December 16, 2004

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



Subject: Comments on reopening of Title V permits for Facilities
A0011, Shell Martinez Refinery
A0016, ConocoPhillips Refinery

Dear Ms. Jordan:

Thank you for your comments on the above reopening of a Title V permit, dated October 31, 2003.

The District has made some changes in response to comments. The details are in the District response, contained in Attachment A. The response refers to your comments by number. A copy of your letter that numbers the comments is enclosed in Attachment B.

EPA submitted additional comments on these permits in the letter of April 14 concerning five Bay Area refineries. A separate letter will address those comments.

The District has decided to issue the permits. The final permits and the final statements of basis/permit evaluations will be sent separately. All final responses to comments will be transmitted to you with the response to your comments on all refineries. If you have any questions about this action, please call Steve Hill, Manager, Permit Evaluation, at (415) 749-4673.

Sincerely,

Jack P. Broadbent,
Executive Officer/
Air Pollution Control Officer

Enclosure

SAH:myl

Cc: Gerardo C. Rios, USEPA Region IX

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Attachment A

The District has prepared the following responses to the comments contained in your letter. This letter was submitted after the close of EPA's 45-day review period for the initial permits, and was therefore not addressed in the initial issuance. The District is handling these comments during the public comment period for the Revision 1 Reopening.

Each comment consists of 1) a suggestion for action or change, and 2) the argument, if any, supporting the suggestion.

The comments identified by the District have been numbered. Refer to the attached copy of the original comment letter for the comment numbers.

| | **Response** |
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| 1. | The requirement to vent these sources to a baghouse is designed to help assure compliance with the opacity, particulate fallout, grain-loading, and process-weight curve requirements of District Regulation 6. If the baghouses are operating properly, compliance with these standards should be achieved. However, an attempt to correlate baghouse pressures to compliance with each of these standards would be subject to a high degree of uncertainty. Readings outside the normal range are an indication of baghouse failure, which allows for prompt corrective action. The gauges are thus helpful in maintaining compliance even though in most situations they will not be directly useful in determining compliance. |
| 2. | Visible emissions from the silos would be an indication of bag failure and would be expected to be reflected as an abnormal differential pressure reading. |
| 3. | S3 and S7 are permitted to use only naphtha as liquid fuel. Condition 1694 has been changed to make this explicit in Parts A.2b and A.2c. The facility would need to seek authorization from the District to burn fuel oil. |
| 4. | The original comment was updated in the 4/14/04 letter to ask why the capacity of S300 was increased from 56,000 to 81,000. As discussed in the SOB, the capacity for S300 has increased because the unit was modified as approved in Application 5814. |
| 5. | This comment regarding S8 and S14 was deleted in the updated letter of 4/14/04. |
| 6. | The visible monitoring for tube cleaning at S3 and S7 has been added to Tables VII-A.2 and VII-A.5, and the stipulation that inspections only occur during daylight hours has been removed from Condition 1694, Part A.2b. |
| 7. | This comment regarding S3 and S7 was deleted in the updated letter of 4/14/04. |
| 8. | The argument supporting a suggested change is incorrect as a matter of law. No change has been made to the permit. Permit conditions are not automatically federally enforceable simply because they are contained in permits issued pursuant to a federally-approved NSR permit program. The District imposes permit conditions to enforce both federal and state-only requirements. Each of the permit conditions mentioned in the comment was imposed to address non-federal applicable requirements, and each is therefore correctly labeled non-federally-enforceable. The comment does not assert that these particular permit conditions implement federal requirements.<br><br>The permit condition at issue contains a list of furnaces and nominal firing rates. The condition limits the furnaces to the listed firing rates. The authority to impose these limits comes from non-SIP District Regulation 2-1-234.3. Violation of the limit is therefore not a violation of any federal requirement. Because the condition was imposed under an authority not included in the District's SIP, the condition is not federally enforceable. |
| 9. | The firing rate at S10 was changed to 223 MM BTU/hr following an audit of refinery heater firing rates that was related to the implementation of the facility-wide NOx emission limit in Regulation 9, Rule 10. The firing rate has been set at 223 MM BTU/hr since the year 2000 permit renewal. No evidence of heater modification was found, and the source of the original firing rate is unknown and assumed to be erroneous. |

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| 10. | The federal enforceability status for the CEM Policy and Procedures Manual has been corrected from "no" to "yes" in Tables IV-A.6, IV-A.8, IV-A.11, IV-A.12, IV-A.13, IV-A.14, IV-A.15, IV-A.16, IV-A.17, IV-A.25, IV-A.26, IV-A.31, IV-A.32, IV-A.33, IV-A.34, IV-Q.1 and IV-Q.2 of the ConocoPhillips permit. |
| 11. | ConocoPhillips submitted application 10349 to permit these cooling towers. The resulting applicable requirements will be added to the permit in Revision 2. In the interim, the cooling towers are subject to all applicable requirements, including 8-2-301 and applicable federal standards. |
| 12. | Although the cooling tower calculations indicated that towers were identified by source number, for ConocoPhillips these towers are identified by the ConocoPhillips ID number of the process unit with which they are associated. These numbers are not source numbers and source numbers have not been assigned since ConocoPhillips has not yet submitted an application for these towers. Thus, the permit is correct. |
| 12a. | See Item 12. |
| 13. | This comment regarding S228 was deleted in the updated letter of 4/14/04. |
| 14. | This comment regarding S230 was deleted in the updated letter of 4/14/04. |
| 15. | See Item 12. |
| 16. | See Item 12. |
| 17. | This comment regarding S240 was deleted in the updated letter of 4/14/04. |
| 18. | ConocoPhillips does not have process streams containing 10% or more of any VHAP with a promulgated equipment leak standard, including benzene, and therefore none of the provisions of NESHAP Subpart V are applicable. |
| 19. | S1007 has been added to Table IV-AA. |
| 20. | S388 has been added to Table IV-AA. |
| 21. | S324 has been added to Table IV-AB. |
| 22. | Citations to 60.482-2(c) and 60.482-7(d) have been added to Table IV-AB. |
| 23. | Citation to 63.648(d) has been added to Table IV-AB. |
| 24. | Obsolete references to SIP 8-18 have been deleted and non-SIP citations have been changed to "federally enforceable" |
| 25. | Regulation 8, Rule 10 was revised in January 2004. This facility is subject to the requirements of this rule, including its new monitoring provisions. The relevant monitoring requirement, 8-10-401, has been included in Table VII and has been marked as federally enforceable. |
| 26. | Since the current version of Rule 8-28 has been adopted into the SIP, references to a separate, SIP-version of this rule have been deleted. |
| 27. | Whether and what type of monitoring is appropriate will depend in large part on the margin of compliance. The comment does not offer insight into this, and the District believes some investigation is appropriate before a determination is made. Condition 6671 has been amended to contain an annual source test requirement. Results of source tests will inform a decision as to whether parameter monitoring is appropriate. |
| 28. | Flow rate through a vapor recovery system is limited by the throughput at the marine terminal. It is unnecessary to measure vapor flow rate. Furthermore, EPA's technical position on this issue, as demonstrated by requirements it has incorporated into a regulation, is that once a performance test indicates that the afterburner is sufficiently engineered (in terms of excess air flow, residence time and mixing) to achieve the required emissions limit, then continuous monitoring of combustion zone temperature will provide adequate assurance of continuous compliance. |
| 29. | The permit shield has been removed. |
| 30. | This comment regarding 60.113b(a)(2) was deleted in the updated letter of 4/14/04. |
| 31. | The tanks in Tables VII-B11, VII-B12 and VII-B15 are vented to the facility fuel gas system. The applicable requirements are that vent gas system must be gas-tight and the "emission control system" must provide at least 95% abatement efficiency. Neither of these standards has a specified monitoring frequency in the rule. The purpose of the gas-tight standard for tanks with emission control systems is to provide a basis for the District to require that leaks be corrected, and not a concern that these systems are prone to leak. Fittings that might have a tendency to leak are already subject to inspection under Regulation 8-18. The District's experience with these systems is that leaks at other points |

