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Administrator Stephen L. Johnson
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Fax Number: (202) 501-1450

VIA FACSIMILE AND CERTIFIED MAIL

December 23, 2008

Re: Petition for objection to proposed ConocoPhillips Company Title V Federal Operating Permit for operation of Wilmington Refinery, Facility ID: 800363, 1660 W Anaheim Street, Wilmington, CA 90744

Dear Administrator Johnson:

Enclosed is a petition requesting that the Administrator of the U.S. Environmental Protection Agency object to the proposed Title V Federal Operating Permit issued to ConocoPhillips Company for operation of the Wilmington Refinery. This petition is submitted by Environmental Integrity Project, Coalition for a Safe Environment and Communities for a Better Environment (Petitioners) pursuant to Section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2), 40 C.F.R. § 70.8(d), and South Coast Air Quality Management District (AQMD) Rule 3003(l)(1), 03-16-2001.

Thank you for your attention to this matter. If you have any questions, please call me at 512-637-9478.

Sincerely,

Layla Mansuri
ENVIRONMENTAL INTEGRITY PROJECT

On behalf of Environmental Integrity Project, Coalition for a Safe Environment and Communities for a Better Environment

cc (facsimile and certified mail):
Dr. Barry R. Wallerstein, Executive Officer, South Coast Air Quality Management District
Jay Churchill, Manager ConocoPhillips Wilmington Refinery
Wayne Nastri, U.S. Environmental Protection Agency, Region 9 Regional Administrator
Gerardo Rios, U.S. Environmental Protection Agency, Region 9 Air Permit Section Chief

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE ADMINISTRATOR

IN THE MATTER OF	)	PETITION FOR OBJECTION
Proposed Clean Air Act Title V Operating Permit Issued to ConocoPhillips Company for Operation of Wilmington Refinery	)	Facility ID: 800363

INTRODUCTION

Pursuant to Section 505(b)(2) of the Clean Air Act (CAA or Act), 42 U.S.C. § 7661d(b)(2), 40 C.F.R. § 70.8(d), and South Coast Air Quality Management District (AQMD) Rule 3003(l)(1), 03-16-2001, the Environmental Integrity Project, Coalition for a Safe Environment and Communities for a Better Environment (Petitioners) petition the Administrator of the U.S. Environmental Protection Agency (EPA) to object to the proposed Title V Federal Operating Permit (proposed permit) issued by the AQMD to ConocoPhillips Company (Applicant) for operation of the ConocoPhillips, Wilmington refinery (refinery). As required by these cited provisions, Petitioners are providing this Petition to the EPA Administrator, the AQMD, and Applicant. Petitioners are also providing this Petition to the EPA Region 9 Administrator and Air Permit Section Chief.

The ConocoPhillips, Wilmington Refinery is located in Wilmington, near Los Angeles, California. The Refinery processes intermediate crude oil products into final products such as gasoline, diesel, jet fuel and other derivatives. The processes and equipment at the refinery include catalytic cracking, isomerization, reforming, alkylation,

hydrogen production, hydrotreating, blending, storage, sulfur recovery, flares and wastewater treatment.

AQMD published the *Notice of Proposed Title V Permit and Public Consultation Meeting* for the ConocoPhillips, Wilmington Refinery on July 31, 2008. Petitioners timely submitted written comments to AQMD on September 30, 2008. Petitioners raised all issues in this petition in their comments to AQMD. *See,* Attachment A (Petitioners' September 30, 2008 Comments to AQMD). EPA received the proposed Title V permit from AQMD on August 1, 2008. EPA extended its 45-day review period based on AQMD Rule 3003(k)(1), which allows EPA to take up to 90 days to review AQMD submissions. The 90 day EPA review period ended on October 30, 2008. This Petition is timely filed within 60 days following the end of EPA's review period. 42 U.S.C. § 7661d(b)(2); AQMD Rule 3003(l)(1), 03-16-2001.

Petitioner Environmental Integrity Project (EIP) is a national nonprofit organization dedicated to advocating for more effective enforcement of environmental laws. EIP's ability to carry out its mission of improving the enforcement of environmental laws would be adversely impacted if EPA fails to object to this permit.

Petitioner Coalition For A Safe Environment (the Coalition) was established in 2001 for the purpose of advocating, on behalf of its members for environmental justice, public health and public safety involved in international trade ports, goods movement, transportation, and energy and petroleum industry issues. The Coalition has members in over 25 cities in California and in Baja California. The Coalition and its members have an interest in assuring that the permit contains all federally applicable requirements and monitoring adequate to assure compliance with those requirements. Members of the

Coalition will be adversely impacted by the inadequate emission monitoring and testing in the current version of the permit as well as EPA's failure to object to this permit.

Petitioner Communities for a Better Environment (CBE) is a non-profit environmental health and justice advocacy organization with offices in Oakland and Huntington Park, California. CBE and its members work to secure clean air and reduce pollutant emissions in and near its members' communities. CBE strives to accomplish this by facilitating public participation in administrative decision-making processes, and by ensuring implementation of laws that protect public health and the environment, like the Clean Air Act. CBE has approximately 20,000 members, many of whom live, work, recreate and breathe the air in parts of the Los Angeles metropolitan areas that host disproportionate numbers of pollution sources, including refineries. The refinery is located in the community of Wilmington, directly adjacent to residential neighborhoods, a community college, a recreational park, and other sensitive receptors. Hundreds of CBE members live, work, and attend school in Wilmington. Wilmington residents are primarily low-income people of color and many speak little or no English. This community already bears a disproportionate share of environmental hazards. Residents live surrounded by pollution sources such as Conoco's refinery and three other refineries, the Ports of Los Angeles and Long Beach, major freeways, and numerous industrial facilities. Pollution from these sources combines to create cumulative adverse health and environmental impacts. SCAQMD's own air quality study shows that the residents of the San Pedro-Wilmington area suffer from some of the highest cancer risks in the South Coast from breathing polluted air. The unacceptably high cancer risk for Wilmington residents is 1,537 per million. CBE's interests in environmental justice in the Los

Angeles area has been, and continues to be, threatened by emissions from the refinery and failure to issue a Title V permit for the refinery that complies with state and federal law.

