BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of the Proposed Title V
Operating Permits Issued to

Chevron Products Company
to operate a petroleum refinery
located in Richmond, California

Facility # A0010

Issued by the Bay Area Air
Quality Management District

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO THE ISSUANCE OF THE PROPOSED TITLE V PERMITS FOR THE CHEVRON REFINERY IN RICHMOND

INTRODUCTION

Pursuant to Clean Air Act ("CAA" or "Act") § 505(b)(2) and 40 C.F.R. § 70.8(d), Communities for a Better Environment ("CBE") hereby petitions the Administrator of the United States Environmental Protection Agency ("US EPA" or "EPA") to object to issuance of the proposed Title V Operating Permit for the Chevron Petroleum Refinery in Richmond, California ("Chevron Refinery"), Facility #A0010.

The Bay Area Air Quality Management District ("BAAQMD" or "District") submitted the proposed Title V permit for US EPA's review on August 25, 2004.[1] US EPA received the proposed Title V permit on August 25, 2004 and its 45-day review period ended on October 8, 2004. This petition is timely filed within 60 days following the conclusion of US EPA's 45-day review period as required by Clean Air Act § 505(b)(2). Under the CAA, the Administrator must grant or deny this petition within 60 days after it is filed.[2] In compliance with Clean Air Act § 505(b)(2), this petition is based

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[1] *See* Letter to Deborah Jordan, Director, Air Management Division, US EPA Region 9, from Jack Broadbent, Executive Officer, Air Pollution Control Officer, BAAQMD, August 25, 2004. Available at http://www.baaqmd.gov/pmt/title_v/A0010/A0010_2004-08_reopen_05.pdf (last visited Nov. 11, 2004).

[2] *See* 42 U.S.C. § 505(b)(2). CBE submitted a petition to EPA that is substantially similar to the current petition in November, 2003. *See* CBE's Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the Chevron Refinery in Richmond, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003. The November, 2003 petition resulted in the initiation of litigation by CBE and others that was partially resolved in a settlement agreement entered into between the Department of Justice ("DOJ") and CBE (and others) on Sept 15, 2004. Based on that agreement, EPA must respond to the current petition no later than March 15, 2005. For all references to the November,

on objections to the proposed Title V permit that were raised during the public comment periods.[3] Chevron submitted its Title V permit application over eight years ago. Over the last two years, CBE has filed three sets of public comments with BAAQMD and two petitions with US EPA regarding Chevron's permit, and the permit is still riddled with inadequacies and non-compliance with the CAA and related rules and regulations. The agency process for issuing oil refinery permits is fundamentally flawed and has been dragged out for far too long. Each day that passes with an inadequate permit, directly impacts the Richmond community members who live near the refinery. These permitting problems need to be resolved now.

Richmond is a community that bears a disproportionate share of environmental hazards from the Chevron Refinery and other industrial activities. The community surrounding the refinery is comprised primarily of low-income people and people of color. For example, Liberty Village housing complex is home to very low income, mono-lingual Spanish speaking, immigrant families. Other community facilities within close proximity of the refinery are the Verde, Peres, Washington, Lincoln, and Nystrom Elementary Schools, Samuel Gompers Alternative School, Shields Park/Community Center, and several low income residences. The demographics of schoolchildren at the schools reflect that of the surrounding community.

CBE is a non-profit environmental justice organization committed to the rights of urban low-income communities and communities of color in California who are disproportionately impacted by environmental hazards. CBE has worked in Richmond for numerous years on environmental justice issues.

EPA "does not have discretion whether to object to draft permits once noncompliance has been demonstrated."[4] In *New York PIRG*, NY PIRG petitioned EPA to object to three Title V permits issued in the state of New York.[5] The court held that "once NYPIRG demonstrated to the EPA that the draft permits were not in compliance with the CAA, the EPA was required to object to them."[6]

The Title V comments submitted by CBE to BAAQMD on September 27, 2002, on September 22, 2003, and again on April 14, 2004, demonstrate that the permit is not in compliance with the Clean Air Act and related regulations. These examples of non-compliance are further discussed below. Based on this non-compliance, EPA must object to the permit.

2003 petition, please see Appendix 1. For all references to this settlement agreement, please see Appendix 2.

[3] Comments submitted by CBE dated Sept. 27, 2002, Sept. 22, 2003, and April 14, 2004/April 30, 2004 (with modifications requested by the District) are attached as Appendices 3, 4, and 5, respectively.

[4] *New York PIRG v. Whitman*, 321 F.3d 316, 334 (2nd Cir. 2003).

[5] *Id.* at 323.

[6] *Id.* at 334.

This Petition constitutes EPA's fourth opportunity to object to Chevron's permit based on non-compliance with the Act.[7] In fact, rather than objecting to the permit on all of the non-compliance issues,[8] EPA has submitted several informal letters to BAAQMD requesting revisions to the permit in an informal attempt to bring the permit into compliance.[9] The contents of EPA's letters to BAAQMD, on their own, require EPA to object to the permits because they set out numerous examples of non-compliance. However, these letters do not, on their own, constitute an objection under the Act; therefore, EPA is in violation of a non-discretionary duty of the Act.[10]

EPA's first opportunity to object was during EPA's first 45-day comment period that commenced on August 12, 2003.[11] The District chose to submit the permit for public comments and EPA review concurrently. This submission of the "proposed" permit to EPA on August 5, 2003[12] and a "draft" permit to the public on August 15, 2003 was not in compliance with Clean Air Act § 505(a)(1)(B) and 40 C.F.R. § 70.8(c). The District is required to "provide to the Administrator a copy of each permit proposed to be issued" and the Administrator is required "to object to the issuance of any proposed permit determined by the Administrator not to be in compliance with applicable requirements" of 40 C.F.R. § 70 or the Clean Air Act.[13] A "proposed permit" is "the version of a permit that the permitting authority proposes to issue and forwards to the Administrator for review in compliance with 70.8."[14] In contrast, a "draft permit" is "the version of a permit for which the permitting authority offers public participation."[15] In other words, a draft permit indicates revision, whereas a proposed permit indicates final review.

The District submitted essentially identical draft/proposed permits to US EPA on August 5, 2003 and to the public on August 15, 2003. Although US EPA has indicated

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[7] At a minimum, EPA should have objected during the following periods: 1) EPA's first 45-day review period that began on August 12, 2003; 2) Within 60 days following CBE's Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the Chevron Refinery in Richmond, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003; 3) EPA's second 45-day review period that began on August 25, 2004; 4) CBE's current petition gives EPA until March 15, 2005 to object to the permit.

[8] Most recently, in a letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, US EPA objected only to very particular NSPS and NESHAP inadequate monitoring requirements. For all references to this letter, please see Appendix 6.

[9] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003. For all references to this letter, please see Appendix 7.
US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, October 31, 2003. For all references to this letter, please see Appendix 8.
US EPA letter from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, October 8, 2004.

[10] *New York PIRG*, 321 F.3d at 334.

[11] The proposed Title V permits were first issued by the District in June, 2002, and public hearings were held in July, 2002. The District made changes to the draft permit, reissued the draft permit in August, 2003, and held another public comment period at the same time as EPA's first 45-day review period.

[12] Letter to Jack Broadbent, Director, Air Management Division, US EPA Region 9, from William Norton, Executive Officer, Air Pollution Control, BAAQMD, August 5, 2003. Available at http://www.baaqmd.gov/pmt/t5/Refinery2003/a0010EPA8-5-03.pdf (last visited October 31, 2003).

[13] 42 U.S.C § 505(a)(1)(B); 40 C.F.R. § 70.8(c)(1).

[14] 40 C.F.R. § 70.2.

[15] 40 C.F.R. § 70.2.

that some renderings of concurrent review are valid,[16] these actions by the District were not in compliance with the Clean Air Act or related regulations. The District is required to "submit any information necessary to review adequately the proposed permit."[17]

Public comments were due on September 22, 2003 and US EPA's 45-day review period concluded on September 26, 2003 – a disparity of a mere four days. The improper concurrent review period resulted in violations of the Title V public participation requirements. First, the permit submitted to EPA was not a final proposed permit, as it did not contain revisions by BAAQMD based on the submitted public comments. Second, EPA admitted that it did not have adequate time to review all five refinery permits that were submitted at the same time and were hundreds of pages each, nor did it have time to review the comments submitted by the public during its 45-day review period.[18] EPA stated that "EPA has received substantial comments from the public and the refineries earlier this week that we were not able to review in the few days prior to the end of our review period."[19] EPA also stated that "[w]e were unable to review the proposed Title V permits for Conoco-Phillips Company and Shell Martinez Refinery due to the short review period."[20] As a result, US EPA submitted a subsequent letter to the District on October 31, 2003, well after the close of the public comment period and the close of EPA's 45-day review period, offering comments on the Conoco-Phillips and Shell Martinez refineries.[21]

US EPA's review of a proposed permit is intended to be the final step prior to the issuance of a final permit; either EPA objects or approves the permit. However, it is clear that the District and US EPA view this as an "evolving document that will be updated

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[16] During the issuance process, can a permitting authority give notice to EPA, affected States, and the public simultaneously?

> Yes, provided EPA has a reasonable opportunity to review any comments received from the public and affected States. The minimum public comment period is 30 days and the EPA review period is 45 days. This would allow EPA 15 days additional review after the public and affected State review, assuming the permitting authority does not provide for a longer public comment period. *Fifteen days may not be sufficient depending on the complexity of the permit.* To provide for a longer EPA period for reviewing the results of public comment, the permitting authority could vary the beginning of EPA's review resulting in less overlap of the EPA and public comment review where more EPA review after the public comment would likely be needed.
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> Questions and Answers on the Requirements of Operating Permits Program Regulations (July 7, 1993) § 7.6 #1 (emphasis added).

[17] 40 C.F.R. § 70.8(c)(3)(ii).

[18] In fact, the District spent 7 years (1996-2003) preparing the first proposed permit and 9 months (October, 2002-July 2003) preparing a combined response to the public comments for all 5 refineries. Just 45 days to review the proposed permits *and* the public comments was inappropriate under Title V.

[19] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.