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| | are too infrequent to justify imposition of scheduled inspections.<br><br>Because the emission control system consists of combustion of the tank vent gas in the facility fuel gas system (after blending and treatment) direct measurement of the abatement efficiency for vent gases is not possible, although it may reasonably be assumed to be much higher than 95%. Thus, monitoring of the abatement efficiency is neither possible nor justified.<br><br>The tanks in Table VII-B25 are LPG spheres that must be gas-tight. The gas-tight standard does not have a specified monitoring frequency in the rule. The purpose of the gas-tight standard for pressurized tanks is to provide a basis for the District to require that leaks be corrected, and not a concern that these systems are prone to leak. Because leaks are expected to be very infrequent, scheduled monitoring is not justified. |
| 32. | Crude oil is not a low vapor pressure material, and is therefore not a good example. The low vapor pressure exemption is an applicability criterion, not an applicable requirement. It is therefore not subject to periodic monitoring. A facility is subject to enforcement if it incorrectly claims an exemption, and so the refinery acts at its own risk if it fails to test for vapor pressure when it changes to a material for which reliance on the exemption is questionable. |
| 33. | This comment regarding Regulation 9-1-313.2 was deleted in the updated letter of 4/14/04. |
| 34. | This comment regarding the SOB was deleted in the updated letter of 4/14/04. |
| 35. | This comment regarding the SOB was deleted in the updated letter of 4/14/04. |
| 36. | The applicable requirements are listed in Table IV, not Table II. We plan to revise this format in a future revision. In the interim, the District believes the permit is sufficiently clear. |
| 37. | The monitoring for control devices is source specific. Therefore, the monitoring to show compliance with the efficiency of A56 is addressed in Table VII-L for S532 (Tanks 532). Per the definition in 40 CFR 61.341, no monitoring is required for this source because this tank vents to a fuel gas system (A56). Additionally, revisions to Part 61 Subpart FF dated November 12, 2002 exempt the gaseous streams from these units that are routed to fuel gas systems from being subject to Subpart FF. Per Section 61.340(d), no testing, monitoring, recordkeeping or reporting is required under this subpart for any gaseous stream from a waste management unit, treatment process or wastewater treatment unit routed to a fuel gas system. Note also that there is a mistake in one line of Table VII-L that currently reads Subpart FF 63.649(a)(2)(ii). This should have been Subpart FF 61.349(a)(2)(ii). Monitoring should be "None" and Section 61.340(d) should be cited. The citation of 61.340(d) and the correction to the mistake has been made in the permit. |
| 38. | The applicable requirement is listed in Table IV. Note that the gases from the LOP vapor recovery system normally go to the fuel gas system, for which complete destruction is presumed; otherwise the gases go to the LOP main flare, for which the District has determined that control efficiency is at least 98% when properly operated. We plan to revise the table format in a future permit revision, to clarify the connection between source, abatement device, and compliance monitoring. |
| 39. | As has been discussed, it is not possible to measure flare efficiency. The new flare monitoring condition ensures that the flare is operated properly. This is the best that can be done for this requirement.<br><br>The thermal oxidizers have continuous temperature monitors. EPA's technical position on this issue, as demonstrated by requirements it has incorporated into a regulation, is that once a performance test indicates that the afterburner is sufficiently engineered (in terms of excess air flow, residence time and mixing) to achieve the required emissions limit, then continuous monitoring of combustion zone temperature will provide adequate assurance of continuous compliance. |
| 40. | See Response to Comments 41 through 43. |
| 41. | The correct reference is Subpart FF 61.349(a)(2)(ii)): control by vapor recovery system (95% control of organics, or 98% control of benzene). However, the revisions to Part 61 Subpart FF dated November 12, 2002 exempt gaseous streams from these units that are |

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| | routed to fuel gas systems from being subject to Subpart FF. Per Section 61.340(d), no testing, monitoring, recordkeeping or reporting is required under this subpart for any gaseous stream from a waste management unit, treatment process or wastewater treatment unit routed to a fuel gas system. This correction has been made in the permit. In Table VII-L, the Subpart FF 63.649(a)(2)(ii) requirement was changed to Subpart FF 61.349(a)(2)(ii). Monitoring is specified as "none" and Section 61.340(d) is cited. |
| 42. | As seen in Table IV-AEa and Table VII-X of the revised permit, S13, S1114, and S1115 are subject to both 40 CFR 60 Subpart Kb and 40 CFR 63 Subpart CC. These sources vent to a fuel gas system. Per 63.640(d)(5), emission points routed to a fuel gas system, as defined in Section 63.641, no testing, monitoring, recordkeeping, or reporting is required for refinery fuel gas systems or emission points routed to refinery fuel gas systems. |
| 43. | See discussion above for S532 (Comment 41). The same correction has been made in Table IV-AV and Table VII-AM. In Table IV-SV, under Subpart FF, 61.340(d) was added; this section was added into the Nov. 2002 revision to Subpart FF. In Table VII-AM, the Subpart FF 63.649(a)(2)(ii) requirement was changed to Subpart FF 61.349(a)(2)(ii). Monitoring is "none" and Section 61.340(d) is cited. |
| 44. | The old SIP version no longer applies. The current BAAQMD rule is SIP approved. |
| 45. | The EPA statement is incorrect. A101, A102 and A103 are backup systems for vapor recovery systems A25, A56 and A26 respectively. S4201 is also a backup for a vapor recovery system. Thus, there are already compressors and, according to the refinery, these flares only burn upset gas or fuel gas that is released to it as a result of relief valve leakage or other emergency malfunctions if the vapor recovery systems are down. In any event, if gases from events other than an upset or emergency were combusted, then the flare would no longer be exempt from Subpart J. As a general matter, the nature of the exercise in determining applicability of a requirement does not change because the facility has been issued a Title V permit. As far as the District is aware, EPA has never required the use of compressors in connection with its efforts to determine the applicability of Subpart J, so this regulatory exercise would be unprecedented. Moreover, “requiring the use of compressors” could be a complex regulatory exercise entailing a detailed monitoring of and prescription for refinery operations. Questions of legal authority aside, the Title V permit is a context not well-suited to approaching such a task. |
| 46. | The EPA reference to Table VII-G is incorrect. S1426 requirements are found in Table VII-AG. The limits and applicable requirements are cited, and summarized, not repeated, in the Title V permit. The summary has been revised to include requirements from 40 CFR 60.102(b). The citation in the permit is correct. |
| 47. | The limits and applicable requirements are not repeated verbatim in the permit. This would result in an excessively long permit. The citation is correct and the reader may follow it to find the complete requirement, which is readily available to the public. |
| 48. | The EPA statement is incorrect. The requirements are applicable and are cited in the appropriate tables:<br>• IV-AP cites 40 CFR 60.107<br>• IV-AP cites BAAQMD Regulation 6-305<br>• IV-AP cites BAAQMD Regulation 6-401<br>• In IV-AP, 40 CFR 60.104(b)(2) is cited, rather than 40 CFR 60.104(b)(3), because it is applicable to this unit and is the compliance method that the facility uses.<br>• IV-AP cites 40 CFR 60.106(b)<br>• IV-AP cites 40 CFR 60.107 |
| 49. | S1426 and the CO Boilers (S1507, S1509 and S1512) use COMS and source testing for opacity and grain loading respectively. There is no need for additional parametric monitoring. |
| 50. | The District does not agree with the recommendation. The standard and the means for demonstrating compliance, when developed together, are inseparable. The District cannot alter the method of determining compliance without reexamining the standard as well. |
| 51. | Section 60.106(i)(12) is cited in the Title V permit. |
| 51a. | BAAQMD Condition Part 31 has two parts: the requirement for the SCR, and the ammonia slip < 20 ppm. The ammonia slip requirement, which is cited, is not federally enforceable. |