EPA must object to the proposed permit because it is not in compliance with the CAA. "If any [Title V] permit contains provisions that are determined by the Administrator as not in compliance with the applicable requirements of this chapter ... the Administrator shall ... object to its issuance." CAA § 505(b)(1); 42 U.S.C. § 7661d(b)(1) (emphasis added). EPA "does not have discretion whether to object to draft permits once noncompliance has been demonstrated." *See, N.Y. Pub. Interest Group v. Whitman*, 321 F.3d 316, 334 (2nd Cir. 2003) (holding that EPA is required to object to Title V permits once petitioner has demonstrated that permits do not comply with the Clean Air Act). Failures of the proposed permit to comply with the CAA, include, but are not limited to the following: failure to include monitoring sufficient to assure compliance with the emissions limitations in the permit, failure to include compliance assurance monitoring (CAM) requirements, and failure to include all federally applicable requirements, including requirements of the ConocoPhillips Consent Decree and maximum achievable control technology (MACT) limits for certain emissions of hazardous air pollutants. Each of these failures is discussed in detail in the September 30, 2008, comments and below. Finally, broad use of incorporation by reference for emissions limitations and monitoring requirements renders the permit practically unenforceable.

SPECIFIC OBJECTIONS

I. The proposed permit fails to include monitoring sufficient to assure compliance with the permit terms.

The CAA requires that "each permit issued under [Title V] shall set forth ... monitoring ...requirements sufficient to assure compliance with the permit terms and conditions" 42 U.S.C. § 7661c(c). On August 19, 2008, the D.C. Circuit Court of Appeals vacated an EPA rule that would have prohibited AQMD and other state and local authorities from adding monitoring provisions to Title V permits if needed to "assure compliance." *See, Sierra Club, et al., v. EPA*, 536 F.3d 673 (D.C. Cir. 2008). The Court emphasized the statutory duty to include adequate monitoring:

> Title V is a complex statute with a clear objective: it enlists EPA and state and local environmental authorities in a common effort to create a permit program for most stationary sources of air pollution. Fundamental to this scheme is the mandate that "[e]ach permit . . . shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661(c)c. By its terms, this mandate means that a monitoring requirement insufficient "to assure compliance" with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards." *Id.* at 677.

The opinion also makes clear that the mere existence of "periodic monitoring" requirements may not be sufficient. *Id.* at 676, 677. For example, the Court questioned whether annual testing could assure compliance with a daily emission limit. *Id.* at 675. In other words, the frequency of monitoring should bear some relationship to the averaging time used to measure compliance.

Compliance with an emission limit that has to be met on a daily basis should be measured every day, not once a year. Where continuous monitoring is not available, the proposed permit should require alternative methods that more closely match monitoring

frequency to the averaging time for compliance. The chart found in Attachment A provides examples of monitoring that is too infrequent to assure compliance with limits that must be met on a short-term basis. Several of these examples are explained further in the discussion below. The Administrator should object to the proposed permit because its monitoring provisions do not ensure compliance with the permit terms and conditions.

A. The proposed permit must require continuous monitoring of particulate matter (PM) emissions.

Monitoring provisions for PM emissions in the proposed permit fail to assure compliance with the PM limits. Section D of the proposed permit limits PM emissions from the fluid catalytic cracking unit (FCCU) to 0.5 lbs/1000 lbs of coke burned averaged over 3 hours,[1] and requires an annual stack test to determine compliance with that limit.[2] Additionally, Section D limits PM emissions from Turbine D828 and Boiler D829 to 11 lbs/hr[3] and no more than a combined total of 269 lbs from both units in any single day.[4] However, a performance test is only required once every five years to assure compliance with the hourly and daily emission limits.[5] Relying on annual stack tests – much less one that occurs only once in five years – is clearly inadequate to assure compliance with emission limits that must be met on an hourly or daily basis.[6] Operating conditions at a

[1] S. Coast Air Quality Mgmt. Dist., Cal. Envtl. Prot. Agency, ConocoPhillips Wilmington Refinery Draft Operating Permit (Facility ID 800363), Section D, Page 208 (July 31, 2008).

[2] *Id.* at 247.

[3] *Id.* at 208.

[4] *Id.* at 205.

[5] S. Coast Air Quality Mgmt. Dist., Periodic Monitoring Guidelines for Title V Facilities, Page 30 (November 1997).

[6] While the permit appears to require annual testing to *measure* PM emissions from the turbine and boiler, Condition D28.8, it also specifies that tests for determining *compliance* need only be conducted once every

refinery are far too variable to rely on such infrequent testing to verify compliance with short term standards. As the D.C. Circuit's opinion makes plain, the Administrator has not only the authority, but the duty to correct this deficiency since, "... a monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards." *Sierra Club* at 677; 42 U.S.C. § 7661(c)c.

The FCCU is subject to an opacity limit of thirty percent (30%). The EPA determined in its approval of Alabama's *Proposed Approval of Revisions to the Visible Emissions Rule* within the Alabama State Implementation Plan (SIP), that "a reliable and direct correlation between opacity and PM emissions cannot be established without significant site-specific simultaneous testing of both PM emissions and opacity, particularly for short-term periods (e.g., 24 hours or less)." 72 Fed. Reg. 18429 (April 12, 2007); 73 Fed. Reg. 60957, 60959 (October 15, 2008) (Final Rule). EPA defines opacity "as the degree to which emissions reduce the transmission of light and obscure the view of an object in the background." Id. In the past PM has been indirectly correlated with opacity given the fact that particulates of different size and shape can alter the way light is transmitted. However, EPA now clearly rejects any direct correlation.

Thus, the Applicant's opacity limit of 30% does not indicate that PM emissions from the refinery are in compliance with the limits reflected in the permit. Nor do stack tests conducted annually or once every five years reliably assure compliance with an emission limit that must be met on an hourly or daily basis. The Administrator should

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five years, AQMD Rule 476, 10-8-1976, citing the periodic monitor rule. Even annual testing is inadequate.

object to this permit as proposed and require the continuous emission monitoring system (PM CEMS) to measure compliance with the FCCU PM limit on a continuous basis.