[20] *Id.*

[21] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, October 31, 2003.

over time" rather than an adequate final permit as required by Title V.[22] US EPA also stated in its September 26, 2003 letter to Steve Hill that "[w]e understand that the District also intends to proposed [sic] additional permit revisions in the near future."[23] The District's submission of a draft permit to US EPA and US EPA's ad hoc attempt to remedy a clearly inadequate permit was not in compliance with the Clean Air Act.[24]

However, rather than objecting to the permits in September, 2003, on its own accord, as it was required to do by the CAA, EPA submitted a letter to the District stating that "[w]e are not objecting to these permits because the District has committed to make a number of specific improvements, and has also committed to following EPA guidelines and regulations to make several applicability determinations once [the District] obtains the necessary information." [25]

Given EPA's inappropriate decision not to object to the permit, CBE provided EPA with its second opportunity to object to the permit, by filing its first petition with EPA on November 24, 2003, requesting that EPA object to the permit.[26] However, rather than granting the petition and objecting to the permits, EPA chose a circuitous procedural method that has resulted in a confusing and potentially never ending back and forth between EPA and the District, leaving the public to bear the burden of an inadequate permit.

In a December 12, 2003 letter, EPA informed the District that EPA was reopening the permit based on the above mentioned inappropriate concurrent review that took place in August/September, 2003, rather than objecting based on the substantive comments submitted by CBE and others.[27] This reopening has caused the permit to languish in an administrative quagmire. In the District's December 31, 2003 letter responding to EPA's reopening request, the District was loathe to accept EPA's methodology, claiming that the District was already planning to reopen the permits on its own terms, practically disregarding EPA's half hearted attempts to remedy the permit problems.[28] This ridiculous power struggle between the agencies is simply delaying the issuance of appropriate permits and is in no way helpful to the public, and particularly CBE's members who live near the refinery.

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[22] BAAQMD Consolidated Responses to Comments on Refinery Title V permits, July 25, 2003, pg. 5 ("Consolidated Responses"). For all references to the Consolidated Responses, please refer to Appendix 9.
[23] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.
[24] *See New York PIRG*, 321 F.3d at 334.
[25] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.
[26] Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the Chevron Refinery in Richmond, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003.
[27] US EPA letter from Deborah Jordan, Acting Director, Air Division, to Jack Broadbent, Air Pollution Control Officer BAAQMD, December 12, 2003. Attached as Appendix 10.
[28] BAAQMD letter from Jack Broadbent, APCO, to Deborah Jordan US EPA, December 31, 2003. Attached as Appendix 11. *See also* letter in response from Deborah Jordan US EPA, to Jack Broadbent, BAAQMD, Feb. 3, 2004, attached as Appendix 12.

Given EPA's explicit recognition of the noncompliance in the permit,[29] EPA was required to object to the permit. In fact, had EPA objected to the permit during its August/September, 2003 45-day review period or in response to CBE's November, 2003 petition, this power struggle would not be interfering and delaying the process. However, EPA used this reopening as an opportunity to dismiss CBE's November, 2003 petition as unripe causing a third round of public comments, a second 45-day EPA review period, and another significant delay in the issuance of a compliant permit.[30]

This wrangling has delayed the process more than a full year, as this current petition is being filed over a year after CBE's last petition was filed in November, 2003. In addition, the latest correspondence threatens to delay the process even further with no true end in sight. Over four months after the third public comment period concluded on April 14, 2004, the District issued a proposed permit on August 25, 2004 for EPA's second 45-day review period. This 45-day review period constituted EPA's third opportunity to object to the non-compliant permit. Yet EPA again chose to engage in the same agency wrangling that has continued to delay the issuance of an appropriate permit.

On October 8, 2004, at the conclusion of EPA's 45-day review period, rather than objecting to the permits on all of the numerous non-compliance issues, EPA only objected on limited monitoring issues.[31] For numerous other non-compliance issues, EPA stated that "the District has agreed to submit applicability determinations to EPA . . . to publish notice to include any necessary revisions to the permits . . . [and] to make certain changes to the permits before issuing them."[32]

The CAA and related regulations do not give EPA the discretion to engage in informal negotiations with the District in an attempt to piece together an adequate Title V permit. This constant back and forth between the agencies has already spanned a few years and is likely to continue ad infinitum, with a never ending process of permit reopenings, wasting the valuable time and resources of commenters such as CBE.[33] This is EPA's fourth opportunity to object. Based on CBE's petitions and EPA's letters to the District, EPA has a laundry list of instances of non-compliance in the permit that requires

[29] See letters to BAAQMD from EPA, *supra* note 9.
[30] US EPA letter from Deborah Jordan, Acting Director, Air Division, to Holly Gordon and Will Rostov of CBE, December 19, 2003. Attached as Appendix 13.
[31] US EPA letter from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, October 8, 2004.
[32] *Id.*
[33] The District corresponded with EPA in letters, indicating that the District would be performing yet another reopening that would address some of the issues represented in EPA's October 8, 2004 letter. BAAQMD letters dated October 6 & 8, 2004 from Jack Broadbent, APCO, to Deborah Jordan, Air Division, US EPA. Attached as Appendices 14 and 15. This indication regarding reopening by the District is just another example of why this process has no end in sight. In addition, EPA has assured CBE that EPA will "consider comments filed during any of BAAQMD's previous public comment periods in 2002, 2003, or 2004" during the current petitioning process. EPA letter dated July 6, 2004, from Gerardo Rios, Chief, Permits Office, to Holly Gordon (among others). Attached as Appendix 16. Therefore, regardless of BAAQMD's never ending reopening processes, CBE fully expects EPA to consider and address all of the issues raised in the previous three public comment periods.

EPA to object to the permit. CBE's September, 2004 settlement agreement with DOJ (on behalf of EPA) requires that EPA appropriately respond to this petition by March 15, 2005.[34] We implore EPA to finally get it right; avoid lengthy and costly litigation in the 9th Circuit, by granting our petition, objecting to the permit, and requiring the District to bring all aspects of the permit into compliance with the CAA and related regulations in a timely manner.

SUMMARY OF OBJECTIONS

Petitioner requests that the Administrator object to the proposed Title V permit because the permit does not comply with the Clean Air Act and applicable requirements. In particular:

A) The permit is based on an incomplete permit application and an inadequate public process.

B) The permit does not assure compliance with all applicable requirements under the Clean Air Act and related regulations. In particular, the permit does not assure compliance with applicable emissions limitations and with the New Source Review ("NSR") rules; therefore, schedules of compliance must be added to the permit.

C) The District's claim that current monitoring practices are adequate is incorrect and violates the requirements of Title V. The permit must contain adequate monitoring to assure compliance with applicable requirements.

D) The permit does not comply with applicable recordkeeping requirements because the permit does not require submission of all appropriate records to the District to ensure access to the records by the public.

E) The treatment of flares is incomplete.

F) Since the refinery emits several hazardous air pollutants, the permit must contain all of the applicable MACT standards.

G) The permit shield is improperly drafted and therefore inaccessible to the public. In addition, the permit shield improperly subsumes applicable requirements.

H) The permit is based on improper procedures as discussed above.

A. INCOMPLETE PERMIT APPLICATION AND INADEQUATE PUBLIC PROCESS

The District issued the permit based on an inadequate permit application in violation of 40 C.F.R. § 70.7(a)(1)(i), which states that "[a] permit . . . may be issued

[34] Settlement Agreement between DOJ and CBE (and others) entered into on Sept. 15, 2004.

only if . . . [t]he permitting authority has received a complete permit application for a permit." However, despite this clear language, the District does not deny the validity of the permit application inadequacies, but instead claims that "[i]nadequacies in the permit application do not necessarily invalidate the permit. The requirement to submit a complete permit application is an obligation on the facility . . . Whether the facility has met its obligation to submit a complete permit application does not predetermine whether the District can meet its obligation to issue an accurate permit . . . The District could spend a vast amount of time and effort working with the facility to perfect its application, but this would be an exceedingly inefficient allocation of resources, particularly when the legal risk for application incompleteness fall [sic] upon the facility, not the District."[35]

The District's legal analysis is simply incorrect. Although the facility *does* have an obligation to submit a complete application, under the Title V implementing regulations, the District may *not* issue a permit that is not supported by a complete application.

The submission of a complete permit application is directly correlated with the public's ability to participate in the Title V permitting process. However, the District's procedure regarding public participation in the permitting process was not in compliance with 40 C.F.R. § 70.7(h)(2). The District failed to provide the public with appropriate access to information relevant to the facilities in order to meaningfully comment and participate in the Title V permitting process. 40 C.F.R. § 70.7(h)(2) requires the District to post public notice that includes the "name, address, and telephone number of a person from whom interested persons *may obtain* additional information including *all relevant supporting materials . . ., and all other materials available to the permitting authority that are relevant to the permit decision*."[36] The Title V regulations further support the substantive requirement of notice by stating that "the permitting authority shall provide such notice *and opportunity for participation*."[37] The District incorrectly suggests that this requirement is solely an obligation to provide public notice information and does not oblige the District to actually *provide* relevant documents or information upon request. The District's interpretation of this rule strips the notice requirement from the substantive participation requirements.

In violation of the above mentioned regulations, the District and the facilities failed to make information required under the Clean Air Act and applicable regulations available to the public. The information the refinery submitted since the original permit application in 1996 has not been made available to the public as an application update.[38] In some cases there are serious gaps between what the refinery applied for and what appears in the permit.

The Air District must make available to the public "a copy of each permit

[35] Consolidated Responses, pg. 9.
[36] 40 C.F.R. § 70.7(h)(2) (emphasis added).
[37] 40 C.F.R. § 70.7(h)(3) (emphasis added).
[38] CBE had to piece together what constituted the pertinent information through a broad public records request.

application."[39] In its summary of the application, Chevron stated that it would be submitting at a later date alternatives to permit conditions.[40] Chevron submitted fourteen letters to the Air District that proposed Title V permit limits for individual sources at the refinery. These letters are additional submittals by Chevron that constitute part of Chevron's Title V permit application.[41] Yet, CBE was only able to discover these letters through a broad public records act request. The information in these letters must be incorporated into a new permit application.

Chevron claimed that the supporting documentation for these permit application submittals were trade secret. However, the federal Title V regulations authorize the District to "require additional information related to the emissions of air pollutants sufficient to verify which requirements are applicable to the source . . . ."[42] The information in the appendices is the data necessary to determine if the correct permit requirement is applicable to the source. The Clean Air Act and its implementing regulations require that this information be made available to the public.

The difference between the information provided in the permit application and the information in the permit makes it next to impossible for the public to adequately review the draft permit. The public has little information about changes at the refineries that may have occurred between 1996 and the present that, for example, could affect the permit's applicable requirements. Further, the public has no method of determining whether the draft permit includes all relevant information because the only reference the public has is an out-of-date and unreliable permit application. The application and the permit do not meet the minimum requirements of Part 70 and the permit should not be finalized in its current form.