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| | The first requirement is not cited in the table. This first requirement (to use the SCR at all times while S4161 is in operation) has been added as a federally enforceable requirement to Table IV-CU, citing Condition 12271, Part 31. |
| 52. | The permit conditions in question were established as part of the BACT determination, and they are unchanged from the conditions imposed in the original NSR permit. The relevant question is therefore not whether they "assure compliance" with BACT, because they are an integral component of the BACT determination. The Title V permit accurately incorporates this applicable requirement. As a result, there is no Title V-related authority to change it. Staff welcomes EPA's suggestions for addressing similar issues in future NSR permits. |
| 53. | The permit does not exempt combustion units from BACT. BACT, for these sources, has been determined to be no control during startup. See the response to the previous comment. |
| 54. | In Part VI, Condition # 12271 lists the affected sources. This condition and the 72-hour exemption only appear on tables of sources that are listed in the condition. Therefore, it is clear that Condition #12271 only applies to those sources. District disagrees with EPA's comment. |
| 55. | Condition 12271, part 24a states that "The cogeneration power plant (S4190, S4191, S4192, and S4193) shall not use fuels other than natural gas, commercial grade propane, commercial grade butane, refinery fuel gas (RFG), flexigas (FXG), and ultra low sulfur distillate (ULSD)." None of the above is a fuel oil. ULSD is not a diesel fuel, but is a gaseous distillate fuel, as defined in Condition 12271, part 19: For the purposes of these conditions, ULSD is defined as a gaseous hydrocarbon mixture composed of C6 and lighter components, produced by the Straight Run Hydrotreater, Saturated Gas Plant, Cracked Gasoline Depentanizer, and Alky Depentanizer. Based on the condition and the definition, S4190-S4193 has been removed from the introductory paragraph in Table II-A, since fuel oils are not burned in these units. Also, fuel oil requirements have been removed from their respective tables in Section IV and VII. |
| 56. | As stated above (Comment 55), S4190-S4193 are not allowed to burn fuel oil.<br>For other units that are allowed to burn fuel oil, the permit adequately addresses monitoring. For example, Condition 18618, Part 3 states that the owner/operator shall conduct a visible emissions inspection at each source after every 1 million gallon of liquid fuel combusted, to be counted cumulatively over a 5-year period. Condition 18618, Part 4 states that owner/operator shall sample and analyze the liquid fuel to determine its sulfur content after every 1 million gallon of liquid fuel is combusted, to be counted cumulatively over a 5 year period, or at least once every 5 years, whatever comes first. NSPS boilers that use fuel oil are required to have an opacity meter. |
| 57. | S1800 is fired with gaseous fuels only. |
| 58. | PM emissions are a function of sulfur content in No. 6 oil. The permit conditions already require sulfur analysis as well as VE inspections.<br><br>Some sources are limited as to fuel use by the Clean Fuels program. |
| 59. | These requirements do apply and are cited correctly in Table IV-BK. |
| 60. | The current condition will adequately evaluate the sulfur content of the fuel that is used in the CO boilers. Since the refinery produces diesel fuels, it does not purchase batches of fuel oil. Therefore, it makes more sense to define a usage period rather than sample batches. |
| 61. | The required frequency of source testing, as well as the decision whether to require parameter monitoring, should take into account the relationship between operating emission levels and permitted emissions levels. If a source consistently demonstrates that emissions are less than 50 percent of the emissions standard, the frequency of source testing should be reduced. Three consecutive years is sufficient to establish that the source operates with a wide margin of safety below the limit. Additional monitoring during the three years without source testing is unwarranted. |
| 62. | The CO boilers burn DAF Float, Waste Biosolids, and Sulfinol Reclaimer Bottoms in accordance with Shell's Part B RCRA Hazardous Waste Permit. The processing of these materials is routine and continuous. Routine BAAQMD source tests on the CO Boilers |

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| | capture the emissions from the burning of this material. Numerous characterizations of the emissions from the burning of this waste have been performed as required by the RCRA permit. Future source tests are also required by the RCRA permit. Results of these tests can be made available upon request. |
| 63. | The CO boilers burn DAF Float, Waste Biosolids, and Sulfinol Reclaimer Bottoms in accordance with Shell's Part B RCRA Hazardous Waste Permit. The language in the Table II-A of the Title V permit has been amended. |
| 64. | Applicable requirements for S4210 are addressed in IV-CY. |
| 65. | Rule 6-310 for grain loading applies to the cooling towers. Rule 6-311 applies to "general operations". The intent of the rule is to control solid material feeds with the potential for dust emissions. A cooling water tower is not a "general operation". The process material in the cooling towers is water. Dissolved solids in the water would be emitted in quantities that are orders of magnitude below the limits in this rule. It would be meaningless to apply this rule to a cooling tower process. |
| 66. | The conditions in Table VII-CJ only apply to S4210. The other two sources in Table VII-AJ are not subject to Condition 12271 (the Clean Fuels project). Therefore the tables cannot be consolidated. |
| 67. | District believes that EPA meant to reference Condition 12271 rather than 12190 in this comment Condition 12271 only applies to Tank 1117. Refineries are included in the list of 28 source categories required to include fugitives in NSR analysis. In previous permitting analysis related to the emission cap conditions, the fugitives are included in the applicability and offset calculation and are based on new component counts. Conditions limiting fugitive emissions are specified in Condition 12271, Parts 1-14.<br>In Condition 12271, the emission limits in Part A do not include routine fugitive emissions. Emission caps are set for point sources, where emissions can be directly monitored, or where parametric monitoring can reasonably assure compliance. Short of capturing all fugitive emissions, emissions from these can only be estimated from correlation equations as they pertain to LDAR programs, bagging studies performed at the plant, and studies performed elsewhere. Furthermore, fugitives do not depend on throughput, in contrast to point source emissions, but are assumed by the mere presence of material in the piping and the number of components (leaking/non-leaking) in the piping, and thus are not as likely to change in the estimates. In any event, EPA's comment goes to the substance of an applicable requirement. Title V does not provide authority for such an inquiry. |
| 68. | The sanctions are in addition to other enforcement authorities. |
| 69. | Language has been added to the condition to clarify that EPA may not recognize a District variance when determining compliance with the cap. |
| 70. | See previous comments (46 and 49) on ESP for S1426. |
| 71. | The EPA incorrectly references Condition 18617. The correct reference is Condition 18618, Part 12. This condition has been rewritten. The intent of the condition was not to imply that "intentional" releases are allowed to all flares. Only a few flares accept routine or "intentional" releases. These are appropriately identified in Section IV and VII tables as subject to NSPS Subpart J. |
| 72. | See the Statement of Basis for Revision 1 to see the evaluation of thermal oxidizer applicability to Subpart J. |
| 73. | Table VII-AO does include a citation of applicability to NSPS Subpart J. S1471 and S1472 are exempt from the fuel limit to the extent used only to combust gases from upsets or emergencies. The "/E" is for each flaring event per condition 20747, Part 2, recording the event allowed for leakage or other emergency malfunctions per Part 1.<br>The units are subject to Subpart J, but exempt per 60.104(a)(1) to the extent used only to combust gases from upsets and emergencies. |
| 74. | S4201 is now addressed in Table IV-CX.<br>Citations for 60.11 have been added to Table IV-AXa and Table IV-CX. |
| 75. | 40 CFR 63 Subpart CC Section 63.643 applies to process vents. Table IV-DR and VII-CV cite 63.643(a)(2). These sources vent to the refinery fuel gas system. Since these sources do not vent to flares, there is no need to add 63.11 to these tables or to any of the flare tables.<br>It is noted that Section 63.640(d)(5) should be cited since testing of these systems is not |

