

July 20, 2006

Ms. Deborah Jordan, Director
Air Management Division
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Jordan:

The District is reopening the following Major Facility Review permit pursuant to Applications 12431 and 12599:

Facility #	Facility Name	Address, City	Type of Operation
B2758 &	Tesoro Refining & Marketing Company	150 Solano Way, Martinez	Petroleum Refinery
B2759	Tesoro Refining & Marketing Company	1750 Marina Vista Way, Martinez	Petroleum Refinery

ALAMEDA COUNTY

Roberta Cooper
Scott Haggerty
Janet Lockhart
Nate Miley

CONTRA COSTA COUNTY

Mark DeSaulnier
Mark Ross
(Vice-Chair)
Michael Shimansky
Gayle B. Uilkema
(Chair)

MARIN COUNTY

Harold C. Brown, Jr.

NAPA COUNTY

Brad Wagenknecht

SAN FRANCISCO COUNTY

Chris Daly
Jake McGoldrick
Gavin Newsom

SAN MATEO COUNTY

Jerry Hill
(Secretary)
Carol Klatt

SANTA CLARA COUNTY

Erin Garner
Yoriko Kishimoto
Liz Kniss
Patrick Kwok

SOLANO COUNTY

John F. Silva

SONOMA COUNTY

Tim Smith
Pamela Torliatt

Jack P. Broadbent
**EXECUTIVE
OFFICER/APCO**

This reopening of the Title V permit addresses permit deficiencies identified in EPA's letter of October 8, 2004 and in EPA's order of March 15, 2005. The reopening also incorporates changes in applicable requirements authorized in an Authority to Construct and addresses issues raised by the refinery's appeals and comments. In addition, minor revisions for ten NSR applications are being proposed: Applications 11901, 12592, 13047, 13076, 13228, 13240, 13401, 13493, 13803, and 14047.

The District sent formal notices of reopening pursuant to BAAQMD Regulation 2-6-415 on December 16, 2004 and May 12, 2005. The regulation requires at least 30 days' notice for any reopening. Public notices were published on April 22, 2005 and August 9, 2005. The public notice period for Application 12431 ended on May 24, 2005; the public notice period for Application 12599 ended on September 8, 2005. Comments were received from the facility, EPA and Our Children's Earth (OCE).

There were two public notices and two separate comment periods because the District initially proceeded with this reopening on two separate tracks. The District proposed to address EPA's October 8, 2004, letter in one reopening ("Revision 2") and to address the March 15, 2005 Order in a second reopening ("Revision 3"). The District is now consolidating the two reopenings and is finalizing Revision 2 and Revision 3 concurrently.

This is a submittal of a proposed permit to EPA for review. Enclosed for your review are copies of (i) the proposed permit incorporating the Revision 2 and Revision 3 changes; (ii) the draft permit evaluations/statements of basis for the Revision 2 and Revision 3 changes; and (iii) the draft responses to EPA's comments on Revisions 2 and 3 and to Our Children's Earth's comments on Revision 3. The responses to the refinery comments will be prepared within two months. (Please also note that an earlier draft of the District's responses to EPA's comments on Revision 2 was provided to EPA on May 23, 2006, in connection with the Chevron and ConocoPhillips permits. That draft had not been finalized with respect to two issues that did not concern Chevron and ConocoPhillips. The District is now providing a full explanation of its position on those issues in the current draft. The inconsistent language in the earlier draft transmitted on May 23, 2006, should be ignored.)

July 2006 proposal of Applications 12431 & 12599 to EPA

If you have any questions regarding this project, please call Dennis Jang, Senior Air Quality Engineer, at (415) 749-4707, fax (415) 749-5030.

Sincerely,

Signed by Jean Roggenkamp
Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

BFB:PJL:vch
Enclosures

H:\Engineering\TITLE V Permit Appls\1 ALL T5 Application Files here\B2758 -B2759\Reopen - Rev 2 & Rev 3 Combined\epa final proposal docs\Tesoro TV Transmittal Letters.DOC

District Response to EPA Comments on Draft Revision 2 Permits

1. Best modern practices for cooling towers

Chevron, ConocoPhillips, Shell, Tesoro, Valero

Comment: “As indicated in the statements of basis prepared for this revision, the District determined that frequent monitoring for potential heat exchanger leaks is the best modern practice for the operation of refinery heat exchangers. More specifically, the District concluded that daily visual inspections plus water sampling and analysis for indicators of hydrocarbon leaks once per shift constitutes best modern practices. While frequent monitoring for leaks should be considered an element of best modern practices for cooling towers, the proposed practices do not include a component that would limit or otherwise minimize the emissions from cooling towers with leaking heat exchangers. Under the District’s current proposal, the cooling towers could emit tons of VOC emissions per day with no consequences provided that the refineries continue to monitor for the presence of leaks.

“Regulation 1-207 defines best modern practices as, “The *minimization of emissions* from equipment and operations by the employment of modern *maintenance* and operating practices used by superior operators of like equipment and which may be reasonably applied under the circumstances.” It is unclear how the District’s proposed monitoring regimen would comport with this definition. EPA asks that the District discuss whether additional maintenance and operating practices should be employed to be consistent with the definition in Regulation 1-207.”

Response: The District’s determination of best modern practices for the purpose of the exemption in 8-2-114 is based upon a survey of all Bay Area refineries, and is a composite of the best techniques used at each of the refineries. Based on this survey, the District has determined that best modern practices consist of a number of elements, including the monitoring to ensure that a hydrocarbon leak into cooling water would be swiftly detected, maintenance to minimize the chances of equipment failure that could cause such a leak, and appropriate response actions in order to minimize emissions in the event that any leaks are discovered. All of these elements together make up the “best modern practices” as defined in Regulation 1-207, and the refineries must implement all elements for the cooling towers to be exempt from Regulation 8-2. The nature of any corrective action will depend upon the cause and the severity of the detected leak, and so cannot be specified in advance. However, the District agrees with EPA’s comment that the determination of best modern practices should include maintenance taking corrective action as appropriate. This will be expressly included in the District’s determination as reflected in the statements of bases for Revision 2.

