EXCEPT for S438 which may also use pressure swing adsorption (PSA) off gas as fuel, and EXCEPT for S3 and S7 which may also use naphtha fuel during periods of natural gas curtailment, test runs, or for operator training. [Regulation 9-1-304 (sulfur content), Regulation 2, Rule 1, Consent Decree Case No. 05-0258, DATE: 1/27/05]
Amended Application 12931

2b. Sources S3 and S7 are permitted to use naphtha fuel only during periods of natural gas curtailment, test runs, or for operator training. These sources shall be monitored for visible emissions during tube cleaning. If any visible emissions are detected when the operation commences, corrective action shall be taken within one day, and monitoring shall be performed after the corrective action is taken. If no visible emissions are detected, monitoring shall be performed on an hourly basis. [Regulation 2-6-409.2, Consent Decree Case No. 05-0258, DATE: 1/27/05]
Amended Application 12931

2c. Sources S3 and S7 are permitted to use naphtha fuel only during periods of natural gas curtailment, test runs, or for operator training. These sources shall be monitored for visible emissions before each 1 million gallons of liquid fuel is combusted at each source. If an inspection documents visible emissions, a Method 9 evaluation shall be completed within 3 working days, or during the next scheduled operating period if the specific unit ceases firing on liquid fuel within the 3 working day time frame.
[Regulation 2-6-409.2, Consent Decree Case No. 05-0258, DATE: 1/27/05]. Amended Application 12931

3a. The refinery fuel gas shall be tested for total reduced sulfur (TRS) concentration by GC analysis at least once per 8 hour shift (3 times per calendar day). At least 90% of these samples shall be taken each calendar month. No readable samples or sample results shall be omitted. TRS shall include hydrogen sulfide, methyl mercaptan, methyl sulfide, dimethyl disulfide. As an alternative to GC TRS analysis, the fuel gas total sulfur content may be measured with a dedicated total sulfur analyzer (Houston Atlas or equivalent), and TRS concentration estimated based on the total sulfur/TRS ratio, with the TRS estimate increased by a 5% margin for conservatism. The total sulfur/TRS ratio shall be determined at least on a monthly basis through

GC analyses of total sulfur and TRS values, and the most recent ratio shall be used to estimate TRS concentration. [SO2 Bubble]

3b. The average of the 3 daily refinery fuel gas TRS sample results shall be reported to the District in a table format each calendar month, with a separate entry for each daily average. Sample reports shall be submitted to the District within 30 days of the end of each calendar month. Any omitted sample results shall be explained in this report. [SO2 Bubble]

4. Emissions of SO2 shall not exceed 1,612 lb/day on a monthly average basis from non-cogeneration sources burning fuel gas or liquid fuel. This limit shall not include S45, Heater (U240) and shall not include any engine. [SO2 Bubble]

5. The following records shall be maintained in a District-approved log for at least 5 years and shall be made available to the District upon request:

a. Daily and monthly records of the type and amount of fuel combusted at each source listed in Part A.1. [Regulation 2-1]
b. TRS sample results as required by Part A.3 [SO2 Bubble]
c. SO2 emissions as required by Part A.4 [SO2 Bubble]
d. The operator shall keep records of all visible emission monitoring required by Part 2b, shall identify the person performing the monitoring and shall describe all corrective actions taken. [Regulation 2-6-409.2]
e. The operator shall keep records of all visible emission monitoring required by Part 2c, of the results of required visual monitoring and Method 9 evaluations on these sources, shall identify the person performing the monitoring and shall describe all corrective actions taken. [Regulation 2-6-409.2]

6. Sources listed below are affected facilities under NSPS Subpart J and are subject to the application requirements of NSPS Subparts A and J for fuel gas combustion devices. [Consent Decree Case No. 05-0258, DATE: 1/27/05]

S2 U229/B301
S3 U230/B201
S4 U231/B101
S5 U231/B102
S7 U231/B103
S8 U240/B1
S9 U240/B2
S10 U240/B101
S11 U240/B201
S12 U240/B202
S13 U240/B301
S14 U240/B401
S15-S19 U244/B501-B505
S20 U244/B506
S21 U244/B507

S22 U244/B606
S29 U200/B5
S30 U200/B101
S31 U200/B501

F. S2, S3, S4, S5, S7, S9, S10, S11, S12, S13, S14, Heaters

1b. Total fuel firing at Unit 240 (S9, S10, S11, S12, S13, S14) shall not exceed 877.3 MMbtu/hr (based on higher heating value) averaged over any consecutive 12 month period. [Cumulative Increase]
[Part 1b will be effective after S8 is removed from service pursuant to Application 13424.]

2. Total fuel fired at the MP-30 Complex, including Unit 229 (S2), Unit 230 (S3) and Unit 231 (S4, S5, S7) shall not exceed 346.5 MMbtu/hr (based on higher heating value) averaged over any consecutive 12 month period. [Cumulative Increase]

3. Monthly records of the fuel fired at sources in Parts 1 and 2 shall be kept in a District-approved log for at least 5 years and shall be made available the District upon request. [Cumulative Increase]

4. The owner/operator shall not exceed the following NOx emission limits as measured by NOx CEMs:
   a. S10: 0.015 lb NOx per MMbtu heat input based on a 12 consecutive month average.
   b. S13: 0.015 lb NOx per MMbtu heat input based on a 12 consecutive month average.
   c. S15, S16, S17, S18 and S19 combined: 0.015 lb NOx per MMbtu heat input based on a 12 consecutive month average. [Basis: ConocoPhillips-EPA Consent Decree Case No. H-05-0258]

G. Regulation 9-10 Startup / Shutdown Provisions [Basis: 9-10-301]

For determining compliance with Regulation 9-10-301, the contribution of each affected unit that is in a startup or shutdown condition shall be based on the methods described in 9-10-301.1, and the contribution of each affected unit that is in an out of service condition shall be based on the methods described in 9-10-301.2. Low-firing conditions (no higher than 20% of a unit's rated capacity), including refractory dryout periods, shall be considered out of service conditions subject to the 30-day averaging procedure in Regulation 9-10-301.2, including the 60-day annual limit for this procedure.

1. Heaters S14 (Unit 240, B-401) and S44 (Unit 200, B-201) shall be considered to be in normal operation whenever they have detectable fuel flow, and shall be considered to be out of service for the purpose of Regulation 9-10-301 whenever they have undetectable fuel flow.

2. For heaters S43 (Unit 200, B-202), S351 (Unit 267, B-601/602) and S371/372 (Unit 228, B-520/521), the durations of startups, shutdowns and refractory dryout periods are defined in Condition 1694, Part D.2 (S43), Part B.2 (S351) and Part C.2 (S371, S372).

3. For heaters S10 (Unit 240, B-101) and S15 through S19 (Unit 244, B-501 through B-505), the duration of startups, shutdowns and low-firing periods are defined as follows:

   a. startup and shutdown periods are not to exceed 24 hours
   b. low-firing periods are not to exceed 72 hours

4. For heater S13 (Unit 240, B-301), the duration of startups, shutdowns and low-firing periods are defined as follows:

   a. startup and shutdown periods are not to exceed 72 hours
   b. low-firing periods are not to exceed 72 hours

5. For heaters with no CEMS:

   S2 (Unit 229, B-301)
   S3 (Unit 230, B-201)
   S4 (Unit 231, B-101)
   S5 (Unit 231, B-102)
   S7 (Unit 231, B-103)
   S9 (Unit 240, B-2)
   S11 (Unit 240, B-201)
   S12 (Unit 240, B-202)
   S20 (Unit 244, B-506)
   S22 (Unit 248, B-606)
   S29 (Unit 200, B-5)
   S30 (Unit 200, B-101)
   S31 (Unit 200, B-501)
   S336 (Unit 231, B-104)
   S337 (Unit 231, B-105)

   startups, shutdowns, and out of service conditions shall each not exceed 5 days in succession at each source.

The following condition requiring a source test is no longer necessary and will be deleted.

Condition 24905

S3 replacement burners startup condition

1. No later than 60 days from the first source test of S3 with the replacement burners (Callidus CRG-LN-8W) for condition 21235, the owner/operator shall submit a copy of the source test results to the District permit engineer. [Regulation 2-1-233]

CONDITION 19278
Conditions for ~~S1001,~~ S1002~~,~~ and S1003

1. Deleted Application 12433

2. Deleted Application 12433

3. An annual District-approved source test shall be performed to verify compliance with the requirements of Regulation 6-1-330. A copy of the source test results shall be provided to the District Director of Compliance and Enforcement within 45 days of the test. [Regulation 6-1-330]

4. The Owner/Operator shall perform a visible emissions check on Sources ~~S1001,~~ S1002~~,~~ and S1003 on a monthly basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the owner/operator shall have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures outlined in the CARB manual, "Visible Emissions Evaluation" for six (6) minutes within three (3) days and record the results of the reading. If the reading is in compliance with the Ringelmann 1.0 limit in BAAQMD Regulation 6-1-301, the reading shall be recorded and the owner/operator shall continue to perform a visible emissions check on a monthly basis. If the reading is not in compliance with the Ringelmann 1.0 limit in BAAQMD Regulation 6-1-301, the owner/operator shall take corrective action and report the violation in accordance with Standard Condition 1.F of this permit. The certified smoke-reader shall continue to conduct the Method 9 or CARB Visible Emission Evaluation on a daily basis until the daily reading shows compliance with the applicable limit or until the equipment is shut down. Records of visible emissions checks and opacity readings made by a CARB-certified smoke reader shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulations 6-1-301, 2-6-501, 2-6-503]

5. Within 90 days of issuance of the Major Facility review permit pursuant to Application 10994, the owner/operator shall perform source tests at the stacks of Tail Gas Incinerators ~~A421~~ A422 and A423 to determine compliance with BAAQMD Regulations 6-1-310 and 6-1-311 for filterable particulate using the existing single port. The owner/operator shall submit a proposed source test protocol to the Source Test group at least 30 days before conducting the source test. Within 60 days of the source tests, the owner/operator shall submit the results of the source tests to the District. The owner/operator shall repeat the source tests on an annual basis. The District's Source Test Group will observe the initial test to determine if testing with a single port is acceptable for these stacks. If the Source Test Group finds that a single port is not acceptable, the District may reopen the permit to require installation of a second port at each stack. [2-6-503]

6. The owner/operator shall ensure that the throughput of molten sulfur at ~~S1001,~~ S1002~~,~~ and S1003 combined does not exceed ~~98,915~~73,365 long tons/yr. The owner/operator shall record the throughput of molten sulfur on a monthly basis. [Cumulative Increase]

In addition to the changes required by removal of S1001, Sulfur Recovery Unit, a correction to Condition 22964 is being made in this action. Condition 22964, parts 2, 3, 8 and 9 were deleted inadvertently in the renewal permit issued on September 1, 2011. This is considered to be an administrative amendment because it is similar to a typo. The condition will be reinstated as it existed in the permit issued on May 23, 2011.

CONDITION 22964
Sources ~~S301,~~ S302~~,~~ -S303, S465, Sulfur Pits, and S1010, Sulfur Recovery Unit

1. The owner/operator shall ensure that the throughput of molten sulfur at S301, S302, and S303 combined does not exceed 98,915 long tons per consecutive 12-month period. [Cumulative Increase]

2. The owner/operator shall ensure that the throughput of molten sulfur at S465 does not exceed 73,000 long tons per consecutive 12-month period. [Cumulative Increase]

3. The owner/operator shall ensure that S465, Sulfur Pit, is controlled at all times by S1010, Sulfur Recovery Unit. [Cumulative increase, 40 CFR 60.104(b)]

4. ~~The owner/operator shall ensure that S301, Molten Sulfur Pit, is abated by A8, Stretford Evaporative Cooler. [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR 60.104(a)(2)(i)]~~Deleted Application 17632

5. The owner/operator shall ensure that S302, Molten Sulfur Pit, is abated by A9, Stretford Evaporative Cooler. [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR 60.104(a)(2)(i)]

6. The owner/operator shall ensure that S303, Molten Sulfur Pit, is abated by A10, Stretford Evaporative Cooler. [Consent Decree Case No. 05-0258, paragraph 123, DATE: 1/27/05; Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07; 40 CFR 60.104(a)(2)(i)]

7. Notwithstanding the requirements of parts 4-6, the owner/operator may disconnect the vent lines from ~~S301,~~ S302~~,~~ and S303, Molten Sulfur Pits, to ~~A8,~~ A9~~,~~ and A10, Stretford Evaporative Coolers, for periodic maintenance without penalty, as long as the owner/operator takes reasonable measures to minimize emissions while such periodic maintenance is being performed. [Consent Decree Case No. 05-0258 amendment, paragraph 123, DATE: 5/1/07]

8. The owner/operator shall maintain monthly records of throughput at S301, S302, and S303 combined. These records shall be maintained on site for a minimum of 5 years and shall be made available to District staff upon request. [Cumulative Increase]

9. The owner/operator shall maintain monthly records of throughput at S465. These records shall be maintained on site for a minimum of 5 years and shall be made available to District staff upon request. [Cumulative Increase]

Condition 12133
APPLICATION 12412; SAN FRANCISCO REFINERY; PLANT 16

AMENDED BY APPLICATIONS 22023 (SEPT. 2010) AND 23726 (OCT 2011)
CONDITIONS FOR S-448 (T-1007)

1. The following total throughput shall not be exceeded in any rolling continuous 12 month period, except that the throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted:
   a. 2,190 thousand barrels.
   [Cumulative Increase]

2. S-448 shall operate with closed, gasketed covers on all tank openings except pressure relief valves and vacuum breaker valves.
   [BACT]

3. Monthly records of the throughput of each material processed at this tank shall be kept in a District-approved log for at least 5 years and shall be made available to the District upon request. [Cumulative Increase]

Alternate Operating Scenario

4. S-448 is under an Alternate Operating Scenario in accordance with BAAQMD Regulation 2-6-409.7 and 40 CFR 70 and either stores material subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb or stores material exempt from Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb.
   a. The owner/operator shall keep a record in a contemporaneous log of the stored material.
   b. The owner/operator shall notify the District in accordance with section 40 CFR 60.113(a)(5) prior to storing materials in S-448 that are subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb.
   c. The owner/operator shall perform inspections required by Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb prior to storing materials in S-448 that are subject to those regulations.
   [40 CFR 70.6(a)(9), BAAQMD Regulation 2-6-409.7]

An excerpt of Condition 1440 is shown.

CONDITION 1440
CONDITIONS FOR S324, S381, S382, S383, S384, S385, S386, S387, S390, S392, S400, S401 S1007, S1008, S1009

7b. The following conditions apply to operation of A49, DAF Thermal Oxidizer:
   i. Within 90 days of the startup date of A49, DAF Thermal Oxidizer, the owner/operator shall perform a source test to determine the following:
      1. Mass emissions rate for POC that is collected and sent to A49.
      2. Mass emissions rate for POC after abatement by A49.
      3. Mass emissions rate for H2S that is collected and sent to A49.
      4. Mass emissions rate for H2S after abatement by A49.
      5. Mass emissions rate for SO2

During the source test, the owner/operator shall determine the temperature required to achieve 98.0% destruction by weight of POC or a concentration of 10 ppmv POC at the outlet. The temperature shall become an enforceable limit.

ii. After the initial source test required in Part 8 of this condition, the minimum temperature ~~determined shall become the minimum temperature limit~~ for A49 shall be 1445 F.

CONDITION 23125
Source S1010, U235 Sulfur Recovery Unit, S503, Sulfur Storage Tank, S504, Sulfur Degassing Unit, S505, Sulfur Truck Loading Rack

14. After the initial source test required in part 13 of this condition, the owner/operator shall ensure that the minimum temperature shall not be lower than ~~the temperature determined in the initial source test~~ than 1496 F. ~~The temperature limit will be added to this part after the source test is performed. The owner/operator shall submit the source test results to District staff no later than 60 days after any source test~~. [Offsets, 40 CFR 64]

VII. Applicable Limits and Compliance Monitoring Requirements

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

In the case of a conflict between Section VII and the other sections of the permit, the other sections govern.

Changes to permit:
The changes to Section VII will be presented in the following order:

- Cooling towers, S452, S453, S455, S457, S456, S458, S500
- Flares, S296, S398
- S3, Heater
- Sulfur recovery units, S1001-S1003
- S448, Tank
- S45, Heater
- S1007, DAF
- S1010, Sulfur Recovery Unit

Table VII – CC.1
Applicable Limits and Compliance Monitoring Requirements
S452, S453, S455, S457, S458, S500, COOLING TOWERS

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD Regulation 6-1-301	N		Ringelmann No. 1 for no more than 3 minutes/hour	None	N	None
Opacity	SIP Regulation 6-301	Y		Ringelmann No. 1 for no more than 3 minutes/hour	None	N	None
FP	BAAQMD 6-1-310	N		0.15 grain/dscf	None	N	None
FP	SIP 6-310	Y		0.15 grain/dscf	None	N	None
	BAAQMD 6-1-311	N		40 lb/hr	None	N	None
	SIP 6-311	Y		40 lb/hr	None	N	None
PM				None	BAAQMD Condition 22121, part 4	P/M	Analysis total dissolved solids
Organic com-pounds	BAAQMD 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	BAAQMD Condition 22121, part 1	P/D	Visual inspection
Organic com-pounds	BAAQMD 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	BAAQMD Condition 22121, part 2	P/3 times per week	Analysis of chlorine content
	BAAQMD 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	BAAQMD Condition 22121, part 6	P/E, after 4 weeks of indication of hydrocarbon leak	Estimate of daily VOC loss
	BAAQMD 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	BAAQMD Condition 22121, part 2	P/M	VOC analysis
Chloro-form				None	BAAQMD Condition 22121, part 3	P/M	Records of NaOCl usage

Table VII – CC.2
Applicable Limits and Compliance Monitoring Requirements
S456, COOLING TOWER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD Regulation 6-1-301	N		Ringelmann No. 1 for no more than 3 minutes/hour	None	N	None
Opacity	SIP Regulation 6-301	Y		Ringelmann No. 1 for no more than 3 minutes/hour	None	N	None
FP	BAAQMD 6-1-310	N		0.15 grain/dscf	None	N	None
FP	SIP 6-310	Y		0.15 grain/dscf	None	N	None
PM				None	BAAQMD Condition 22122, part 2	P/M	Analysis total dissolved solids
Organic com-pounds	BAAQMD 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	BAAQMD Condition 22122, part 1	P/D	Visual inspection
				None	BAAQMD Condition 22122, part 4	P/E, after 4 weeks of indication of hydrocarbon leak	Estimate of daily VOC loss

No change are required for the Section VII table for the flares.