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| | required. 63.640(d)(5) has been added to Table IV-DR and Table VII-CV in the monitoring column for 63.643(a)(2). |
| 76. | The applicable requirement is listed in Table IV. We plan to revise this format in a future revision. |
| 77. | The tables are correct and the list on Page 322 (section VI, permit conditions, 7618) has been corrected. There is no longer a discrepancy. |
| 78. | EPA is incorrect. There are several flares that are exempt from Regulation 12-11. A101. A102 and A103 are exempt from 12-11 and this requirement has been removed from Table IV-AXa. Rule 12-11 has been added to the appropriate flare tables. |
| 79. | S1470 uses an alternative monitoring plan in accordance with 60.13(i). This plan has been submitted to EPA and approved and has been submitted to the District for inclusion in the permit. The tables are correct. |
| 80. | This flare monitoring issue has been addressed by the District in the Title V permit by the addition of Regulation 6-305 applicability to the flare as a source-specific requirement and the requirement for the monitoring of vent gas flaring at S4201 in Permit Condition 18618, Parts 12 through 19. |
| 81. | Fugitive source requirements are included in the process unit tables. For non-permitted sources, there are tables that address Subpart GGG (Table IV-DP and Table VII-CU) and Subpart CC equipment leaks (Table IV-DS and Table VII-CW.) |
| 82. | The NESHAP requirements could potentially apply to any permitted or exempt source at the facility. For example Subpart M (asbestos) requirements could apply to any building that has such material. The Subpart FF (benzene waste) is included here because the calculations and tracking are addressed facility wide. The reason that these requirements are on a facility-wide table is because they apply to numerous sources, many of which do not require permits and have no identification references. The process units have additional specific requirements that are identified in other tables besides the facility-wide. |
| 83. | The requirements for 8-18 and 8-28 are currently cited by source and are included in all of the process unit tables. This is more correct than placing the requirements facility wide. |
| 84. | These source descriptions are generic in nature and occur throughput the refinery. Since these are not permitted sources, there is no identifier. For example QQQ refers to individual drains. These drains are not units that can be easily specified and detailing each one seems excessive in the Title V permit. |
| 85. | Regulation 8-10 limits the partial pressure of VOC, not the total pressure. Partial pressure is a function of concentration and total pressure. Since 8-10-401 requires the recording of total VOC emitted, it is inherent in the use of Raoult's Law based vapor displacement calculations to track total pressure to determine the emission rate (e.g., see "Control of Volatile Organic Compound Emissions from Batch Processes-Alternative Control Techniques Information Document", EPA-450/R-94-020 Feb. 1994, Chapter 3, Vessel Depressurization). |
| 86. | It appears that the District's emission inventory is in error. The emissions inventory is used primarily as a planning tool rather than as a source of information to determine applicability or compliance. The only VOC emissions from this unit would be fugitives. Emissions should be negligible as for Hydrogen Plant #1 and #2. Table IV-AL and IV-CR list the applicable requirements for S4160. The applicable requirements for S4160 are found in Table IV – AL and are similar to other process units at Shell. These include Rules 8-9, 8-10, 8-18 and 8-28. Table IV-AM has been deleted. The District is working to correct the emission factors used in our databank to reflect more accurate values. |
| 87. | This is a process unit. There are no routine releases from this unit. |
| 88. | BAAQMD Condition #4288, Part 3a requires pressure and temperature monitors and recorders. The basis of this permit condition is BAAQMD 8-44-301 which requires 95% control. This monitoring also demonstrates compliance with Condition #4288, Part 6, which states that "Vapor recovery system exhaust temperature shall not drop below 1400°F for more than 15 minutes per hour". The basis for this requirement is also BAAQMD 8-44-301. Recording the exhaust temperature suffices for compliance assurance. |
| 89. | A specific applicability determination has been added to the SOB for each permit shield in Table IX A-10. |

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| | Table A-3 has been deleted. |
| 90. | Table IX A-3 has been deleted. However, all of the sources initially listed in that shield were not subject to 40 CFR, Subpart Db because of size and or date of construction. |
| 91. | The permit shield has been deleted. Applicability of Subpart J to these thermal oxidizers will be addressed in a future revision. In the mean time, there is no permit shield and the applicability of Subpart J as a federal matter is unaffected by the Title V permit. A discussion regarding this issue has been added to the statement of basis. |
| 92. | The citation for 40 CPR 60, Subpart J, 60.105 has been deleted. |
| 93. | The permit shield should be retained. The sources listed in the shield are correct. Part 19 of Condition 18618 identifies all flares used for emergency/malfunction and these limits have been reflect in the applicable tables in the Title V permit. |
| 94. | The District respectfully disagrees. A permit shield, by its very nature, is redundant to the regulations. A permit shield is an explicit recitation of the determination that a particular requirement is not applicable, and the circumstances upon which that determination is made. |
| 95. | **8-8-114 Exemption, Bypassed Oil-Water Separator or Air Flotation Influent:** The requirements of Sections 8-8-301, 8-8-302, and 8-8-307 shall not apply for wastewater which bypasses either the oil-water separator or air flotation unit provided that: (1) the requirements of Section 8-8-501 are met; and (2) on that day the District did not predict an excess of the Federal Ambient Air Quality Standard for ozone.<br><br>**8-8-113 Exemption, Secondary Wastewater Treatment Processes And Stormwater Sewer Systems:** The requirements of Sections 8-8- 301, 8-8-302, 8-8-306, and 8-8-308 shall not apply to any secondary wastewater treatment processes or stormwater sewer systems, as defined in Sections 8-8-208 and 8-8-216, which are used as a wastewater polishing step or collection of stormwater which is segregated from the process wastewater collection system.<br><br>The applicable shield citation is 8-8-113. This mistake has been corrected in Revision 1 of the Title V permit. |
| 96. | This shield is justified because process drains are excluded from the definitions in Rule 8-8 and are not covered by other sections of the rule. |
| 97. | The provisions are in an approved document. A copy was sent to the District to use in the Title V permit. This version will be added in subsequent reopenings to the Title V permit. |
| 98. | Rule 9-1-301 Limitations on Ground Level Concentrations is a facility-wide requirement. It is not specific to the sulfur plants, but addresses all sulfur dioxide emissions.<br>Rule 9-1-307 and Rule 6-305 do apply to the Sulfur Plants and are included in Table IV-AQ. |
| 99. | Rule 9-1-313.2 (SIP) is marked federally enforceable. The current District Rule 9-1-313.2 differs from the language in the SIP version and has never been federally approved. It is not federally enforceable. |
| 100. | This comment warrants no action for Shell's Title V permit. |
| 101. | The required frequency of source testing and the determination as to whether parameter monitoring is appropriate should have some basis in the relationship between operating emission levels and permitted emissions levels. If a source consistently demonstrates that emissions are less than 50 percent of the emissions standard, the frequency of source testing should be reduced. Three consecutive years is sufficient to establish that the source operates with a wide margin of safety below the limit. Additional monitoring during the three years without source testing is unwarranted. |
| 102. | The District has amended the Title V permit to ensure compliance with the limit. The effectiveness of the system for removing sulfur from the petroleum streams will be monitored continuously. This eliminates the need for the annual test |
| 103. | The basis is cumulative increase. This basis is identified in Condition 7618 Part E. 2. |
| 104. | The District has correctly determined that PM and visibility emissions are negligible from the sulfur plants and no monitoring is required. Each of the sulfur plants final exhaust streams are controlled by thermal or catalytic oxidizers. These oxidizers are gas fired with high temperature and residence time that ensure complete combustion of carbon, |