Comment: “EPA also notes that Chapter 115 of the Texas Commission on Environmental Quality Rules contains regulatory requirements for cooling tower heat exchange systems. Like the District’s rule, the TCEQ rule contains certain exemptions. In particular, §115.768 states, “Any cooling tower heat exchange system in which each individual heat exchanger is operated with the minimum pressure on the cooling water side at least five pounds per square inch gauge (psig) greater than the maximum pressure on the process side, as demonstrated by continuous pressure monitoring and recording at all heat exchangers, is exempt from the requirements of this division...” The District should address whether operation in a similar manner could be considered the best modern practice for the minimization of VOC emissions from the refinery cooling towers.”

Response: A heat exchanger that has been designed with a pressure difference between the fluids on either side might be inherently less likely to see hydrocarbon leak into the water side. But the pressure differential of a heat exchanger is a matter of design, not operating practice. District Regulation 1-207 defines “Best Modern Practice” as those “maintenance and operating practices used by superior operators of like equipment . . . which may be reasonably applied under the circumstances.” Under this definition, the District must base its finding on maintenance and operating practices rather than equipment design specifications. Requiring conformance to a design criterion such as that used by Texas is therefore not authorized. It is also not necessary in this situation, because the District believes that regular monitoring and appropriate corrective action should be effective for preventing cooling tower leaks that may cause emissions.

2. Miscellaneous cooling tower comments

ConocoPhillips

- a. **Comment:** Page 6 of the statement of basis contains a typographical error regarding the cooling towers that require permits pursuant to BAAQMD Regulation 2-1-319. Specifically, it states, “...the District determined that three cooling towers (S452, S453, and S454) require District permits pursuant to BAAQMD Regulation 2-1-319 because they emit more than 5 tons particulate matter per year.” According to the data supplied by the District, the three sources with estimated emissions greater than 5 tpy are S453, S454, and S455.

Response: The SOB has been corrected.

- b. **Comment:** BAAQMD Regulation 6-311 appears to have been omitted from tables IV – CC and VII – CC.1 (for sources S452-S455, S457, S458, S500); and IV – CC and VII – CC.2 (for S456).

Response: BAAQMD Regulation 6-311 was omitted in error although compliance with the regulation was addressed in the evaluation. It will be added to Tables IV-CC.1, IV-CC.2 VII-CC.1 and VII-CC.2.

- c. **Comment:** Part 6 of Condition 22121 and Part 4 of Condition 22122 require that the owner/operator estimate the daily amount of VOC emitted if the monitoring, “indicates a hydrocarbon leak for longer than 4 weeks.” EPA recommends the District clarify that the 4 week time period is cumulative over the entire year.

Response: This comment concerns a condition in the existing operating permit for this facility previously issued by the District. This permit condition was incorporated into the Title V permit unmodified. Issues regarding the appropriateness of the condition are not within the scope of the Title V review process.

- d. **Comment:** In the event that leaks are detected for more than 4 weeks, Part 6 of Condition 22121 and Part 4 of Condition 22122 state, “The owner/operator shall sample the water in the inlet line and in the return line and determine the VOC content in each line using EPA laboratory method 8015. This analysis shall be performed each week until VOC levels return to **normal**.” It is not clear what “normal” VOC levels are in the cooling tower water. Please clarify the conditions.

Response: This comment concerns a condition in the existing operating permit for this facility previously issued by the District. This permit condition was incorporated into the Title V permit unmodified. Issues regarding the appropriateness of the condition are not within the scope of the Title V review process.

’Normal’ in this context means the range of VOC levels that are present when there are no leaks, and “return to normal” means that whatever VOCs were leaked into the cooling water are now gone. Normal VOC levels will vary from system to system, and may vary within a system over time.

- e. **Comment:** Part 6 of Condition 22121 states, “If a hydrocarbon leak occurs at Sources S452, S457, or S500, the facility shall submit an application for a District permit within 90 days of determining that the source is subject to District permits.” It is not clear why S458 was omitted from this requirement. Please include it in the condition or explain its absence.

Response: This error was fixed before the District’s operating permit was issued. The proposed Title V permit therefore contains the appropriate applicable requirement, which has been modified to include S458.

- f. Part 4 of Condition 22121 requires (non-federally enforceable) monthly sampling of the cooling water to determine the total dissolved solids content of each cooling tower. Part 7 (which is federally enforceable) in turn says that the owner/operator shall use the total dissolved solids monitoring to estimate the annual emissions from the cooling towers. It further says that estimate shall be

used to confirm that S452 has not emitted more than 5 tons of particulate matter per year.

- i. **Comment:** Please explain the District's rationale for making Part 4 non-federally enforceable. Note that the same requirement in Condition 22122 is federally enforceable.

Response: The permit condition was imposed in order to gather information for the District's emission inventory, and to determine emission fees. Because the monitoring was not imposed to assure compliance with a federally enforceable applicable requirement, the monitoring requirement is not federally enforceable.

- ii. **Comment:** Given that the requirements to monitor and estimate the emissions apply to Sources S457, S458, and S500, it is unclear why they were excluded from the requirement in Part 7 to confirm that the PM emissions are below 5 tpy.