In addition, the permit application is missing several required pieces of information. The permit application fails to list insignificant sources at the refinery. BAAQMD Rule 2-6-405.4 requires every source to be in the permit application even if they are exempt or insignificant. During the rulemaking for BAAQMD's Title V program, the Air Resources Board ("ARB") commented that BAAQMD's rules failed to

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[39] 42 U.S.C. § 7661b(e).

[40] *See* Richmond Refinery Major Facility Review Application Summary. Attached as Appendix 17.

[41] In addition, rather than having Chevron draft the permit application and the District draft the permit, as required by Title V, it appears that Chevron had inappropriate access to the initial drafts of the permit. On January 17, 2002, the Air District sent Chevron an electronic version of the draft Title V permit with the following email message: "Attached is the single Microsoft Word document that contains your permit. Re-format and add index to make it more user-friendly. *Don't change any content yet*." (Email, Barry Young, BAAQMD to stie@chevron.com, dated Jan. 17, 2002 (emphasis added) (Attached as Appendix 18). On April 2 , 2002, Alex Stiem of Chevron emailed Barry Young of the Air District changes to the Title V permit. This email attaches a word document and states: "With a few exceptions (which I noted), I have incorporated the District's changes in the permit conditions. This attached file is now the master copy of Section VI. You can look through the file and decide how to handle the yellow-highlighted changes. I left the deleted condition numbers and part umbers [sic] or letters in tact if you wanted to leave them in the draft. If you don't you can delete the yellow stuff." (Email, Alex M. Stiem, ChevronTexaco, to Barry Young, dated April 2, 2002) (Attached as Appendix 19). The cozy relationship between the Air District and Chevron deprives the public of the assurance that they have any effective voice in the process.

[42] 40 CFR § 70.5(c)(3)(i).

adequately address insignificant activities.[43] In response to ARB's concern, BAAQMD stated that "[t]he District requires a listing of all sources in the permit application (Section 2-6-405.4) whether significant or insignificant."[44] BAAQMD's failure to require the correct listing of every source is in direct contradiction to its statements to ARB.[45]

In that same response to ARB, the District also stated that "we have expanded the requirement for emission calculations in Section 2-6-405.6 to require calculations of emissions from all sources that have significant emissions, even those that are exempt from District permits or excluded from District regulations." BAAQMD failed to require the facility to submit this information in its permit application. The permit application must be resubmitted with the emission calculations for sources that are exempt from District permits or excluded from District regulations.

The Chevron permit application cites out-of-date requirements. The application improperly lists insignificant sources of hazardous air pollutants ("HAPs") as sources that emit less than 0.5 tons per year (or 1000 pounds) of HAPs.[46] BAAQMD Regulation 2-6-239 provides, however, that a significant source is one that has a potential to emit of more than 2 tons per year of any regulated air pollutant, or more than 400 lbs per year of any hazardous air pollutant.[47]

The District failed to require the refinery to submit specific information that is crucial for a determination of all applicable requirements and to identify all emission sources. The following information should have been included in the application:

- Comprehensive information on stack discharge points required under 40 C.F.R. §§ 70.5(c)(3)(ii) & (vii). This information should include stack descriptors, stack heights and discharge conditions necessary to conduct air quality modeling to ensure attainment and maintenance of National Ambient Air Quality Standards ("NAAQS") and calculation of Prevention of Significant Deterioration ("PSD") increment consumption.

- Detailed information on fuels, fuel use, raw materials, production rates and operating schedules as required by 40 C.F.R. § 70.5(c)(3)(iv).

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[43] Staff Report on Proposed Amendments to BAAQMD Regulation 2, Rule 6, Major Facility Review, April 17, 2001, at p. 12, ARB Comment #7. Attached as Appendix 20.
[44] *Id.*, Response to ARB Comment #7.
[45] Although the Proposed Permit lists exempt sources, given that the permit application did not include a complete list of these sources, it is not clear that the permit section containing exempt sources is complete.
[46] *Id.*
[47] *See also* 40 C.F.R.§ 70.5(c) which states that " for insignificant activities which are exempted because of size or production rate, a list of such insignificant activities must be included in the application." In addition, although BAAQMD's November, 2003 Statement of Basis (pg. 6) cites the appropriate thresholds for HAPs, since the permit application was incorrect, the correct information is not included in the Proposed Permit. For all references to this SOB, please see Appendix 21.

- Detailed information on air pollution control equipment and compliance monitoring devices as required by 40 C.F.R. § 70.5(c)(3)(v).

- Detailed information on the dates when emission sources and air pollution control equipment were last installed and modified, as required by 40 C.F.R. § 70.5(c)(5). This would enable verification of claims of permit exemption and NSR compliance for modified sources.

- Detailed calculations, input assumptions to the calculations and sufficiently detailed process production rate and throughput capacities which would be required to support other quantitative aspects of its application in violation of 40 C.F.R. § 70.5(c)(3)(viii).

Until all such information is included in the permit application the permit is inadequate and should not be finalized in its current form.

B. INADEQUATE SCHEDULES OF COMPLIANCE

The permit is not in compliance with several sections of 40 C.F.R. § 70 regarding the facility's compliance status. 40 C.F.R. § 70.1(b) requires that "[a]ll sources . . . have a permit to operate that assures compliance by the source with all applicable requirements" and 40 C.F.R. § 70.7(a)(1)(iv) states that "a permit . . . may be issued only if. . . the conditions of the permit provide for compliance with all applicable requirements." However, the facility is out of compliance with many of the permit requirements. Therefore, the permit must contain a compliance schedule.[48] In particular, "[s]uch a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements."[49] In addition, the permit must include "[a] schedule for submission of certified progress reports no less frequently than every 6 months for sources required to have a schedule of compliance to remedy a violation."[50]

However, despite these clear requirements, and despite the District's admission that the public "comments described evidence of particular instances of non-compliance,"[51] the permit was issued without a compliance schedule. In fact, the District suggested that issuing the permit without addressing the non-compliance issues was entirely appropriate under Title V. In July 2003, the District responded to the allegations of non-compliance by stating that "there is a balance to be achieved between delaying the permit issuance to address significant compliance issues versus putting those issues aside . . . so that the permit can go into effect. In general, the District approaches this balancing exercise with a bias towards issuing the Title V permit while using other enforcement authorities to address the compliance issues . . . If compliance concerns

[48] 40 C.F.R. § 70.5(c)(8)(iii)(C).
[49] 40 C.F.R. § 70.5(c)(8)(iii)(C).
[50] 40 C.F.R. § 70.5(c)(8)(iv).
[51] Consolidated Responses, pg. 4.

progress to the point where additional Title V permit terms are warranted, those terms can be added later on."[52] More recently, the District has changed its tune – from addressing compliance problems at a future date to – "the facility is not currently in violation of any requirement."[53] Simply stated, the District does not have the discretion to read compliance requirements out of the statute and Title V requirements. [54]

In particular, the District improperly excludes compliance with NSR rules from the Title V permit. "The District takes the position that the preconstruction review rules themselves are not applicable requirements, for purposes of Title V."[55] The District also asserts that EPA itself does not view preconstruction permitting rules as applicable requirements. The District's position is unfounded and incorrect. The District's SIP, the C.F.R., and EPA rulings and correspondence all unequivocally establish that Title V does require Title V permits to apply preconstruction review rules.

The BAAQMD Rule 2-6-202 describes applicable requirements as:

> Air quality requirements with which a facility must comply pursuant to the District's regulations, codes of California statutory law, and the federal Clean Air Act, including all applicable requirements as defined in 40 C.F.R. 70.2.

NSR is an air quality requirement, codified in the District's regulation 2-2-101. It applies to all new and modified sources subject to BAAQMD's regulation 2-1-301, authority to construct requirements. Since the District regulations require facilities to comply with NSR, these preconstruction review rules must be incorporated in the Title V permit.[56]

EPA's C.F.R. 70.2 also defines applicable requirements to include preconstruction review requirements. Specifically, applicable requirement means:

> (1) Any *standard or other requirement* provided for in the applicable implementation plan approved [SIP] or promulgated by EPA . . . that implements the relevant requirements of the Act, (2) any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking . . .(3) any standard or requirement under section 111 [standards of performance for new and existing stationary sources; and] (4) any standard or other requirement under section 112 [accident prevention for new and existing sources] of the Act.[57]

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[52] Consolidated Responses, pg. 5.
[53] BAAQMD July, 2004, Statement of Basis, pg. 28. For all references to this SOB, please see Appendix 22.
[54] The District is being disingenuous; the District waited 7 years to issue the first proposed permit and now they are claiming that they did not have enough time to address the non-compliance.
[55] Consolidated Responses, pgs. 6-7.
[56] *See also* 42 U.S.C. § 7503.
[57] 40 C.F.R. § 70.2 (emphasis added).

EPA confirms its position that Title V permits include preconstruction review rules in *In the Matter of Pacific Coast Building Products, Inc., Apex Nevada, EPA* (1999). In *Pacific Coast Building*, the petitioner alleged that the Title V permit under review failed to assure compliance with federal and state preconstruction review programs because, in its opinion, the permit did not apply BACT.[58] Before determining that the permit did apply BACT, EPA articulated that applicable requirements include the requirement to obtain preconstruction permits that comply with Clean Air Act requirements.

> [A]ll sources subject to Title V must have a permit to operate that assures compliance by the source with all applicable requirements. Applicable requirements are defined in 40 C.F.R. 70.2 to include . . . Such applicable requirements include the requirement to obtain preconstruction permits that comply with preconstruction review requirements under the Act, EPA regulations, and State Implementation Plans ("SIPs").[59]

The District's claim that preconstruction review rules are not applicable requirements for purposes of Title V is clearly erroneous. In fact, the facilities must comply with the preconstruction review rules by formulating appropriate schedules of compliance. The District's claim that "there is no advantage to holding the Title V permits in abeyance while compliance issues are investigated and resolved"[60] violates federal law. Since the District improperly excluded these requirements from the Title V permit, the permit is not in compliance with appropriate laws and EPA must object.