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| | ammonia and all other substances. The reference note #5 has been added to the SOB. |
| 105. | The District has not yet completed its review of the support facility issue. If it is determined that certain proximate operations are part of the refinery Title V "source," then these facilities will be required to obtain a Title V permit. The District believes this result would not entail changes for the Title V permit issued to the Shell refinery (i.e., no new requirements would thereby become applicable to the refinery). |
| 106. | The Rule 8-5 revisions have been addressed. |
| 107. | There are specific monitoring requirements in the regulations, e.g., 8-5-401, which are applicable and incorporated by reference but currently not spelled out in the permit. The District will consider adding more detail in a future revision. |
| 108. | The Rule 8-5 revisions have been addressed. |
| 109. | Regulation 8-5-402 inspections have been added to Table VII-P. Also, numeric limits in applicable requirements of 60.113b were added to the table. |
| 110. | These are emission points routed to a fuel gas system, as defined in § 63.641 of this subpart. No testing, monitoring, recordkeeping, or reporting is required for refinery fuel gas systems or emission points routed to refinery fuel gas systems per 40 CFR 63.640(d). |
| 111. | The other tanks listed in Table IV-R (e.g., S858) are listed in VII-P and IX-B2. S952 has been added to Tables VII-P and IX-B2. |
| 112. | The permit contains Standard Condition I.J, which includes the following language: "Exceedance of this limit does not establish a presumption that a modification has occurred, nor does compliance with the limit establish a presumption that a modification has not occurred." There is no confusion about the facility's obligation to report deviations. |
| 113. | The current permit shows the requirements of Condition 4303 as federally enforceable. |
| 114. | S1465, S1469, S1779, S2007, S2009, S2010, S2011, and S5121 are regulated in Tables IV-AT, AU, AV, BY, CG, CJ, and DM, and in Tables VII-AK, AL, AM, BK and BY. |
| 115. | Shell does not operate sludge dewatering equipment at the Martinez Refinery. All sludge dewatering operations are owned and operated by Sierra Processing at the Martinez Refinery. Sierra Processing holds air permits for their sludge dewatering operation. These permits shall be incorporated into a Title V permit in the near future. |
| 116. | Sections 61.357(d)(2), (d)(6), and (d)(7) and corresponding monitoring requirements were added for S532. |
| 117. | Sections 61.357(d)(2), (d)(6), and (d)(7) were added to Table IV-DV and Table VII-CY. |
| 118. | Biotreaters are not affected Subpart FF benzene waste NESHAP units. |
| 119. | Pipelines and process drains are not specific emission units, and are therefore not listed as such in Table II. Generic groupings have no capacity limitations. The requirements of 40 CFR Part 61, Subpart FF and/or 40 CFR Part 63, Subpart CC are listed in Table IV-DU. |
| 120. | S1779 is not an affected Subpart FF unit.<br><br>For S1469, Section 61.347(a)(1) is listed in Table IV-AV and Table VII-AM. All of the necessary monitoring is cited in the regulation and included in Table VII-AM. It is not necessary to add a permit condition. |
| 121. | The wastewater ponds (S1466, S1468), wastewater separator dubbs box (S2009), wastewater junction boxes (S2010), wastewater collection sumps (S2011), Final EPT 1&2 Holding Ponds 5C & 5D (S2014), and Bioclarifiers (S5118 & S5119) are not required to be managed in accordance with the requirements of 40 CFR 61 Subpart FF or 40 CFR 63 Subpart CC. Under 40 CFR 61 Subpart FF and the wastewater provisions of 40 CFR 63 Subpart CC, facilities have several available compliance options. The compliance option selected for the Shell Martinez Refinery is known as "6BQ" and requires that most aqueous benzene containing wastes be managed in controlled systems in accordance with standards listed in 40 CFR 61 Subpart FF. The selected compliance option provides a six (6) megagram per year (Mg/yr) "allotment" for aqueous waste streams that are not managed in controlled systems. To comply with the 6BQ compliance option, Shell has segregated the "larger" benzene containing streams and manages them in controlled systems. The remaining benzene containing wastes streams (low benzene concentration and/or low flow rate) are managed in uncontrolled systems and are subject to a facility-wide requirement to annually document that these streams contain less than six Mg/yr. This facility wide requirement is cited in Table IV-DV for citation 61.342(e)(2). Shell has |