Response: BAAQMD Condition 22121, part 7, requires that the owner/operator seek a permit for S452 if he or she determines that it emits more than 5 tpy particulate. S457, S458, and S500 were not included because a judgment was made that they were too small to ever emit more than 5 tpy particulate.

- iii. **Comment:** Consistent with Part 6 of the condition, please add a requirement to Part 7 for the owner/operator to submit an application for a permit if the emissions exceed 5 tpy. Also please make the same change to Part 5 of Condition 22122.

Response: This comment concerns a condition in the existing operating permit for this facility previously issued by the District. This permit condition was incorporated into the Title V permit unmodified. Issues regarding the appropriateness of the condition are not within the scope of the Title V review process.

- g. **Comment:** "The draft engineering evaluation for Application 10349 indicates that ConocoPhillips does not operate the S456 with what the District considers to be best modern practices. As a result, the District included the emission limit of Regulation 8-2-301 in the permit along with a requirement to take a sample of the water and perform a visual inspection. While this will indicate whether or not there is a leak, it will not clearly demonstrate compliance or non-compliance with the emission limit if a leak is present. Given the very small capacity of the cooling tower and the associated low likelihood of a violation, EPA generally agrees with the District's approach in this instance. However, EPA recommends that the District add a requirement to quantify the VOC content in the water and estimate the emissions if a leak is present for a certain

period of time. Such a requirement could, for instance, be coupled with Part 4 of Condition 22122.

Response: The operator is required to collect and report information from which VOC emissions may, if necessary, be quantified. A requirement to actually make the calculation would be redundant. Furthermore, this comment concerns a condition in the existing operating permit for this facility previously issued by the District. This permit condition was incorporated into the Title V permit unmodified. Issues regarding the appropriateness of the condition are not within the scope of the Title V review process.

3. MACT CC Applicability Determinations for Flares
Shell, Tesoro, and Valero

Comment: “The statements of basis for the draft permits for Chevron, ConocoPhillips, Shell, Tesoro, and Valero contain identical discussions explaining the District’s rationale for determining that all flares at these refineries are exempt from the requirements of MACT Subpart CC. This discussion of the applicability focuses on the exemption in 63.640(d)(5) for emission points routed to a fuel gas system, and on the fact that episodic and non-routine releases are not included in the definition of miscellaneous process vents and, as such, are not subject to Subpart CC.

“EPA continues to disagree with BAAQMD’s interpretation of the fuel gas system exemption, as it applies to flares. However, BAAQMD also puts forth an alternative rationale for why flares at these refineries are not subject to MACT Subpart CC. This rationale is that the flares at the Bay Area refineries are not within the definition of “miscellaneous process vent” because these flares only combust non-routine, episodic releases. In general, EPA agrees with this analysis. Such emissions are excluded from the definition of “miscellaneous process vent” per Section 63.641. Therefore, if a flare only combusts episodic, non-routine releases, it will never be used to control “miscellaneous process vents” and will never be subject to the requirements for flares in Section 63.644(a)(2).

“However, EPA notes that the monitoring data provided on BAAQMD’s website for some of these flares (notably Shell’s OPS Central Flare, Shell’s OPS Central Flexigas Flare, Tesoro’s Main Flare, and Valero’s North and South Flares) indicate that these flares may be combusting routinely released gases. For instance, Shell’s OPS Central Flare operated every day from January 1, 2004 to January 31, 2005 (the most recently available date of information on the website). The other flares mentioned have operated between 45 and 69 percent of the time during the same period. The data suggests that these flares may be used for more than episodic, non-routine releases. The applicability determinations in the statements of basis for at least these flares at Shell, Tesoro, and Valero would greatly benefit from a discussion of why the apparently routine use of these flares is still considered non-routine and episodic by the District in evaluating the applicability of Subpart CC.”

Response:¹ The District reviewed data from the flares identified in the comment and found no indication that they are being used on a routine basis. (See attached letters from Shell, Tesoro and Valero outlining the root causes of flaring events.) To the contrary, all of the evidence the District reviewed demonstrates that these flares are being used only during startups, shutdowns, and process upsets.

Furthermore, the District disagrees with the central premise of this comment: that the number of days on which a flare operated is an indicator of whether or not the flaring was routine for purposes of MACT Subpart CC. Whether the flaring is consistent with the exemption for miscellaneous process vents is a question of the root causes of the various flaring events, not the number of days on which they occurred. The District also notes that EPA has apparently misinterpreted the information from the District's website about the number of days on which the flares operated in concluding that flares were operated "between 45 and 69 percent of the time." The data may indicate that flaring events occurred during some portion of 45 to 69 percent of the days during the time period, but flaring events are usually relatively short-term and do not last for an entire day. Therefore, the data does not imply that the flares were operated for 45 to 69 percent of the total time period between January 1, 2004 and January 31, 2005.

Finally, it is worth noting that the District has recently adopted Regulation 12, Rule 12, which is intended to restrict flaring to episodic and non-routine events only. Regulation 12, Rule 12, requires Tesoro to notify the District of the root cause of its flaring events. The District will continue to evaluate Tesoro's flaring events on an ongoing basis and will take appropriate action if it ever appears that the flares are being used on a routine basis.

4. Hydrogen Plant Vents

Tesoro

Comment: "BAAQMD has added the limits of Regulation 8-2, along with periodic monitoring, to the tables of source-specific requirements for the hydrogen plants at Shell and Tesoro, consistent with EPA's comments of October 8, 2004. Because the changes to Shell's permit were made in the final permit issued by BAAQMD on December 16, 2004, this comment only addresses the changes proposed for the Tesoro permit. Condition 22070 of the draft permit for Tesoro requires an annual source test for Tesoro's hydrogen plant to demonstrate compliance with Regulation 8-2. The Statement of Basis should discuss why an annual source test is sufficient to assure compliance with the limits of Regulation 8-2 at hydrogen plant vents.