Following is the change made to the Section VII table for S3. The daily heat input has been reduced because the hourly capacity has been reduced.

Table VII – A.2
Applicable Limits and Compliance Monitoring Requirements
S3 – UNIT 230, B-201 HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type

Table VII – A.2
Applicable Limits and Compliance Monitoring Requirements
S3 – UNIT 230, B-201 HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-10-301	N		Refinery-wide emissions: 0.033 lb NOx/ MMbtu	BAAQMD 9-10-502.1 BAAQMD Condition 21235, Part 7	P/SA	source test
NOx	BAAQMD 9-10-303	Y		Federal emissions: Refinery-wide emissions: 0.20 lb NOx/MMbtu	None	N	None
Heat input	BAAQMD Condition 1694, Part A.1a	Y		~~1,488~~1,272 MMbtu/day	BAAQMD Condition 1694, Part A.5	P/D	records
Heat input	BAAQMD Condition 1694, Part F.2	Y		346.5 MMbtu/hr averaged over any year at S2, S3, S4, S5, S7	BAAQMD Condition 1694, Part F.3	P/M	records
O2		N		No limit	BAAQMD 9-10-502.1 BAAQMD Condition 21235, Part 2	C	O2 Monitor
CO	BAAQMD 9-10-305	N		400 ppmv (dry, 3% O_2)	BAAQMD 9-10-502.1 BAAQMD Condition 21235, Part 7	P/SA	source test
Opacity	BAAQMD 6-1-301	N		Ringelmann 1 for no more than 3 minutes in any hour (gaseous fuel firing)	None	N	None
Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour (gaseous fuel firing)	None	N	None

Table VII – A.2
Applicable Limits and Compliance Monitoring Requirements
S3 – UNIT 230, B-201 HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-1-301	Y		Ringelmann 1 for no more than 3 minutes in any hour (liquid fuel firing)	BAAQMD Condition 1694, Part A.2c	P/E (before 1 million gallons of liquid fuel combusted)	visual inspection
Opacity	BAAQMD Condition 1694, Part A.2b	Y		No visible emissions	BAAQMD Condition 1694, Part A.2b	P/E	visual inspection
FP	BAAQMD 6-1-305	N		Prohibition of nuisance	None	N	None
FP	SIP 6-305	Y		Prohibition of nuisance	None	N	None
FP	BAAQMD 6-1-310.3	N		0.15 grain/dscf @ 6% O2 (gaseous fuel firing)	None	N	None
FP	SIP 6-310.3	Y		0.15 grain/dscf @ 6% O2 (gaseous fuel firing)	None	N	None
FP	BAAQMD 6-1-310.3	Y		0.15 grain/dscf @ 6% O2 (liquid fuel firing)	BAAQMD Condition 1694, Part A.2c	P/E (before 1 million gallons of liquid fuel combusted)	visual inspection
SO2	BAAQMD Condition 1694, Part A.4	Y		1,612 lb/day SO2 over any month from non-cogeneration sources	BAAQMD Condition 1694, Part A.3a	P/3 times per day	TRS analysis
H2S	40 CFR 60.104(a)(1)	Y		fuel gas H2S concentration limited to 230 mg/dscm (0.10 gr/dscf)	40 CFR 60.105(a)(4)	C	H2S analyzer
Fuel Flow		Y		No limit	BAAQMD 9-10-502.2	C	Fuel Flowmeter

~~**TABLE VII – U**~~
~~**APPLICABLE LIMITS AND COMPLIANCE MONITORING REQUIREMENTS**~~
~~**S1001 - SULFUR PLANT UNIT 234; S1002 - SULFUR PLANT UNIT 236;**~~
~~**S1003 - SULFUR PLANT UNIT 238; S301 - MOLTEN SULFUR PIT 234;**~~
~~**S302 - MOLTEN SULFUR PIT 236; S303 - MOLTEN SULFUR PIT 238**~~

~~Type of Limit~~	~~Citation of Limit~~	~~FE Y/N~~	~~Future Effective Date~~	~~Limit~~	~~Monitoring Requirement Citation~~	~~Monitoring Frequency (P/C/N)~~	~~Monitoring Type~~
~~(H2S, ammonia)~~	~~BAAQMD 9-1-313.2 and SIP 9-1-313.2~~	~~N~~ ~~Y~~		~~95% of H2S in refinery fuel gas is removed and recovered on a refinery-wide basis AND 95% of H2S in process water streams is removed and recovered on a refinery-wide basis AND 95% of ammonia in process water streams is removed~~	~~None~~	~~N~~	~~None~~
~~Opacity~~	~~BAAQMD 6-1-301~~	~~Y~~		~~Ringelmann No. 1 for no more than 3 minutes/hour~~	~~BAAQMD Condition 19278 Part 4~~	~~Y~~	~~Visible emissions inspection~~
~~FP~~	~~BAAQMD 6-1-305~~	~~Y~~		~~Prohibition of nuisance~~	~~BAAQMD Condition 19278 Part 5~~	~~Y/annual or every 5 years~~	~~Source test on thermal oxidizer stack~~
~~FP~~	~~QMD 6-1-310~~	~~Y~~		~~0.15 grain/dscf~~	~~BAAQMD Condition 19278 Part 5~~	~~Y/annual or every 5 years~~	~~Source test on thermal oxidizer stack~~
~~FP~~	~~BAAQMD 6-1-311~~	~~Y~~	~~After turn-around~~	~~$4.10P^{0.67}$ lb/hr, where P is process weight, ton/hr~~	~~BAAQMD Condition 19278 Part 5~~	~~Y/annual or every 5 years~~	~~Source test on thermal oxidizer stack~~
~~SO2~~	~~40 CFR 60.104(a)(2)~~	~~Y~~		~~250 ppm at 0% excess air, 12-hr rolling average~~	~~40 CFR 60.105(a)(5)~~	~~C~~	~~CEM on thermal oxidizer stack~~
~~SO2~~	~~40 CFR 63.1568(a)(1)(i)~~	~~Y~~		~~250 ppm at 0% excess air, 12-hr rolling average~~	~~40 CFR 63.1572~~	~~C~~	~~CEM on thermal oxidizer stack~~
~~SO3, H2SO4~~	~~BAAQMD 6-1-330~~	~~Y~~		~~0.08 grain/dscf exhaust concentration of SO3 and H2SO4, expressed as 100% H2SO4~~	~~BAAQMD Condition 19278 Part 3~~	~~P/A~~	~~Source test on thermal oxidizer stack~~
~~throughput~~	~~BAAQMD Condition 19278, , part 6~~	~~Y~~		~~98,915 long ton/yr for S1001, S1002, S1003, S301, S302, S303~~	~~BAAQMD Condition 19278, Part 6~~	~~P/M~~	~~records~~

Table VII – U[a]
Applicable Limits and Compliance Monitoring Requirements
~~S1001 - SULFUR PLANT UNIT 234;~~ S1002 - SULFUR PLANT UNIT 236; S1003 - SULFUR PLANT UNIT 238; S301 - MOLTEN SULFUR PIT 234; S302 - MOLTEN SULFUR PIT 236; S303 - MOLTEN SULFUR PIT 238

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
FP	SIP 6-1-311	Y	After turn-around	$4.10P^{0.67}$ lb/hr, where P is process weight, ton/hr	BAAQMD Condition 19278 Part 5	Y/annual or every 5 years	Source test on thermal oxidizer stack
FP	BAAQMD 6-1-311	N~~Y~~	After turn-around	$4.10P^{0.67}$ lb/hr, where P is process weight, ton/hr	BAAQMD Condition 19278 Part 5	Y/annual or every 5 years	Source test on thermal oxidizer stack
throughput	BAAQMD Condition ~~19278,~~ 22964, part ~~6~~1	Y		98,915 long ton/yr for ~~S1001, S1002, S1003,~~ S301, S302, S303	BAAQMD Condition ~~19278~~22964, Part ~~6~~8	P/M	records
throughput	BAAQMD Condition 19278, , part 6	Y		73,365 long ton/yr for S1002, S1003	BAAQMD Condition 19278, Part 6	P/M	records

Table IV – BB.9B
Source-Specific Applicable Requirements
NSPS KB ZERO-GAP INTERNAL FLOATING ROOF TANK
BUT WITH NSPS KB AND BAAQMD 8-5 FLEXIBILITY
S448 (TANK 1007)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
S448 will be subject to the requirements of Table IV-BB.9A when storing materials subject to NSPS Kb and BAAQMD 8-5. S448 will be subject to the requirements of Table IV-BB.9B when storing materials exempt from NSPS Kb and BAAAMD 8-5.			
BAAQMD Condition 12133			
Part 1	Throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted. [Basis: Cumulative Increase]	Y	
Part 2	Requirements for tank openings [Basis: Cumulative Increase]	Y	
Part 3	Monthly throughput records [Basis: Cumulative Increase]	Y	
Part 4	Alternate Operating Scenario	Y	

Table IV – BB.9B
Source-Specific Applicable Requirements
NSPS Kb Zero-Gap Internal Floating Roof Tank
but with NSPS Kb and BAAQMD 8-5 Flexibility
S448 (Tank 1007)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
Part 4a	Log of the stored material [Basis: 40 CFR 70.6(a)(9), BAAQMD Regulation 2-6-409.7]	Y	
Part 4b	Notification requirement for refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	Y	
Part 4c	Inspection requirement prior to refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	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	

Table VII – BB.9B
Applicable Limits and Compliance Monitoring Requirements
NSPS Kb Zero-Gap Internal Floating Roof Tank
but with NSPS Kb and BAAQMD 8-5 Flexibility
S448 (Tank 1007)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	S448 will be subject to the requirements of Table IV-BB.9A when storing materials subject to NSPS Kb and BAAQMD 8-5. S448 will be subject to the requirements of Table IV-BB.9B when storing materials exempt from NSPS Kb and BAAAMD 8-5.						
	BAAQMD Permit Conditions						
throughput	BAAQMD Condition 12133, Part 1	Y		Throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted ~~2,190,000 bbl/yr~~	BAAQMD Condition 12133, Part 3	P/M	records

The Section VII table for S45, shown below, was not included in the permit issued on September 1, 2011. It will be added in this action. This is considered to be an administrative amendment because it is similar to a typo. The table will be reinstated as it existed in the permit issued on May 23, 2011.

Table VII – A.36
Applicable Limits and Compliance Monitoring Requirements
S45 – Unit 246 B-801 A/B, Heater

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD Condition 22962, Part 4a	Y		5 ppmv NOx at 3% O2 (3 hour average), except startups and shutdowns	BAAQMD Condition 22962, Part 8	C	CEM
NOx	BAAQMD Condition 22962, Part 6a	Y		2.3 tons/yr	BAAQMD Condition 22962, Part 8	C	CEM
NOx	BAAQMD Condition 22970, Part A.2.a	Y		13.5 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.i	P/A	CEMS, source tests, and calculations

Table VII – A.36
Applicable Limits and Compliance Monitoring Requirements
S45 – UNIT 246 B-801 A/B, HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
O2		Y		No limit	BAAQMD Condition 22962, Part 8	C	O2 Monitor
CO	BAAQMD Condition 22962, Part 4b and 4e	Y		10 ppmv CO @ 3% O2 (3-hr average) when operating over 30 MMbtu/hr except startups and shutdowns; 28 ppmv CO at 3% O2 (3-hr average) when operating below 30 MMbtu/hr, except startups and shutdowns	BAAQMD Condition 22962, Part 9	P/SA	source test
CO	BAAQMD Condition 22962, Part 6b	Y		2.8 tons/yr	BAAQMD Condition 22962, Part 9	P/SA	source test
CO	BAAQMD Condition 22970, Part A.2.e	Y		40.72 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.ii	P/A	Source tests, and calculations
POC	BAAQMD Condition 22962, Part 4c	Y		5.5 lb POC per MM ft3 of fuel	None	N	None
POC	BAAQMD Condition 22962, Part 6c	Y		1.5 tons/yr	None	N	None
POC	BAAQMD Condition 22970, Part A.2.d	Y		1.9 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.iii	P/A	Source tests, and calculations
PM10	BAAQMD Condition 22962, Part 4d	Y		7.6 lb PM10 per MM ft3 of fuel	None	N	None
PM10	BAAQMD Condition 22962, Part 6d	Y		2.1 tons/yr	None	N	None

Table VII – A.36
Applicable Limits and Compliance Monitoring Requirements
S45 – UNIT 246 B-801 A/B, HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
PM10	BAAQMD Condition 22970, Part A.2.c	Y		2.5 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.iii	P/A	calculations
PM10	BAAQMD Condition 22970, Part A.6	Y		16.3 tons per any consecutive 12 months for S45, S434, and S1010 at Facility A0016 and S2 and S3 at Facility B7419, combined	BAAQMD Condition 22970, Part A.6	P/A	Source tests, and calculations
ammonia	BAAQMD Condition 22962, Part 5	N		15 ppmv ammonia at 3% O2 (8 hour average), except startups and shutdowns	None	N	None
Ammonia	BAAQMD Condition 22970, Part A.2.g	N		6.35 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.iv	P/A	Source tests and calculations
Opacity	BAAQMD 6-1-301	N		Ringelmann 1 for no more than 3 minutes in any hour	None for gaseous-fueled sources	N	None
Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour	None for gaseous-fueled sources	N	None
FP	BAAQMD 6-1-305	N		Prohibition of nuisance	None for gaseous-fueled sources	N	None
FP	SIP 6-305	Y		Prohibition of nuisance	None for gaseous-fueled sources	N	None
FP	BAAQMD 6-1-310.3	N		0.15 grain/dscf @ 6% O2	None for gaseous-fueled sources	N	None
FP	SIP 6-310.3	Y		0.15 grain/dscf @ 6% O2	None for gaseous-fueled sources	N	None

Table VII – A.36
Applicable Limits and Compliance Monitoring Requirements
S45 – UNIT 246 B-801 A/B, HEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO2	BAAQMD Condition 22962, Part 6e	Y		4.7 tons/yr	BAAQMD Condition 22962, Part 11	P/3 times/day	Total sulfur analysis
SO2	BAAQMD Condition 22970, Part A.2.b	Y		34.4 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.v	P/A	Source tests, and calculations
H2S	40 CFR 60 Subpart J 60.104(a)(1)	Y		fuel gas H2S concentration limited to 230 mg/dscm (0.10 gr/dscf) except for gas burned as a result of process upset	40 CFR 60.13(i); Condition 22962, part 13	P/3 times/day	H2S analysis
S in fuel gas	BAAQMD Condition 22962, Part 10	Y		100 ppmv total sulfur in fuel, monthly average	BAAQMD Condition 22962, Part 11 and 12	P/3 times per day	Sulfur analysis
Sulfuric Acid Mist	BAAQMD Condition 22970, Part A.2.f	Y		6.01 tons per any consecutive 12 months for S45, S434, and S1010 combined	BAAQMD Condition 22970, Part A.4.a.iii	P/A	Source tests and calculations
	BAAQMD Condition 22970, Part A.3	Y		38 lb/day for S45, S434, and S1010 at Facility A0016 and S2 at Facility B7419 combined	BAAQMD Condition 22970, Part A.4.a.iii	P/A	Source tests and calculations
Heat input	BAAQMD Condition 22962, Part 2	Y		85 MMbtu/hr; 744,600 MMbtu/12-month period	BAAQMD Condition 22962, Part 7	C	Continuous fuel flow monitor
Duration of startup	BAAQMD Condition 22962, Part 4	Y		48 consecutive hours	Condition 22962, part 14	P/E	Records
Duration of shutdown	BAAQMD Condition 22962, Part 4	Y		48 consecutive hours	Condition 22962, part 14	P/E	Records
Duration of heater dryout/ warmup periods	BAAQMD Condition 22962, Part 4	Y		24 consecutive hours	Condition 22962, part 14	P/E	records

Table VII – Da
Applicable Limits and Compliance Monitoring Requirements
A49 DAF THERMAL OXIDIZER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Tempe-rature	BAAQMD Condition 1440, Part 7b(ii)	Y		~~Temperature limit TBD~~ 1445 F	BAAQMD Condition 1440, Part 7b(iii)	C	Temperature monitoring

Table VII – Ub
Applicable Limits and Compliance Monitoring Requirements
S465, MOLTEN SULFUR PIT; S1010 – U235 SULFUR PLANT UNIT

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Tempe-rature	BAAQMD Condition 23125, part 1~~3~~4	Y		~~TBD~~ 1496 F	BAAQMD Condition 23125, parts 14-18	C	Temperature monitoring

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 IV of the permit.