B. The proposed permit must require continuous carbon monoxide (CO) emissions testing.

Similarly, the permit includes numerous examples of short-term emission limitations for CO. For example, Section D of the permit limits CO emissions from the FCCU to 500ppm/hr. 40 CFR Part 60 Subpart J, 6-24-2008. The permit states that "(t)he operator shall determine compliance with the CO emission limit(s) by either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method." *Id.* Once again, measuring compliance with hourly limits once every five years or annually will not meet the requirement of Title V.[7]

Section D limits emissions for the Turbine D828 and Boiler D829 to less than 2,000 ppmv CO, dry basis, averaged over 15 minutes duration,[8] but compliance is monitored only once every five years.[9] This frequency of monitoring does not assure compliance with the CO permit terms and conditions. Unless it can be shown to be technically impossible, the permit should require that analyzers are deployed on a continuous (or at least daily) basis, or identify an alternate method that can be used to measure emissions consistent with the averaging time specified in the permit.

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[7] *Sierra Club* at 675 ; 42 U.S.C. § 7661c(c). The permit appears to require annual testing to measure CO emissions, condition D28.8; however, the permit also seems to allow the Applicant to rely on testing only once every five years to determine compliance, D328.1.

[8] S. Coast Air Quality Mgmt. Dist., Cal. Envtl. Prot. Agency, ConocoPhillips Wilmington Refinery Draft Operating Permit (Facility ID 800363) Section D, Page 143, 144 (July31, 2008).

[9] S. Coast Air Quality Mgmt. Dist., Periodic Monitoring Guidelines for Title V Facilities, Page 8 (November 1997).

C. Approved alternative monitoring for heaters and boilers must be specified in the permit.

The permit appropriately requires continuous monitoring of nitrogen oxide and sulfur dioxide from the FCCU, heaters, boilers, and other large units, but allows alternative monitoring if approved by AQMD. Where such alternative monitoring has been approved, the method should be specified in the permit and be rigorous enough to assure compliance with the applicable emission limit.

D. The proposed permit must require Compliance Assurance Monitoring (CAM).

CAM requirements are important because they assure that pollution control equipment is in good working order, which means that emission limits are more likely to be met. CAM monitoring applies to refineries whose permit application is submitted after April 20, 1998. 40 C.F.R. § 64 et seq.; 62 Fed. Reg. 54900, 54927 (October 22, 1997).

The refinery has been in continuous operation since 1919 and has applied for numerous permits, including permit revisions, since the CAM regulations were established in 1997. Petitioners understand that revisions to the pending application came in well past 1998. EPA should object to the proposed permit because it does not require the Applicant to use CAM monitoring.

II. The proposed permit should include emission limits and monitoring requirements for hazardous air pollutants (HAPs) for each of the industrial boilers and process heaters at the facility.

Section 112 of the Clean Air Act (CAA) requires owners/operators of major sources with industrial boilers and process heaters to submit permit applications complying with the National Emission Standards for Hazardous Air Pollutants

(NESHAPs), which reflect the maximum degree of HAP emissions reductions achievable (commonly referred to as the "MACT standards"). 42 U.S.C. § 7412(j)(2)(5); 7412(d)(2).

The refinery is a major source of HAPs under the Clean Air Act because it emits more than "10 tons per year of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." 42 U.S.C. § 7412(a)(1); 40 C.F.R. 63.761. In addition, emission units 4, 6, 7 and 8 are either an industrial boiler or process heater subject to the NESHAPs. 40 C.F.R. §§ 63.7485; 63.7575; 63.761.

The CAA requires the U.S. Environmental Protection Agency (EPA) to promulgate NESHAPs for industrial boilers and process heaters by November 15, 2000. 42 U.S.C. § 7412(e)(1)(E); 58 Fed. Reg. 63,941, 63, 952 (Dec. 3, 1993) (*see* 40 C.F.R. Part 63, Subpart DDDDD). However, Subpart DDDDD (EPA's "boilers rule") was vacated by the D.C. Circuit Court of Appeals in *Natural Resources Defense Council v. EPA*, 489 F.3d 1250 (D.C. Cir. 2007). Thus, no NESHAP for this source subcategory was validly promulgated or currently exists.

If EPA fails to promulgate a NESHAP for a category or subcategory of sources, then the so-called "MACT Hammer" provisions of section 112(j) of the CAA apply, placing the burden on the owner or operator of an affected source to submit an application containing emission limitations equivalent to the limitation that would have been set had the standard been properly promulgated. 42 U.S.C. § 7412(j)(2). That is, the permit application must contain emission limits and standards for HAPs for industrial boilers and process heaters, determined by the permitting authority, "on a case-by-case" basis, to be equivalent to the limitation that would apply to such source if an emission standard had been promulgated . . . ." Id. § 7412(j)(5).

The MACT permit application must be submitted no later than 18 months after the date on which EPA should have promulgated the standard. Id. § 7412(j)(2). That deadline passed on May 15, 2002. Therefore, the Applicant must submit a permit application that includes appropriate MACT standards for each industrial boiler and process heater. The draft Title V permit makes no reference to hazardous air pollutants (HAPs) in connection with Boiler Nos. 4, 6, 7 and 8.[10] The Administrator should object to the proposed permit until SCAQMD includes the MACT standards—as well as monitoring requirement sufficient to assure compliance with these standards— in the Title V permit.

III. The proposed permit should require remote sensing technology to determine actual emissions of volatile organic compounds (VOCs).

The permit limits VOC leak rates for the diesel hydrotreater unit 90 system to 500 ppmv.[11] AQMD regulates leaks that emit more than 500 ppmv but less than/equal to 1,000 ppmv by setting a timeline for repairing the leak. Best Available Control Technology (BACT) requirements apply to VOC service fugitive components to control leaks of VOCs into the atmosphere. However, the infrequent measurement of VOC leaks may not be adequate to assure compliance with the emission standard. For large units, e.g. tanks, compliance with emission limits is based on emission factors that have been shown to be inaccurate.[12]

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[10] *Id.* at Section D, Pages 145-147.

[11] S. Coast Air Quality Mgmt. Dist., Cal. Envtl. Prot. Agency, ConocoPhillips Wilmington Refinery Draft Operating Permit (Facility ID 800363) Section D, Pages 18, 200 (July31, 2008).

[12] Environmental Integrity Project (EIP), *Re: Request for Correction of Information Under the Data Quality Act and EPA's Information Quality Guidelines*, (5-6), (2008), *available at* http://www.environmentalintegrity.org/pub521.cfm.