¹ The District's earlier draft response to EPA's Revision 2 comments transmitted on May 23, 2006 with the Chevron and ConocoPhillips included placeholder language on this issue, which did not involve Chevron or ConocoPhillips. In finalizing this draft response letter for Shell, Tesoro, and Valero, the District is providing a full explanation of its position on on this issue. The earlier placeholder language in the Chevron and ConocoPhillips draft should be ignored.

Response: BAAQMD Regulation 8-2-301 limits an organic emission containing more than 15 lbs/day and containing a concentration of more than 300 ppm total carbon on a dry basis. Tesoro has provided the following source test data from the two CO₂ vents. Note that TOC is total organic hydrocarbon.

CO2 Vent #1		CO2 Vent #2	
TOC (ppmvd)	TOC (lb/day as C1)	TOC (ppmvd)	TOC (lb/day as C1)
67	20.9	102	7.9
77	24.9	109	8.1
47	16.1	49	3.9
53	16.7	71	5.4
58	23.3	61	5.3
55	20.5	86	6.4
average = 59.5	average = 20.4	average = 79.7	average = 6.2

Average emissions of TOC from CO₂ Vent #1 are 20.4 lb/day but the concentration average is 59.5 ppmvd with the highest emission of 77 ppmvd, which is well below the limit of 300 ppmvd in Regulation 8-2-301. Average emissions of TOC from CO₂ Vent #2 are 6.2 lb/day, while the average concentration is only 79.7 ppmvd. The highest concentration from CO₂ Vent #2 is 109 ppmvd, which is less than half of the limit of 300 ppmvd of Regulation 8-2-301.

Based on the margin of compliance demonstrated by source tests on the hydrogen plant CO₂ vents, and the consistency with which source test results have always been well below the regulatory limits, annual source testing should be sufficient to demonstrate compliance with the limits in Regulation 8-2-301.

5. Electrostatic Precipitator Particulate Monitoring

Chevron, Shell, Tesoro, Valero

Chevron

Comment: “In attachment 2 of its October 8, 2004 comment letter, EPA stated:

The Chevron permit (see Table VII.C.2.1) requires four source tests per year and parameter monitoring for the applicable New Source Review limit. The District should either demonstrate that it has already conducted a review that shows that the NSR monitoring in the Chevron permit is adequate periodic monitoring for the SIP, or conduct a similar monitoring review for the Chevron permit.

Table VII.C.2.1 in the draft permit for S-4285, Fluid Catalytic Cracking Unit lists Condition #11066 Part 7A as federally enforceable monitoring for SIP rules 6-310 and 6-311. Condition #11066 Part 7A requires parametric monitoring to assure compliance with a limit of 21 lb/hr of Total Suspended Particulate pursuant to BACT.

SIP-approved BAAQMD Regulation 6-310 limits particulate emissions to 0.15 grains per dscf of exhaust gas volume. BAAQMD Regulation 6-311 states that no person shall discharge particulate matter into the atmosphere at a rate in excess of that specified in Table 1 of the Rule for the corresponding process weight rate.

Comment: In reviewing the statement of basis accompanying the draft revised permit for Chevron, we were unable to find a discussion showing that the NSR monitoring is adequate periodic monitoring for SIP Regulation 6-310 and 6-311, nor were we able to find a separate discussion of periodic monitoring pursuant to these rules. Because the limits of 6-310 and 6-311 are different than the BACT limit, the permit record should demonstrate how the monitoring imposed pursuant to the BACT limit also assures compliance with the SIP limits.

Response: The limits of 6-310 and 6-311 are different from the BACT limit in that they are less stringent than the BACT limit. Compliance with the BACT limit should entail compliance with 6-310 and 6-311.

Shell, Tesoro, & Valero

Comment: “EPA appreciates the District’s intent to add periodic monitoring to the permit for the ESPs to assure compliance with SIP Regulation 6 particulate matter limits. EPA understands that the District has determined that the monitoring required for compliance with MACT Subpart UUU is an appropriate means to assure compliance with Regulation 6 for these sources.

“The District has added permit Condition #22165 (Shell), #22150 (Tesoro), and #22156 (Valero) to the permits for sources controlled by an ESP. These conditions require that the refinery operators begin conducting continuous monitoring of ESP operating parameters “no later than the ESP monitoring commencement date required under MACT Subpart UUU.” The conditions also require operators to establish a correlation between “selected parameters” and particulate mass emissions by the deadline set forth in MACT Subpart UUU, and to establish a range of compliance. Finally, the conditions state that each time the parametric value exceeds the range established for compliance determination, operators must conduct a source test within 45 days to determine compliance with Regulation 6-310 and, for Tesoro, 6-311. EPA has the following comments on the draft revisions with respect to ESP monitoring:

a. Parameters

Comment: “The specific parameters to be monitored should be chosen and included in the permit prior to issuance. The compliance deadline for MACT Subpart UUU has passed; therefore, the refineries should have already determined how they will comply with the standard. If any refineries have requested an extension, that information could be included in the statement of basis.”

Response: Subsequent to the publication of the Draft permits, the District has contacted the affected refineries about their choice of monitoring

approach. All of the affected refineries have decided to monitor opacity. The permit conditions have been updated to require opacity monitoring.

All of the refineries have conducted the initial compliance demonstration required by the permit condition. We are in the process of determining appropriate compliance ranges for each of the sources.

b. Dates

Comment: The permit should list the specific dates by when the refineries must establish the correlation and begin parametric monitoring.