Changes to permit

There are no changes to Section VIII in this action.

IX. Permit Shield:

Changes to permit:

This action proposes no changes to permit shields.

X. Revision History

Changes to permit:

Minor Revisions (Applications 17466, 17632, 23293, 23726)	[enter approval date]
Administrative Amendments (Application 24530)	[enter approval date]

XI. Glossary

Changes to permit:

There are no changes to Section XI in this action.

D. Alternate Operating Scenarios:

There are no changes to alternate operating scenarios in this action.

E. Compliance Status:

See Section C.V above.

H:\pub_data\title V permit appls\1.0 all …\a0016\minor-22024\\a0016 22024 sob

APPENDIX A

GLOSSARY

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

Basis
The underlying authority that allows the District to impose requirements.

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CEM
Continuous Emission Monitor

CEQA
California Environmental Quality Act

CFEP
Clean Fuel Expansion Project

CFR
The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO
Carbon Monoxide

Cumulative Increase
The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered.

District
The Bay Area Air Quality Management District

dscf
Dry Standard Cubic Feet

EPA
The federal Environmental Protection Agency.

EFRT
External Floating Roof Tank

Federally Enforceable, FE
All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPAapproved program that has been incorporated into the SIP.

FP
Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

MOP

The District's Manual of Procedures.

NAAQS
National Ambient Air Quality Standards

NESHAPS
National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NH3
Ammonia

NOx
Oxides of nitrogen.

NSPS
Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR
New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement
A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NOx, PM10, and SO2.

POC
Precursor Organic Compounds

PM
Particulate Matter

PM10
Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD
Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SCR
Selective Catalytic Reduction

SIP
State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO2
Sulfur dioxide

Title V
Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TRMP
Toxic Risk Management Plan

VOC
Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m^2	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year

APPENDIX B

NSR Application 17465

ENGINEERING EVALUATION
CONOCOPHILLIPS - SAN FRANCISCO REFINERY; PLANT 16
APPLICATION 17465

1.0 BACKGROUND

ConocoPhillips – San Francisco Refinery (ConocoPhillips) has submitted this permit application to request the following permit condition change:

- **Modify permit conditions 22121 and 22122 to clarify the definition of a hydrocarbon leak.**

Permit condition 22121 applies to the following Cooling Towers: S452, S453, S455, S457, S458 and S500. Permit condition 22122 applies to S456, Cooling Tower.

On November 14, 2006, ConocoPhillips submitted a letter to Director of Compliance and Enforcement Division of the BAAQMD requesting an agreement on the definition of a VOC leak. The letter included results of monthly and weekly reports of VOC leakage at S452, MP-30 Cooling Tower. Leakage levels discovered at S452 were less than 84 ppb. For complete VOC leakage report, please refer to the letter that has been included in Appendix A of this document. BAAQMD requested that a permit application be submitted to have the associated cooling tower monitoring conditions revised to reflect the leak definition. In the letter, ConocoPhillips proposed defining a hydrocarbon leak as a VOC level above 84 ppb when subtracting the cooling tower supply from the return level. The 84 ppb difference is based on the AP-42 emission factor of 0.7 lb/MM gallons for cooling towers. 84 ppb is equivalent to the emission factor of 0.7 lb/MM gallons, which is the applicable federal emission factor for controlled (i.e., monitored) cooling towers.

84 ppb equivalency to 0.7 lb/MM gallons is calculated as follows:

$(0.7 \text{ lb THC}/10^6 \text{ gal}) \times (1\text{gal}/8.34 \text{ lb}) = 0.084 \text{ ppm}$

$0.084 \text{ ppm} \times 1000 = 84 \text{ ppb}$

ConocoPhillips proposes to incorporate this leak definition into permit conditions 22121 and 22122 to ensure VOC leaks are properly defined and reported. ConocoPhillips also proposes to incorporate language into permit condition 22121 part 5 and permit condition 22122 part 3 that is meant to ensure data quality when sampling for VOCs. ConocoPhillips proposes to retest samples when the difference is greater than 84 ppb to confirm that a VOC leak is

occurring followed by more frequent sampling as required by permit condition 22121 part 5 and permit condition 22122 part 3.

The proposed changes will not increase the throughput rate or capacity of any cooling tower mentioned above. Daily or annual emission levels of any regulated air pollutant will not exceed current emission levels. Part 6 of permit condition 22121 will ensure that no more than 5 tons VOC per year are emitted at exempt cooling towers, S452, S457, S458 and S500. Similarly, part 4 of permit condition 22122 will ensure that no more than 5 tons VOC per year are emitted at exempt cooling tower S456.

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

- The change is not considered a major modification under 40 CFR Parts 51 (NSR) or 52 (PSD).
- The change is not considered a modification under 40 CFR Parts 60 (NSPS), 61 (NESHAPS), or Section 112 of the Clean Air Act (HAP).
- 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.

2.0 EMISSIONS SUMMARY

As mentioned in the Background section, the proposed permit condition changes will not increase emissions of any regulated air pollutant.

2.1 PLANT CUMULATIVE INCREASE

The cumulative emission increase is zero for all the criteria pollutants because annual emissions for this plant are not increasing due to this application.

2.2 BEST AVAILABLE CONTROL TECHNOLOGY

In accordance with BAAQMD Regulation 2, Rule 2, Section 301, a modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NOx, CO, SO_2 or PM_{10} that has an increase in emissions must use BACT. Regulation 1-217 defines modification as a change that results in an

increase in emissions. For this application, BACT is not triggered because the proposed permit condition changes will not result in an increase in any emissions as mentioned in Emissions Summary section above.

2.3 TOXICS

A Toxic Risk Screening Analysis is not required because there are no emission increases for this application.

2.4 OFFSETS

Since there is no increase in emissions at this plant as mentioned in Section 2.0 above, offsets are not required for this application.

3.0 STATEMENT OF COMPLIANCE

BAAQMD REGULATIONS

The cooling towers will continue to comply with Regulation 6, Rule 1 (Particulate Matter-General Requirements) including 6-1-301, 305, 310, and 311, which require that particulate emissions not exceed a Ringelmann 1.0, visible emissions not cause a public nuisance, that particulate emissions not exceed 0.15 gr/dscf, and that particulate emissions not exceed 40 pounds per hour.

The cooling towers are exempt from Regulation 8-2 per Section 8-2-114, which requires that best modern practices be used. All cooling towers mentioned in this application will continue to be maintained using best modern practices such as daily visual inspection, plus water sampling and analysis for indicators of hydrocarbon leaks once per shift.

MAJOR FACILITY REVIEW

ConocoPhillips has a Major Facility Review permit as required by BAAQMD Rule 2-6 since it is considered a major source of emissions. The modifications proposed in this project will require changes to the facility title V permit that will be handled in Application number 17466.

CEQA

The project is considered to be ministerial under the District's CEQA 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 emissions factors as outlined in the District Permit Handbook Chapter 11.4.

ConocoPhillips has completed and submitted to the District CEQA Appendix H, Environmental Information Form, for the project. Appendix H indicates that this project will have no environmental effects.

PUBLIC NOTICE

The proposed project is not located within 1,000 feet of any school. Therefore, it is not subject to public notification requirements of Regulation 2-1-412.

NESHAPS, NSPS and PSD do not apply.

4.0 PERMIT CONDITIONS

Current permit conditions 22121 and 22122 will be modified as follows:

(i) CONDITION 22121

COND# 22121 ----------

For Sources S452, S453, S455, S457, S458, S500, Cooling Towers (Applications 10349, ~~and~~ 14112 and 17465)

1. The owner/operator shall take a sample and perform a visual inspection of the cooling tower water at each cooling tower above on a daily basis to check for signs of hydrocarbon in the cooling water. (Regulation 2-6-503)

2. The owner/operator shall take a sample of the cooling tower water 3 times per week at each cooling tower above and analyze for chlorine content as an indicator of hydrocarbon leakage into the cooling water. On a monthly basis, the owner/operator shall sample the water in the inlet line and in the return line of each cooling tower and determine the VOC content in each line using EPA laboratory method 8015. Any period of sampling when the difference between the return and supply sample VOC concentrations are greater than or equal to 84 ppb is considered a hydrocarbon leak. (Regulation 2-6-503)

3. The owner/operator shall maintain daily records of sodium hypochlorite usage at each cooling tower above. (Regulation 2-6-503)

4. The owner/operator shall sample the cooling tower water at each cooling tower at least once per month and subject the sample to a District approved laboratory analysis to determine its total dissolved solids content. (basis: Regulations 2-6-503, Regulation 3)

5. If the monitoring in part 1 or part 2 indicates that there is a hydrocarbon leak into the cooling water, the owner/operator shall retest two times to confirm that there is a hydrocarbon leak. If the VOC concentrations in the second and third leak tests are less than 84 ppb, the owner/operator shall revert to monthly testing. However, if the VOC concentrations in the second and third leak tests are greater than or equal to 84 ppb, the owner/operator shall submit a report to the Enforcement and the Engineering divisions at the District. The owner/operator shall perform weekly testing until VOC levels are below 84 ppb for two consecutive weeks. The owner/operator shall submit reports on a weekly basis until the monitoring indicates that no hydrocarbon leaks into the cooling water. (Regulation 1-441)

6. If the monitoring in part 1 or part 2 indicates a hydrocarbon leak for longer than 4 weeks, the owner/operator shall estimate the daily amount of VOC emitted using the following procedure. The owner/operator shall sample the water in the inlet line and in the return line and determine the VOC content in each line using EPA laboratory method 8015. This analysis shall be performed each week until VOC levels return to normal. The owner/operator shall report the VOC estimates to the Enforcement and the Engineering divisions at the District on a monthly basis. If a hydrocarbon leak occurs at Sources S452, S457, S458, or S500, the owner/operator shall use the VOC estimates to confirm that no more than 5 tons VOC per year was emitted at any source. If more than 5 tons VOC per year is emitted at S452, S457, S458, or S500, the facility shall submit an application for a District permit within 90 days of determining that the source is subject to District permits. (Regulations 1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)

7. The owner/operator shall use the total dissolved solids monitoring to estimate annual emissions of particulate from the cooling towers. The estimated annual emissions shall be reported to the Engineering Divisions by June 30th of each year as part of the annual update. The owner/operator shall use this estimate to confirm that S452 has not emitted more than 5 tons particulate per year. (Regulation 1-441, 2-6-416.2, 2-6-501)

8. The owner/operator shall maintain the following records for five years from the date of record:
   a. Records of daily visual inspection

b. Records of chlorine content 3 times per week
c. Records of monthly usage of sodium hypochlorite
d. Records of monthly determination of total dissolved solids
e. Records of any indications of hydrocarbon leaks
f. Records of any analyses of VOC content in cooling tower inlet and outlet

(Regulation 2-6-501)

(ii) CONDITION 22122

COND# 22122 ----------

For Source S456, Cooling Tower (Application 10349)

1. The owner/operator shall take a sample and perform a visual inspection of the cooling tower water on a daily basis to check for signs of hydrocarbon leakage in the cooling water. Any period of sampling when the difference between the return and supply sample VOC concentrations are greater than or equal to 84 ppb is considered a hydrocarbon leak. – (Regulation 2-6-503)

2. The owner/operator shall sample the cooling tower water at least once per month and subject the sample to a District approved laboratory analysis to determine its total dissolved solids content. (basis: Regulations 2-6-503, Regulation 3)

3. If the monitoring in part 1 indicates that there is a hydrocarbon leak into the cooling water, the owner/operator shall retest two times to confirm that there is a hydrocarbon leak. If the VOC concentrations in the second and third leak tests are less than 84 ppb, the owner/operator shall revert to monthly testing. However, if the VOC concentrations in the second and third leak tests are greater than or equal to 84 ppb, the owner/operator shall submit a report to the Enforcement and the Engineering divisions at the District. The owner/operator shall perform weekly testing until VOC levels are below 84 ppb for two consecutive weeks. –The owner/operator shall submit reports on a weekly basis until the monitoring indicates that no hydrocarbon leaks into the cooling water. (Regulation 1-441)

4. If the monitoring in part 1 indicates a hydrocarbon leak for longer than 4 weeks, the owner/operator shall estimate the daily amount of VOC emitted using the following procedure. The owner/operator shall sample the water in the inlet line and in the return line and

determine the VOC content in each line using EPA laboratory method 8015. This analysis shall be performed each week until VOC levels return to normal. The owner/operator shall report the VOC estimates to the Enforcement and the Engineering divisions at the District on a monthly basis. If a hydrocarbon leak occurs, the owner/operator shall use the VOC estimates to confirm that no more than 5 tons VOC per year was emitted at the source. If more than 5 tons VOC per year is emitted at the source, the facility shall submit an application for a District permit within 90 days of determining that the source is subject to District permits. (Regulations 1-441, 2-1-424, 2-6-416.2, 2-6-501, 2-6-503)

5. The owner/operator shall use the total dissolved solids monitoring to estimate annual emissions of particulate from the cooling tower. The estimated annual emissions shall be reported to the Engineering Divisions by June 30th of each year as part of the annual update. The owner/operator shall use this estimate to confirm that the cooling tower has not emitted more than 5 tons particulate per year. (Regulation 1-441, 2-6-416.2, 2-6-501)

5.0 RECOMMENDATION

Issue modified Permit to Operate to ConocoPhillips after approving the following permit condition change:

- **Modify permit conditions 22121 and 22122 to clarify the definition of a hydrocarbon leak.**

By: _____

Sanjeev Kamboj Date
Senior Air Quality Engineer

APPENDIX A

(Letter to Compliance and Enforcement Division)

APPENDIX C
NSR Application 17631

ENGINEERING EVALUATION
ConocoPhillips, San Francisco Refinery
Application #17631- Plant #16

I. BACKGROUND

ConocoPhillips has applied for a change of conditions for the following equipment to comply with their consent decree with EPA, which requires inclusion of some provisions of the consent decree into their Title V permit.

S296, C-1 Main Flare
S398, MP-30 Flare

After the change in conditions is approved for the purposes of the District permit, the conditions and associated citations will be proposed for inclusion into the Title V permit through a minor revision of the permit.

Section J, Paragraphs 138 through 149, of Consent Decree Case No. 05-0258 contains requirements for flares.

Section L, Paragraphs 151 through 166, of the consent decree contains requirements for control of acid gas flaring incidents and tail gas incidents, which are related to flares.

Section M, Paragraphs 167 through 170, of the consent decree contains requirements for control of hydrocarbon flaring incidents, which are related to flares.

A discussion of the consent decree requirements is found under Section VIII, Statement of Compliance. Excerpts of the consent decree including definitions and Sections J, L, and M, are found in Appendix B.

II. EMISSION CALCULATIONS

This change in conditions will not cause any increase in emissions. It is expected that the required Root Cause Analyses and subsequent corrective actions will reduce emissions, but the amount of the reduction has not been quantified.

III. CUMULATIVE INCREASE

This change in conditions will not cause any change in the cumulative increase because there will be no emissions increase.

IV. OFFSETS

Because there will be no emissions increase, this application will not be subject to offsets.

V. TOXIC SCREENING ANALYSIS

Because there will be no emissions increase, this application will not be subject to a Health Risk Screening Assessment.

VI. BEST AVAILABLE CONTROL TECHNOLOGY

This change in conditions will not result in a modification to the sources, since there will be no emissions increase, so BACT is not triggered at this time.

VIII. STATEMENT OF COMPLIANCE

Consent Decree
The consent decree contains three sections that affect flares:

- J. NSPS Applicability of Flaring Devices
- L. Control of Acid Gas Flaring Incidents and Tail Gas Incidents
- M. Control of Hydrocarbon Flaring Incidents

The general strategy is to require flares to comply with 40 CFR 60, Subpart J, Standards of Performance for Petroleum Refineries, to encourage the use of flare gas recovery systems, and to reduce flaring by requiring the facility to analyze instances where a significant amount of SO2 has been emitted and to take corrective action so that the facility does not flare for the same reasons repeatedly.

The Rodeo facility already had a flare gas recovery system when the consent decree was finalized, so it was already well on its way to compliance with the consent decree's flare provisions.

Following is a narrative that shows how the facility has complied with the flare requirements in the consent decree and that explains which of the consent decree provisions will be added to the facility's Title V permit.

The parent company certified compliance to EPA and accepted applicability of NSPS for the flares at all of the Conoco USA refineries EPA by December 31, 2011 as required by paragraph 138 and143.

The parent company submitted a compliance plan for the flares at all of the Conoco USA refineries to EPA by December 31, 2007 as required by paragraphs 139, 141, 142, and 143. For the flares at the Rodeo refinery, the parent company chose option 139(a) for the Main Flare and option 139(c) for the MP-30 flare.

Paragraph 140 does not apply to the Rodeo refinery because it is not using an alternative monitoring method.

The performance tests required by paragraph 144 were performed by December 2007.

Paragraph 145 exempts the combustion of process upset gases or fuel gas that is released to the flare due to relief valve leakage or other emergency malfunctions.

Paragraph 146 requires good air pollution control practices for minimizing emissions for the flares.

Paragraph 147 considers compliance with the consent decree to be equivalent to the notice requirements of 40 CFR 60.7(a) and the initial performance test requirement of 40 CFR 60.8(a).