Differential Absorption LIDAR ("DIAL") technology uses lasers to track emissions from refineries, including fugitive emissions from tanks and hard to measure emissions from flares.[13] Two different studies of refineries in Texas and the Canadian province of Alberta have confirmed that emissions from cokers, tanks, flares and other sources are substantially greater than predicted by EPA emission factors. Petitioners recommend that AQMD take advantage of this technology to measure actual emissions from such units, and make appropriate adjustments to the methods that are used to estimate emissions. AQMD should also require periodic use of infrared cameras to pinpoint major sources of leaks from process units.

IV. The proposed permit must include all federally-applicable requirements, including the ConocoPhillips consent decree.

"To assure compliance with all applicable regulations, [AQMD] may impose written conditions on any permit."[14] In addition, AQMD mandates that the Applicant's permit include a variety of compliance requirements such as compliance certification, monitoring, reporting, testing and recordkeeping. AQMD Rule 3004(a)(10), 12-12-1997. AQMD Rule 3004 applies directly to Title V permits and mandates that permits include a provision stating that any non-compliance with regulatory requirements and facility permit conditions is a violation of the CAA. AQMD Rule 3004(a)(7), 12-12-1997.

Importantly, Rule 3004(a)(10)(C) covers facilities that are not in full regulatory compliance at the time that a Title V permit is issued. This section requires the permit to "include a compliance schedule of remedial measures, including an enforceable sequence

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[13] *Id.* at 6; Clearstone Eng'g Ltd., *A Review of Experiences Using DIAL Technology to Quantify Atmospheric Emissions at Petroleum Facilities 2* (Sept. 6, 2006).

[14] AQMD Rule 204, 10-8-1993; *See also* 40 C.F.R. 52.220(c)(217)(i)(C)(1), incorporating AQMD Rule 204 by reference into the California State Implementation Plan.

of actions with milestones, to be taken by the owner or operator to achieve compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any: i) Judicial consent decree or administrative order to which the source is subject..." AQMD Rule 3004(a)(10)(C)(i), 12-12-1997.

The Applicant is currently subject to the terms of the ConocoPhillips consent decree from the U.S. District Court (Western District of Texas) that was entered into on January 27, 2005.[15] In addition, the Applicant is subject to the AQMD Hearing Board Order for Case No. 4900-79, regarding compliance with District Rule 1118.[16] Thus, according to Rule 3004, AQMD must incorporate the requirements of the consent decree into the Applicant's Title V permit.

V. The proposed permit mischaracterizes some rules as non-federally enforceable.

In preparing its Title V permit application, the Applicant must determine which requirements are included in the State Implementation Plan (SIP). This determination is crucial to ensuring compliance with the CAA, particularly for larger facilities. State regulations that are part of the SIP are federally enforceable, meaning that their requirements operate as both state and federal law. The Table on pages 9-12 in Section K of the proposed permit identifies applicable rules as federally or non-federally enforceable, depending on whether each rule is SIP approved, not SIP approved, or EPA's approval of the rule as part of the SIP is pending.

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[15] S. Coast Air Quality Mgmt. Dist., Cal. Envtl. Prot. Agency, ConocoPhillips Wilmington Refinery Draft Operating Permit (Facility ID 800363) Statement of Basis of Permit, Page 24. (July31, 2008).

[16] *Id.*

The draft permit acknowledges that EPA has approved many of the District's rules and entered them into the SIP. 40 CFR Part 52, Subpart F, 11-24-1987. In cases where the District has adopted new, more stringent rules that have not yet been approved as part of the SIP, EPA requires the Title V permit to refer to both the SIP-approved and the non SIP-approved version of the rule.[17] Thus, some of the rules in Table K are non-federally enforceable pending EPA approval as part of the SIP. While AQMD awaits SIP-approval of the more recent amended rules, facilities are required to comply with both the SIP-approved rule and the most recent version of the same applicable rule.[18]

While Table K, for the most part, correctly describes the rules' status (SIP approved or approval pending), in one instance, AQMD incorrectly labels a federally enforceable rule as non-federally enforceable. EPA included Rule 431.2 on its list of SIP approved rules effective May 4, 1990 and it is therefore federally enforceable. 64 FR 30396, 6-8-1999. Table K of the permit should be amended to reflect that Rule 431.2 is federally enforceable.

VI. The proposed permit should clearly identify emissions limits.

Section D of the permit currently contains emissions limits that apply to the devices within the refinery. While Petitioners appreciate the effort to cross-reference rule sections throughout Section D and the Code of Federal Regulations, for future permits, AQMD should specify the emission limits and monitoring methods directly into the charts provided in Section D. Specifically, these limits should be listed in the "Emissions and Requirements" column for the public to more easily connect emissions limits with

[17] Compliance with Outdated Rules in the State Implementation Plan on South Coast AQMD website updated March 29, 2006 see: http://www.aqmd.gov/titlev/requirements.html.
[18] *Id.*

the equipment releasing the emissions. This would be particularly helpful for high emission devices. Additionally, it appears that not all the rules in Section D's "Emissions and Requirements" column are up to date. For example, D42 is required to meet "Rule 1146, 11-17-2000," yet this was amended on 01-07-05 and 05-05-06.

CONCLUSION

The proposed ConocoPhillips Wilmington Refinery Title V permit does not comply with the Clean Air Act. The permit fails to require monitoring sufficient to assure compliance with the terms and conditions of the permit and fails to include all federally-applicable requirements. Title V aims to improve accountability and enforcement by "clarify[ing], in a single document, which requirements apply to a source." 57 Fed. Reg. 32250, 32251 (July 21, 1992). The proposed permit fails to comply with the Act and to reach this aim.

For the foregoing reasons, Petitioners respectfully request that the Administrator timely object to the proposed permit and require the South Coast Air Quality Management District to revise the permit in accordance with the Act.