Response: The District incorporated the compliance deadline of the MACT standard in order to avoid duplication and conflict. Now that the MACT standard's compliance deadline has passed, the permit conditions have been updated to require immediate compliance.

c. Correlation

Comment: The permits currently do not make clear that a correlation must be established linking the chosen operating parameters to the limits of Regulation 6. Part 2 of the conditions state:

The owner/operator shall conduct an initial compliance demonstration to establish a correlation between selected parameters and particulate mass emission by the deadline set forth in 40 CFR Part 63, Subpart UUU.

This should be rephrased to state "...to establish a correlation between selected parameters and the particulate mass emission limits of Regulations 6-310 and 6-311."

Response: The District has not determined that the requested correlation is feasible. Opacity is determined by multiple variables. As indicators of proper ESP operation, voltage and current are parameters relevant to assuring compliance. However, it is the engineering judgment of the District that voltage and current do not predict opacity with a reasonable degree of accuracy. A June 30, 2005, letter from Valero refinery contains data analysis consistent with this finding. Furthermore, the requested correlation is not necessary in order to assure compliance with the standard. The District considers the more general formulation of the condition to be the most appropriate language at this time.

d. Federal Enforceability

Comment: The requirements of Condition 22165 (Shell) and 22156 (Valero) are included as non-federally enforceable conditions in tables IV-BK and IV-A3, and as federally enforceable monitoring requirements pursuant to SIP Regulation 6-310 in tables VII-BA (Shell) and VII-A3

(Valero). EPA believes that Conditions 22165 and 22156 should be denoted as federally enforceable in tables IV-BK and IV-A3.

Response: The conditions will be denoted as federally enforceable in the proposed permit for the reasons given in the comment.

Comment: The requirements of Condition 22150 (Tesoro) in tables IV-K, IV-M, IV-Y, IV-Z, and IV-AD are lacking enforceability determinations. These tables should indicate that the requirements of Condition 22150 are federally enforceable, as discussed above for Shell and Valero.

Response: The condition will be denoted as federally enforceable in the proposed permit for the reasons given in the comment

e. Regulation 6-311

Comment: Regulation 6-311 should be added to the Shell and Valero permits as a source-specific applicable requirement in tables IV-BK and IV-A3, with periodic monitoring added to tables VII-BA and VII-A3. Condition 22150 in Tesoro's permit applies to Regulation 6-310 and 6-311 (see Condition 22150, Part 1). Additionally, 6-311 is listed as a source-specific applicable requirement in tables IV-K, IV-M, IV-Y, IV-Z, and IV-AD of the Tesoro permit. However, the Tesoro permit omits the monitoring requirements for Regulation 6-311 in Section VII, tables VII-M, VII-V, VII-W, and VII-AB. Monitoring for Regulation 6-311 should be added to these tables.

Response: Regulation 6-311 applies to "general operations," which excludes heat transfer operations (*i.e.*, the CO Boilers in Shell Table IV-BA, Valero Table IV-A3, and Tesoro Tables IV-Y, IV-Z, and IV-AD). Regulation 6-311 is not an applicable requirement for these boilers, and so there is no need for monitoring for compliance with 6-311 at the Electrostatic Precipitators on these sources.

When the District initially proposed Revision 2, Regulation 6-311 was inadvertently included in certain tables and permit conditions in the proposed Tesoro permit. As explained above, Tesoro's CO boilers (and the ESPs that abate the emissions from them) are exempt from Regulation 6-311 because they are heat transfer operations. As for Tesoro's FCCU (S-802) and Fluid Coker (S-806), exhaust gases from these units are vented to CO boilers and incinerated there before being exhausted through an ESP to the atmosphere. Because the emissions are burned in and ultimately result from a heat transfer operation, these emissions are similarly not subject to Regulation 6-311. References to Regulation 6-311 are therefore being removed for all of these sources.²

² The District's earlier draft response to EPA's Revision 2 comments transmitted on May 23, 2006 with the Chevron and ConocoPhillips included placeholder language on this issue of monitoring for Regulation 6-

f. Exceedance of Compliance Range

Comment: Part 4 of conditions 22165, 22150, and 22156 requires that the owner/operator conduct a source test within 45 days of detecting an exceedance of the established range of compliance. Please explain the District's rationale for not treating an exceedance of the established compliance range as a violation of the particulate limits of Regulation 6 as soon as that exceedance is detected.

Response: Exceedance of the established compliance range is not, standing alone, sufficient evidence to determine that a violation of Regulation 6 has occurred. An exceedance of the compliance range is an indication of a potential violation of Regulation 6's particulate emissions requirements, but the correlation between opacity and particulate emissions is not strong enough to meet the District's burden to demonstrate that a violation has occurred.

311 at these sources. (See District May 23, 2006 letter, Attachment A.) That placeholder language erroneously implied that Regulation 6-311 was an applicable requirement. As explained above, that is not the case. In finalizing this response letter for Tesoro, the District is correcting this oversight. The earlier placeholder language in the Chevron and ConocoPhillips letters should be ignored.

District Response to EPA Comments on Draft Revision 3 Permits

1. FCCU Mass Emission and Feed Rate Limits

Chevron

Comment: “In EPA’s March 15, 2005 petition order regarding the title V permit for Chevron, EPA directed the District to either (i) amend the Statement of Basis to explain why BACT is the basis for the limits, (ii) revise the permit to provide an acceptable basis for the limits, (iii) revise the limits to more accurately reflect BACT, or (iv) remove the limits from the permit. See *In the Matter of Chevron Products Company*, Petition Number IX-2004-08, at 11-13.