The Chevron Refinery is out of compliance with applicable New Source Review rules in the following instances:

Retrofit of Heaters and Furnaces with Low NOx burners

Chevron administratively increased the maximum firing rate of several pieces of equipment at the refinery, alleging that firing rates had previously been underreported.[61] The increase in firing rates was due to debottlenecking of the Refinery's fuel gas system, which led to a significant increase in the fuel gas compressor capacity. Although these administrative increases have caused significant emission increases, the District has allowed them to occur without requiring appropriate NSR review under CAA § 111, and related regulations and BAAQMD rule 2-2.

The District explained that it was allowing the increases based on BAAQMD rule 2-1-234.3. However, BAAQMD rule 2-1-234.3 is not applicable to these sources

[58] *See Pacific Coast,* pg. 6.
[59] *Pacific Coast,* pg. 7.
[60] Consolidated Responses, pg. 6
[61] These comments are based on comments submitted by Adams Broadwell. *See* Adams Broadwell's comments and relevant exhibits: September 27, 2002 regarding the Chevron refinery, pgs. 35-39, for a more detailed discussion of these issues. For all references to these comments, please see Appendix 23.

because the rule does not apply to sources, such as these, which have been issued a District authority to construct and are subject to daily or annual emissions limits. In addition, this BAAQMD rule does not preempt the requirements of the Clean Air Act. These changes resulted in modifications to the source requiring NSR because the sources underwent physical or operational changes that caused significant emissions increases. In fact, the District admits that a modification likely occurred: "Chevron has made changes in the past to piping and pumping that could have been considered modifications. An example is the replacement of the fuel gas compressor. Chevron has submitted an application to replace its compressor with an equivalent compressor but ended up installing a larger capacity compressor and keeping the existing fuel gas compressor. This allowed for more fuel to be burned at each combustion source connected to the fuel gas system at the facility."[62]

Since the permit does not contain a schedule of compliance to remedy the deficient NSR, the permit is not in compliance with the Clean Air Act and related regulations and EPA must object to the permit.

Fluid Catalytic Cracking Unit

The permitting process of the last decade for the Chevron FCCU (Fluid Catalytic Cracking Unit, a central part of the refinery process, and major pollution source) has been riddled with improper permitting including the failure to require NSR.[63] This improper process has set the throughput and emissions limits of the unit at extremely high levels, e.g. 1504.7 tons per year of NOx and 2199.4 tons per year of SOx.[64] However, this improper permitting of the past should not be formalized in the Permit.

The Air District has long been aware of its failure to require NSR on the FCC unit and the resulting improperly high permit limit for NOx. For example, Robert Kwong, District Counsel identified this issue in a September 28, 1999 memorandum to Senior Management at the District regarding Chevron's application for pollution credits:

> A good argument can also be made that these reductions are not enforceable because the underlying new source review basis for this emission reduction project [sic]. FCCU emission reduction is not surplus because Chevron is using the FCCU's potential to emit (a holdover of its 1996 modernization effort) of 1,504 tons per year of NOx. This higher permit limit for allowable emissions from the FCCU is the outcome of accommodation set forth in 2-2-113. Rule 2-2-213, after being added to Regulation 2 in November 1991, was deleted in June 15, 1994, because 'the modernization provisions of Section 2-2-113 have been superseded by new offset requirements for replacement sources in Section 2-2-313 requiring a 1.0:1.0 offset ratio.' The 1994 staff report does not fully explain the deletion of 2-2-113. The

[62] BAAQMD July, 2004, Statement of Basis, pg. 26.
[63] The permitting history is described fully in CBE's September 27, 2002 comment letter at pgs. 5-8. The document's referenced in this section were submitted with CBE's September 27, 2002 comment letter, unless otherwise noted.
[64] Proposed permit submitted to US EPA on August 25, 2004 ("Proposed Permit"), pgs. 326, 440.

District staff report does, however, refer to new section 2-2-213 as the requirement governing offsets from 'replacement sources.' One can surmise from this deletion of 2-2-113 and addition of 2-2-313 that the 'modernization' exemption was untenable from the federal NSR standpoint. This becomes even more credible given EPA's vigilance on NSR issues.[65]

The District must correct its past permitting errors and place correct permit levels for the FCCU in the Title V permit. Another District memo states that the "District Emission Inventory for the 1999 SIP list [sic] the Chevron FCC (Source No. 10) units as emitting 81.5 tons per year of NOx. The new FCCU has been emitting at or near this rate since it went into service in 1995 although permit conditions allow the unit to emit 1504 tons per year of NOx."[66] CBE has not done an exhaustive analysis of BACT, but an Air District memo provides a good source for comparison.[67] In 1993, staff reported that the same technology used at Chevron was in use at Ultramar in Southern California and met an 8.7 ppm NOx limit. Using Ultramar baseline and Chevron's calculation methodology, CBE's expert Julia May calculated that the FCCU should have been permitted at 8.7 ppmv NO2, which results in 65 tons per year of NOx.[68]

Despite the identification of the ability of the same equipment to meet 8.7 ppm at Ultramar, the District allowed Chevron the limits of 220 ppmv NOx (over any 24-hr operating day period), 180 ppmv (averaged over any rolling 30 day period) or 150 ppmv (averaged over any calendar year period, corrected to 3% oxygen, dry), and 1504.7 tons per year. This limit does not meet NSR requirements, and must be corrected in the Title V permit. Similarly, the SOx limit is overly inflated and based on the old FCCU rather than BACT on the new FCCU.

In addition, an interoffice memo written by Steve Hill at BAAQMD, regarding the FCC unit states that "it is impossible to characterize the current operation of the ESP as BACT for particulate . . . . The problem, from a legal standpoint, with this situation is that the ESP was (incorrectly, in my opinion) deemed to be BACT at the time, and the project was approved. . . . should we reopen the particulate BACT determination?"[69] It is clear from this memo that BAAQMD questioned the BACT determination. Based on this memo and the above discussion, the District must also do a compliance plan that includes BACT and Offset determinations for all criteria pollutants including PM, SOx and HAPs for the FCCU.

The permitting failures related to the FCCU extend beyond NSR. The source specific applicable requirements fail to include New Sources Performance Standards

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[65] BAAQMD Memo, Robert Kwong to Ellen Garvey, Peter Hess, William de Boisblanc, September 28, 1999, pgs. 6-7, fn.3. Attached as Appendix 24.
[66] BAAQMD Memo, William de Boisblanc to Peter Hess, May 10, 1999, Subject: Application No. 19515: Reconsideration of your decision to allow Chevron IERC credits. Attached as Appendix 25.
[67] To: Peter Hess, via: Bill de Boisblanc, From: Barry Young, Date: November 16, 1993, Subject: Chevron Application 9978 FCC Regenerator BACT Determination. Attached as Appendix 26.
[68] CBE's September 27, 2002 comment letter at pgs. 7-8.
[69] Interoffice memorandum, from Steve Hill, to DAPCO, dated March 10, 2000 regarding comments on Chevron IERCs, pg. 6. Attached as Appendix 27.

("NSPS") Subpart A.[70] During the modernization of the FCCU, Chevron made changes to the unit by installing a new regenerator/generator and by removal of the CO boiler from emission train. Since major changes were made, the FCCU is subjected to the New Sources Performance Standards (NSPS) Subparts A and J.

Alkylation Expansion and New Butamer Units

The Alkylation and Butamer plants also had permitting irregularities, including the failure to comply with NSR.[71] The Reformulated Fuels Project (RFG2) permitted a large number of new and modified refinery units, many of which were not built until after the RFG2 permit application #9978 expired. Two of these were the major expansion of the Alkylation Unit and new Butamer plant.

On March 6, 1997, the District issued a Permit to Operate for the H2SO4 Alkylation Plant and the Butamer Plant, with throughputs of 36,000 BPD and 40,000 BPD, respectively.[72] The Butamer plant and Akylation unit were not built when the RFG2 project was constructed. A letter from the District, Feb. 3, 2000 cancelled the permit for the Butamer plant. It appears that the Alkylation unit Authority to Construct (A/C) under the FCCU Modernization and Reformulated Fuels project phase 2 (or RFG2 of 1993) expired, and with it the increased throughput of 36,000 bbl/day. In this case, the original throughput of 21,000 bpd should apply, and this throughput should be in the Title V permit. Both of these projects need to be repermitted and to undergo NSR. A schedule of compliance must be added to the permit; therefore EPA must object to the permit.

The following issues also require schedules of compliance:

Bubble Permit[73]

The permit incorporates Condition #469, which is the Chevron Refinery "bubble" emissions cap. According to the permit, the refinery-wide emissions cap applies to several units, specified at the top of the permit conditions.[74] Adams Broadwell modified the District's emissions inventory[75] to include only these units.[76] The District's emissions inventory indicates that the refinery has been out of compliance with the refinery-wide emissions cap for particulates, SO_2, and CO for every year for which the District has made the inventory available.[77] SO_2 emissions are more than double the

[70] Proposed Permit, pgs. 122-26.
[71] The permitting history is described fully in CBE's September 27, 2002 comment letter at pgs. 13-18 and the referenced documents submitted with that letter.
[72] *See* Proposed Permit, pg. 318.
[73] These comments were taken from Adams Broadwell's comments submitted to BAAQMD on September 27, 2002, pg. 60.
[74] Proposed Permit, pg. 263.
[75] *See* discussion of emissions inventory below.
[76] Chevron criteria pollutant emissions information, Attached as Appendix 28.
[77] Proposed Permit, pg. 264.

bubble cap of 918 tons/yr (for both Wharf and refinery sources) in 1993-2001. PM emissions are more than six times the bubble cap of 326 tons/yr. CO emissions are almost three times the cap of 773.5 tons/yr. Only NOx emissions appear to comply with the refinery-wide emissions cap, according to the District's emissions inventory.

Neither the Statement of Basis nor the permit itself specifically address the Refinery's compliance with Condition #469, or the discrepancy between the District's emissions inventory for the refinery and the emissions cap. The District must address this discrepancy and, if the refinery is out of compliance with Condition #469, impose an enforceable schedule of compliance. Without an appropriate schedule of compliance, the permit is not in compliance with the Clean Air Act and related regulations and EPA must object.

Emissions Inventory

In response to comments that find non-compliance history based on exceedances of the refinery's reported emissions inventories, the District claims that "[b]ecause the emissions inventory functions as a macro tool the District does not subject emissions inventory figures to analysis sufficiently rigorous to ensure credibility relative to compliance with applicable requirements."[78] Yet, the District uses emissions inventory estimates for purposes of establishing exemptions from emissions limits. In the Chevron permit application, Chevron states that its uses emissions inventory to demonstrate the applicability of Hazardous Air Pollutant ("HAPs") requirements.[79] The District must take a consistent position. If emissions inventory data is not sufficiently accurate for purposes of Title V permitting, then it cannot be included in the refinery's permit applications and may not be used for establishing any permit conditions, including exemptions.