Paragraph 148 allows maintenance of the flare gas recovery system as long as emissions are minimized during maintenance.

Paragraph 149 recognizes the occasional need to bypass the flare gas recovery system.

The consent decree also contains requirements for reports of releases, for root cause analyses (RCA), and for corrective actions related to the RCAs in Sections L and M. Section L pertains to acid gas and tail gas. Acid gas is gas that contains hydrogen sulfide and is generated by the regeneration of an amine solution. Tail gas is the exhaust gas from the Claus trains and the tail gas unit of the sulfur recovery unit. Section M refers to gases that are not defined as acid gas and tail gas.

Condition 18255, parts 12 and 13, contain the provisions in Sections L and M for reports of releases of acid gas, tail gas, or hydrocarbons, and for corrective action to prevent additional releases.

BAAQMD Regulation 6, Rule 1, and SIP Regulation 6
The flares are subject to the Ringelmann 1 limitation, the visible particle limitation, and the particulate weight limitations in BAAQMD Regulation 6, Rule 1, Particulate Matter, General Requirements and SIP Regulation 6, Particulate Matter and Visible Emissions.

Compliance with the Ringelmann 1 limitations is determined by inspection. Requirements for inspection are contained in Condition 18255, parts 3 through 6.

Non-compliance with the visible particle requirement would be determined in response to a complaint. This section is only invoked if "such particles fall on real property other than that of the person responsible for the emission."

Compliance with the 0.15 grain/dscf requirement cannot be determined because the flares do not have stacks.

The facility is subject to the requirement in BAAQMD Section 6-1-401 and SIP Section 6-401, which states:

> Appearance of Emissions: Every person responsible for an emission (except from gas fired heat transfer operations regulated by Sections 6-1-301, 6-1-303 and 6-1-304) shall have and maintain means whereby the operator of the plant shall be able to know the appearance of the emission at all times.

This requirement was omitted in error from the Title V permit. It will be included in the minor revision pursuant to Application 17932.

Regulation 9, Rule 1, Sulfur Dioxide

The flares are not subject to the general SO2 limitation in Section 9-1-302 because they are exempt pursuant to Section 91-110, which states that if a facility had area monitoring for SO2 prior to 1980, it is not subject to Section 9-1-302.

Title V

This facility is subject to Regulation 2, Rule 6 and requires a minor revision to the Title V permit in accordance with section 2-6-404.4. The minor revision will be handled in Application #17632. The changes proposed in this application are not significant as defined by section 2-6-226, since the changes are not considered a major modification under 40 CFR Parts 51 or 52 (PSD) nor a modification under 40 CFR Parts 60 (NSPS), 63 (NESHAPs). The change will not be a significant change or relaxation of monitoring, reporting, or recordkeeping nor will it allow the facility to avoid an applicable requirement. The change is not a case-by-case determination of any emission limit or standard or facility-specific determination or incorporation of any requirement promulgated by EPA. In accordance with section 2-6-215, this change is a minor permit revision. The changes that the District will propose to make to Section IV, Source-Specific Applicable Requirements, and Section VII, Applicable Limits and Compliance Monitoring Requirements, of the Title V permit are shown in Appendix A. The changes to the permit conditions are shown below in Section IX of this evaluation.

Waters Bill, BAAQMD Regulation 2-1-412

This project is not located within 1,000 feet of the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

CEQA
This change in conditions will not cause an increase in emissions or any other environmental effect. It places conditions that are already in Consent Decree Case No. 05-0258 into the Title V permit. The facility is already complying with the requirements of the consent decree. The effect of the consent decree requirements is to lower emissions because the facility is required to maintain the flare gas recovery system, to determine the root cause of every release, and to determine corrective actions so that releases for any given cause do not re-occur.

Therefore it is not subject to CEQA in accordance with CCR Title 14, Natural Resources, Division 6, Resources Agency, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act, Article 5, Preliminary Review of Projects and Conduct of Initial Study, Section 15061, Review for Exemption, which states in subsection (b)(3) that a project is exempt from CEQA if:

> "The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA."

IX. CONDITIONS

CONDITION 18255
FOR SOURCES S296 AND S398, FLARES

1. Deleted Application 12601.

2. Deleted Application 12601.

3. For the purposes of these conditions, a flaring event is defined as a flow rate of vent gas flared in any consecutive 15 minutes period that continuously exceeds 330 standard cubic feet per minute (scfm). If during a flaring event, the vent gas flow rate drops below 330 scfm and then increases above 330 scfm within 30 minutes, that shall still be considered a single flaring event, rather than two separate events. For each flaring event during daylight hours (between sunrise and sunset), the owner/operator shall inspect the flare within 15 minutes of determining the flaring event, and within 30 minutes of the last inspection thereafter, using video monitoring or visible inspection following the procedure described in Part 4. [Regulation 2-6-409.2]

4. The owner/operator shall use the following procedure for the initial

inspection and each 30-minute inspection of a flaring event.
a. If the owner/operator can determine that there are no visible emissions using video monitoring, then no further monitoring is necessary for that particular inspection.
b. If the owner/operator cannot determine that there are no visible emissions using video monitoring, the owner/operator shall conduct a visual inspection outdoors using either:
i. EPA Reference Method 9; or
ii. Survey the flare by selecting a position that enables a clear view of the flare at least 15 feet, but not more than 0.25 miles, from the emission source, where the sun is not directly in the observer's eyes.
c. If a visible emission is observed, the owner/operator shall continue to monitor the flare for at least 3 minutes, or until there are no visible emissions, whichever is shorter.
d. The owner/operator shall repeat the inspection procedure for the duration of the flaring event, or until a violation is documented in accordance with Part 5. After a violation is documented, no further inspections are required until the beginning of a new calendar day.
[Regulation 6-1-301, 2-1-403]

5. The owner/operator shall comply with one of the following requirements if visual inspection is used:
a. If EPA Method 9 is used, the owner/operator shall comply with Regulation 6-1-301 when operating the flare.
b. If the procedure of Part 4.b.ii is used, the owner/operator shall not operate a flare that has visible emissions for three consecutive minutes.
[Regulation 2-6-403]

6. The owner/operator shall keep records of all flaring events, as defined in Part 3. The owner/operator shall include in the records the name of the person performing the visible emissions check, whether video monitoring or visual inspection (EPA Method 9 or visual inspection procedure of Part 4) was used, the results of each inspection, and whether any violation of this condition (using visual inspection procedure in Part 4) or Regulation 6-1-301 occurred (using EPA Method 9). [Regulation 2-6-501; 2-6-409.2]

7. Deleted Application 12601.

8. The owner/operator shall operate and maintain a flare gas recovery system to control continuous or routing combustion in the Refinery Main Flare (S296). Use of a flare gas recovery system on a flare obviates the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 CFR 60.105(a)(4) and 60.7. [Consent Decree Case No. 05-0258,

paragraph 139(a)]

9. Recognizing that periodic maintenance may be required for properly designed and operated flare gas recovery systems, Phillips 66 will take all reasonable measure to minimize emissions while such periodic maintenance is being performed. Nothing in this part shall exempt the source from compliance with other applicable State and Local requirements. [Consent Decree Case No. 05-0258, paragraph 148]

10. The flare gas recovery system may be temporarily bypassed in the event of an emergency or in order to ensure safe operation of refinery processes. Nothing in this part shall exempt the source from compliance with other applicable State and Local requirements. [Consent Decree Case No. 05-0258, paragraph 149]

11. Phillips 66 shall eliminate the routes of continuous or intermittent, routinely-generated fuel gases to the MP-30 Flare (S398) and operate the flare such that it receives only process upset gases, fuel gas released as a result of relief valve leakage or gases released due to other emergency malfunctions.

12. Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses The facility shall investigate the cause of acid gas and hydrocarbon flaring incidents, take reasonable steps to correct the conditions that have caused or contributed to such flaring incidents, and minimize such flaring incidents.

For purposes of this specific part, acid gas flaring shall mean the continuous or intermittent combustion of acid gas and/or sour water stripper gas. Hydrocarbon flaring shall mean the continuous or intermittent combustion of refinery-generated gases, except for acid gas and/or sour water stripper gas and/or tail gas, that results in the emission of sulfur dioxide equal to, or greater than 500 pounds in a 24 hour period; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in a 24 hour period and flaring continues into subsequent, contiguous, non-overlapping 24 hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one flaring incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the flaring incident.

The owner/operator shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the root cause and all contributing causes of the flaring

incident(s). For purposes of this specific condition, Root Cause shall mean the primary cause(s) of a flaring incident(s) as determined through a process of investigation. To the extent that a flaring incident has as its root cause the bypass of a flare gas recovery system for safety or maintenance, the owner/operator is only required to keep a record of the date, time and duration of the event. A single Root Cause analysis may be used for root causes that occur routinely. Where the owner/operator has previously analyzed hydrocarbon incidents related to startup and shutdown, it may refer to those analyses when evaluating later incidents. Records of such investigations and corrective actions shall be kept onsite and shall be made available to District staff upon request. [Consent Decree Case No. 05-0258, paragraphs 152, 167]

13. Tail Gas RCA

Tail gas flaring shall mean combustion of tail gas that either is: (i) combusted in a flare and results in 500 pounds or more of SO2 emissions in any 24 hour period; or (ii) Combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO2 emissions in any 24 hour period. Only those time periods which are in excess of a SO2 concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO2 emissions from the incinerator; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in a 24 hour period and flaring continues into subsequent, contiguous, non-overlapping 24 hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one flaring incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the flaring incident.

The owner/operator shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of the flaring incident(s). For purposes of this specific condition, Root Cause shall mean the primary cause(s) of a flaring incident(s) as determined through a process of investigation. To the extent that a flaring incident has as its root cause the bypass of a flare gas recovery system for safety or maintenance, the owner/operator is only required to keep a record of the date, time and duration of the event. A single Root Cause analysis may be used for root causes that occur routinely. Where the owner/operator has previously analyzed hydrocarbon incidents related to startup and shutdown, it may refer to those analyses when evaluating later incidents. Records of such investigations and corrective actions shall be kept onsite and shall be made available to

District staff upon request.. [Consent Decree Case No. 05-0258, paragraph 152]

X. RECOMMENDATION

Issue a Change of Conditions for the following equipment:

S296, C-1 Main Flare
S398, MP-30 Flare

Brenda Cabral
Supervising Air Quality Engineer

APPENDIX A

PROPOSED CHANGES TO TITLE V PERMIT

PROPOSED CHANGES TO TITLE V PERMIT

The following excerpt from Table II-A, Permitted Sources is shown for information only.

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*
296	C-1 Flare (main refinery flare, elevated, steam-assisted, serves S304, S305, S306)	Callidus		845 ton/hr gas handling capacity, 6.6 MMbtu/hr pilot
398	MP-30 Flare (backup refinery flare, elevated, steam-assisted, serves S304, S305, S306)	John Zink	Q5-48C	845 ton/hr gas handling capacity, 3.1 MMbtu/hr pilot

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
District Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
BAAQMD Regulation 12, Rule 11	**Flare Monitoring at Petroleum Refineries (06/04/03)**		
12-11-401	Flare Data Reporting Requirements	N	
12-11-402	Flow Verification Report	N	
12-11-501	Vent Gas Flow Monitoring	N	
12-11-502	Vent Gas Composition Monitoring	N	
12-11-502.3	Vent Gas Composition Monitoring	N	
12-11-503	Pilot Monitoring	N	
12-11-504	Pilot and Purge Gas Monitoring	N	
12-11-505	Recordkeeping Requirements	N	
12-11-506	General Monitoring Requirements	N	
12-11-506.1	Periods of Inoperation of Vent Gas Monitoring	N	
12-11-507	Video Monitoring	N	
BAAQMD Regulation 12, Rule 12	**Flares at Petroleum Refineries (04/05/06)**		
12-12-301	Flare Minimization	N	
12-12-401	Flare Minimization Plan Requirements	N	
12-12-402	Submission of Flare Minimization Plans	N	
12-12-403	Review and Approval of Flare Minimization Plans	N	
12-12-404	Update of Flare Minimization Plans	N	
12-12-405	Notification of Flaring	N	
12-12-406	Determination and Reporting of Cause	N	
12-12-408	Designation of Confidential Information	N	
12-12-501	Water Seal Integrity Monitoring	N	
40 CFR Part 60 Subpart A	**New Source Performance Standards – General Provisions (01/18/08)**	**Y**	
60.1	Applicability	Y	
60.2	Definitions	Y	
60.3	Units and abbreviations	Y	
60.4	Address	Y	
60.5	Determination of construction or modification	Y	
60.6	Review of plans	Y	
60.7	Notification and record keeping	Y	

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.8	Performance tests	Y	
60.9	Availability of information	Y	
60.10	State authority	Y	
60.11	Compliance with standards and maintenance requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumstances	Y	
60.14	Modifications	Y	
60.15	Reconstruction	Y	
60.16	Priority list	Y	
60.17	Incorporation by reference	Y	
60.19	General notification and reporting requirements	Y	
NSPS 40 CFR 60 Subpart J	**Standards of Performance for Petroleum Refineries (9/21/06)**		
60.104	Standards for Sulfur Oxides: Compliance Schedule	Y	
60.104(a)(1)	Exempt from fuel gas H2S limit if the flare is used only for startup, shutdown, upset, or emergency malfunction gas	Y	
40 CFR 60, Subpart VV; BAAQMD Regulation 10-52	**Standards of Performance for Equipment Leaks (Fugitive Emission Sources) (8/18/95); BAAQMD Standards of Performance for New Stationary Sources (12/20/95)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4(c)	Leakage routed to control device	Y	
60.482-10	Standards: Closed vent systems and control devices	Y	

Table IV – L.1
Source-specific Applicable Requirements
S296 – C-1 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
NSPS Part 60 Subpart VVa; BAAQMD Regulation 10-52	**Applies to S307 and S434, Cracking Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (11/16/07); BAAQMD Standards of Performance for New Stationary Sources (12/20/95) (Applies to equipment in VOC service)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4a	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4a(c)	Leakage routed to control device	Y	
60.482.10a	Standards: Closed vent systems and control devices	Y	
BAAQMD Condition 18255			
Part 3	Flaring event definition [Basis: 2-6-409.2]	Y	
Part 4	Flaring event inspection procedure [Basis: 6-301, 2-1-403]	Y	
Part 5	Flaring event compliance criteria [Basis: 2-6-403]	Y	
Part 6	Flaring event records [Basis: 2-6-501, 2-6-409.2]	Y	
Part 8	Requirement for flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 139(a)]	Y	
Part 9	Periodic maintenance of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 148]	Y	
Part 10	Temporary bypass of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 149]	Y	
Part 12	Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses [Basis: Consent Decree Case No. 05-0258, paragraphs 152, 167]	Y	
Part 13	Tail Gas Root Cause Analysis [Basis: Consent Decree Case No. 05-0258, paragraph 152]	Y	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
District Regulation 6, Rule 1	**Particulate Matter, General Requirements (12/05/07)**		
6-1-301	Ringelmann Number 1 Limitation	N	
6-1-305	Visible Particles	N	
6-1-310	Particulate Weight Limitation	N	
6-1-401	Appearance of Emissions	N	
SIP Regulation 6	**Particulate Matter and Visible Emissions (9/4/98)**		
6-301	Ringelmann No. 1 Limitation	Y	
6-305	Visible Particles	Y	
6-310	Particulate Weight Limitation	Y	
6-401	Appearance of Emissions	Y	
BAAQMD Regulation 12, -Rule 11	**Flare Monitoring at Petroleum Refineries (06/04/03)**		
12-11-401	Flare Data Reporting Requirements	N	
12-11-402	Flow Verification Report	N	
12-11-501	Vent Gas Flow Monitoring	N	
12-11-502	Vent Gas Composition Monitoring	N	
12-11-502.3	Vent Gas Composition Monitoring	N	
12-11-503	Pilot Monitoring	N	
12-11-504	Pilot and Purge Gas Monitoring	N	
12-11-505	Recordkeeping Requirements	N	
12-11-506	General Monitoring Requirements	N	
12-11-506.1	Periods of Inoperation of Vent Gas Monitoring	N	
12-11-507	Video Monitoring	N	
BAAQMD Regulation 12, Rule 12	**Flares at Petroleum Refineries (04/05/06)**		
12-12-301	Flare Minimization	N	
12-12-401	Flare Minimization Plan Requirements	N	
12-12-402	Submission of Flare Minimization Plans	N	
12-12-403	Review and Approval of Flare Minimization Plans	N	
12-12-404	Update of Flare Minimization Plans	N	
12-12-405	Notification of Flaring	N	
12-12-406	Determination and Reporting of Cause	N	
12-12-408	Designation of Confidential Information	N	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
12-12-501	Water Seal Integrity Monitoring	N	
40 CFR Part 60 Subpart A	**New Source Performance Standards – General Provisions (01/18/08)**	**Y**	
60.1	Applicability	Y	
60.2	Definitions	Y	
60.3	Units and abbreviations	Y	
60.4	Address	Y	
60.5	Determination of construction or modification	Y	
60.6	Review of plans	Y	
60.7	Notification and record keeping	Y	
60.8	Performance tests	Y	
60.9	Availability of information	Y	
60.10	State authority	Y	
60.11	Compliance with standards and maintenance requirements	Y	
60.11(a)	Compliance determined by performance tests	Y	
60.11(d)	Control devices operated using good air pollution control practice	Y	
60.12	Circumstances	Y	
60.14	Modifications	Y	
60.15	Reconstruction	Y	
60.16	Priority list	Y	
60.17	Incorporation by reference	Y	
60.19	General notification and reporting requirements	Y	
NSPS 40 CFR 60 Subpart J	**Standards of Performance for Petroleum Refineries (9/21/06)**		
60.104	Standards for Sulfur Oxides: Compliance Schedule	Y	
60.104(a)(1)	Exempt from fuel gas H2S limit if the flare is used only for startup, shutdown, upset, or emergency malfunction gas	Y	
40 CFR 60, Subpart VV; BAAQMD Regulation 10-52	**Standards of Performance for Equipment Leaks (Fugitive Emission Sources) (8/18/95); BAAQMD Standards of Performance for New Stationary Sources (12/20/95)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4	Standards: Pressure Relief Devices in gas/vapor service	Y	