Respectfully submitted,

ENVIRONMENTAL INTEGRITY PROJECT
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(512) 637-9478 (phone)
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By: _____
Layla Mansuri
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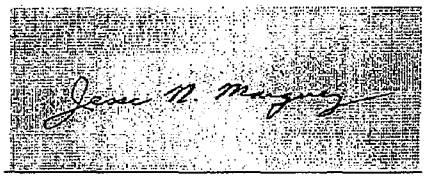

By: _____
Jesse N. Marquez, Executive Director

COMMUNITIES FOR A BETTER ENVIRONMENT
1440 Broadway, Suite 701
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By: __/s/_____
Shana Lazerow, Staff Attorney
Email: slazerow@cbecal.org

DATED: December 23, 2008

CERTIFICATE OF SERVICE

I declare under penalty of perjury under the laws of the United States that I have provided copies of the foregoing Petition to persons or entities below on December 23, 2008 as specified:

VIA FACSIMILE AND CERTIFIED MAIL
Administrator Stephen L. Johnson
Administrator
U.S. Environmental Protection Agency
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VIA FACSIMILE AND CERTIFIED MAIL
U.S. Environmental Protection Agency
Attn: Air Permit Section Chief
Region 9
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Fax Number: 415-947-3579

Layla Mansuri

Attachment A

COMMENTS ON THE PROPOSED CONOCOPHILLIPS, WILMINGTON REFINERY PERMIT FOR OPERATION OF WILMINGTON REFINERY (FACILITY NO. 800363)

September 30, 2008

September 30, 2008

VIA CERTIFIED MAIL
Mr. Jay Chen
South Coast Air Quality Management District (SCAQMD)
Engineering and Compliance
21865 Copley Dr.
Diamond Bar, CA 91765-4182

RE: Comments on the draft operating permit for the ConocoPhillips Wilmington Refinery, Facility ID: 800363, 1660 W Anaheim St., Wilmington, CA 90744

Dear Mr. Chen,

Environmental Integrity Project (EIP), Communities for a Better Environment (CBE), People's Community Organization for Reform and Empowerment (PeoplesCORE), and Coalition for a Safe Environment (CFASE) (collectively, Commenters) appreciate the opportunity to comment on the draft operating permit for the ConocoPhillips Wilmington Refinery. EIP is a national non-profit organization that advocates for more effective enforcement of environmental law. CBE, PeoplesCORE and Coalition for a Safe Environment are non-profit membership environmental research and advocacy organizations with members in the immediate vicinity of, and directly affected by, the ConocoPhillips Wilmington Refinery.

Communities in Wilmington are particularly vulnerable to air pollution.

The Refinery is located in the community of Wilmington, directly adjacent to residential neighborhoods, a community college, a recreational park, and other sensitive receptors. Hundreds of CBE members live, work, and attend school in Wilmington. Wilmington residents are primarily low-income people of color and many speak little or no English. This community already bears a disproportionate share of environmental hazards. Residents live surrounded by pollution sources such as Conoco's refinery and three other refineries, the Ports of Los Angeles and Long Beach, major freeways, and numerous industrial facilities. Pollution from these sources combines to create cumulative adverse health and environmental impacts. SCAQMD's own air quality study shows that the residents of the San Pedro-Wilmington area suffer from some of the highest cancer risks in the South Coast from breathing polluted air. The unacceptably high cancer risk for Wilmington residents is 1,537 per million.

The D.C. Circuit Court of Appeals recently confirmed that Title V permits must include monitoring sufficient to assure compliance.

As SCAQMD is aware, Title V permits must include monitoring requirements sufficient to assure compliance with applicable emission limits and standards.[1] On August 19, 2008, the D.C. Circuit Court of Appeals struck down a USEPA rule that would have prohibited SCAQMD and other state and local authorities from adding monitoring provisions to Title V permits if needed to "assure compliance."[2] The opinion instead emphasized the statutory duty to include adequate monitoring:

> "By its terms, this mandate means that a monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards."[3]

The opinion also makes clear that the mere existence of "periodic monitoring" requirements may not be sufficient.[4] Finally, the court's decision removed any doubt about SCAQMD's authority to supplement monitoring in Title V permits when needed to "assure compliance" with emission limits.

SCAQMD should review the Title V monitoring provisions to ensure that each provision is in compliance with the Clean Air Act and the court's recent opinion. Wherever possible, the permit should require continuous emission monitoring that measures compliance based on the averaging period in the underlying standard. For example, compliance with an emission limit that has to be met on a daily basis should be measured every day, not once a year. Where continuous monitoring is not available, the permit should require alternative methods that more closely match monitoring frequency to the averaging time for compliance.

Attachment A provides examples of monitoring methods that do not appear to meet the Title V standard, because testing is too infrequent to assure compliance with limits that must be met on a short-term basis. Several of these examples are explained further in the discussion below.

SCAQMD must require continuous monitoring of particulate matter (PM) from the ConocoPhilips Wilmington Refinery, particularly from the fluid catalytic cracking units (FCCUs) and Boilers.

Section D of the Title V permit limits PM emissions from the FCCU to 0.5 lbs/1000 lbs of coke burned averaged over 3 hours,[5] and Section D requires an annual stack test to determine compliance with that limit.[6] Additionally, Section D of the Title V permit limits PM emissions from Turbine D828 and Boiler D829 to 11 lbs/hr,[7] and no more than a combined total of 269 lbs from both units in any single day.[8] To monitor emissions at the Turbine Device and Boiler,

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[1] 42 U.S.C.A. §7661c(c).
[2] *Sierra Club, et al., v. EPA*, No. 04-1243, slip op., (D. C. Cir., August 19, 2008).
[3] Id. at 9.
[4] Id. at 6.
[5] Section D at 208.
[6] Id. at 247.
[7] Id. at 208.
[8] Id. at 205.

Section D requires a performance test once every 5 years at the exhaust stack for PM.[9] Relying on annual stack tests – much less one that occurs only once in five years – is clearly inadequate to assure compliance with emission limits that must be met on an hourly or daily basis.[10] Operating conditions at a refinery are far too variable to rely on such infrequent testing to verify compliance with short term standards. As the DC Circuit's opinion makes plain, SCAQMD has not only the authority, but the duty to correct this deficiency since, "... a monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards."[11]

While the FCCU is subject to an opacity limit of 30%, the USEPA has determined in its proposed approval of Alabama's Revisions to the Visible Emissions Rule within the Alabama State Implementation Plan (SIP), that "a reliable and direct correlation between opacity and PM emissions cannot be established without significant site-specific simultaneous testing of both PM emissions and opacity, particularly for short-term periods (e.g., 24 hours or less)."[12]

Thus, the ConocoPhilips Wilmington Refinery's opacity limit of 30% does not indicate that PM emissions from the refinery are in compliance with the limits reflected in the permit. Nor do stack tests conducted annually or once every five years reliably assure compliance with an emission limit that must be met on an hourly or daily basis. The ConocoPhillips Wilmington Refinery should be required to install a PM CEMS (continuous emissions monitoring systems) to measure compliance with the FCCU PM limit on a continuous basis. In lieu of infrequent stack testing, the permit should require PM CEMS or a more reliable method of measuring PM emissions from large turbines and boilers.