“EPA does not believe the District has adequately responded to the order regarding the basis for the feed rate and mass emission limits. First, it appears that the District has not proposed to explain, revise, or remove the feed rate limits in Condition 11066 part 1, which was included in EPA’s objection. Second, it is not apparent why the new proposed basis for the mass emission limits is appropriate. As EPA noted in the petition order, the actual basis for the feed rate and mass emission limits appears to be the now defunct District Rule 2-2-113, which provided an exemption from the NSR requirement to obtain offsets. Thus, it remains unclear how “offsets” could be the basis for limits that appear to have been set to avoid obtaining offsets.

The District should (i) address the feed rate limits in Condition 11066 part 1, thoroughly explaining any decision, and (ii) either explain why “offsets” is the appropriate basis for the mass emission limits, provide another acceptable basis for these limits, or remove these limits from the permit.”

Response: (i) The applicable requirements (the feed rate limits in Condition 11066 part 1) were imposed in a District permit action pursuant to the District’s New Source Review rule (Application 11066, issued 8/1/92). This applicable requirement is accurately implemented in the Title V permit. The original permit condition is the origin of and authority for the term in the Title V permit.

EPA’s request for additional information about this condition appears to be focused not on whether the existing applicable requirement is accurately codified in the permit, but rather on whether an NSR permit issued in 1992 was correct. The District gives substantial weight to EPA comments on NSR determinations when those comments are timely made. However, the incorporation of NSR permit conditions into a Title V permit is not an opportunity to reopen a determination made 15 years earlier. A copy of the engineering evaluation for the permit action that established this applicable requirement is attached to this letter.

(ii) During preparation of the initial Title V permits, the District took the opportunity to review its existing permit conditions. A basis code was added to each part of each permit condition. This basis code provides some information about the underlying regulation or body of regulations that the condition is intended to implement. A given permit condition may help implement several regulations. This code is not a substantive part of the condition, and has no aspect of enforceability; it is explanatory. The original permit condition is the origin of and authority for the term in the Title V permit.

The District uses the code “offsets” to denote a permit condition that is imposed in order to ensure that the assumptions made to calculate emissions during permit review remain valid. In this case, the permit condition was imposed, in part, to ensure that emissions did not increase, so that offsets would not be required for the project.

2. Periodic Monitoring for Asphalt Operations

Chevron

Comment: “In EPA’s March 15, 2005 petition order regarding the title V permit for Chevron, EPA directed BAAQMD to include additional analysis in the Statement of Basis supporting its decision to not impose periodic monitoring for Regulation 6-310 for asphalt operations. See *In the Matter of Chevron Products Company*, Petition Number IX-2004-08, at 21.

“In the Statement of Basis for the draft Chevron permit, BAAQMD states that the correct basis for its determination that periodic monitoring is not necessary to assure compliance with Regulation 6-310 is that “the control technology being used (mist eliminators) is expected to keep emissions below the standard with a wide margin of compliance.” See Revision 3.0 Statement of Basis for Chevron at 7.

“We believe it would be appropriate to provide calculations demonstrating the ability of the mist eliminators to keep emissions below the limits required by Regulation 6-310.”

Response: The district conducted a source test (ST-15) on A-37 and the average of the three runs was 0.021 gr/dscf, which is significantly less than 0.15 gr/dscf. Based on this source test result the district believes that no additional monitoring is warranted.

3. Federal Enforceability of Regulation 8-28-304

Chevron

Comment: “In EPA’s March 15, 2005 petition order regarding the title V permit for Chevron, EPA directed BAAQMD to correct the federal enforceability designation for the version of Regulation 8-28-304 recently adopted into the State Implementation Plan (SIP). See *In the Matter of Chevron Products Company*, Petition Number IX-2004-08, at 28.

“In the Statement of Basis, BAAQMD states: “A correction...is proposed to show that Regulation 8-28-304 is federally enforceable.” However, both the “Y” and “N” in table IV.H.2.1 appear as text with strikethrough, indicating that both notations will be deleted in the final permit. BAAQMD should correct this mistake.”

Response: The District intended to indicate that 8-28-304 is federally enforceable. That typographical error will be corrected in the proposed permit.

4. NSPS Subpart J - Flares

Chevron and Valero

Comment: “In EPA’s March 15, 2005 petition orders regarding the title V permits for Chevron and Valero, EPA directed BAAQMD to reopen the permits for Chevron and Valero to either include monitoring under section 60.105(a)(3) or (4), or to include other monitoring to assure compliance with NSPS Subpart J, for example, by including federally enforceable monitoring to show compliance with an existing permit condition prohibiting the use of flares for routine purposes. See In the Matter of Chevron Products Company, Petition Number IX-2004-08, at 30-31 and In the Matter of Valero Refining Co., Petition Number IX-2005-07, at 29-30.

“Additionally, on March 15, 2005, EPA issued a memorandum entitled “Conditions in Title V Permits to Verify Compliance with NSPS, Subpart J” intended to provide national guidance to permitting authorities on the monitoring required by NSPS Subpart J for flares at refineries. That memorandum created some confusion within the regulated community and was withdrawn on May 16, 2005.

“Withdrawal of the memo issued on March 15, 2005 does not represent a change in EPA’s position regarding monitoring required for affected flares at Chevron and Valero. BAAQMD’s revised draft permits continue to lack the monitoring required by NSPS Subpart J. The BAAQMD needs to address this issue and should work with EPA to ensure that the permits for Chevron and Valero include adequate monitoring for flares subject to NSPS Subpart J in compliance with EPA's orders.”

Response: The District intends to continue to work with EPA to address this issue.