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| | selected to manage the Wastewater Ponds (S1466, S1468), Wastewater Separator Dubbs Box (S2009), Wastewater Junction Boxes (S2010), Wastewater Collection Sumps (S2011), Final EPT 1 and 2 Holding Ponds 5C&5D (S2014), and Bioclarifiers (S5118 and S5119) as uncontrolled systems. Therefore, these operations are exempted from standards listed in 40 CFR 61 Subpart FF and the wastewater provisions of 40 CFR 63 Subpart CC. |
| 122. | See Table VII-BS. Carbon Adsorption generally achieves >95% removal efficiency. |
| 123. | See response to Comment 121. |
| 124. | S1779 is not an affected Subpart FF unit. |
| 125. | This error was corrected in the current version. |
| 126. | This is not an alternative monitoring plan. Condition #4298 is in addition to the Rule and helps clarify the vagueness of the Rule. For example, it defines "immediate". This condition was required by the Consent Decree. |
| 127. | Sections 61.357(d)(2) and (d)(5) do not apply to tanks specifically. They apply facility wide and are already listed in the facility wide Table IV- DV. Section 61.357(d)(2) does not apply to this facility |
| 128. | The following list shows how the 61.356 recordkeeping requirements are cited in the permit.<br>IV-CG itemizes (d) and (h).<br>CZ does not itemize.<br>DG itemizes (h).<br>DT itemizes (a), (g), and (h)<br>DU itemizes (a) and (g)<br>DV itemizes (a) and (b)<br>VII-C itemizes (k)<br>L itemizes (d) and (h)<br>T itemizes (k)<br>W itemizes (k)<br>Y itemizes (d) and (h)<br>AD itemizes (k)<br>AM itemizes (d) and (h)<br>BS itemizes (d) and (h)<br>CK itemizes (d) and (h)<br>CO itemizes (k), (d) and (h)<br>CR itemizes (k)<br>CX itemizes (a) and (h)<br>CY itemizes (a) and (b) |
| 129. | This comment warrants no action of Shell's Title V permit. |
| 130. | This comment warrants no action of Shell's Title V permit. |
| 131. | Note 5 has been added. |
| 132. | The SOB does give an explanation for these sources. It is Note 1. These sources burn gaseous fuels. |
| 133. | Yes, EPA has approved this alternative monitoring. |
| 134. | The following comment was added by EPA in their April 14, 2004 letter to the District regarding the draft Revision 1 permit:<br>"In addition to our prior comments on permit shields, we have found that new permit shield language from District Regulation 12-11 was added to the draft permit. This type of shield does not have a valid basis because the rule is not included in the permit as federally enforceable, and the source would continue to be shielded from federal-enforcement of the requirement even after the rule becomes part of the SIP. (We expect that the rule will become part of the SIP because it is part of the District's latest attainment plan). Please delete the shield or include the shielded requirement as a federally enforceable requirement."<br>The shielded requirement is not federally enforceable, and the shield itself does not have federal significance until the requirement becomes federally enforceable. At that point, EPA may have a basis for commenting on its validity |

Attachment B

October 31, 2003

Mr. Steve Hill
Air Pollution Control Officer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

**RE: EPA Review of Proposed Refinery Title V/ Major Facility Review Permits:
Conoco-Phillips Company (Rodeo) source # A0016, and
Shell Martinez Refinery (Martinez) source # A0011**

Dear Mr. Hill:

Thank you for the opportunity to comment on two proposed Bay Area Air Quality Management District ("BAAQMD" or "District") Title V Major Facility Review permits ("Title V permits"). We are submitting these comments now because we did not have enough time to review these two permits during the short EPA 45-day review period that ended on September 26, 2003 for all five proposed District refinery permits. We understand that the District will revise each proposed refinery permit as necessary to respond to the General Comments in our September 26, 2003 letter on the other three proposed refinery permits and we did not repeat those comments in today's letter.

We appreciate the District's willingness to review these comments prior to issuing the initial Title V permits for Conoco-Phillips and Shell Martinez. We recommend that the District include as many of the changes we are requesting as possible in the initial Title V permits, and make the rest of the recommended changes as soon as possible. As you know, EPA retains the authority to reopen any Title V permit if necessary to assure compliance with all applicable requirements and the requirements of 40 CFR part 70.

We appreciate the District's cooperation during this process. We understand that the District intends to proposed additional refinery Title V permit revisions in the near future, and we will continue to work cooperatively with the District during these revisions. If you have any questions concerning our comments, please contact me at (415) 972-3974, or contact Ed Pike of my staff at (415) 972-3970.

Sincerely,

*Original signed by*

Gerardo C. Rios
Chief, Air Permits Office

Adams, Broadwell, Joseph & Cardozo - Daniel Cardozo, et. al.
California Air Resources Board - Mike Tollstrup
Communities for a Better Environment - Will Rostov
Conoco-Phillips Company - Willie W. C. Chiang
Golden Gate University - Marcie Keever, et al
Shell Martinez Refinery - Aamir Farid

**Enclosure A**
**EPA Comments on Conoco Phillips Refinery Permit**

## STATUS OF EPA REVIEW

EPA is providing comments now based on our limited review of the proposed permit so that the District will have time to review our comments prior to issuing the initial Title V permit. We will inform you if we have any additional comments in the future.

Our September 26, 2003 letter contains several general issues that are potentially applicable to all five proposed refinery permits including this proposed permit. Please note that today's comments are not intended to replace or repeat those comments.

## ABATEMENT DEVICES

### Monitoring

1. For abatement devices A-20 and A-21, the limits for differential pressure are specified as the "normal range"(Table IIB, page 19). Because the permit does not state what the "normal range" for the differential pressure is, these limits do not establish clear requirements for the source. EPA strongly recommends that these generic limits be replaced by the specific numerical values that constitute the allowable range of differential pressures. 1

2. The only monitoring included in the permit for sources 380 and 389 is measurement of the differential pressure across the sources' abatement devices. EPA recommends adding additional requirements for visual inspections on an event basis whenever visible emissions are seen exiting the silos. 2

## COMBUSTION UNITS

### Applicable Requirements

1. The note regarding Condition 1694 says that the original version of Part 5 of the condition was deleted because fuel oil is not burned at the facility and the condition is not needed. According to Condition A.2b, however, sources 3 and 7 are permitted to use liquid fuel. Unless the facility is prohibited from firing fuel oil, the original fuel oil conditions and the necessary monitoring requirements should remain in the permit. 3

2. According to Part B1 of Condition 476, the charging rate for source 300 has a daily limit of 56,000 barrels and an annualized daily limit of 52,000 barrels. Only the 56,000 barrel limit is listed in Table IIA on page 10 of the permit. This table should be revised to also include the annualized daily limit. 4

3. BAAQMD Regulation 9-3-303 was potentially omitted from the permit for sources 8 and 14. The District should review the applicability of this requirement for these units and revise the permit as appropriate. 5

4. Condition #1694, Part A.2b requires that sources 3 and 7 be monitored for visible emissions during tube cleaning (page 255). 6 This applicable requirement was not included in Tables VII - A.2 and VII - A.5 and should be added.

5. Condition # 1694, Part A.2c requires that sources 3 and 7 be monitored for visible emissions before each 1 million gallons of liquid fuel is combusted at each source. 7 The condition also requires a Method 9 evaluation if visible emissions are present. These requirements were not included in Tables VII - A.2 and VII - A.5 and should be added.

**Federal Enforceability**

Throughput Limits established in permit condition 1694:

In this permit, the District has proposed to change the designation for fuel limits that apply to most combustion sources from federally enforceable to not federally enforceable (for example, see Condition 1694 in Table IV - A.2 for source S-3; similar conditions exist for sources S-4 up to S-31 and all of the combustion units other than gas turbines and duct burners). 8 The throughput limits in condition 1694 were established in a prior permitting action, although the permit and the Statement of Basis do not appear to discuss the type of permit nor the reason for marking them non-federally enforceable. Limits created through prior NSR permits are federally enforceable Title V permit requirements. Please see the enclosed March 31, 1999 letter from John Seitz, Director of EPA's Office of Air Quality Planning and Standards, to Doug Allard, CAPCOA President.

In addition, the throughput for S-10 in condition 1694 was increased from 184 to 223 mmbtu/hr without an explanation. 9 The District should retain the 184 mmbtu/hr limit or justify the change.

**Monitoring**

The BAAQMD Continuous Emission Monitoring Policy and Procedures manual is designated as non-federally enforceable throughout the permit (for example, see Table IV - A.6 for source S-8 on page 43). 10 This manual was approved into the SIP on 05/03/1984 and is therefore a federally enforceable requirement. The District should revise the permit accordingly.