Table IV – L.2
Source-specific Applicable Requirements
S398 – MP-30 FLARE

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.482-4(c)	Leakage routed to control device	Y	
60.482-10	Standards: Closed vent systems and control devices	Y	
NSPS Part 60 Subpart VVa; BAAQMD Regulation 10-52	**Applies to S307 and S434, Cracking Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (11/16/07); BAAQMD Standards of Performance for New Stationary Sources (12/20/95) (Applies to equipment in VOC service)** (Standard applies with flares are used as control devices for the purpose of complying with 40 CFR 60.482-4a(c). The main control device is the fuel gas system.)	Y	
60.482-4a	Standards: Pressure Relief Devices in gas/vapor service	Y	
60.482-4a(c)	Leakage routed to control device	Y	
60.482.10a	Standards: Closed vent systems and control devices	Y	
BAAQMD Condition 18255			
Part 3	Flaring event definition [Basis: 2-6-409.2]	Y	
Part 4	Flaring event inspection procedure [Basis: 6-301, 2-1-403]	Y	
Part 5	Flaring event compliance criteria [Basis: 2-6-403]	Y	
Part 6	Flaring event records [Basis: 2-6-501, 2-6-409.2]	Y	
Part 9	Periodic maintenance of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 148]	Y	
Part 10	Temporary bypass of flare gas recovery system [Basis: Consent Decree Case No. 05-0258, paragraph 149]	Y	
Part 11	Elimination of routes of routine flaring [Basis: Consent Decree Case No. 05-0258, paragraph 139(c)]	Y	
Part 12	Acid Gas or Hydrocarbon Flaring Incident Root Cause Analyses [Basis: Consent Decree Case No. 05-0258, paragraphs 152, 167]	Y	
Part 13	Tail Gas Root Cause Analysis [Basis: Consent Decree Case No. 05-0258, paragraph 152]	Y	

Table VII – L
Applicable Limits and Compliance Monitoring Requirements
S296 – C-1 FLARE
S398 – MP-30 FLARE
[Flares which are visually inspected upon release, with no remote viewing system]

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opa-city	BAAQMD 6-1-301	Y		Ringelmann No. 1 for no more than 3 minutes/hr	BAAQMD Condition 18255, Part 4	P/E	Visual Inspec-tion
FP	BAAQMD 6-1-305	N		Prohibition of nuisance	None	N	None
FP	SIP 6-305	Y		Prohibition of nuisance	None	N	None
FP	BAAQMD 6-1-310	Y		No emissions from source > 0.15 grains per dscf of gas volume	BAAQMD Condition 18255, Part 4	P/E	Visual Inspec-tion
SO2	40 CFR 60.104(a)(1)	Y		Flares are exempt when they are used only for startup, shutdown, malfunction, and upset gases	None	N	None
All		N			BAAQMD 12-11-501 & 12-11-505	P/C	Flow Rate
All		N			BAAQMD 12-11-502.1 & 12-11-505	P/E	Compo-sition
All		N			BAAQMD 12-11-502.3 & 12-11-505	P/E	Compo-sition
All		N			BAAQMD 12-11-503 & 12-11-505	P/C	Flame Detector

Table VII – L
Applicable Limits and Compliance Monitoring Requirements
S296 – C-1 FLARE
S398 – MP-30 FLARE
[Flares which are visually inspected upon release, with no remote viewing system]

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
All		N			BAAQMD 12-11-504 & 12-11-505	P/C	Purge Gas Flow Rate
All		N			BAAQMD 12-11-507	P/C	1 frame per minute image video recor-ding

Appendix B

Excerpts of Consent Decree Case No. 05-0258

IV. Definitions

11. Unless otherwise .defined herein, terms used in the Consent Decree will have the meaning given to those terms in the Clean Air Act and the implementing regulations promulgated thereunder. The following terms used in the Consent Decree will be defined for purposes of the Consent Decree and the reports and documents submitted pursuant thereto as follows:

A. "Acid Gas" shall mean any gas that contains hydrogen sulfide and is generated at a refinery by the regeneration of an amine solution.

B. "Acid Gas Flaring" or "AG Flaring" shall mean the combustion of Acid Gas and/or Sour Water Stripper Gas in an AG Flaring Device.

C. "Acid Gas Flaring Device" or "AG Flaring Device" shall mean any device at the Covered Refineries that is used for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid. The AG Flaring Devices currently in service at the Covered Refineries are included in Appendix A to the Consent Decree. To the extent that, during the duration of the Consent Decree, any Covered Refinery utilizes AG Flaring Devices other than those specified in Appendix A for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, those AG Flaring Devices shall be covered under this Consent Decree.

D. "Acid Gas Flaring Incident" or "AG Flaring Incident" shall mean the continuous or intermittent combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or in excess of, five-hundred (500) pounds in any twenty-four (24) hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to or in excess of five-hundred (500) pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the AG Flaring Incident.

EE. "Flaring Device" shall mean either an AG and/or an HC Flaring Device. The Flaring Devices that COPC owns and operates at the Covered Refineries are identified in Appendix A.

HH. "Hydrocarbon Flaring" or "HC Flaring" shall mean the combustion of refinery-generated gases, except for Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, in a Hydrocarbon Flaring Device.

II. "Hydrocarbon Flaring Device" or "HC Flaring Device" shall mean a device at the Covered Refineries that is used to safely control (through combustion) any excess volume of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Off Gas and/or Tail Gas. The HC Flaring Devices currently in service at the Covered Refineries are included in Appendix A to the Consent Decree, but shall also include the Paratone Flaring Device on the grounds of the Bayway Refinery. To the extent that, during the duration of the Consent Decree, any Covered Refinery utilizes HC Flaring Devices other than those specified in Appendix A or the Paratone Flaring Device for the purpose of combusting any excess of a refinery-generated gas other than Acid Gas and/or Sour Water Stripper Gas, those HC Flaring Devices shall be covered under this Consent Decree.

JJ. "Hydrocarbon Flaring Incident" or "HC Flaring Incident" shall mean the continuous or intermittent combustion of refinery-generated gases, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, that results in the emission of sulfur dioxide equal to, or greater than five hundred (500) pounds in a twenty-four (24) hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in any twenty-four (24) hour period and flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to or in excess of five-hundred (500) pounds of sulfur dioxide, then only one HC Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the HC Flaring Incident.

VV. "Malfunction" shall mean, as specified in 40 C.F.R. Part 60.2, "any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in.a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions."

NNN. “Root Cause" shall mean the primary cause(s) of an AG Flaring Incident(s), Hydrocarbon Flaring Incident(s), or a Tail Gas Incident(s) as determined through a process of investigation.

OOO. "Root Cause Analysis” or "RCA" shall mean the term used internally by COPC to undertake the investigation and reporting requirements associated with Acid Gas Flaring Incidents, Hydrocarbon Flaring Incidents, and Tail Gas Incidents.

VVV. "Sour Water Stripper Gas" or "SWS Gas" shall mean the gas produced by the process of stripping refinery sour water.

YYY. "Sulfur Recovery Plant" or "SRP" shall mean a process unit that recovers sulfur from hydrogen sulfide by a vapor phase catalytic reaction of sulfur dioxide and hydrogen sulfide.

ZZZ. "Sulfur Recovery Unit" or "SRU" shall mean a single component of a Sulfur Recovery Plant, commonly referred to as a Claus train.

BBBB. "Tail Gas" shall mean exhaust gas from the Claus trains and the tail gas unit ("TGU") section of the SRP.

CCCC. "Tail Gas Incident" shall mean, for the purpose of this Consent Decree, combustion of Tail Gas that either is:

i. Combusted in a flare and results in 500 pounds or more of SO2 emissions in any twenty-four (24) hour period; or

ii. Combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO2 emissions in any twenty-four (24) hour period. Only those time periods which are in excess of a SO2 concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO2 emissions from the incinerator.

COPC will use good engineering judgment and/or other monitoring data during periods in which the SO2 continuous emission analyzer has exceeded the range of the instrument or is out of service.

DDDD. “Tail Gas Unit" or “TGU" shall mean a control system utilizing a technology for controlling emissions of sulfur compounds from a Sulfur Recovery Plant.

KKKK. "Upstream Process Units” shall mean all amine contactors, amine regenerators, and sour water strippers at the Covered Refineries, as well as all process units at the Covered Refineries that produce gaseous or aqueous waste streams that are processed at amine contactors, amine scrubbers, or sour water strippers.

J. NSPS Applicability of Flaring Devices

138. NSPS Applicability of Flaring Devices. COPC owns and operates the Flaring Devices that are identified in Appendix A. These Flaring Devices are or will become affected facilities as that term is used in the NSPS at such time as COPC certifies compliance and accepts NSPS applicability under Paragraphs 142 - 143.

139. Compliance Methods for Flaring Devices. For each Flaring Device, COPC will elect to use one or any combination of following compliance methods:

(a) Operate and maintain a flare gas recovery system to control continuous or routine combustion in the Flaring Device. Use of a flare gas recovery system on a flare obviates the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 C.F.R. §§ 60.l05(a)(4) and 60.7;

(b) Operate the Flaring Device as a fuel gas combustion device and comply with NSPS monitoring requirements by use of a CEMS pursuant to 40 C.F.R. § 60.105(a)(4) or with a predictive monitoring system approved by EPA as an alternative monitoring system pursuant to 40 C.F.R. § 60.13(i);

(c) Eliminate the routes of continuous or intermittent, routinely-generated fuel gases to a Flaring Device and operate the Flaring Device such that it receives only process upset gases, fuel gas released as a result of relief valve leakage or gases released due to other emergency malfunctions; or

(d) Eliminate to the extent practicable routes of continuous or intermittent, routinely-generated fuel gases to a Flaring Device and monitor the Flaring Device by use of a CEMS and a flow meter; provided however, that this compliance method may not be used unless COPC: (i) demonstrates to EPA that the Flaring Device in question emits less than 500 pounds per day of SO2 under normal conditions; (ii) secures EPA approval for use of this method as the selected compliance method; and (iii) uses this compliance method for five or fewer of the Flaring Devices listed in Appendix A,

140. For the compliance method described in Paragraph 139(b), to the extent that COPC seeks to use an alternative monitoring method at a particular Flaring Device to demonstrate compliance with the limits at 40 C.F.R. § 60.104(a)(l), COPC may begin to use the method immediately upon submitting the application for approval to use the method, provided that the alternative method for which approval is being sought is the same as or is substantially similar to the method identified as the "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" attached to EPA's December 2,1999, letter to Koch Refining Company LP.

141. Compliance Plan for Flaring Devices (Paragraphs 141 – 142). For each Covered Refinery, COPC will submit a Compliance Plan for Flaring Devices to EPA and the Applicable Co-Plaintiff by no later than December 31, 2007. The Plan will have the objective of reducing to the extent practicable: (i) the routing of continuous or intermittent, routinely-generated fuel gas streams that contain hydrogen sulfide of greater than 230 mg/dscm (0.10 gr/dscf) to Flaring Devices; and (ii) the characterization of streams that COPC considers to be the result of alleged malfunctions, process upsets, and/or relief valve leakage by taking into consideration the source and frequency of the stream.

142. In each Refinery's Compliance Plan for Flaring Devices, COPC will:

(a) Certify compliance with one of the four compliance methods set forth in Paragraph 139 and accept NSPS applicability for at least (i) 50% of the system-wide Flaring Devices identified in Appendix A; and (ii) one Flaring Device per Refinery where such Refinery has three or more Flaring Devices;

(b) Identify the Paragraph 139 compliance method used for each Flaring Device that COPC identifies under Subparagraph 142(a);

(c) Describe the activities that COPC has taken or anticipates taking, together with a schedule, to meet the objectives of Paragraph 141 at each Refinery; and

(d) Describe the anticipated compliance method and schedule that COPC will undertake for the remaining Flaring Devices identified in Appendix A.

143. By no later than December 31, 2011, COPC will certify compliance to EPA and the Applicable Co-Plaintiff with one of the four compliance methods in Paragraph 139 and will accept NSPS applicability for all of the Flaring Devices in Appendix A.

144. Performance Tests. By no later than ninety (90) days after bringing a Flaring Device into compliance by using one or more of the methods in Paragraph 139, COPC will conduct a flare performance test pursuant to 40 C.F.R. §§ 60.8 and 60.18, or an EPA-approved equivalent method, In lieu of conducting the velocity test required in 40 C.F.R. § 60.18, COPC may submit velocity calculations that demonstrate that the Flaring Device meets the performance specification required by 40 C.F.R. § 60.18.

145. The combustion in a Flaring Device of process upset gases or fuel gas that is released to the Flaring Device as a result of relief valve leakage or other emergency malfunctions is exempt from the requirement to comply with 40 C.F;R. § 60.104(a)(l).

146. Good Air Pollution Control Practices. On and after the Date of Entry of this Decree, COPC, at all times, including during periods of startup, shutdown, and or Malfunction, will, to the extent practicable, maintain and operate the Flaring Devices in Appendix A, and associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions pursuant to 40 C.F.R. § 60.11(d).

147. Compliance with Consent Decree Constitutes Compliance with Certain NSPS Subpart A Requirements. For Flaring Devices that become affected facilities under NSPS Subpart J pursuant to Paragraphs 142 and 143, entry of this Consent Decree and compliance with the relevant monitoring requirements of this Consent Decree for Flaring Devices will satisfy the notice requirements of 40 C.F.R. § 60.7(a) and the initial performance test requirement of 40 C.F.R. § 60.8(a).

148. Periodic Maintenance of Flare Gas Recovery Systems. The Parties recognize that periodic maintenance may be required for properly designed and operated flare gas recovery systems. To the extent that COPC currently operates or will operate flare gas recovery systems, COPC will take all reasonable measures to minimize emissions while such periodic maintenance is being performed.

149. Safe Operation of Refining Processes. The Parties recognize that under certain conditions, a flare gas recovery system may need to be bypassed in the event of an emergency or in order to ensure safe operation of refinery processes. Nothing in this Consent Decree precludes COPC from temporarily bypassing a flare gas recovery system under such circumstances.

L. Control of Acid Gas Flaring Incidents and Tail Gas Incidents

151. Past Acid Gas Flaring Analysis. COPC has identified Acid Gas Flaring Incidents that have occurred at the Covered Refineries in recent years and has described their probable causes and estimated emissions. COPC has implemented (or is in the process of implementing) corrective actions to address the root causes of the prior incidents and to minimize the number and duration of Acid Gas Flaring Incidents.

152. Future Acid Gas flaring and Tail Gas Incidents: General. COPC agrees to implement a program to investigate the cause of future Acid Gas Flaring and Tail Gas Incidents, to take reasonable steps to correct the conditions that cause or contribute to such Acid Gas Flaring and Tail Gas Incidents, and to minimize Acid Gas Flaring and Tail Gas Incidents. COPC will follow the procedures in this Section V.L lo evaluate whether future Acid Gas Flaring and Tail Gas Incidents occurring after the Date of Entry of this Decree are due to Malfunctions or are subject to stipulated penalties. The procedures set forth in Section V.L require a Root Cause Analysis ("RCA") and corrective action for all types of Acid Gas Flaring and Tail Gas Incidents. The procedures require stipulated penalties for Acid Gas Flaring and Tail Gas Incidents if the Root Causes are not due to Malfunctions.

153. Investigation and Reporting (Root Cause Analysis). Bv no later than forty-five (45) days following the end of an Acid Gas Flaring or Tail Gas Incident, COPC will submit a report to EPA and the Applicable Co-Plaintiff that sets forth the following;

(a) The date and time that the Acid Gas Flaring or Tail Gas Incident started and ended. To the extent that the Acid Gas Flaring or Tail Gas Incident involved multiple releases either within a 24-hour period or within subsequent, contiguous, non-overlapping 24-hour periods, COPC will set forth the starting and ending dates and times of each release;

(b) An estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity;

(c) The steps, if any, that CQPC took to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring or Tail Gas Incident;

(d) . A detailed analysis that sets forth the Root Cause and all contributing causes of that Acid Gas Flaring or Tail Gas Incident, to the extent determinable;

(e) An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of an Acid Gas Flaring or Tail Gas Incident resulting from the same Root Cause or contributing causes in the future.