It should be noted that the District has determined, based on available evidence, that the sources in question are not subject to 40 CFR 60.105(a)(3) or (4). Specifically, because there are no known incidents of flaring other than to combust process upset gases or gases released due to malfunction, the flares have been exempt per section 104(a)(1). Contrary to what the withdrawn March 15, 2005, guidance implied, Title V does not provide authority to establish monitoring for requirements that are not applicable. The above comment from EPA either additionally or alternatively asserts that the H₂S standard of Subpart J is in fact applicable, presumably on the theory that it applies to flares physically configured to burn routine gases whether they do so or not. To the District’s knowledge, all refinery flares are physically configured such that they are capable of burning routine gases, and were so configured when Subpart J was promulgated in the early 1970’s. The District has assumed that if EPA’s interpretation of Subpart J had been that the mere physical configuration of a flare allowing it to burn routine gases renders it subject to Subpart J, there would be a historical record of such applicability determinations. Regardless of past practice, if EPA takes this position now, the District will work with EPA to bring about compliance with Subpart J, including monitoring required by the regulation, at flares that were historically considered exempt.

As EPA is aware, the District has adopted two local rules that specifically address the emissions from refinery flares. Regulation 12: Miscellaneous Standards of Performance, Rule 11: Flare Monitoring at Petroleum Refineries, was adopted on June 4, 2003, and requires monitoring, recordkeeping and reporting of flare emissions. Regulation 12: Miscellaneous Standards of Performance, Rule 12: Flares at Petroleum Refineries, was adopted on July 20, 2005, and requires the use of all feasible prevention measures to minimize the frequency and magnitude of flaring. Regulation 12, Rule 12 also has the

requirement to report the results of an investigation to determine primary cause and contributing factors for flaring events (i.e., causal analysis). The requirements for detailed monitoring, recordkeeping, reporting, and causal analysis of flaring events provides the District, EPA, and the public with the useful information to verify whether flaring events qualify for the exemption from Subpart J.

5. Regulation 8-2 – Flares

Chevron and ConocoPhillips

Comment: “In EPA’s March 15, 2005 petition orders regarding the title V permits for Chevron and ConocoPhillips, EPA ordered the District to conduct a flare design review and reopen the permits to either include the results in the Statement of Basis or, if needed, to include the requirements of Regulation 8-2 in the permit. It also ordered the District to include federally enforceable monitoring for the requirements of Conditions 18255 (ConocoPhillips) and 18656 (Chevron).

“The District must conduct a design review and adding federally enforceable monitoring to Conditions 18656 and 18255 (or otherwise demonstrating that the flares will achieve the 90% control efficiency), unless BAAQMD can adequately demonstrate that Regulation 8-2 was not intended to apply to refinery flares. In the long term, an alternate approach might be for BAAQMD to submit the recent revisions to Regulation 8-2 to EPA for approval into the SIP.”

Response: The District will not revise the proposed permit to include the requested monitoring because Regulation 8-2 is not applicable to refinery flares. The basis for that applicability determination is contained in the District’s statement of basis for the proposed permit and is briefly summarized below. Because 8-2 does not apply to flares, the District has no authority under state or federal law to impose monitoring for compliance with this rule; therefore, the District will delete those provisions of Condition 18255 (ConocoPhillips) and Condition 18656 (Chevron) erroneously proposed in response to EPA March 15, 2005 petition order and will not compound the error by adding additional related monitoring requirements as suggested in this comment.

The District does intend to submit the recent revisions to Regulation 8-2 to EPA for approval into the SIP. It is the District’s position that, with regard to the applicability of 8-2 to flares, the revised regulation does not constitute a substantive change to the regulation, but instead clarifies the existing requirement. The clarification is consistent with the District’s longstanding interpretation and application of this rule. We believe EPA is bound by the District’s purpose and intention in adopting the rule, and that the rule as incorporated in the SIP must be implemented consistent with that purpose and intention.

Additionally, the District does not feel that the alternative method of demonstrating the non-applicability of 8-2 (performing a design review to demonstrate that the exemption in 8-1-110.3 applies) would be a good use of resources, for the following reasons:

1. Regulation 8-2 already does not apply to flares.
2. Even if it applied, 8-2 is not enforceable for flares (because the method of determining compliance in 8-2-601 cannot be utilized for flares)

3. The role that 8-2 plays in the District's regulatory scheme (to provide a driving force for adoption of category-specific rules) is moot for flares, because the District has adopted rules specific to flares.

6. Streamlining Determination for Recordkeeping Requirements for Tanks *Chevron*

Comment: "In EPA's March 15, 2005 petition order regarding the title V permit for Chevron, EPA directed BAAQMD to provide a more specific reference for the MACT requirement into which SIP tank recordkeeping requirements were subsumed in permit shield tables IX-B-1, -B-2, and -B-3 for tanks. *See In the Matter of Chevron Products Company*, Petition Number IX-2004-08, at 42.

"BAAQMD is proposing to revise these permit shield tables by citing specifically to the recordkeeping requirements of 40 CFR §63.654. However, given that 40 CFR §63.654 contains dozens of recordkeeping requirements, a broad citation to 40 CFR §63.654 is inadequate. Additionally, it does not appear that 40 CFR §63.654 and the subsumed SIP rules require the same type of records to be kept.

"BAAQMD must provide a streamlining analysis that demonstrates which specific subsections of 40 CFR §63.654 contain the subsumed SIP recordkeeping requirements. If the District is not able to make an adequate streamlining demonstration, the permit shields should be removed from Chevron's title V permit."

Response: The requested streamlining analysis has been added to the Statement of Basis for the proposed permit.

7. Periodic Monitoring Determinations for FCCU Catalyst Hoppers *Tesoro*

Comment: "BAAQMD has proposed to add monthly visible emissions monitoring to assure compliance with regulations 6-301 and 6-31 for the FCCU catalyst hoppers.