## <u>COOLING TOWERS</u>

**Applicable Requirements**

It appears that the cooling towers and all of their applicable requirements were omitted from the draft permit (except for BAAQMD Regulation 11, Rule 10 on page 24). The cooling towers listed in the cooling tower calculations (and any additional towers not included in the calculations) should be incorporated into the permit. 11

**Miscellaneous**

Several sources are included in the cooling tower calculations but are listed in the permit as units other than cooling towers. For each of the following, the District should revise the permit and/or the calculations to reflect the true nature of the sources: 12

a. Source 110 - listed in the permit as tank 155 (see permit pages 9, 196, 197, 198 for example). 12a

b. Source 228 - listed in the permit as tank 750. In addition, the statement of basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change. 13

c. Source 230 - listed in the permit as tank 752. In addition, the statement of basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change. 14

d. Source 236 - listed in the permit as tank 770 (see permit pages 22, 246, and 408). 15

e. Source 238 - listed in the permit as Used Caustic Tank T-211 (see permit pages 9, 164, 294, and 374). 16

f. Source 240 - listed in the permit as tank 774. In addition, the Statement Of Basis notes that this unit has been removed from service. If this is the case, the permit should be updated to reflect the change. 17

## FUGITIVE SOURCES (PRESSURE RELIEF VALVES, PUMPS, COMPRESSORS)

**Applicable Requirements**

1. Table IV - AA indicates that 40 CFR 61 Subpart V is neither applicable on a refinery-wide basis nor to any of the sources that are individually listed and it is unclear in the permit why. The standard would apply to any piece of equipment that contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP), such as benzene, unless the facility has demonstrated that the standard doesn't apply under 61.285(d). The District should re-evaluate the applicability of this subpart with respect to the fugitive emission sources at the refinery and include all appropriate applicable requirements. If the refinery or any sources are not subject to the subpart, a justification should be provided in the statement of basis. 18

2. Table IV-AB shows that NSPS Subpart QQQ is applicable to source 1007 (page 145). As a result this source should also be added to table IV-AA. 19

3. According to Table IV-B5, source 388 is subject to Part 3 of Condition 1860, which requires that the source be included in the fugitive emission monitoring program required by Regulation 8-18. This source and condition are not included in Table IV-AA and should be added. 20

4. Table IV-AA indicates that source 324 is subject to the requirements of 40 CFR 60 Subpart QQQ (page 142). This source should be specifically listed in Table IV-AB as a unit that is subject to Subpart QQQ along with source 1007 on page 145. 21

5. Table IV-AB is missing applicable requirements from 40 CFR 60 Subpart VV. The following should be added to the permit: 22
   60.482-2(c) - Pump leak repair period
   60.482-7(d) - Valve leak repair period

6. Table IV-AB is missing an applicable requirements from 40 CFR 63 Subpart CC. The following should be added to the permit: 23
   · 63.648(d) - New sources

**Federal Enforceability**

The 11/27/02 amendment to BAAQMD Regulation 8-18 has been approved in the SIP. Therefore, requirements 8-18-405 and 8-18-406 should be denoted as federally enforceable in Table IV-AB on page 143 of the permit. Upon doing so, the District should also delete the redundant requirements for SIP Regulation 8-18 from the same page. 24

**Monitoring**

We understand that the District will require the refineries to demonstrate compliance with SIP Regulation 8-10 by monitoring the pressure of all of the pressure vessels. 25

**Miscellaneous**

The adoption date for SIP 8-28 was misprinted in Table IV-AB on page 144. The date should be changed from 12/9/94 to 6/01/94. 26

**<u>HYDROGEN PLANT</u>**

**Monitoring**

Pursuant to BAAQMD Condition 6671 and Regulation 8-2-301, source 307 has a vent scrubber (A-50) to meet a 15 lb/day POC limit from emission streams with more than 300 ppm total carbon. EPA agrees that the rule limits are necessary for hydrogen plants at each of the refineries because hydrogen plant vents (presumably $CO_2$ vents) can emit over 15 lbs/day. We also believe that parameter monitoring to ensure proper operation of the control 27 device is necessary and that testing will be necessary if the facility is not well under its emission limits (see Table VII-N, which only requirements for visual inspection). We also believe that Reg 8-2 and monitoring requirements should apply to the CO2 vent at the hydrogen plant for each refinery.

## LOADING RACKS

**Monitoring**

1. According to Table II B, the marine terminal thermal oxidizer must meet either of two limits: 28
   1) 2 pounds POC per 1,000 barrels loaded; or
   2) achieve a reduction of POC emissions of at least 95% by weight.

To demonstrate compliance with the above limits, Table VII - S (page 347) requires continuous monitoring of the device's temperature. EPA recommends adding a requirement for an appropriate residence time (with a gas flow meter as a monitoring method for the flow rate) to help ensure that the oxidizer meets the required control efficiency.

## PERMIT SHIELDS

**Applicable Requirements**

The proposed permit contains a "subsumed requirements" permit shield from the floating roof tank requirements based on a request from Unocal in 1987 for alternate NSPS QQQ conditions. We were not able to locate an EPA approval document in the limited amount of time available to review this permit. Please remove the shield or provide us with a copy of the EPA approval document or the date and name of person who approved it. 29

## TANKS

**Applicable Requirements**

For sources subject to NSPS Subpart Kb, the frequency specified for inspections of the secondary rim seal is not consistent with the regulations. The permits require inspections for holes or tears of the secondary rim seal at a frequency of once every ten years. However, pursuant to 60.113b(a)(2), the secondary seal should be inspected for holes, tears, or detachment on an annual basis. For example, see Table VII-B9 for source 448 in the permit. 30

**Monitoring**

1. The frequency specified for multiple tank monitoring requirements in the permit is "not specified." In cases where the monitoring frequencies are not specified in the applicable requirements, the District should use its periodic monitoring authority to establish appropriate ones. Occurrences of the unspecified monitoring frequency were noted in tables VII - B11, VII - B12, VII - B15, and VII - B25. Also note that the unspecified frequency occurs in Table VII - Cluster 11 in the Tesoro permit and Table VII.F.1.7 in the Chevron permit. 31

2. For tanks that are exempt from Regulation 8-5 based on low vapor pressure, the District requires monitoring of the vapor pressure only when there is a change in the material that is stored (see monitoring requirements for source 118 in Table VII-B2 for example). In such cases, the District should establish what conditions or circumstances constitute a "material change." For example, crude oil that comes from one location can have a different vapor pressure than oil that comes from a different source. Without a clear definition of a "material change," the facilities may not consider such an event to be cause for a vapor pressure determination. In addition, for these sources, the District should require that the facilities maintain records of the tank contents. 32

## GENERAL COMMENTS (UNSPECIFIED UNITS AND STATEMENT OF BASIS)

### *Unspecified Units*

#### Applicable Requirements

1. Regulation 9-1-313.2 is marked non-federally enforceable in several instances throughout the permit. This regulation is in the SIP and should be denoted federally enforceable in the permit. 33

### *Statement of Basis*

#### Miscellaneous

1. The statement of basis says that permits may be revised through a variance or an administrative change (page 12, electronic version). Please add to this discussion a clarification that any permit revisions made through a variance must go through the appropriate review process. 34
2. Section G of the statement of basis contains a brief summary of the changes made to the permit based on comments received by the District. The general response to comments document does not contain this type of summary, and we encourage the District to include this type of summary in the statement of basis or final response to comments for all five of the refinery permits. 35

**Enclosure B**
**EPA Comments on Proposed Shell Martinez Refinery Permit**

## STATUS OF EPA REVIEW

EPA is providing comments based on our limited review of the proposed permit so that the District will have time to review our comments prior to issuing the initial Title V permit. We will inform you if we have any additional comments in the future.