SCAQMD must continually test carbon monoxide (CO) emissions with process analyzers.

Similarly, the permit includes numerous examples of short-term emission limitations that need to be met for CO. For example, Section D of the permit limits CO emissions from the FCCU to 500ppm/hr.[13] To ensure compliance with this limit, it states that "(t)he operator shall determine compliance with the CO emission limit(s) by either: (a) conducting a source test at least once every five years using SCAQMD Method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and SCAQMD-approved test method."[14] For the same reason discussed above, measuring compliance with hourly limits once every five years or annually will not meet the requirement of 40 C.F.R Section 70.6(c)(1) of the Clean Air Act. [15]

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[9] South Coast Air Quality Management District, Periodic Monitoring Guidelines for Title V Facilities 30, 1997.

[10] While the permit appears to require annual testing to *measure* PM emissions from the turbine and boiler, Condition D28.8, it also specifies that tests for determining *compliance* need only be conducted once every five years, AQMD Rule 476, 10-8-1976, citing the periodic monitoring rule. As noted above, even annual testing is inadequate.

[11] Section D at 9.

[12] 40 CFR Part 52 at 3 *available at* http://www.epa.gov/EPA-AIR/2007/April/Day-12/a6948.htm.

[13] 40 CFR Part 60 Subpart J, 6-24-2008.

[14] Id.

[15] Slip op. at 5 and 15; 42 U.S.C. §7661c(c). Again, while the permit appears to require annual testing to measure CO emissions, condition D28.8, the permit appears to allow Conoco Phillips to rely on testing only once every five years to determine compliance, D328.1. As noted above, even annual testing is inadequate.

Section D limits emissions for the Turbine D828 and Boiler D829 to less than 2,000 ppmv CO, dry basis, averaged over 15 minutes duration,[16] but compliance is monitored only once every five years.[17] Once again, this frequency of monitoring does not assure compliance and the United States Court of Appeals for the D.C. Circuit has held that agencies like SCAQMD have the authority to require compliance through additional monitoring.[18] We recommend that the SCAQMD deploy analyzers on a continuous (or at least a daily) basis to measure short-term CO emissions, or identify an alternate method that could be used to measure emissions consistent with the averaging time specified in the permit.

Approved alternative monitoring for heaters and boilers should be specified in the permit.

SCAQMD appropriately requires continuous monitoring of nitrogen oxide and sulfur dioxide from the FCCU, heaters, boilers, and other large units, but allows alternative monitoring if approved by SCAQMD. Where such alternative monitoring has been approved, the method should be specified in the permit and be rigorous enough to assure compliance with the applicable emission limit.

SCAQMD must require compliance assurance monitoring (CAM) for the ConocoPhillips Wilmington Refinery.

CAM monitoring requirements are important, because they assure that pollution control equipment is in good working order, which means that emission limits are more likely to be met. CAM monitoring applies to refineries whose applications are submitted after April 20, 1998.[19] The ConocoPhillips Wilmington Refinery's application was originally submitted on February 5, 1998.[20] If revisions to the application have been made to the permit in the ten years since AQMD originally received the application, CAM requirements are applicable and should be included in the Title V permit.

SCAQMD must require the ConocoPhillips Wilmington Refinery to submit an application to reduce toxic emissions from its boilers.

Four large boilers are listed in the Steam Generation process of the ConocoPhillips Wilmington Refinery Permit in the following order: Boiler, No.4 (142 MMBU/HR); Boiler, No. 8 (304 MMBtu/HR); Boiler, No.7 (179 MMBTU/HR); and Boiler, No.6 (250 MMBTU/HR).[21]

The draft Title V permit makes no reference to hazardous air pollutants (HAPs) in connection with Boiler Nos. 4, 6, 7 and 8. SCAQMD should determine if the industrial boilers are major sources of HAPs, and if so, whether they are subject to the so-called "MACT" Hammer provisions. The D.C. Circuit Court of Appeals struck down the EPA's attempt to set the required

[16] Section D at 143, 144.
[17] South Coast Air Quality Management District, Periodic Monitoring Guidelines for Title V Facilities 8, 1997.
[18] *Slip* op. at 15.
[19] EPA, *Frequently Asked Questions (FAQs) Concerning the Compliance Assurance Monitoring (CAM) Rule*, (2004), *available at* http://www.epa.gov/ttn/emc/cam.html; SCAQMD website, http://www.SCAQMD.gov/titlev/CAM.html.
[20] Statement of Basis of Permit at 1.
[21] Section D at 145-147.

national emission standard for hazardous air pollutants ("NESHAP") limits for industrial boilers.[22] Because the original deadline for establishing such standards had long since expired, the "MACT Hammer" provisions of Clean Air Act section 112(j) now apply. Thus, if Boiler Nos. 4, 6, 7 and 8 are major sources of HAPs, ConocoPhillips is required to submit an application that proposes HAP limits for the boilers based on maximum achievable control technology (MACT).

Title V permits must include all applicable requirements and, at a minimum, this Title V permit should reflect the obligation of ConocoPhillips to submit applications required under 112(j) and establish a schedule for determining MACT limits for industrial boilers

SCAQMD should deploy remote sensing technology to determine actual emissions of volatile organic compounds (VOCs) emitted from the ConocoPhillips Wilmington Refinery.

Starting on Page 150 of the permit, SCAQMD limits VOC leak rates to 500 ppmv. SCAQMD regulates leaks that emit more than 500 ppmv but less than/equal to 1,000 ppmv by setting a timeline for repairing the leak. Best Available Control Technology (BACT) requirements apply to VOC service fugitive components to control leaks of VOCs into the atmosphere. However, the infrequent measurement of VOC leaks may not be adequate to assure compliance with the emission standard. For large units, e.g. tanks, compliance with emission limits is based on emission factors that have been shown to be inaccurate.[23]

Differential Absorption LIDAR ("DIAL") technology uses lasers to track emissions from refineries, including fugitive emissions from tanks and hard to measure emissions from flares.[24] Two different studies of refineries in Texas and the Canadian province of Alberta have confirmed that emissions from cokers, tanks, flares and other sources are substantially greater than predicted by USEPA emission factors. Commenters recommend that SCAQMD take advantage of this technology to measure actual emissions from such units, and make appropriate adjustments to the methods that are used to estimate emissions. SCAQMD should also require periodic use of infrared cameras to pinpoint major sources of leaks from process units.