"BAAQMD should explain how compliance with Regulation 6-310 will be assured by monitoring visible emissions. Additionally, while tables IV-D and VII-D indicate that monitoring will be required for these sources, table VII-C indicates that no monitoring will be required. BAAQMD should correct this discrepancy."

Response: Monitoring is being added to comply with 2-6-509.2.2, which corresponds to 40 C.F.R. §70.6(a)(3)(i)(B). The specific requirement to be met is not that monitoring "assure compliance," but rather that it be sufficient to "yield reliable data from the relevant time periods that is representative of the source's compliance with the permit." The catalyst fines hoppers are abated by both a cyclone and baghouse. In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", for both opacity limits and grain loading from baghouses, the recommended monitoring is based on the amount of potential uncontrolled particulate matter emissions. For uncontrolled emissions between 300 and 1,300 tpy, the recommended monitoring frequency is once a month. In the Title V permit for Tesoro, the annual grandfathered throughput limits of S97, S98, and S99 are 14,600

tpy, 5,475 tpy, and 9,125 tpy, respectively. Uncontrolled emissions from the catalyst hoppers are only a small fraction of the total throughputs. At these throughputs the emissions of uncontrolled particulate are expected to be well below 1,300 tpy. Monthly visible emissions monitoring shall ensure that the baghouse is in good operating condition and that emissions meet the limit in Regulation 6-310. The EPA, CAPCOA and ARB agreement also requires that the baghouse be inspected annually. This requirement will be added to Condition #19528 as part 13A.

The monitoring requirements for Regulations 6-301 and 6-310 will be added to Table VII – C for S97 and S98. Table VII – C was originally overlooked in the original proposed version of Revision 3.0 (July, 2005) and S97 and S98 were added to Table VII – D for S99. Because Table VII – C will be corrected and Regulations 6-301 and 6-310 will be added, S97 and S98 will be deleted from Table VII - D.

In Condition #19528, part 13 and in Table II – D, the future effective date of 4/11/04 has passed and will be removed.

8. Periodic Monitoring Determinations for Cooling Towers

Tesoro

Comment: “EPA’s March 15, 2005 petition orders regarding the title V permits for Tesoro and Valero directed BAAQMD to include periodic monitoring that yields reliable data representative of the refineries’ compliance with Regulation 6-311. *See In the Matter of Tesoro Refining and Marketing Co.*, Petition Number IX-2004-06, at 35, and *In the Matter of Valero Refining Co.*, Petition Number IX-2005-07, at 36.

“The Statement of Basis for the current revision, the District recalculated the emissions using a procedure outlined in AP-42 and found that the estimated emissions are not above the 50% threshold for any of the cooling towers. As a result, the District is not proposing any monitoring at this time. However, the District’s current draft Statement of Basis does not explain the basis for its use of the specific TDS concentration values and why they yield conservative estimates of the emissions.

“A review of historical TDS data for each cooling tower could be helpful in this regard. EPA notes that the District did review TDS data from a two year period for the Valero cooling tower but the same review was apparently not conducted for the 13 Tesoro cooling towers. The District should conduct a similar analysis for Tesoro. Due to the variability of TDS concentrations over time, EPA also suggests that the District review data from a longer period of time to better understand the degree of variability at both facilities.”

Response: The TDS concentrations used in the PM10 calculations were provided by Tesoro. They are the average TDS concentrations in the circulating water at the cooling towers. AP-42 outlines a procedure to calculate a conservative PM10 emission factor, which is excerpted below.

“A conservatively high PM10 emission factor can be obtained by (a) multiplying the total liquid drift factor by the total dissolved solids (TDS) fraction in the

circulating water and (b) assuming that, once the water evaporates, all remaining solid particles are within the PM10 size range.”

An even more conservative PM10 emission may be calculated by using the highest TDS concentration obtained versus the average TDS concentration. For S975, the highest TDS concentration obtained since 2002 was 2485 ppm (46% greater than average). For S983, the highest TDS concentration obtained was 3084 ppm (46% greater than average). When Tesoro sees the conductivity and therefore TDS concentration increasing in the circulating water, more makeup or fresh water is added and the concentrated blowdown is increased. This procedure prevents TDS concentrations from large variations and increases. Historical data has shown that TDS concentrations have never increased by 100%. Good operating procedures will prevent TDS concentrations from ever approaching a 100% increase from the average. For this demonstration, to obtain the most conservative PM10 emissions from the cooling towers, the average measured TDS concentrations have been DOUBLED The table below demonstrates that emissions will be well below the limit of 40 lb/hr and periodic monitoring to assure compliance with Regulation 6-311 is not justified.

Source	Cooling Tower Description	Circulation (gpm)	Drift (lb/hr)	TDS (ppm)	PM10 (lb/hr)
846	3 HDS	12,125	1214	1,625	1.97
975	4 Gas Plant	69,000	6,906	3,396	23.45
976	5 Gas Plant	75,000	7,506	775	5.82
977	3 Crude	22,000	2,202	1,625	3.58
978	FWS	4,100	410	1,566	0.64
979	2 Feed Prep	15,000	1502	3,275	4.92
980	Isocracker	12,000	1201	1,425	1.71
981	1 HDS	14,000	1,401	1525	2.14
982	2 HDS	18,000	1,801	4200	7.56
983	Alky/2 Ref	34,900	3,493	1500	5.24
985	1 Gas/MTBE	16,000	1,601	1525	2.44
987	50 Crude	15,000	1,501	925	1.39
988	3 Reformer	10,000	1,001	1650	1.65

The District has also revised the Statement of Basis to clarify that water flow rate is the process weight basis for determining allowable emissions for a cooling tower subject to Regulation 6-311.