The analysis will discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or. not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes will be evaluated. If COPC concludes that corrective action(s) is (are) required under Paragraph 154, the report will include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If COPC concludes that corrective action is not required under Paragraph 154, the report will explain the basis for that conclusion;

(f) A statement that:

(1) Specifically identifies each of the grounds for stipulated penalties in Paragraphs 158 and 159 of this Decree and describes whether or not the Acid Gas Flaring or Tail Gas Incident falls under any of those grounds;

(2) if an Acid Gas Flaring or Tail Gas Incident falls under Paragraph 161 of this Decree, describes which Subparagraph (161(a) or 16!(b)) applies and why;

(3) if an Acid Gas Flaring or Tail Gas Incident falls under either Paragraph 159 or Paragraph 161 (b), states whether or not COPC asserts a defense to the Incident, and if so, a description of the defense;

(g) To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of this Paragraph 153 will be submitted. However, if COPC has not submitted a report or a series of reports containing the information required to be submitted under this Paragraph within the forty-five (45) days (or such additional time as EPA may allow) after the due date for the initial report for the Acid Gas Flaring or Tail Gas Incident, the stipulated penalty provisions of Paragraph 332 will apply, but COPC will retain the right to dispute, under the dispute resolution provisions of this Consent Decree, any demand for stipulated penalties that was issued as a result of COPC's failure to submit the report required under this Paragraph 153 within the time frame set forth. Nothing in this Paragraph 153 will be deemed to excuse COPC from its investigation, reporting, and corrective action obligations under this Section V.L for any Acid Gas Flaring or Tail Gas Incident which occurs after an Acid Gas Flaring or Tail Gas Incident for which COPC has requested an extension of time under this Paragraph 153.

(h) To the extent that completion of the implementation of corrective action(s), if any, is not finalized at the time of the submission of the report required under this Paragraph 153, then, by no later than thirty (30) days

after completion of the implementation of corrective action(s), COPC will submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

154. Corrective Action (Paragraphs 154 - 157). In response to any AG Flaring or Tail Gas Incident occurring after the Date of Entry, COPC will take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of that AG Flaring or Tail Gas Incident.

155. If EPA does not notify COPC in writing within forty-five (45) days of receipt of the report(s) required by Paragraph 153 that it objects to one or more aspects of the proposed corrective action(s), if any, and schedules) of implementation, if any, then that (those) action(s) and schedules) will be deemed acceptable for purposes of compliance with Paragraph 154 of this Decree. EPA does not, however, by its consent to the entry of this Consent Decree or by its failure to object to any corrective action that COPC may take in the future, warrant or aver in any manner that any corrective actions in the future will result in compliance with the provisions of the Clean Air Act, corollary state/local acts, or their implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective measures or procedures under this Section V.L, COPC will remain solely responsible for non-compliance with the Clean Air Act, corollary state/local acts, and their implementing regulations. Nothing in this Section V.L will beconstrued as a waiver of EPA's rights under the Clean Air Act and its regulations for future
violations of the Act or its regulations.

156. If EPA does object, in whole or in part, to the proposed corrective action(s) and/or the schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedules), it will notify COPC of that fact within forty-five (45) days following receipt of the report(s) required by Paragraph 153 above. If EPA and COPC cannot agree on the appropriate corrective action(s), if any, to be taken in response to a particular Acid Gas Flaring or Tail Gas Incident, either Party may invoke the Dispute Resolution provisions of Section XV of the Consent Decree.

157. Nothing in this Section V.L will be construed to limit the right of COPC to take such corrective actions as it deems necessary and appropriate immediately following an Acid Gas Flaring or Tail Gas Incident or in the period during preparation and review of any reports required under this Section.

158; Stipulated Penalties for AG Flaring and Tail Gas Incidents (Paragraphs 158 - 161). The stipulated penalty provisions of Paragraph 332 will apply to any Acid Gas Flaring or Tail Gas Incident for which the Root Cause is one or more or the following acts, omissions, or events;

(a) Error resulting from careless operation by the personnel charged with the responsibility for the Sulfur Recovery Plant, TGU, or Upstream Process Units;

(b) A failure of equipment that is due to a failure by COPC to operate and maintain
that equipment in a manner consistent with good engineering practice;

(c) Failure to follow written procedures; or

(d) For each of the following Covered Refineries:
- (1) Alliance
  - (i) Steam jacketing leaks in lines between SRP and TGU; or
  - (ii) Failure of 1391 -X-l and subsequent shutdown of the reformer unit
- (2) Bayway
  - (i) Inadequate winterization of control valve UPO52 controlling acid gas; or
  - (ii) C101 governor valve linkage failure
- (3) Borger
  - (i) Sulfur condenser leaks into SRU 34
- (4) Ferndale -
  - (i) . Failure.to follow facility-specific winterization program; or
  - (ii) Inadequate winterization of the SWS overhead accumulator level control taps; or
    - (iii) Inadequate winterization of the SRP waste heat boiler level sensing lines
- (5) LAR Wilmington
  - (i) False signal to SRU feed control valves causing valves to close

Except for a force majeure event, COPC will have no defenses to a demand for stipulated
penalties for an Acid Gas Flaring or Tail Gas Incident under this Paragraph 158.

159. The stipulated penalty provisions of Paragraph 332 will apply to any Acid Gas Flaring Incident or Tail Gas Incident that either:

(a) Results in emissions of sulfur dioxide at a rate greater than twenty (20.0) pounds per hour continuously for three (3) consecutive hours or more and COPC failed to act in a manner consistent with the PMO Plan and/or to take any action during the Acid Gas Flaring Incident or Tail Gas Incident to limit the duration and/or quantity of SO2 emissions associated with such Incident; or

(b) (i) For Acid Gas Flaring Incidents, causes the total number of Acid Gas Flaring Incidents per Refinery in a rolling twelve (12) month period to exceed five; or

(ii) for Tail Gas Incidents, causes the total number of Tail Gas Incidents per
Refinery in a rolling twelve (12) month period to exceed five.

160. In response to a demand by the United States for stipulated penalties with respect to any Acid Gas Flaring Incident or Tail Gas Incident falling under Paragraph 159, COPC will be entitled to assert a Malfunction and/or force majeure defense. In the event that a dispute arising under Paragraph 159 is brought to the Court pursuant to the dispute resolution provisions of this Consent Decree, nothing in this Paragraph is intended or will be construed to prevent COPC from asserting its view that startup, shutdown, and Malfunction defenses are available for Paragraph 159 Acid Gas Flaring Incidents or Tail Gas Incidents, nor to prevent the United States from asserting its view that such defenses are not available. In the event that an AG Flaring Incident or a Tail Gas Incident falls under both Paragraph 158 and Paragraph 159, then Paragraph 158 will apply.

161. The stipulated penalty provisions of Paragraph 332 will apply to Acid Gas Flaring and Tail Gas Incidents other than those identified in Paragraphs 158 and 159 as follows:

(a) First Time: No stipulated penalties will apply if the Root Cause is a first time occurrence of a Root Cause provided:

(1) If the Root Cause of the Acid Gas Flaring Incident or Tail Gas Incident was sudden, infrequent, and not reasonably preventable through the exercise of good engineering practice, then that cause will be designated as an agreed-upon Malfunction for purposes of reviewing subsequent Acid Gas Flaring Incidents;
(2) If the Root Cause of the Acid Gas Flaring Incident or Tail Gas Incident was sudden and infrequent, and was reasonably preventable through the exercise of good engineering practice, then COPC will implement corrective action(s) pursuant to Paragraphs 154- 157.

(b) Recurrence: Stipulated penalties will apply if the Root Cause is a recurrence of the same Root Cause of a previous Acid Gas Flaring Incident or Tail Gas Incident that occurred since the Date of Entry unless:

(1) the AG Flaring Incident or Tail Gas Incident resulted from a Malfunction; or

(2) the Root Cause previously was designated as an agreed-upon Malfunction under Paragraph 161 (a)(l); or

(3) the AG Flaring Incident or Tail Gas Incident was a recurrence of an event for which COPC had previously developed, or was in the process of developing, a corrective action plan but COPC had not yet completed implementation.

(c) In the event that a dispute arising under Subparagraph 161(b) is brought to the Court pursuant to the dispute resolution provisions of this Consent Decree, nothing in Subparagraph 161 (b) is intended or will be construed to deprive COPC from asserting that startup, shutdown, and Malfunction defenses are available for Acid Gas Flaring Incidents and Tail Gas Incidents, nor to deprive the United States from asserting that such defenses are not available.

162. Other than for a Malfunction or force majeure. if no Acid Gas Flaring Incident, no Tail Gas Incident, and no violation of the emission limits under Paragraph 120 occur at a Covered Refinery for a rolling thirty-six (36) month period, then the stipulated penalty provisions of Paragraph 332 no longer apply to that Covered Refinery. EPA may elect to prospectively reinstate the stipulated penalty provision if COPC has an Acid Gas Flaring or Tail Gas Incident which would otherwise be subject to stipulated penalties. EPA's decision to reinstate stipulated penalty provisions will not be subject to dispute resolution. Once reinstated, the stipulated penalty provision will apply to future AG Flaring and Tail Gas Incidents at that Covered Refinery and will continue until termination of this Consent Decree.

163. Calculation of the Quantity of Sulfur Dioxide Emissions Resulting from AG Flaring Incidents. For purposes of this Consent Decree, the quantity of SO2 emissions resulting from AG Flaring will be calculated by the following formula:

Tons of SO2 = [FR][TD][ConcH2S][8.44x 10^{-5}].

The quantity of SO2 emitted will be rounded to one decimal point. (Thus, for example, for a calculation that results in a number equal to 10.05 tons, the quantity of SO2 emitted will be rounded to 10.1 tons; for a calculation that results in a number equal to 10.04 tons, the quantity of SO2 emitted will be rounded to 10.0 tons.) For purposes of determining the occurrence of, or the total quantity of SO2 emissions resulting from, an AG Flaring Incident that is comprised of intermittent AG Flaring, the quantity of SO2 emitted will be equal to the sum of the quantities of SO2 flared during each such period of intermittent AG Flaring.

164. Calculation of the Rate of SO, Emissions During AG Flaring. For purposes of this Consent Decree, the rate of SO2 emissions resulting from AG Flaring will be expressed in terms of pounds per hour, and will be calculated by the following formula:

ER - [FR][ConcH2S][0.169].

The emission rate will be rounded to one decimal point. (Thus, for example, for a calculation that results in an emission rate of 19.95 pounds of SO2 per hour, the emission rate will be rounded to 20.0 pounds of SO2 per hour, for a calculation that results in an emission rate of 20.04 pounds of SO2 per hour, the emission rate will be rounded to 20.0.)

165. Meaning of Variables and Derivation of Multipliers used in the Equations in Paragraphs 163 and 164:

ER = Emission Rate in pounds of SO2 per hour
FR = Average Flow Rate to Flaring Device(s) during Flaring, in standard cubic feet per hour
TD = Total Duration of Flaring in hours
ConcH2S + Average Concentration of Hydrogen Sulfide in gas during Flaring (or immediately prior to Flaring if all gas is being flared) expressed as a volume fraction (scf H2S/scf gas)

8.44×10^{-5} = [lb mole H2S/379 scf H2S][64 lbs SO2/lb mole H2S][Ton/2000 lbs]

0.169 = [lb mole H2S/379 scf H2S][1.0 lb mole SO2/1.0 lb mole H2S][64 lb SO2/1.0 lb mol SO2]

Standard conditions: 60 degree F; 14.7 lbforce/sq.in. absolute

The flow of gas to the AG Flaring Devices) ("FR") will be as measured by the relevant flow meter or reliable flow estimation parameters. Hydrogen sulfide concentration ("ConcH2S") will be determined from the Sulfur Recovery Plant feed gas analyzer, from knowledge of the sulfur content of the process gas being flared, by direct measurement by tutwiler or draeger tube analysis or by any other method approved by EPA. In the event that any of these data points is unavailable or inaccurate, the missing data point(s) will be estimated according to best engineering judgment. The report required under Paragraph 153 will include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

166. Calculation of the Quantity of SO-; Emissions Resulting from a Tail Gas Incident.
For the purposes of this Consent Decree, the quantity of SO2 emissions resulting from a Tail Gas Incident will be calculated by one of the following methods, based on the type of event:

(a) If the Tail Gas Incident is combusted in a flare, the SO2 emissions are calculated using the methods outlined in Paragraphs 163 - 165; or

(b) If the Tail Gas Incident is an event exceeding the 250 ppmvd (NSPS J limit), from a monitored Sulfur Recovery Plant incinerator or stack, then the following formula applies:

$$ERTGl = \sum_{i=1}^{TDTC1} [FR_{inc}]i\ [\text{Conc. SO2-250}]i\ [0.l69 \times 10^{-6}]\left[\frac{20.9 - \%O_2}{20.9}\right] i$$

Where:

Emissions from Tail Gas at the Sulfur Recovery Plant incinerator or stack, SO2 lb over a twenty-four (24) hour period

TDTC1 = Total Duration (number of hours) when the incinerator or stack CEMS exceeded.250 ppmvd SO2 corrected to 0% O2.on a rolling twelve (12) hour average, in each twenty-four (24) hour period of the Incident

i = Each hourly average

FR_{inc} = . Incinerator or Stack Exhaust Gas Flow Rate (standard cubic feet per hour, dry basis) (actual stack monitor data or engineering estimate based on the acid gas feed rate to the SRP) for each hour of the Incident

Conc. SO2 = Each actual twelve (12) hour rolling average SO2 concentration (CEMS data) that is greater than 250 ppm in the incinerator or stack exhaust gas, ppmvd corrected to 0% O2> for each hour of the Incident

% O2 = O2 concentration (CEMS data) in the incinerator or stack exhaust gas in volume % on dry basis for each hour of the Incident

$0.169 \times 1O^{-6}$ = [lb mole of SO2 / 379 SO2] [64 lbs SO2 / lb mole SO2] [1×10^{-6}]

Standard conditions = 60 degree F; 14.7 lb_{force}/sq.in. absolute

In the event the concentration SO2 data point is inaccurate or not available or a flow meter for FR_{inc}, does not exist or is inoperable, then estimates will be used based on best engineering judgment.

M. Control of Hydrocarbon Flaring Incidents

167. For Hydrocarbon Flaring Incidents occurring after the Date of Entry, COPC will follow the same investigative, reporting, and corrective action procedures as those outlined in Paragraphs 153-157 for Acid Gas Flaring and Tail Gas Incidents. However:

(a) Hydrocarbon Flaring Incidents will be reported in a Covered Refinery's quarterly/semi-annual reports due under Section IX rather than on an incident-by-incident basis;

(b) For each of the Flaring Devices identified in Appendix A, COPC may prepare and submit a single RCA for one or more Root Causes found by that analysis to routinely recur. COPC will inform EPA and the Applicable Co-Plaintiff that it is electing to report only once on that Root Cause(s). Unless EPA or the Applicable Co-Plaintiff objects within thirty (30) days of receipt of the RCA, such election will be effective;

(c) For the six (6) month period after the installation of a flare gas recovery system (that -is, during the time in which the flare gas recovery system is being commissioned), COPC will not be required to undertake Hydrocarbon Flaring Incident investigations if the root cause of the Hydrocarbon Flaring Incident is directly related to the commissioning of the flare gas recovery system;

(d) In lieu of analyzing possible corrective actions under Paragraph 153 and taking interim and/or long-term corrective action under Paragraph 154 for a Hydrocarbon Flaring Incident attributable to the startup or shutdown of an Upstream Process Unit that GOPC has previously analyzed under this Paragraph 167, COPC may identify such prior analysis when submitting the report required under this Paragraph 167.

(e) To the extent that a Hydrocarbon Flaring Incident at a Covered Refinery has as its Root Cause the bypass of a flare gas recovery system for safety or maintenance reasons as set forth in Paragraphs 148 - 149, COPC will be required to describe only the HC Flaring Incident and to list the date, time, and duration of such incident in the quarterly/semi-annual reports due under Section DC.

168. Stipulated penalties under Paragraphs 158 – 161 and Paragraph 332 do not apply to Hydrocarbon Flaring Incident(s).

169. The formulas at Paragraphs 163 - 165 used for calculating the quantity and rate of sulfur dioxide emissions during AG Flaring Incidents will be used to

calculate the quantity and rate of sulfur dioxide emissions during HC Flaring Incidents.

170. For Distilling West, COPC will continue to implement operating practices designed to reduce flaring and associated emissions from coker drum switch cycles. As part of its efforts to reduce flaring, COPC will continuously operate the COPC-upgraded coker drum gas recovery system during all periods during which coker drums are switched. .The immediately-preceding sentence will no longer apply if COPC installs a flare gas recovery system on the Distilling West Flare in accordance with Paragraph 139(a).

APPENDIX D

NSR Application 23166

ENGINEERING EVALUATION
ConocoPhillips, San Francisco Refinery, Plant: 16
Application: 23166

Background

ConocoPhillips has applied for a Permit to Operate under the Accelerated Permitting Program to replace the existing burners at the following source:

S3 U230, B-201 Heater

Per Regulation 2-1-233.1, the replacement of the burners at the above source, which is currently scheduled to occur in the second quarter of 2011, is an alteration. Per Regulation 2-1-106, any alteration of a source is exempt from the Authority to Construct requirements of Section 2-1-301 and will be evaluated under the Accelerated Permitting Program in Section 2-1-302.2, provided that the owner or operator certifies for all pollutants that the alteration does not result in an increase in emissions.

The facility has proposed to replace the existing 6 John Zink MA-20 burners at the above source with 5 Callidus Raw Gas Injection Low NOx (CRG-LN-8W) burners to optimize the burner spacing and improve the flame pattern in order to minimize flame impingement and coking in the heater. The facility will not make any other modifications to the heater. The facility has stated they are not replacing the burners with ultra-low NOx burners because the heater would need to be reconfigured to accommodate the longer flame length.