The District's response to comments is inconsistent with its own guidelines. The District's Manual of Procedures does allow the use of emissions inventory for establishing the emission limits of a Title V permit.

> The requirement to include emission calculations for a source may be satisfied by the submission of emission inventory calculations provided by the District, based on throughput data from the most recent annual renewal and calculated using APCO approved emission factors. If accurate emission inventory calculations for a source are not available from the District, the facility must provide the calculations and explain any assumptions regarding emission factors and abatement factors. . . . The emission calculations included in the permit application (whether those supplied by the District or calculated independently by the facility) must be certified by the responsible official as complete, accurate, and true.[80]

[78] Consolidated Responses, pg. 16.
[79] *See, e.g.,* Chevron's application at 4.
[80] BAAQMD Manual of Procedures, Volume II, Part 3, p.3-7,3-8 (May 2, 2001).

In addition, the Clean Air Act requires that the submission of nonattainment plans include "a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants."[81] The Bay Area is in nonattainment for ozone; therefore, accurate emissions inventories are required.

C. INADEQUATE MONITORING

Title V of the Clean Air Act and related regulations requires "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit" and that "[a]ll permits shall contain . . . compliance certification, testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit."[82] However, despite these requirements, the District has determined that including monitoring in a Title V permit is discretionary based on a balancing test of their own making, rather than a clear requirement.

The District stated in the Statement of Basis that "although Title V calls for a re-examination of all monitoring**,** there is a presumption that these factors [used by the District to determine whether monitoring is necessary] have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, *no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation***.** Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate."[83]

The District's determination that, in some cases, requiring additional monitoring is inappropriate where there is no monitoring, directly contradicts the mandate of Title V of the Act. "If an applicable State emission standard contains no monitoring requirement to ensure compliance, EPA's regulation requires the State permitting agency to impose on the stationary source some sort of 'periodic monitoring' as a condition in the permit or specify a reasonable frequency for any data collection mandate already specified in the applicable requirement."[84] By its own admission, the District has failed to place monitoring requirements on sources where historically there has been no monitoring.

In addition, the District created and relies upon its own presumption that existing monitoring is adequate. According to the District, "a presumption of adequacy for existing monitoring is appropriate because the District has traditionally applied the same factors to assessing monitoring that are called for by Title V."[85] The District claims it

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[81] 42 U.S.C. § 7502.
[82] 42 U.S.C. §504(c); 40 C.F.R. § 70.6(a)(3)(i)(B); 70.6(c)(1).
[83] BAAQMD, November, 2003, Statement of Basis, pgs. 18-19 (emphasis added).
[84] *Appalachian Power Co. v. Environmental Protection Agency*, 208 F.3d 1015, 1019 (D.C. Cir. 2000).
[85] Consolidated Responses, pg. 17.

reviewed all monitoring in the permit for sufficiency and determined that, with very few exceptions, the monitoring is sufficient.[86] However, neither Title V nor its implementing regulations authorize such a presumption. To the contrary, Title V specifically authorizes and requires the imposition of new monitoring requirements on a facility to assure compliance with permit conditions and other applicable requirements.

Emissions Limitations

For all of the following pollutants/sources of pollutants, the permit cites no or inadequate monitoring to assure compliance with applicable requirements:

> No monitoring exists for boilers,[87] furnaces,[88] asphalt operations,[89] and internal combustion engines[90] that have federally enforceable limits for opacity and/or filterable particulate ("FP") pursuant to BAAQMD regulations 6-301 and 6-310, respectively. Periodic monitoring on an event basis exists for cogeneration[91] devices and claus units[92] that are subject to the same federally enforceable limits for opacity and FP.
>
> No monitoring exists for furnaces[93] that have federally enforceable limits for ammonia pursuant to particular permit conditions.
>
> No monitoring exists for cooling towers subject to rule 8-2. Although the permit indicates that 8-2 applies to cooling towers, no monitoring requirements are in the permit.[94] EPA has already conceded that this is a clear example of non-compliance in the permit. In EPA's October 8, 2004 letter to BAAQMD in regard to the Chevron permit, EPA stated that "[t]he District has requested information from the refineries regarding the current operation and maintenance practices for their cooling towers. This information will be used to make an applicability determination and include all conditions necessary to assure compliance with Regulation 8-2."[95] EPA's recognition of this non-compliance should have resulted in an objection, not a further, unenforceable amount of time to bring this condition into compliance.
>
> Periodic monitoring on an event basis exists for the facility that has federally enforceable limits for SO2 pursuant to BAAQMD regulation 9-1-302.[96] In the

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[86] *See id.*
[87] Proposed Permit, pg. 426.
[88] Proposed Permit permit, pgs. 402, 412, 421, 423.
[89] Proposed Permit, pg. 427.
[90] Proposed Permit, pg. 424.
[91] Proposed Permit, pg. 399.
[92] Proposed Permit, pg. 449.
[93] Proposed Permit, pg. 421.
[94] Compare Proposed Permit pgs. 121 and 431.
[95] US EPA letter from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, October 8, 2004.
[96] Proposed Permit, pg. 442.

Statement of Basis, the District explains that "[n]o monitoring is required for BAAQMD regulation 9-1-302 because it only applies when the ground level monitors (GLMs) are not operating, which is infrequent."[97] The Statement of Basis must be updated to reflect the current permit's monitoring requirements.

Certainly the refinery cannot assure compliance with applicable requirements without any monitoring at all. In addition, monitoring based solely on "events" at the facility is not adequate to assure compliance with applicable requirements. Since the permit does not contain adequate monitoring, EPA must object to the permit.

Refinery Vessel Depressurization

Federally enforceable BAAQMD regulation 8-10-301.4 allows opening refinery vessels after the pressure within a vessel is brought "as close to atmospheric pressure as practically possible, in no case shall a process vessel be vented to the atmosphere until the partial pressure of organic compounds in that vessel is less than 1000mm Hg (4.6 psig)." There are no requirements in this rule specifying monitoring or protocols for determination of the partial pressure of hydrocarbon gases in the vessels. The permit only requires periodic monitoring on an event basis for this provision.[98]

Since neither the rule, nor the permit specifies how facilities determine that they are meeting a maximum of 4.6 psig, there is inadequate monitoring, and emissions could exceed 4.6 psig and consequently even more could be released at each vessel opening. Again, these are episodic releases, and thus have the potential to release large amounts in a relatively short time, contributing significantly to smog formation during hot days and emitting toxic vapors into nearby communities. The permit must have adequate monitoring, not based on "events" to assure compliance with these requirements.

Fugitives

EPA inspections have identified much higher leak rates for refinery valves (including for Bay Area refineries) than were reported by the refineries.[99] EPA found an average leak rate of 5%, compared to 1.3% reported by these refineries. EPA estimated the emissions from the unreported leaks at over 80 million lbs/year of VOCs emissions, including 15 million pounds of toxics.

The range of leak rates reported by the refineries was 0.2 to 3.6%, but EPA found a range of 1.7 to 10.5% for ten companies for which the investigation was completed. For another 7 refineries still under investigation, the refineries reported a leak range of 0.2 to 2.3%, but EPA found a range of 2.8 to 11.5%.

[97] BAAQMD, November, 2003, Statement of Basis, pg. 22.
[98] Proposed Permit, pg. 441.
[99] *See* "Oil Refineries Fail to Report Millions of Pounds of Harmful Emissions," U.S. Representative Henry A. Waxman, November 1999.

Of the ten companies for which investigations were completed, two were San Francisco Bay Area refineries. The highest leak rate found among all ten investigated was at the Bay Area Chevron Richmond refinery, with a 10.5% leak rate compared to a 2.3% Chevron-reported rate. EPA's leak rate for Chevron was based on an inspection of 3,363 of Chevron's valves, of which EPA found 354 valves leaking. Chevron reported finding only 179 leaking valves in the entire valve population of 7,694. Despite this finding, BAAQMD insists that no more monitoring is necessary for valves at Chevron. A monitoring regime must be put in place that assures compliance with Reg. 8-18-300.

Storage Tanks

Storage tanks have federally enforceable limits for VOCs pursuant to BAAQMD regulations 8-5. Therefore monitoring requirements are necessary to assure compliance with these limits. However, the use of "look up" tables and sample analysis as the required type of monitoring is inappropriate – in fact these methods are not actually monitoring. For this rule, the District improperly proposes to use emission factors as a substitute for monitoring.[100]

Pressure Relief Valves

The permit is not in compliance with BAAQMD rule 8-28, particularly section 304. Rule 8-28-304 is federally enforceable and must be marked as such in the Source-Specific Applicable Requirements section of the Proposed Permit.[101] As discussed above, valve leaks and ventings, including those from PRVs, occur on a frequent basis.[102] Therefore, appropriate limits and monitoring must be added to the permit to comply with BAAQMD rule 8-28-304.

D. INADEQUATE SUBMISSION OF REPORTING REQUIREMENTS

The reporting requirements in the permit are not in compliance with 40 C.F.R. § 70.6(a)(3)(iii)(A), which states that "[w]ith respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following . . . [the] *[s]ubmittal* of reports of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports."[103]

In many places in the permit, BAAQMD requires the refinery to maintain logs at the facility for five years, but BAAQMD fails to require reporting of the data collected in these logs every six months, as required by Title V.[104] BAAQMD consistently states that

[100] *See* Proposed Permit, pgs. 453, 455-59, 461, 464, 466, 468, 470.
[101] Proposed Permit pg. 251.
[102] For a more detailed discussion of this issue, see CBE's September 22, 2003 comment letter at pgs. 15-17.
[103] Emphasis added.
[104] *See* Chevron Proposed Permit Condition 5270, Title V Permit at 311; Condition 8715, Title V Permit at 316; Condition 8869, Title V Permit at 318; Condition 10761, Title V Permit at 323; Condition 10967, Title V Permit at 324; Condition 11025, Title V Permit at 325; Condition 11193, Title V Permit at 330; Condition 11228, Title V Permit at 318; Condition 11436, Title V Permit at 333; Condition 12842, Title V

these logs "shall be kept on site and made available to District staff upon request."[105] By itself, this is improper. BAAQMD needs to include the semi-annual reporting requirement in each place in the permit where BAAQMD requires the facility to make the log "available to District staff upon request."