SCAQMD must include the requirements of the Valero Consent Decree in the ConocoPhillips Wilmington Refinery operating permit.

SCAQMD Rule 3004 requires that Title V permits include all federally applicable requirements, as well as provisions to address any outstanding violations of the Clean Air Act at the time the permit is issued.[25] More specifically, Rule 3004(a)(10)(C) requires the permit to, "include a compliance schedule of remedial measures, including an enforceable sequence of actions with milestones, to be taken by the owner or operator to achieve compliance. This compliance

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[22] 58 Fed. Reg. 63941, 63952.

[23] Environmental Integrity Project (EIP), *Re: Request for Correction of Information Under the Data Quality Act and EPA's Information Quality Guidelines*, (5-6), (2008), *available at* http://www.environmentalintegrity.org/pub521.cfm.

[24] Id. at 6; Clearstone Eng'g Ltd., *A Review of Experiences Using DIAL Technology to Quantify Atmospheric Emissions at Petroleum Facilities 2* (Sept. 6, 2006).

[25] South Coast Air Quality Management District Rule 3004(a) (Found at http://www.arb.ca.gov/DRDB/SC/CURHTML/R3004.HTM).

schedule shall resemble and be at least as stringent as that contained in any: i) Judicial consent decree or administrative order to which the source is subject..."[26]

The ConocoPhillips Wilmington Refinery is currently subject to the terms of the Valero consent decree from the U.S. District Court (Western District of Texas) that was decided on January 27, 2005.[27] In addition, the ConocoPhillips Wilmington Refinery is subject to the SCAQMD Hearing Board Order for Case No. 4900-79, regarding compliance with District Rule 1118.[28] SCAQMD must revise the draft permit to include all federally applicable requirements, including those from the January 27, 2005 consent decree, which includes a schedule for resolving alleged violations of the Clean Air Act.

The proposed permit mischaracterizes some rules as non-federally enforceable.

In preparing its Title V permit application, Conoco must determine which requirements are part of the State Implementation Plan (SIP). This determination is crucial to ensuring compliance with the CAA, particularly for larger facilities. State regulations that are part of the SIP are federally enforceable, meaning that their requirements operate as both state and federal law. The Table in Section K identifies applicable rules as federally or non-federally enforceable, depending on whether each rule is SIP approved, not SIP approved, or EPA's approval of the rule as part of the SIP is pending.

The draft permit acknowledges that EPA has approved many of the District's rules and entered them into the SIP [40 CFR Part 52, Subpart F]. In cases where the District has adopted new, more stringent rules that have not yet been approved as part of the SIP, EPA requires the Title V permit to refer to both the SIP-approved and the non SIP-approved version of the rule.[29] Thus, some of the rules in Table K are non-federally enforceable pending EPA approval as part of the SIP. While SCAQMD awaits SIP-approval of the more recent amended rules, facilities are required to comply with both the SIP-approved rule and the most recent version of the same applicable rule.[30]

While Table K, for the most part, correctly describes the rules' status (SIP approved or approval pending), in one instance, SCAQMD incorrectly labels a federally enforceable rule as non-federally enforceable. EPA included Rule 431.2 on its list of SIP approved rules effective May 4, 1990 and it is therefore federally enforceable.[31] Table K of the permit should be amended to reflect that Rule 431.2 is federally enforceable.

SCAQMD should re-organize pending permits to clearly identify emissions limits.

Section D of the permit currently contains emissions limits that apply to the devices within the refinery. While EIP appreciates the effort to cross-reference rule sections throughout Section D

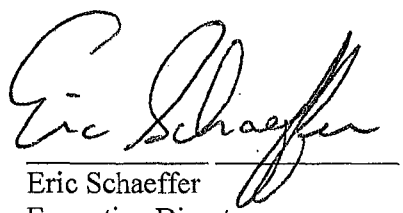
[26] Rule 3004(a)(10)(C) and 3004(a)(10)(C)(i).
[27] Statement of Basis of Permit at 24.
[28] Id.
[29] Compliance with Outdated Rules in the State Implementation Plan on South Coast AQMD website updated March 29, 2006 see: http://www.aqmd.gov/titlev/requirements.html.
[30] Id.
[31] 64 FR 30396.

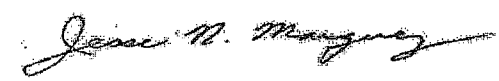
and the Code of Federal Regulations, for future permits, SCAQMD should include the emissions limits and monitoring methods directly into the charts provided in Section D. Specifically, these limits should go under the column "Emissions and Requirements" and "Conditions," so that the public can more easily connect the emissions limits with the equipment releasing the emissions. This would be particularly helpful for high emission devices.

Additionally, it appears that not all the rules in Section D's "Emissions and Requirements" column are up to date. For example, D42 is required to meet "Rule 1146, 11-17-2000," yet this was amended on 01-07-05 and 05-05-06.

Thank you for the opportunity to comment on the proposed Title V permit for the ConocoPhillips Wilmington Refinery.

Sincerely,





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	ATTACHMENT A	
DEVICE	**EMISSIONS/REQUIREMENTS**	**MONITORING/COMPLIANCE**
FCCU - D1:PM	0.5lbs/1000lbs of coke burned averaged over 3 hours (Section D, pg 208, A195.13)	Annual stack test (Section D, pg 247, D29.1)
	Opacity limit of 30% (Section D, A229.1)	Continuous opacity monitor, which shall be shall be either 1) a continuous monitoring system or 2) a monitoring method pursuant to an USEPA-approved alternative monitoring plan (Section D, A229.1)
		Visible inspection from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions (Section D, D323.5)
	Emission limit of 23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate (Rule 404, 2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
	0.45 to 13.60 kilogram solid PM per hour (emission limit determined from process weight per hour) (Rule 405, 2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 405, 2-7-1986)
	1 lb/1000 lbs of coke burnoff (40CFR 60 Subpart J, 6-24-2008)	The average coke burn-off rate and hours of operation shall be recorded daily for any fluid catalytic cracking unit catalyst regenerator. (40CFR 60 Subpart J, 6-24-2008)
	0.1Grains/SCF (5) [Rule 409,8-7-1981]	No Rule Monitoring: Gap-Filling Monitoring: None for gaseous/liquid fueled equipment. Performance test once every 5 yrs or parametric monitoring correlated with a performance test for solid fuel-fired equipment. (Rule 409,8-7-1981)
FCCU - D1:CO	The FCCU may not release a discharge in excess of 500PPMV (8) [40CFR 60 Subpart J, 6-24-2008]	Monitoring by either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer
	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.