The maximum firing rate of the heaters will decrease from 62.4 MMBtu/hr (LHV) to 48 MMBtu/hr (LHV). S3 is subject to condition 1694 limiting the maximum firing rate to the design capacity of the current burners – this condition will be modified to limit the maximum firing rate to the design capacity of the proposed new burners.

S3 is not equipped with NOx CEMS and is governed by permit condition 21235 (NOx Box). The facility has agreed to continue to comply with the NOx emission factors in condition 21235, even though the manufacturer guaranteed emission factors are slightly higher (by 0.006 lb/MMBtu) than one of the NOx emission factors in the condition 21235 part 5. The facility has certified that "[t]he replacement of burners will not cause any increase in criteria or toxic air pollutants". (*see* Letter from K. Schmitt to B. Cabral dated March 9, 2010) The source S3 shall continue to comply with Regulation 9, Rule 10 "Nitrogen Oxides And Carbon Monoxide From Boilers, Steam Generators and Process Heaters In Petroleum Refineries", and will not result in the increase of any regulated air pollutant. The proposed alteration to source S3 may require a change to the NOx Box range, which will be addressed in a separate application if needed.

Source S3 is subject to semi-annual source testing in permit condition 21235 part 7.a.ii. and will be required under a new proposed condition 24905 to submit the source test results to the Engineering Division to verify the emissions comply with the information submitted in this application.

Emissions Summary

Table 1 below summarizes information on the existing burners at source S3, and the corresponding NOx and CO emission rates/concentrations.

Table 1: "Pre-Project" Summary[1]

Source ID	Burner Manufacturer	Burner Model	Number of burners	Burner design firing rate (LHV) (MMBTU/hr)	Burner design firing rate (HHV) (MMBTU/hr)	NOx (ppm @ 3% O_2)	NOx (lb/MMBTU) (HHV)	CO (ppm @ 3% O_2)	CO (lb/MMBTU) (HHV)
S3	John Zink	MA-20	6	10.4	11.4	103.9	0.123	<3.05	<0.002

Table 2 below summarizes information on the proposed alteration at source S3 the corresponding NOx and CO emission rates/concentrations. The NOx emission rate is a vendor guarantee, however, the burners are expected to emit at approximately 0.10 lb/MMBtu, which is lower than the emission factors in the NOx Box condition 21235 part 5. The CO emission rate is a vendor guarantee; however, the facility has indicated that the actual CO concentrations are expected to be no greater than current emission rates since the new burners should be more efficient. The maximum CO emissions based on vendor guarantee would be less than 10 lb/day[2].

Table 2: "Post-Project" Summary

Source ID	"Callidus" Burner Model	Number of burners	Burner design firing rate (LHV) (MMBTU/hr)	Burner design firing rate (HHV) (MMBTU/hr)	NOx (lb/MMBTU) (HHV)	CO (lb/MMBTU) (HHV)
S3	CRG-LN-8W	5	9.60	10.56	0.115	0.006

It can be seen from Tables 1 and 2 above that the proposed alterations at source S3 will not result in a net increase in emissions. In addition, the maximum firing rate of the above furnace will decrease its maximum firing rate outlined in part 1 of permit condition 1694 (from 62 MMBTU/hr to 53 MMBtu/hr (HHV)).

Statement Of Compliance

ConocoPhillips will continue to comply with Regulation 9, Rule 10, with this project. The facility will source test S-3 during their semi-annual source testing requirements in condition 21235. Any changes to the NOx Box will be addressed in a separate application.

The proposed alteration to source S3 will not result in any increase in daily or annual emissions, so there will be no "Cumulative Increase" in emissions.

BACT does not apply since this is not a new or modified source as defined by 2-1-234.3. ConocoPhillips submitted the original design drawings of the current burners showing the design capacity of 62.4 MMBtu/hr (LHV) and the new design drawings of the proposed burners showing the design capacity of 48 MMBtu/hr (LHV).

Offsets do not apply since there is no increase in emissions.

A health risk screening analysis was not required since there is no increase in toxic air contaminant emissions.

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[1] The NOx and CO concentrations summarized in Table 1 are based on tests conducted on May 10, 2010 for Demonstration of Compliance with Regulation 9, Rule 10.

[2] (5 burners x 9.6MMBtu/hr x 0.006 lb CO/MMBtu x 24 hr/day) = 6.9 lb/day

Sources S3 is subject to 40 CFR Part 60, Subpart J "New Source Performance Standard for Petroleum Refineries" (NSPS J). Table's IV-A.2 of ConocoPhillips' Title V permit contains the NSPS J applicable requirements for source S3, respectively. Therefore, it is not necessary to perform an NSPS J applicability determination to determine whether changes that are part of this evaluation are a "reconstruction" in accordance with 40 CFR 60.15.

PSD does not apply since the potential to emit of the new burners are less than the significance levels in 40 CFR Part 52.21(b)(23).

This facility is subject to Regulation 2, Rule 6 and requires a minor revision to the Title V permit in accordance with section 2-6-404.4 and will submit an application for this purpose. The changes proposed in this application are not significant as defined by section 2-6-226 since the changes are not considered a major modification under 40 CFR Parts 51 or 52 (PSD) nor a modification under 40 CFR Parts 60 (NSPS), 63 (NESHAPs), and the change will not result in any emissions increase. The change will not be a significant change or relaxation of monitoring, reporting, or recordkeeping nor will it allow the facility to avoid an applicable requirement. The change is not a case-by-case determination of any emission limit or standard or facility-specific determination or incorporation of any requirement promulgated by EPA. In accordance with section 2-6-215, this change is a minor permit revision.

The California Environmental Quality Act (CEQA):

Per Section 2-1-311 of the District Rules and Regulations, a permit application for a proposed new or modified source will be classified as ministerial and will accordingly be exempt from the CEQA requirement of Section 2-1-310 if the District's engineering evaluation and basis for approval of the permit application for the project is limited to the criteria set forth in Section 2-1-428 and to the procedures, fixed standards and objective measurements set forth in the District's Permit Handbook and BACT/TBACT Workbook. The method for determining whether a given permit application will be classified as ministerial is set forth in Section 2-1-427.

Per Section 2-1-427, if the District determines that its evaluation of the permit application is covered by the specific procedures, fixed standards and objective measurements set forth in the District's Permit Handbook and BACT/TBACT Workbook, the District's evaluation of the permit application is classified as ministerial and the engineering evaluation of the permit application by the District will be limited to the use of said specific procedures, fixed standards and objective measurements. For such projects, the District will merely apply the law to the facts as presented in the permit application, and the District's decision regarding whether to issue the permit will be based only on the criteria set forth in Section 2-1-428 and in the District's Permit Handbook and BACT/TBACT Workbook.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore, is not subject to CEQA review. The engineering review for this project requires only the fixed standards and objective measurements outlined in the Permit Handbook Chapter 2.1 (Boilers, Steam Generators, and Process Heaters), and therefore, is not discretionary as defined by CEQA.

Permit Conditions

S3 is subject to Conditions 1694 and 21235. Condition 1694 will be amended to reflect the reduced maximum firing rate of the new burners (parts 1a and 1b). Condition 24905 will be added to require initial source test results for S3 be submitted to the Engineering Division. There are no proposed changes to Condition 21235 (NOx Box) at this time.

Condition 1694

This condition was amended by Applications 13424, ~~and~~ 19360, and 23166.

Conditions For Combustion sources and SO2 Cap, Except For Gas Turbines, Duct Burners, Engines, and S45, Heater (U246 B801/B802)

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 Number	Refinery ID Number	Daily Firing Rate (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
S3	U230/B201	1,488	62
[S3 will be deleted from 1a when John Zink burners are replaced with Callidus burners. Application #23166]			
S7	U231/B103	1,536	64
S21	U244/B507	194.4	8.1
S336	U231/B104	2,664	111
S337	U231/B105	816	34

[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 Number	Refinery ID Number	Daily Firing Rate (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
S2	U229/B301	528	22
S3	U230/B201	1,272	53 [Effective when John Zink burners are replaced with Callidus burners. Application #23166]
S4	U231/B101	2,304	96
S5	U231/B102	2,496	104
S8	U240/B1	6,144	256
S8 will be removed from service within 90 days of the date that the NOx offsets pursuant to Application 13424 must be supplied pursuant to BAAQMD Regulation 2-2-410.			
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	U244/B501	5,754	239.75
S16	U244/B502	5,754	239.75
S17	U244/B503	5,754	239.75
S18	U244/B504	5,754	239.75
S19	U244/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
S336	U231/B104	2,664	111
S337	U231/B105	816	34
S351	U267	2,280	95
S371	U228/B520	1,392	58
S372	U228/B521	1,392	58

[Regulation 2-1-301]

1c. 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 Refinery Source ID Number		Daily Firing Rate Number (MM Btu/day)	Hourly Firing Rate (MM Btu/hour)
S438	U110	6,000	250

[Cumulative Increase]

2a. All sources shall use only refinery fuel gas and natural gas as fuel, EXCEPT for S438 which may also use pressure swing adsorption (PSA) off gas as fuel, and EXCEPT for S3 and S7 which may also use naphtha fuel during periods of natural gas curtailment, test runs, or for operator training. [Regulation 9-1-304 (sulfur content), Regulation 2, Rule 1, Consent Decree Case No. 05-0258, DATE: 1/27/05]
Amended Application 12931

2b. Sources S3 and S7 are permitted to use naphtha fuel only during periods of natural gas curtailment, test runs, or for operator training. These sources shall be monitored for visible emissions during tube cleaning. If any visible emissions are detected when the operation commences, corrective action shall be taken within one day, and monitoring shall be performed after the corrective action is taken. If no visible emissions are detected, monitoring shall be performed on an hourly basis. [Regulation 2-6-409.2, Consent Decree Case No. 05-0258, DATE: 1/27/05]
Amended Application 12931

2c. Sources S3 and S7 are permitted to use naphtha fuel only during periods of natural gas curtailment, test runs, or for operator training. These sources shall be monitored for visible emissions before each 1 million gallons of liquid fuel is combusted at each source. If an inspection documents visible emissions, a Method 9 evaluation shall be completed within 3 working days, or during the next scheduled operating period if the specific unit ceases firing on liquid fuel within the 3 working day time frame.
[Regulation 2-6-409.2, Consent Decree Case No. 05-0258,

DATE: 1/27/05]. Amended Application 12931

3a. The refinery fuel gas shall be tested for total reduced sulfur (TRS) concentration by GC analysis at least once per 8 hour shift (3 times per calendar day). At least 90% of these samples shall be taken each calendar month. No readable samples or sample results shall be omitted. TRS shall include hydrogen sulfide, methyl mercaptan, methyl sulfide, dimethyl disulfide. As an alternative to GC TRS analysis, the fuel gas total sulfur content may be measured with a dedicated total sulfur analyzer (Houston Atlas or equivalent), and TRS concentration estimated based on the total sulfur/TRS ratio, with the TRS estimate increased by a 5% margin for conservatism. The total sulfur/TRS ratio shall be determined at least on a monthly basis through GC analyses of total sulfur and TRS values, and the most recent ratio shall be used to estimate TRS concentration. [SO2 Bubble]

3b. The average of the 3 daily refinery fuel gas TRS sample results shall be reported to the District in a table format each calendar month, with a separate entry for each daily average. Sample reports shall be submitted to the District within 30 days of the end of each calendar month. Any omitted sample results shall be explained in this report. [SO2 Bubble]

a. Emissions of SO2 shall not exceed 1,612 lb/day on a monthly average basis from non-cogeneration sources burning fuel gas or liquid fuel. This limit shall not include S45, Heater (U240) and shall not include any engine. [SO2 Bubble]

b. The following records shall be maintained in a District-approved log for at least 5 years and shall be made available to the District upon request:

1) Daily and monthly records of the type and amount of fuel combusted at each source listed in Part A.1. [Regulation 2-1]
2) TRS sample results as required by Part A.3 [SO2 Bubble]
3) SO2 emissions as required by Part A.4 [SO2 Bubble]
4) The operator shall keep records of all visible emission monitoring required by Part 2b, shall identify the person performing the monitoring and shall describe all corrective actions taken. [Regulation 2-6-409.2]
5) The operator shall keep records of all visible emission monitoring required by Part 2c, of the results of required visual monitoring and Method 9 evaluations on these sources, shall identify the person performing the monitoring and shall describe all corrective actions taken. [Regulation 2-6-409.2]

c. Sources listed below are affected facilities under NSPS Subpart J and are subject to the application requirements of NSPS Subparts A and J for fuel gas combustion devices. [Consent Decree Case No. 05-0258, DATE: 1/27/05]

S2 U229/B301
S3 U230/B201
S4 U231/B101
S5 U231/B102
S7 U231/B103
S8 U240/B1
S9 U240/B2
S10 U240/B101
S11 U240/B201
S12 U240/B202
S13 U240/B301
S14 U240/B401
S15-S19 U244/B501-B505
S20 U244/B506
S21 U244/B507
S22 U244/B606

S29 U200/B5
S30 U200/B101
S31 U200/B501

B. S351 Preheater

1. The S351 heater shall be abated by the A6 SCR unit at all times, except that S351 may operate without SCR abatement on a temporary basis for periods of planned or emergency maintenance. A District-approved NOx CEM shall monitor and record the S351 NOx emission rate whenever S351 operates without abatement. All emission limits applicable to S351 shall remain in effect whether or not it is operated with SCR abatement. [BACT, Cumulative Increase]

2. The concentration of NOx from S351 shall not exceed 20 ppmv @ 3% oxygen, dry, averaged over any consecutive 3 hour period. This limit shall not apply during a startup period which shall not exceed 12 hours. The startup exemption period may last up to 24 hours to allow the proper ammonia injection temperature to be reached provided that the temperature is monitored at least once per hour and that ammonia injection begins within 2 hours of reaching the proper temperature. This limit shall also not apply during a shutdown period which shall not exceed 9 hours.

[BACT, Cumulative Increase]

3. The following instruments shall be installed and maintained to demonstrate compliance with Part 2:

1)continuous NOx analyzer/recorder
2)continuous O2 or CO analyzer/recorder [BACT, Cumulative Increase]

C. S371 and S372 Furnaces

1. The S371 furnace shall be abated by the A16 SCR unit at all times, and the S372 furnace shall be abated by the A17 SCR unit at all times, except that S371 and S372 may operate without SCR abatement on a temporary basis for periods of planned or emergency maintenance. A District-approved NOx CEM shall monitor and record the NOx emission rates from these heaters whenever they operate without abatement. All emission limits applicable to S371 and S372 shall remain in effect whether or not they are operated with SCR abatement. [BACT, Cumulative Increase]

2. The concentration of NOx from S371 and S372 shall not exceed 20 ppmv, dry, corrected to 3% oxygen, averaged over any consecutive 3 hour period. This limit shall not apply during a startup period, which shall not exceed 12 hours. The startup exemption period may last up to 24 hours to allow the proper ammonia injection temperature to be reached provided that the temperature is monitored at least once per hour and that ammonia injection begins within 2 hours of reaching the proper temperature. This limit shall also not apply during a shutdown period which shall not exceed 9 hours. [BACT, Cumulative Increase]

3. The concentration of CO emissions from S371 and S372 shall not exceed 50 ppmv, dry, corrected to 3% oxygen, averaged over any consecutive 3 hour period. This limit shall not apply during a startup period, which shall not exceed 12 hours. The startup exemption period may last up to 24 hours to allow the proper ammonia injection temperature to be reached provided that the temperature is monitored at least once per hour and that ammonia injection begins within 2 hours of reaching the proper temperature. This limit shall also not apply during a shutdown period, which shall not exceed 9 hours.

[BACT, Cumulative Increase]

D. S43 Coking Furnace (Unit 200 B-202) and S44 (Unit 200 B-201 PCT Reboil Furnace)

1. Nitrogen oxide emissions from the S43 Coking Furnace (Unit 200 B-202) shall be abated by Selective Catalytic Reduction Unit A4 at all times, except that S43 may operate without SCR abatement on a temporary basis for periods of planned or emergency maintenance. A District-approved NOx CEM shall monitor and record the S43 NOx emission rate whenever S43 operates without abatement. All emission limits applicable to S43 shall remain in effect whether or not it is operated with SCR abatement.
[BACT, Cumulative Increase]

2. The nitrogen oxides in the flue gases for S43, Unit 200 B-202 Coking Furnace and S44, Unit 200 B-201 PCT Reboil Furnace shall not exceed 40 ppmdv corrected to 3% oxygen, dry, over any consecutive 8 hour period. This limit shall not apply during a startup period which shall not exceed 12 hours. The startup exemption period may last up to 24 hours to allow the proper ammonia injection temperature to be reached provided that the temperature is monitored at least once per hour and that ammonia injection begins within 2 hours of reaching the proper temperature. This limit shall also not apply during a shutdown period which shall not exceed 9 hours. [BACT, Cumulative Increase]

3. The carbon monoxide in the flue gas for S43, Unit 200 B-202 Coking Furnace and S44, Unit 200 B-201 PCT Reboil Furnace shall not exceed 50 ppmdv corrected to 3% oxygen averaged over any calendar month. This condition shall not apply during start-up and shutdown. [BACT, Cumulative Increase]

4. Instruments shall be installed and operated to continuously monitor the percentage of oxygen and the concentration of nitrogen oxides from the following sources: S43, Unit 200 B-202 Coking Furnace and S44, Unit 200 B-201 PCT Reboil Furnace. [BACT, Cumulative Increase]

E. S438 Furnace

1. The S438 furnace shall be abated by the A46 SCR unit at all times, except that S438 may operate without SCR abatement on a temporary basis for periods of planned or emergency maintenance. A District-approved NOx CEM shall monitor and record the S438 NOx emission rate whenever S351 operates without abatement. All emission limits applicable to S438 shall remain in effect whether or not it is operated with SCR abatement. [BACT, Cumulative Increase]

2. Total fuel fired in S438 shall not exceed 2.19 E 12 btu in any rolling consecutive 365 day period. [Cumulative Increase]

3. Pressure swing adsorption (PSA) off gas used as fuel at S438 shall not exceed 1.0 ppm (by weight) total reduced sulfur (TRS). TRS shall include hydrogen sulfide, methyl mercaptan, methyl sulfide, dimethyl disulfide. [BACT, Cumulative Increase]

4. The following emission concentration limits from S438 shall not be exceeded. These limits shall not apply during startup periods not exceeding 24 hours (72 hours when drying refractory or during the first startup following catalyst replacement) and shutdown periods not exceeding 24 hours. The District may approve other startup and shutdown durations.