BAAQMD's failure to include semi-annual reporting requirements appears to be an improper policy adopted in the permit: the permit consistently requires the refinery to maintain records at the facility, but does not require those records to be regularly submitted to BAAQMD. This defeats the purpose of Title V. Title V was created to allow the public the ability to see if a facility was in compliance with its permit conditions. If all the records are maintained at the facility, the public has no access to them through the Public Records Act. Without access to the compliance information, the public remains in the dark despite adoption of the permit.

General permit condition F in the permit fails to compensate for this problem; it states: "Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting." Even though this condition requires semi-annual reporting, the lack of a specific directive with each record keeping requirement in the permit creates an ambiguity that could result in the facility arguing that very few items must be reported to the District and the withholding of important information that must be publicly available under Title V. The District must change this condition F to add the following italicized language: "Reports of all required monitoring *and reports of data from all logs maintained at the facility* must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting." Since the permit is out of compliance with applicable Title V regulations, EPA must object.

E. FLARES

Chevron's Title V permit fails to include key federal and state applicability provisions and the monitoring necessary to comply with federal rules related to flares. Namely, the permit fails to include NSPS Subpart J and A requirements. The permit also fails to include federally enforceable BAAQMD rule 8-2 and proper monitoring. Additionally, EPA violated Title V when it failed to object to this permit after acknowledging that the permit omitted federally enforceable requirements.

Permit at 338; Condition 14701, Title V Permit at 344; Condition 15107, Title V Permit at 345; Condition 16393, Title V Permit at 349; Condition 18166, Title V Permit at 368; Condition 16731, Title V Permit at 354; Condition 17470, Title V Permit at 355; Condition 17527, Title V Permit at 356; Condition 17553, Title V Permit at 356; Condition 17628, Title V Permit at 358; Condition 17631, Title V Permit at 360; Condition 17675, Title V Permit at 361; Condition 18003, Title V Permit at 364; Condition 18015, Title V Permit at 365; Condition 18029, Title V Permit at 366; Condition 18166, Title V Permit at 367; Condition 18172, Title V Permit at 369; Condition 18350, Title V Permit at 370; Condition 18387, Title V Permit at 372; Condition 18391, Title V Permit at 374; Condition 18400, Title V Permit at 375; Condition 18702, Title V Permit at 380; Condition 18945, Title V Permit at 381; Condition 19063, Title V Permit at 381; Condition 19425, Title V Permit at 381. (This is not an exhaustive list)

[105] *Id*.

The Title V Permit Improperly Omits Federally Enforceable Provisions

CHEVRON'S FLARES ARE SUBJECT TO NSPS SUBPART J

The proposed permit illegally exempts all except for two of Chevron's flares from NSPS Subpart J.[106] Subpart J effectively limits the release of SOx to the atmosphere by limiting H2S gas combustion within the flare. NSPS applies to sources that have been constructed *or modified* after 1973.[107] While this Subpart is applicable to Chevron's flares, the Statement of Basis omits NSPS Subpart J from Chevron's LSFO flare, South Isomax Flare, North Isomax Flare, LSFO Elevated Flare, FCC Flare, Alkane Flare, SRU, and the Alky Flare S-6015 and S-6039 falsely reasoning the refinery has not modified these flares.[108]

The conclusion that Chevron has not modified these flares is unsupported. First, the Statement of Basis construes modifications too narrowly, and second, it fails to include information that would reveal whether or not modifications had occurred.

A modification is:

> any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.[109]

A change to a source to which the flare is attached, such as an increased throughput, would physically modify the flare and potentially increase the amount of hydrocarbons or any of a host of other air pollutants emitted to the atmosphere. But according to the Statement of Basis, a modification occurs only when the flare burner tip is replaced.[110] The District's interpretation of "modification" is impermissibly narrow. It is generally accepted that a flare consists of more than just a burner tip.

> The typical flare system consists of (1) a gas collection header and piping for collecting gases from processing units, (2) a knockout drum (disentrainment drum) to remove and store condensables and entrained liquids, (3) a proprietary seal, water seal, or purge gas supply to prevent flash-back, (4) a single- or multiple-burner unit and a flare stack, (5) gas pilots and an ignitor to ignite the mixture of waste gas and air, and, if required, (6) a provision for external momentum force (steam injection or forced air) for smokeless flaring.[111]

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[106] *See* Proposed Permit pg. 86.
[107] *See* 40 C.F.R. § 60.100(b).
[108] BAAQMD Statement of Basis, July 2004, pgs. 12-14; *see also* Proposed Permit pgs. 86-87.
[109] 40 C.F.R. § 60.2.
[110] BAAQMD Statement of Basis, July 2004, pg. 22.
[111] EPA's AP 42 Emissions Factors Industrial Flares, 13.5.1. Attached as Appendix 29.

In designing a flare, important considerations, among others, include reliable burning, hydraulics, liquid removal, air infiltration, and flame radiation.[112] All of these considerations translate into parts that must be included in a flare, such as burner pilots, pilot ignitors, pilot monitors, flame stabilizers, relief valves, knock out drums, and liquid seal.[113] The position in the Statement of Basis is untenable.

Moreover, the Statement of Basis does not indicate whether Chevron has replaced the flare burner tips.[114] The District must either indicate in the Statement of Basis that none of the flare burner tips have been replaced or inspect the flares for these modifications.

The District further failed to comply with 40 C.F.R. § 270.42(a)(b) because it did not include a condition in the Title V permit requiring the refineries to notify the District when flares tips are replaced and/or when the refinery makes any other flare modifications.[115]

The Permit violates Title V by weakening the language in 40 C.F.R. § 60.104(a)(1) even where the permit appears to apply the provision.[116] Moreover, the Permit assumes that the exception to the regulation applies continuously. That section exempts flaring events that occur due to relief valve leakage or other emergency malfunction.[117] In pertinent part that section states, "[t]he combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph."[118]

The permit states that the flares are exempt from 60.104(a)(1), the fuel gas H2S limit, so long as the flare is "used only for upsets or emergency malfunctions."[119] But regulation 40 C.F.R. § 60.104 does not exempt flaring that results generally from an "upset." The section states that the *combustion* that is released to the flare is exempt if it is a result of a "*relief valve leakage or other emergency malfunction*."[120]

The Statement of Basis exempts Chevron's flares from 40 C.F.R. § 60.104 based on the assumption that Chevron's flares are incapable of discharging gases that do not result from emergency breakdowns. It then reasons that if these flares *do* discharge gases not resulting from emergency breakdowns, the District will learn this later, from

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[112] Flare System Design – What is Important? John Zink Company, 1998. Attached as Appendix 30.
[113] *Id*. at 4-8.
[114] BAAQMD Statement of Basis, July 2004, pg. 22.
[115] Chevron must notify the District if it is going to make a modification to the flare, which, according to the District, includes changing the flare burner tip. *See* 40 C.F.R. 270.42(a)(b).
[116] Proposed Permit, pg. 87.
[117] 40 C.F.R. § 104(a)(1).
[118] *Id*.
[119] Proposed Permit, pg. 87.
[120] Proposed Permit, pg. 87.

monitoring reports.[121] Specifically, the Statement of Basis states that this "wait and see" policy is:

> typical of situations at oil refineries where the refinery has stated that a flare is used only for upsets and emergencies, and where there is not information to the contrary. The District then proceeds on the assumption that the flare is exempt from the H2S limit of Subpart J.[122]

The permit allows Chevron to circumvent 40 C.F.R. § 60.104 by presuming that each flaring event will be exempt from the rule. This is not what the rule allows.

EPA has agreed that 40 C.F.R. § 60.104(a)(1) does not provide a blanket exemption to the flare H2S limit, but that the subsection, rather, provides an exemption on an event by event basis.[123] EPA further states that the District's flare monitoring rule, "does not assure that each flaring event qualifies for the emergency exemption provided in NSPS J, nor is it federally enforceable."[124]

For the reasons described above, NSPS Subpart J should apply to these flares, including 40 C.F.R. § 60.104(a)(1).

CHEVRON'S FLARES ARE SUBJECT TO NSPS SUBPART A

The District failed to include generally applicable federal NSPS Subpart A requirements, such as 40 CFR § 60.11.[125] EPA acknowledged that "NSPS Subpart A is not included in the permits for all flares subject to the requirements of 40 CFR Part 60, Subpart A. "As the District concurred, Subpart A is an applicable requirement for all flares meeting the applicability criteria for 40 CFR 60.100(a) and (b), including flares that are exempt from the H2S limit pursuant to 40 CFR 60.104(a)(1)."[126] EPA established non-compliance but failed to object to the permit on that basis.[127]

Unlike 40 C.F.R. § 40.104(a), 40 C.F.R. § 60.11 applies even when process upset gases are legitimately exempted under NSPS Subpart J. The latter regulation requires that,

> [A]t all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment

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[121] BAAQMD Statement of Basis, July 2004, pg. 22.
[122] *Id*.
[123] Letter from Gerardo Rios, US EPA, Region IX, to Steve Hill, BAAQMD, July 28, 2004. Attached as Appendix 31.
[124] *Id*.
[125] Proposed Permit, pages 85-87.
[126] *See* Letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, Attachment 3, pg. 2.
[127] *Id.*

> in a manner consistent with good air pollution control practice for minimizing emissions.[128]

EPA has said that frequent flaring is not consistent with good air pollution control practice.[129] Chevron has had a practice of frequent flaring. In a random sample, Chevron flared six days in December 2002 due to planned maintenance. Two different flares were active 12 days each in January 2003. For several days, there was a bad motor bearing, and shutdowns for maintenance. The flare ran for eight days in February 2003 due to shutdowns for maintenance and PLC card failure, FCC upset, high relief system flow, runaway head leak, and depressurizing due to flange leak. In March 2003, the flares roared for five days for shutdowns due to electrical problems, to replace a leaking PSV, and for shutdowns from E-140 plugging. While some of this flaring could have resulted from true emergencies, the data illustrates excessive flaring. Ultimately, though, the permit must include 40 C.F.R. § 60.11 and the other Subpart A requirements because Title V permits must include all applicable requirements.