FCCU: HEATER: D41: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	No Rule Monitoring: Gap-Filling Monitoring: None for gaseous/liquid fueled equipment. Performance test once every 5 yrs or parametric monitoring correlated with a performance test for solid fuel-fired equipment. (Rule 409,8-7-1981)
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to emission factors, testing of their control devices, requirement in Appendix A, which lists various control devices that vary in their frequency and efficacy for monitoring. (Rule 404, 2-7-1986)
FCCU: HEATER: D41: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years or annually with a portable CO analyzer. (D328.1)
FCCU: HEATER: D42: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986]	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
FCCU: HEATER: D42: CO	400 ppmv/hr (5A) (Rule 1146, 11-17-2000). This rule was amended in 01-07-05 and 05-05-06.	For the purposes of demonstrating compliance with the annual compliance determination, an owner or operator may tune a unit prior to conducting emissions testing (Rule 1146, 11-17-2000). This rule was amended in 01-07-05 and 05-05-06.
	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
		Visible inspection from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions (Section D, D323.6)

FCCU: HEATER: D44: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	No Rule Monitoring: Gap-Filling Monitoring: None for gaseous/liquid fueled equipment. Performance test once every 5 yrs or parametric monitoring correlated with a performance test for solid fuel-fired equipment. (Rule 409,8-7-1981)
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
FCCU: HEATER: D44: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 59 HEATERS: D194: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) per cycle or hour, whichever period is shorter (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to emission factors, testing of their control devices, requirement in Appendix A, which lists various control devices that vary in their frequency and efficacy for monitoring. (Rule 404, 2-7-1986)
HYDROTREATING: UNIT 59 HEATERS: D194: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 90 HEATERS: D146: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)

HYDROTREATING: UNIT 90 HEATERS: D146: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 80 HEATERS: D135: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 80 HEATERS: D135: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 80 HEATERS: D136: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 80 HEATERS: D136: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 80 HEATERS: D137: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.

	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 80 HEATERS: D137: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 80 HEATERS: D138: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 80 HEATERS: D138: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
HYDROTREATING: UNIT 100 HEATERS: D154: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 100 HEATERS: D154: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.

	2.89 LBS/HR (7)[RULE 1303(b)(2)-Offset,5-10-1996]	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)
HYDROTREATING: UNIT 100 HEATERS: D155: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 100 HEATERS: D155: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
	2.63 LBS/HR (7)[RULE 1303(b)(2)-Offset,5-10-1996]	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)
HYDROTREATING: UNIT 100 HEATERS: D156: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROTREATING: UNIT 100 HEATERS: D156: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
	1.84 LBS/HR (7)[RULE 1303(b)(2)-Offset,5-10-1996]	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)

HYDROCRACKING: UNIT 120 HEATERS:D264: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	23-450mg PM per dry, standard cubic meter of gas (maximum allowable emission limit varies with the exhaust gas flow rate) (9) [Rule 404,2-7-1986)	No Rule Monitoring: Gap-Filling Monitoring refers to requirement in Appendix A. (Nothing in this appendix.)(Rule 404, 2-7-1986)
HYDROCRACKING: UNIT 120 HEATERS:D264: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
ELECTRICITY GENERATION: BOILER: D829: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	11LBS/HR (5A) [RULE 476, 10-8-1976	No Rule Monitoring: Gap-Filling Monitoring requires performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Rule 476, 10-8-76)
	0.01 GRAINS/SCF (5B) [RULE 476, 10-8-1976	No Rule Monitoring: Gap-Filling Monitoring requires performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Rule 476, 10-8-76)
	269 lbs/day (total combined with D828) [Section D, A63.2]	
ELECTRICITY GENERATION: BOILER: D829: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
	10PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)

ELECTRICITY GENERATION: TURBINE: D828: PM	11 LBS/HR (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]	No Rule Monitoring: Gap-Filling Monitoring requires performance test once every 5 years of exhaust stack for PM conducted or parametric monitoring correlated to performance test.
	0.01 GRAIN/SCF (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]	No Rule Monitoring: Gap-Filling Monitoring requires performance test once every 5 years of exhaust stack for PM conducted or parametric monitoring correlated to performance test.
	0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	None for gas and liquid field equipment.
	269 lbs/day (total combined with D829) [Section D, A63.2]	
ELECTRICITY GENERATION: TURBINE: D828: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
	10PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)
STEAM GENERATION: BOILER: D684: PM	0.01Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
STEAM GENERATION: BOILER: D684: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
STEAM GENERATION: BOILER: D686: PM	0.01Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.

STEAM GENERATION: BOILER: D686: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
	19.2 LBS/HR (7) [RULE 1303(b)(2)-Offset, 5-10-1996]	Performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Section D, p. 260, D328.1)
STEAM GENERATION: BOILER: D687: PM	0.01Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
	11LBS/HR (5A) [RULE 476, 10-8-1976	No Rule Monitoring: Gap-Filling Monitoring requires performance test once every 5 years of exhaust stack for PM or parametric monitoring correlated to performance test. (Rule 476, 10-8-76)
	0.01 GRAINS/SCF, 15 minute average (5B) [RULE 476, 10-8-1976]	None for natural gas fired equipment. For all other fuels, performance test once every 5 years of exhaust stack for PM.
STEAM GENERATION: BOILER: D687: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.
STEAM GENERATION: BOILER: D688: PM	0.1Grains/SCF (5) [Rule 409,8-7-1981]	None for gas and liquid field equipment.
STEAM GENERATION: BOILER: D688: CO	< 2,000 ppmv CO, dry basis, averaged over 15 minutes duration (5) (Rule 407, 4-2-1982)	No Rule Monitoring: Gap-Filling Monitoring requires once every 5 years with a portable CO analyzer.