NOx: 7 ppmv @ 3% oxygen, averaged over any 1 hour period
CO: 32 ppmv @ 3% oxygen, averaged over any calendar day
POC: 0.0023 lb/MMbtu of fuel used
[BACT, Cumulative Increase]

5. The concentration of TRS in the blended fuel gas shall not exceed 14 ppmv averaged over any calendar month. [SO2 bubble, Cumulative Increase]

6. Daily records of the type and amount of fuel combusted at S438 and of the TRS and hydrogen sulfide concentration in the blended fuel gas, and monthly records of average blended fuel gas TRS concentration, shall be maintained for at least five years and shall be made available to the District upon request. [Cumulative Increase]

7. No later than 90 days from the startup of S438, the owner/operator shall conduct District-approved source tests to determine initial compliance with the limits in Part 4 for NOx, CO and POC. The owner/operator shall conduct the source tests in accordance with Part
8. The owner/operator shall submit the source test results to the District staff no later than 60 days after the source test.

[BACT, Cumulative Increase]

9. The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements for continuous emissions monitors as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section, in writing, of the source test protocols and projected test dates at least 7 days prior to testing. [BACT, Cumulative Increase]

F. S2, S3, S4, S5, S7, S8, S9, S10, S11, S12, S13, S14, S15-S19, Heaters

1a. Total fuel firing at Unit 240 (S8, S9, S10, S11, S12, S13, S14) shall not exceed 993.7 MMbtu/hr averaged over any consecutive 12 month period. [Cumulative Increase] [Part 1a will be effective until S8 is removed from service pursuant to Application 13424.]

1b. Total fuel firing at Unit 240 (S8, S9, S10, S11, S12, S13, S14) shall not exceed 877.3 MMbtu/hr (based on higher heating value) averaged over any consecutive 12 month period. [Cumulative Increase] [Part 1b will be effective after S8 is removed from service pursuant to Application 13424.]

2. Total fuel fired at the MP-30 Complex, including Unit 229 (S2), Unit 230 (S3) and Unit 231 (S4, S5, S7) shall not exceed 346.5 MMbtu/hr averaged over any consecutive 12 month period (based on higher heating value). [Cumulative Increase]

3. Monthly records of the fuel fired at sources in Parts 1 and 2 shall be kept in a District-approved log for at least 5 years and shall be made available the District upon request.

[Cumulative Increase]

4. The owner/operator shall not exceed the following Nox emission limits as measured by NOx CEMs:
    i. S10: 0.015 lb NOx per MMBtu heat input based on a 12 consecutive month average.
    ii. S13: 0.015 lb NOx per MMBtu heat input based on a 12 consecutive month average.
    iii. S15, S16, S17, S18 and S19 combined: 0.015 lb NOx per MMBtu heat input based on a 12 consecutive month average.

[Basis: ConocoPhillips-EPA Consent Decree Case No. H-05-0258]

G. Regulation 9-10 Startup / Shutdown Provisions
[Basis: 9-10-301]

For determining compliance with Regulation 9-10-301, the contribution of each affected unit that is in a startup or shutdown condition shall be based on the methods described in 9-10-301.1, and the contribution of each affected unit that is in an out of service condition shall be based on the methods described in 9-10-301.2. Low-firing conditions (no higher than 20% of a unit's rated capacity), including refractory dryout periods, shall be considered out of service conditions subject to the 30-day averaging procedure in Regulation 9-10-301.2, including the 60-day annual limit for this procedure.

1. Heaters S8 (Unit 240, B-1), S14 (Unit 240, B-401) and S44 (Unit 200, B-201) shall be considered to be in normal operation whenever they have detectable fuel flow, and shall be considered to be out of service for the purpose of Regulation 9-10-301 whenever they have undetectable fuel flow.

[S8 will be deleted from this part when the source is removed from service pursuant to Application 13424.]

2. For heaters S43 (Unit 200, B-202), S351 (Unit 267, B-601/602) and S371/372 (Unit 228, B-520/521), the durations of startups, shutdowns and refractory dryout periods are defined in Condition 1694, Part D.2 (S43), Part B.2 (S351) and Part C.2 (S371, S372).

3. For heaters S10 (Unit 240, B-101) and S15 through S19 (Unit 244, B-501 through B-505), the duration of startups, shutdowns and low-firing periods are defined as follows:

3)startup and shutdown periods are not to exceed 24 hours
4)low-firing periods are not to exceed 72 hours

4. For heater S13 (Unit 240, B-301), the duration of startups, shutdowns and low-firing periods are defined as follows:

1) startup and shutdown periods are not to exceed 72 hours

2) low-firing periods are not to exceed 72 hours

b. For heaters with no CEMS:

S2 (Unit 229, B-301)
S3 (Unit 230, B-201)
S4 (Unit 231, B-101)
S5 (Unit 231, B-102)
S7 (Unit 231, B-103)
S9 (Unit 240, B-2)
S11 (Unit 240, B-201)
S12 (Unit 240, B-202)
S20 (Unit 244, B-506)
S22 (Unit 248, B-606)
S29 (Unit 200, B-5)
S30 (Unit 200, B-101)
S31 (Unit 200, B-501)
S336 (Unit 231, B-104)
S337 (Unit 231, B-105)

startups, shutdowns, and out of service conditions shall each not exceed 5 days in succession at each source.

Condition 24905

S3 replacement burners startup condition

1. No later than 60 days from the first source test of S3 with the replacement burners (Callidus CRG-LN-8W) for condition 21235, the owner/operator shall submit a copy of the source test results to the District permit engineer. [Regulation 2-1-233]

Recommendation
Issue a Permit to Operate to ConocoPhillips to alter the following source:

S3 U230, B-201 Heater
Callidus "CRG-LN-8W" Burners
Maximum Firing Rate: 53 MMBTU/hr (HHV)

Modify the Title V permit with the above changes to condition 1694, inclusion of condition 24905, and the following changes to Table II – A Permitted Sources, Table IV – A.2 Source-specific Applicable Requirements, S3 – UNIT 230, B-201 HEATER, and Table VII – A.2 Applicable Limits and Compliance Monitoring Requirements, S3 – UNIT 230, B-201 HEATER.

_____
Kathleen Truesdell
Air Quality Engineer II

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
3	U230, B-201 Heater (natural gas, refinery fuel gas, naphtha)	Petro-Chem	process heater	~~62~~ 53 MMbtu/hr

Table IV – A.2
Source-specific Applicable Requirements
S3 – UNIT 230, B-201 HEATER

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]	Y	Upon replacement of burners
BAAQMD Condition 24905			
Part 1	Submittal of initial source test for replacement burners [Basis: Regulation 2-1-233]	Y	

Table VII – A.2
Applicable Limits and Compliance Monitoring Requirements
S3 – UNIT 230, B-201 HEATER

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~~A.1b	Y		~~1,488~~1,272 MMbtu/day	BAAQMD Condition 1694, Part A.5	P/D	records

APPENDIX E

NSR Application 23754

ENGINEERING EVALUATION
ConocoPhillips, San Francisco Refinery
Application #23754- Plant #16

I. BACKGROUND

ConocoPhillips has applied for a change of conditions for the following equipment:

S-448 Internal Floating Roof Tank, 10,206K gallon capacity (Tank 1007)

ConocoPhillips submitted Application 22023 on May 21, 2010, for an operating scenario that would allow the tank to be exempt from Regulation 8, Rule 5, Storage of Organic Liquids, and NSPS, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, when materials that were not subject to those standards were stored in the tank.

The District evaluated the application and issued a change in conditions on September 14, 2010. The District concluded that, because the throughput limit did not change and because less volatile materials would be stored in the tank, there was no possibility of an increase in emissions.

ConocoPhillips submitted this application to ask the District to evaluate whether the throughput limit could be lifted for exempt materials without resulting in an increase in emissions, which would be considered a modification in accordance with BAAQMD Regulation 2-1-234. Conoco submitted calculations performed with EPA's Tanks program comparing the following two scenarios:

- The emissions in 2010 when the tank held an organic material with a true vapor pressure (TVP) of 4.46 and the actual throughput.
- Hypothetical emissions assuming an exempt material with a TVP of 0.5 (the highest allowed for exempt materials) and a throughput only limited by pumping rate.

The calculations show that the emissions with the exempt material are about 31% of the emissions with non-exempt material. There will be no increase in emissions and the tank is not considered to be modified by this change. The calculations are attached in Appendix A.

ConocoPhillips requested this change because they would like to increase the throughput of diesel and their other exempt tanks do not have throughput limits.

II. EMISSION CALCULATIONS

The calculations for the “before” scenario was based on the 2010 throughput of 66,360,714 gal/yr and a TVP of 4.46. The resulting emissions were 4,712 lb VOC/yr. These are actual emissions.

The calculations for the “after” scenario was based on the maximum possible throughput of 1,073,100,000 gal/yr and a TVP of 0.5. The throughput was based on the maximum pumping rate to the tank. The resulting emissions were 1,478 lb VOC/yr. This represents the potential to emit with the exempt material.

The difference is a decrease of 3,234 lb VOC/yr.

There is no increase in emissions as a result of this application. The tank calculations can be found in Appendix A.

III. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

There will be no increase in the Plant Cumulative Increase as a result of this application.

IV. OFFSETS

There is no increase in emissions so offsets are not required per Regulation 2-2-302.

V. TOXIC SCREENING ANALYSIS

A Toxic Risk Screening Analysis is not required for this project because there is no increase in emissions.

VI. BEST AVAILABLE CONTROL TECHNOLOGY

BACT does not apply per Regulation 2-2-301 because there is no increase in emissions.

VIII. STATEMENT OF COMPLIANCE

While storing low vapor pressure materials, S-448 is exempt from Regulation 8-5 per 8-5-117 when storing low vapor pressure materials:

> **8-5-117 Limited Exemption, Low Vapor Pressure:** The provisions of this rule, except for Section 8-5-307.3, shall not apply to tanks storing organic liquids with a true vapor pressure of less than or equal to 25.8 mm Hg (0.5 psia) as determined by Sections 8-5-602 or 604.
>
> (Adopted 1/20/93; Amended 11/27/02; 10/18/06)

The owner/operator shall continue to comply with all other requirements in BAAQMD Regulation 8, Rule 5, 40 CFR 60, Subpart Kb, and 40 CFR 63, Subpart CC, as listed in the Title V permit.

The project is considered to be ministerial under the District's CEQA 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 emissions factors and therefore is not discretionary as defined by CEQA. (Permit Handbook Chapter 4)

This facility is subject to Regulation 2, Rule 6 and requires a minor revision to the Title V permit in accordance with section 2-6-404.4 and submitted Application 23726 for this purpose. The changes proposed in this application are not significant as defined by section 2-6-226 since the changes are not considered a major modification under 40 CFR Parts 51 or 52 (PSD) nor a modification under 40 CFR Parts 60 (NSPS), 63 (NESHAPs), and the change will not result in any emissions increase. The change will not be a significant change or relaxation of monitoring, reporting, or recordkeeping nor will it allow the facility to avoid an applicable requirement since the new parts of BAAQMD condition 12133 will require recordkeeping and monitoring. The change is not a case-by-case determination of any emission limit or standard or facility-specific determination or incorporation of any requirement promulgated by EPA. In accordance with section 2-6-215, this change is a minor permit revision. The changes that the District proposed to make to the Title V permit are shown in Appendix B.

This project is not located within 1,000 feet of the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

X. CONDITIONS

Condition 12133
APPLICATION 12412; SAN FRANCISCO REFINERY; PLANT 16
AMENDED BY APPLICATIONS 22023 (SEPT. 2010) AND 23726 (OCT 2011)
CONDITIONS FOR S-448 (T-1007)

1. The following total throughput shall not be exceeded in any rolling continuous 12 month period, except that the throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted:
   a. 2,190 thousand barrels.
   [Cumulative Increase]

2. S-448 shall operate with closed, gasketed covers on all tank openings except pressure relief valves and vacuum breaker valves.
[BACT]

5. Monthly records of the throughput of each material processed at this tank shall be kept in a District-approved log for at least 5 years and shall be made available to the District upon request. [Cumulative Increase]

Alternate Operating Scenario

6. S-448 is under an Alternate Operating Scenario in accordance with BAAQMD Regulation 2-6-409.7 and 40 CFR 70 and either stores material subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb or stores material exempt from Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb.
   a. The owner/operator shall keep a record in a contemporaneous log of the stored material.
   b. The owner/operator shall notify the District in accordance with section 40 CFR 60.113(a)(5) prior to storing materials in S-448 that are subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb.
   c. The owner/operator shall perform inspections required by Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb prior to storing materials in S-448 that are subject to those regulations.

[40 CFR 70.6(a)(9), BAAQMD Regulation 2-6-409.7]

Condition 20773, Tanks Exempt From Regulation 8, Rule 5

This condition applies to tanks that are exempt from Regulation 8, Rule 5, Storage of Organic Liquids, due to the exemption in Regulation 8-5-117 for storage of organic liquids with a true vapor pressure of less than or equal to 25.8 mm Hg (0.5 psia).

1. Whenever the type of organic liquid in the tank is changed, the owner/operator shall verify that the true vapor pressure at the storage temperature is less than or equal to 25.8 mm Hg (0.5 psia). The owner/operator shall use Lab Method 28 from Volume III of the District's Manual of Procedures, Determination of the Vapor Pressure of Organic Liquids from Storage Tanks. For materials listed in Table 1 of Regulation 8, Rule 5, the owner/operator may use Table 1 to determine vapor pressure, rather than Lab Method 28. If the results are above 25.8 mm Hg (0.5 psia), the owner/operator shall report non-compliance in accordance with Standard Condition I.F and shall submit an application to the District for a new permit to operate for the tank as quickly as possible. [Basis: 8-5-117 and 2-6-409.2]

2. The results of the testing shall be maintained in a District-approved log for at least five years from the date of the record, and shall be made available to District staff upon request. [Basis: 2-6-409.2]

X. RECOMMENDATION

Issue a Change of Conditions for the following equipment:

S-448 Internal Floating Roof Tank, 10,206K gallon capacity (Tank 1007)

Modify the Title V permit with the following changes (Title V Application # 23726)

Brenda Cabral
Supervising Air Quality Engineer

APPENDIX A

TANK CALCULATIONS

APPENDIX B-PROPOSED CHANGES TO TITLE V PERMIT

Table IV – BB.9B
Source-Specific Applicable Requirements
NSPS Kb Zero-Gap Internal Floating Roof Tank
but with NSPS Kb and BAAQMD 8-5 Flexibility
S448 (Tank 1007)

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
S448 will be subject to the requirements of Table IV-BB.9A when storing materials subject to NSPS Kb and BAAQMD 8-5. S448 will be subject to the requirements of Table IV-BB.9B when storing materials exempt from NSPS Kb and BAAAMD 8-5.			
BAAQMD Condition 12133			
Part 1	Throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted. [Basis: Cumulative Increase]	Y	
Part 2	Requirements for tank openings [Basis: Cumulative Increase]	Y	
Part 3	Monthly throughput records [Basis: Cumulative Increase]	Y	
Part 4	Alternate Operating Scenario	Y	
Part 4a	Log of the stored material [Basis: 40 CFR 70.6(a)(9), BAAQMD Regulation 2-6-409.7]	Y	
Part 4b	Notification requirement for refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	Y	
Part 4c	Inspection requirement prior to refilling with Reg. 8-5- or NSPS Subpart Kb – regulated material	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	

Table VII – BB.9B
Applicable Limits and Compliance Monitoring Requirements
NSPS Kb Zero-Gap Internal Floating Roof Tank
but with NSPS Kb and BAAQMD 8-5 Flexibility
S448 (Tank 1007)

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	S448 will be subject to the requirements of Table IV-BB.9A when storing materials subject to NSPS Kb and BAAQMD 8-5. S448 will be subject to the requirements of Table IV-BB.9B when storing materials exempt from NSPS Kb and BAAAMD 8-5.						
	BAAQMD Permit Conditions						
throughput	BAAQMD Condition 12133, Part 1	Y		Throughput of materials that are not subject to Regulation 8, Rule 5 and 40 CFR Part 60 Subpart Kb is not restricted ~~2,190,000 bbl/yr~~	BAAQMD Condition 12133, Part 3	P/M	records