CHEVRON'S FLARES ARE SUBJECT TO THE MISCELLANEOUS OPERATIONS RULE

The Permit fails to include federally enforceable BAAQMD Regulation 8-2. That section prohibits the discharge into the atmosphere from any miscellaneous operation an emission containing more than 15 lbs per day and a concentration of more than 300 ppm total carbon on a dry basis.[130] A miscellaneous operation is one that is not limited by another rule in regulation 8 or 10.[131] Since flares are not covered by another rule[132], they are subject to the miscellaneous operations rule unless they meet the exception described in BAAQMD regulation 8-1-110.3, i.e. if they operate at greater than 90% combustion efficiency.[133] Without measuring combustion efficiency, the Permit exempts the flares from this federally enforceable provision reasoning that flares are exempt from this regulation during any flaring event where conditions ensure proper operation.[134] EPA must object to the permit on this basis because (1) the permit conditions do not come close to ensuring that Chevron meets the exemption requirement, (2) only flaring events, not flares should be exempt from the rule.

According to the Statement of Basis, the flaring event is exempt if (1) the flare is properly designed – which all are assumed to be – (2) the flare is operated within its design capacity – nearly 400,000 lbs/hr, (3) the BTU content of gases flared exceed 300 Bth/scf, and (4) a flame is present.[135] But numerous studies have established that there are other factors that lower combustion efficiency, including wind speed, low load, steam

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[128] 40 C.F.R. § 60.11

[129] *See* EPA Enforcement Alert, Vol. 3 No. 9, October 2000. Attached as Appendix 32.

[130] BAAQMD Regulation 8-2-301.

[131] BAAQMD Regulation 8-2-201, 8-2-301.

[132] *See* CBE's Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the Chevron Refinery in Richmond, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003, pgs. 23-24.

[133] BAAQMD Regulation 8-2-110.3.

[134] BAAQMD Statement of Basis, July 2004, pg. 20.

[135] BAAQMD Statement of Basis, July 2004, pg. 20.

quenching, gas heat content, and low exit velocity. These factors can decrease efficiency to as low as 50%.[136] Moreover, even if there is a flame, if that flame splits and there is a lot of smoking that is an indication that flare efficiency is not high. The Permit condition does not take this into account.

The Alberta study shows that wind can affect flares.[137] CBE modeled wind turbulence (gust) data from the Chevron MET station and determined that wind can affect flare combustion efficiency at Chevron. CBE has concluded that wind speeds rise to such a level that flare combustion can be affected 20% of the time. This assumes seven meters per second or greater winds. While Chevron has steam and air assist to augment its flows, based on visible flare instability, flare separation, fluctuations in fuel, and the range of gas composition, combustion efficiencies are lower.

The Swedish study[138] concluded that low flows/loads to flares contribute to combustion inefficiencies at oil refinery flares. Specifically, the Swedish study found that while flare efficiency at higher loads was 98%, low load flaring resulted in a 50-90% flare efficiency.[139]

Steam quenching can also affect combustion efficiency. Steam assist generally improves mixing of fuel with air for better combustion, but an EPA study from 1983 on flare efficiency found that at lower flows and high amounts of steam (>7lbs steam/lb of waste gas), the combustion efficiency dropped, down to 70%.[140] According to Karen Olson, an engineer at the Texas Natural Resources Conservation Commission (TNRCC) (project lead in the Texas state study on flare efficiency), this data indicates that too much

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[136] *See CBE flare report,* 2004, page 33 (attached as Appendix 33); s*ee also Comments on Regulation 12, Miscellaneous Standards of Performance Rule 11, Flare Monitoring at Petroleum Refineries, Draft,* (April 7, 2003), prepared by J. Phyllis Fox, Ph.D., P.E., DEE, Consulting Engineer, Berkeley, CA, April 16, 2003 (attached as Appendix 34). " The literature cited by the District indicates that flare efficiency ranges from 62% to over 98%. Only one of the studies reviewed by the District, Boden et al. (1996),[136] supports a flaring efficiency of 98% or greater. This study only measured C_1 thru C_6 alkanes in the flared gases, ignoring soot, CO, non-alkanes, and higher molecular weight alkanes, which are products of incomplete combustion. Thus, this study underestimated flaring efficiency by an indeterminate amount.
The other flare efficiency studies that the District reviewed report flaring efficiencies much less than 98% under some conditions. One recent study of oil field flares reported the average combustion efficiency for two flares (39 ft. high, 8 in. dia; 49 ft. high, 3 in. dia.) was below 70%. Another study reported efficiencies of 62% (high flow rates) to 71% (low flow rates, controlled by knockout drum) when flare gases containing no H_2S and 82% to 84% when flaring sour, 23 wt% H_2S gases. Similarly, the efficiency of oil field flares in Nigeria ranged from 80% to over 98%. The Alberta studies suggested that entrainment of air into the region of combusting gases restricted flame sizes to less than optimum values. The resulting flames are too small to dissipate sufficient heat to result in high combustion efficiencies. This conclusion is consistent with wind tunnel experiments, which showed that a low exit velocity makes flames susceptible to wind effects and reduces flare efficiency. These studies were analyzed to develop a model that predicts flare efficiency as a function of wind speed, stack exit velocity, flame temperature, stoichiometric mixing ratios, and other parameters."

[137] The Alberta Study was presented in 1999 in Calgary. The paper is entitled, Efficiency Measurements of Flares in a Cross Flow, by M.R. Johnson, O. Zastavnuik, D.J. Wilson and L.W. Kostiuk.

[138] "Measurements of VOCs at Refineries Using the Solar Occultation Flux Technique," by Karin Fransson and Johan Mellquist (2002).

[139] *Id*.

[140] McDaniel, Engineering Sciences Incorporated, EPA-600/2-83-052, July 1983.

steam is partially quenching the flame at low flows, and no one requires the control of steam.[141]

Gas heat content can affect combustion efficiency. When a flare mix contains a large quantity of nitrogen, BTU content can be reduced to such a degree that combustion efficiency is significantly affected.

Low exit velocity is also a cause of lower combustion efficiency. TNRCC recently developed a vent gas control rule. That rule "requires that emissions be calculated 'assuming a 98% destruction efficiency when the flare is in compliance with heating value and exit velocity requirements of 40 CFR 60.18, a destruction efficiency of 93% shall be assumed to calculate HRVOC mass emission rates.'" TCAA §115.725(d)(6). The 93% destruction efficiency is based on the median destruction efficiency "from selected flare tests conducted during EPA flare studies in the 1980s."[142] This implies that the CE is sometimes in the 88% range when heating value and exit velocity requirements are not met. Wind tunnel experiments also reveal that a low exit velocity makes flames susceptible to wind effects and reduces flare efficiency.[143]

The Statement of Basis did not consider any of these issues in determining whether combustion efficiency exceeded 90%. While fuel combustion efficiency testing is expensive, this does not justify assuming that the exception requirement is met.

EPA has also agreed that the exception to the miscellaneous operations rule has not been demonstrated.[144] The District included condition 18656 to demonstrate that fuel efficiency would exceed 90%.[145] But EPA noted that while the BAAQMD regulation 8-2 is federally enforceable, the monitoring in the condition used to ensure compliance is not federally enforceable.[146] Therefore, the monitoring must be made federally enforceable. Furthermore, the District has not demonstrated that the flares are correctly designed by conducting design review,[147] which the District admits is necessary to ensure compliance with the rule.[148] Instead, the District relies on the fact that "'OSHA requires that flare system design basis and testing information be kept at the facilities and that flares be operated consistent with the design basis.'"[149]

Even if the permit conditions did ensure high combustion efficiency, the Permit still must list regulation 8-2 as an applicable requirement, and the refinery must

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[141] Telephone conversation between Julia May and Karen Olson, May 17, 2004.
[142] *Comments on Regulation 12, Miscellaneous Standards of Performance Rule 11, Flare Monitoring at Petroleum Refineries, Draft, (April 7, 2003),* Prepared by J. Phyllis Fox, Ph.D., P.E., DEE, Consulting Engineer, Berkeley, CA, April 16, 2003).
[143] M.R. Johnson, O. Zastavniuk, D.J. Wilson, and L.W. Kostiuk, Efficiency Measurements of Flares in a Cross Wind, Presented at Combustion Canada, Calgary, Alberta, May 26-28, 1999.
[144] Letter from Gerardo Rios, U.S. E.P.A. Region IX, to Steve Hill, BAAQMD, pg. 1, August 2, 2004. For all references to this letter, see Appendix 35.
[145] BAAQMD Statement of Basis, July 2004, pg. 26.
[146] *Id*.
[147] *Id.*
[148] BAAQMD Statement of Basis, July 2004, pg. 20.
[149] *Id*.

demonstrate that the exception applied during each event. Because the Statement of Basis itself acknowledges that the permit conditions will not always be met:

> The District … anticipates that the safe operation of the flare will cause the flare to exceed its capacity, with a possible reduction in destruction efficiency. This will result in a violation, but the event will be handled safely.[150]

The exemption is met for each event in which combustion efficiency exceeds 90%; the exception does not apply to flares as a blanket rule. (Hence the rule applies to *operations* that exceed this rate, not *sources*.) Therefore, the miscellaneous operations rule is an applicable rule and should have been included in Chevon's Title V permit.[151]

EPA Failed to Object to the Permit Even After Acknowledging That the Permit Failed to Include All Applicable Requirements

Chevron's permit illegally exempts flares from 40 CFR Part 63, Subpart CC, which includes testing, monitoring, recordkeeping and reporting. EPA acknowledged in its latest permit review that "[t]he District's position that flares are categorically exempt from Subpart CC when used as a (sic) alternative to a fuel gas system is incorrect."[152] Yet EPA declined to object to permit issuance on this basis.[153]Since EPA is required to object to permits that do not comply with the Title V program, based on CAA section 505(b)(1) and 40 C.F.R. 70.8(c), EPA violated the Clean Air Act by not objecting to this omission.[154]

The Permit Creates Improper Flare Emissions Limits

The permit improperly creates flare emissions "limits" to support a flare exemption from the miscellaneous operations rule. In doing so, the Permit effectively allows Chevron to flare VOCs into the atmosphere at an unlimited rate. Moreover, the Permit fails to provide a basis for its numerical conversions, even though these conversions require assumptions.

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[150] BAAQMD Statement of Basis, July 2004, pg. 21.
[151] The Statement of Basis also states that emissions due to flaring from sources subject to a regulation are not subject to 8-2. *See also* BAAQMD Statement of Basis, July 2004, pg. 20. But only flares emit gases due to flaring – only flares flare. And since flares are sources (and have source numbers) and are not subject to any other regulation, this statement is irrelevant.
[152] *See*, Letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer Attachment 3, page 1.
[153] *See*, Letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, page 1.
[154] *See* 42 U.S.C. § 505(b)(2); *see also New York PIRG,*, 321 F.3d at 334.

"Conditions for monitoring for correctly designed and operating flares:

1. The owner/operator shall not flare more than the following limits of vent gas, as defined in Regulation 12-11-210, at the following sources:

S-6012 381,040 #//hr
S-6013 1,357,512 #/hr
S-6015 878,900 #/hr
S-6017 3497 #/hr
S-6039 710,390 #/hr
S-6016 1,440,800 #/hr
S-6019 783,300 #/hr
S-6010 878,900 #/hr. (basis: Regulation 8-1-110.3; 2-1-403)"[155]

These limits are so high as to be effectively no limit at all. They also conflict with, and do not ensure compliance with the Miscellaneous Operations 15lb/day limit, which the District should enforce for these sources.[156]

Even if these limits are meant to regulate gases within the flare, which neither the Statement of Basis nor the Permit make clear, they still result in significantly high emissions. And even assuming a VOC destruction efficiency of 98%, the calculations below demonstrate that lbs/hr and tons/day emissions would be enormous:

Source Number	#/hr figure provided in Title V permit excerpt, if interpreted as pounds within the flare	Emissions out of the flare, #/hr if 98% of column 2 were destroyed by flare	Column three converted to emissions out in tons per day
S6012	381,040	7,621	91
S6013	1,357,512	27,150	326
S6015	878,900	17,578	211
S6017	3,497	70	1
S6039	710,390	14,208	170
S6016	1,440,800	28,816	346
S6019	783,300	15,666	188
S6010	878,900	17,578	211

In recalculating the entire inventory of flare emissions in terms of average per day, the District found eight tons of VOCs, five of which are NMHC (non-methane hydrocarbons) for the historical period. Chevron contributed ¾ of a ton. This new Permit allows Chevron to flare 1544 tons per day. This number is three times the entire

[155] Proposed Permit, pg. 376.
[156] *See* BAAQMD Regulation 2-1-403. "[T]he APCO may impose any permit condition that he deems reasonably necessary to insure compliance with federal or California law or District regulations."

Bay Area VOC Inventory. Whether presented in lbs/hr per day, or tons per day, this permit allows significant emissions. Moreover, these numbers have no apparent basis.

The Statement of Basis also fails to provide a basis for higher throughput values listed in the Title V permit. The previous throughput numbers were listed in BTU units (British Thermal Units, a measure of energy), not pounds (a measure of mass). The numbers in this Title V permit using pounds, excerpted above, have apparently been converted without providing a basis for the conversion. In order to convert from BTUs to pounds, one must make assumptions about which VOCs and other chemicals are present in the flare, and in what concentrations they are present. These affect the overall BTU content. It is not appropriate to set such lbs/hr limits.

The Permit Fails to Include Flare Pilot, Purge Gas and Combustion Emissions in its Flare Emission Calculations

The permit omits calculations for flare purge gas and combustion emissions; flare pilot emissions constitute the entire calculation for flare emissions. See Appendix I.[157]

The flare emission calculations should include not only flare pilot flame emissions, but also flare purge gas emissions and combustion emissions from the volumes of gases routed from refinery process units to the flares, which can dwarf flare pilot emissions. That conclusion is supported. The District's flare "Further Study" found that emissions from flares are orders of magnitude higher than the emissions estimates that were originally made using only the flare pilot.[158] Even the Western States Petroleum Association (WSPA) has found flare emissions an order of magnitude higher than those originally made when estimated using the flare pilot alone. WSPA uses lower numbers than the District for overall flare emissions.

In the past, the District has estimated overall flare emissions (that were reportedly calculated using the flare pilot, according to discussion during the District further study on flares) at 0.1 tons per day. The Draft District Technical Assessment Document on flares found 22 tons per day of organics on the average, and a maximum up to 134 tons per day at one refinery. The Western States Petroleum Association found 2.3 tons per day average (excluding methane), which is still far higher than the flare pilot emissions alone.

Flare Monitoring Language Added to the Chevron Permit Is Inconsistent With the New Flare Monitoring Regulation

New monitoring requirements were added to the proposed Chevron permit, incorporating some of the new BAAQMD flare monitoring regulation 12-11 into the Title

[157] BAAQMD Engineer, Greg Solomon, confirmed in a telephone conversation with CBE Consultant, Julia May, that for the purposes of permitting, the District had only calculated flare pilot emissions in the past, and that these constituted the entire calculation for flare emissions. Telephone Conversation between Julia May and Greg Solomon, March 24, 2004.
[158] BAAQMD Further Study Measure 8, December 2002.

V permit. The new monitoring language should certainly be included. However, rather than using the actual language written into the regulation, new language was written that re-defines the monitoring requirements inconsistently with the regulation. For example, the Title V permit states:

> 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.[159]

This language is not contained in the District's flare monitoring regulation 12-11. There is similar language in the flare monitoring regulation that defines the methods and requirements for *monitoring* a flaring event when gases flared exceed 330 standard cubic feet per minute for consecutive 15 minutes periods. However, the rule does not *define* a flaring event as only those meeting these criteria. Stating that a flaring event is defined in this restrictive way defines away real flaring events less than 330 scfm for consecutive 15 minutes periods. For example, if Chevron flared at 329 scfm all day long, this would add up to 473,760 scf per day, a substantial amount of flaring. But according to Chevron's permit, this flaring would not constitute flaring at all. Unfortunately this could be construed by Chevron to mean that they do not have to record such flaring non-events, nor monitor them in other ways, nor report them. This language should be removed, and the actual language of the regulation should be used.[160]

The Permit also includes language suggesting that once video monitoring occurs, no further monitoring is necessary and that they included the totality of visual monitoring:

> 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.[161]

Many other monitoring provisions are still required after video monitoring. The permit language must make this clear. Moreover, this language conflicts with 40 C.F.R. § 60.18. Moreover, the District regulation video monitoring requirements were not meant to exempt Chevron from any further visual inspection of flares, but were meant to add to them. It is still necessary for Chevron to identify, for example, any smoking of flares over three minutes, regardless of whether a video monitoring inspection has previously been done.

The District has listed this regulation as non-federally enforceable,[162] even though EPA has expressed the opinion that it should be federally enforceable – so that it can be

[159] Proposed Permit, pg. 377.
[160] *See* BAAQMD Regulation 12-11.
[161] Proposed Permit, pg. 377.
[162] Proposed Permit, pg. 86.

used to demonstrate compliance with other rules.[163] Regardless of whether BAAQMD regulation 12-11 is federally enforceable, if the Title V permit includes non-enforceable requirements, it must do so properly. The permit must reflect actual applicable requirements including flare monitoring requirements.

F. APPLICABLE MACT STANDARDS

The refineries are "major sources" of Hazardous Air Pollutants (HAPs) because they emit or have the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs.[164] Therefore they are required to comply with Clean Air Act section 112 National Emission Standards for HAPs (NESHAPS) reflected in the application of Maximum Achievable Control Technology (MACT). Several MACT requirements that apply to the refineries have not been included in the permit and therefore the permit is out of compliance with section 112 of the Clean Air Act and related regulations.[165]

G. IMPROPER PERMIT SHIELD

The permit shield in the permit is not in compliance with 40 C.F.R. § 70.6(f). A permit shield allows the District to "expressly include in a [Title V] permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of the permit issuance." In addition, permit shields allow the District to find certain requirements inapplicable to a facility and/or to subsume one set of requirements into another more stringent set of requirements for that facility. However, the permit shield is only adequate if "[t]he permitting authority . . . determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof."

In regard to the subsumed requirements, the District improperly subsumed several applicable regulations, thereby improperly shielding the facility from applicable requirements. For example, the District improperly subsumed 40 C.F.R. § 60.484 into BAAQMD regulation 8-18-308.[166] Although the BAAQMD regulation additionally allows for a public comment period and the CFR section does not, the CFR section provides for an opportunity for a public hearing and the BAAQMD section does not. The District cannot subsume a regulation unless the applicable regulation is *completely* more stringent, not somewhat more stringent and somewhat less stringent.[167]

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[163] *See eg.,* Letter from Gerardo Rios, U.S. E.P.A. Region IX, to Steve Hill, BAAQMD, pg. 1, August 2, 2004.
[164] 42 U.S.C. § 112(a)(1).
[165] *See* comments submitted by Adams Broadwell regarding the Chevron refinery, September 27, 2002, pgs. 39-51.
[166] *See* 40 C.F.R. § 60.484(e)(1); Proposed Permit, pg. 499.
[167] For an additional example, *see* Proposed Permit pg. 501: The District improperly subsumed 40 C.F.R. 60.115b(b) (which requires reporting in a specific time frame) into the Refinery MACT requirements (which only requires periodic monitoring).

In addition, EPA has already conceded that this is a clear example of non-compliance in the permit. In EPA's September 26, 2003 letter to BAAQMD in regard to the Chevron permit, EPA stated that "[t]he 'subsumed requirements' shield is allowed . . . if the District includes permit conditions that assure compliance with the subsumed requirements and demonstrates the reason for the shield . . . For instance, the demonstration must show that the applicability of the permit conditions will be as broad as the rule that would be streamlined."[168] Based on the above comments, EPA has established non-compliance and therefore it is required to object to the permit.[169]

In addition, the permit shield tables contained on pages 499-504 of the proposed permit are improperly drafted and almost completely unusable by the public. The tables fail to include an explanation of why particular requirements are non-applicable or subsumed; in fact it is unintelligible on its face. In addition, in the second column, titled "regulation title or description of requirement," the permit should indicate specifically what rule the requirement is being subsumed into. For instance, several requirements have been subsumed into "refinery MACT recordkeeping requirements."[170] However, there is no indication of where or what the MACT requirements are, and no explanation of why one section standard or requirement will better assure compliance. Similarly, the District provides no explanation of why the requirement can be subsumed. Therefore the permit shield is not in compliance with 40 C.F.R. § 70.6(f) and EPA must object.

CONCLUSION

In sum, the permit is drastically out of compliance with the Clean Air Act and applicable regulations. Therefore, EPA has no choice but to object to the permit.

Dated: December 6, 2004
Respectfully Submitted,

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[168] US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.
[169] *See* 42 U.S.C. § 505(b)(2); *see also New York PIRG v. Whitman*, 321 F.3d at 334.
[170] *See* Proposed Permit, pg. 499-504.