Please note that these comments are in addition to any relevant issues in our September 26, 2003 letter that may also apply to this refinery.

## ABATEMENT DEVICES (Table II B)

**Monitoring**

1. As noted in our comments for the proposed Tesoro permit (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.1), it is currently unclear what monitoring is required to ensure that the abatement devices in Table IIB meet their emission limits because the table in the proposed permit does not contain this information. For abatement devices subject to monitoring (e.g., baghouse monitoring) all of the applicable requirements should be included in the table. In addition to making the monitoring requirements clearer, this revision will also make Shell's draft permit more consistent with the draft permits for the other refineries (see Table IIB in Chevron's draft permit). 36

2. There are several instances where a control device is subject to an abatement efficiency, but the District has not included any monitoring to determine compliance with that efficiency (see below). In many cases, the type of control device is not specified. For instance, tank 532 is controlled by A56, a vapor recovery system. Without knowing what type of vapor recovery system this device is, we cannot suggest appropriate monitoring. Please specify the control(s) in the permit and include monitoring methods for all limits, or justify why monitoring is not needed. 37

   A. Abatement device A-33 is required to meet a 95% abatement efficiency (table IIB, page 28). Please specify the type of "vapor recovery system" and add a monitoring method to table VII to determine compliance. For instance, if the unit has a condenser or adsorber, then source testing and parameter monitoring would be appropriate. 38

   B. Flares S-1470 (Table II B, p.31) and S-4201 (Table II B, p.38), and thermal oxidizers A-100 (Table II B, p.29) and A-4181 (Table II B, p.37) for the marine loading berths have destruction efficiency requirements of 98.5% and 95%, respectively. Please add monitoring methods to table VII for each of these units to determine 39 compliance with these limits and evaluate in the statement of basis whether the controls in the proposed permit will assure compliance with the associated limit. For thermal oxidizers, we recommend temperature monitors, residence time monitors, and source tests.

C. Tanks S532 on p.428; S13, S1114, S1115, and S4334 on p.438; S1469 on p458; Tanks S2007, S2008, S5115, and S5116 on p. 491; and Tanks S4319, S4350, S4356 on p.517 have a 95% control requirement but no monitoring for compliance. Tanks S4319, S4350, and S4356 on p. 516 have a 90% control requirement but no monitoring for compliance. Please state the controls that will be used to meet this requirement and add appropriate monitoring to table VII: 40

S532: Control device A56 is a vapor recovery system. The citation to the control efficiency limit is NESHAP Subpart FF 63.649(a)(2)(ii). This appears to be an incorrect citation since this regulation has to do with equipment leaks and does not mention control efficiency for a vapor recovery system. Because this citation is incorrect, we cannot suggest monitoring appropriate to assure compliance with the governing regulation. Please correct the citation and add monitoring to table VII-L (p. 428). 41

S13, 1114, 1115: To verify compliance with 60.112b(a)(3)(ii), 95% control efficiency, the abatement devices controlling these sources must comply with 40 CFR, 60.113b(c). Please add citations to this regulation. In accordance with 60.113b(c)(ii), please include a description of the parameters that will be monitored (and a monitoring method) to ensure that the control device will be operated in conformance with its design. 42

S1469: See comment on S532 above on citation to 63.649(a)(2)(ii). 43

**Federal Enforceability**
Table IV-BO, S1598, page 208: Please add rules 8-7-301.8 through 8-7-301.12, and rules 8-7-302.6 through 8-7-302.13 to the SIP version of rules 8-7-301 and 8-7-302, as is done for the District version. 44

**Miscellaneous**
We recommend that the permit require the facility to use compressors to avoid routine releases to those flares (S4201, A-101, A-102, and A-103) designated as emergency–use only to ensure compliance with the exemption from the NSPS J fuel H2S limit. See related Tesoro comment (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.1). 45

## <u>CATALYTIC CRACKING UNIT</u>

## Applicable Requirements

1. The permit should clarify that the NSPS PM limit increase is allowed only if the CCU exhaust is passed through an incinerator or boiler in which auxiliary fuel is combusted; the current conditions allow an increased limit with an unclear reference to "auxiliary fuel." (p.451, table VII-G, S1426.) 46

2. For source 1426, table IV-AP includes several regulations for emission limits. Please spell out numerical limits for 9-1-310.1, sulfur dioxide limit; 60.102, standard for PM; 60.102(a)(1) and (a)(2); 60.102(b); 60.103, and 60.104(b)(2). All numerical limits should be spelled out in the permit. Where a numerical limit is included in one part of the permit, such as Section VI, but not another, it would be helpful to add cross-referencing. 47

3. Please include the following requirements for S-1426 or provide a justification in the statement of basis explaining why these requirements are not applicable:

   1. Reporting and recordkeeping requirements under 60.107 (opacity/PM) 48
   2. 6-305
   3. 6-401
   4. 60.104(b)(3) for units without add-on SOx controls
   5. 60.106(b)(3), calculation for coke burn-off rate
   6. 60.107 for CO requirements

## Monitoring

1. Please add periodic monitoring for proper ESP operation. Examples of monitoring approved by EPA in the past include (but are not necessarily limited to) parameter monitoring based on specified ranges for the voltage and current, periodic stack tests, and COMs. For additional discussion, please see the section on electrostatic precipitators on page 8 of this enclosure, and pages 2-3 of the Tesoro comments, submitted to the District on September 26, 2003. 49

2. We recommend stating that the records used to ensure compliance with the "daily profile" condition on p.454 for S1426 (table VII-G) will be based on the actual emissions monitored by CEMs where available (also p.471 table VII-AW for S1494, etc; p.481 for flexicoker S1759l; and throughout the permit). We understand that if current data shows that incorrect assumptions were made in originally determining the baseline emissions, or that incorrect emission factors were used for new equipment, then permit revisions outside the scope of this proposed Title V permit may be necessary. 50

3. For source 1426, table VII-AG (p.452) lists record-keeping as the monitoring for the $SO_2$ limit pursuant to 60.104(b)(2). NSPS J 60.106(i) outlines the appropriate 51

monitoring to determine compliance with 60.104(b)(2). Please add this monitoring to the permit.

**<u>COMBUSTION UNITS</u>**

**Federal Enforceability**

For source 4161 table IV-CU (p. 251): Please include a federally-enforceable requirement to use the SCR at all times. (See permit condition 12271, part 31 from p. 372) 51a

***Start-up/Shut-downs*** (condition 12271, p.369 and p.370)

1. The proposed permit contains start-up and shut-down exemptions that appear excesive for the gas turbines (p.370 section VI condition #12271). Condition 24b states that limits described as offset limits do not apply during days with start-ups or shut-downs, and condition 24c grants an exemption from BACT limits for start-up and shut-down periods that are allowed for up to 24 hours (see condition 22, which allows 24 hours for units with selective catalytic reduction). The proposed permit would not assure compliance with BACT and offset limits because the permit appears to allow the source to continuously avoid them if the refinery cycles the gas turbine on and off each day. We believe that these exemptions are inappropriate and would like to discuss with the District the origin of these exemptions and the best way to correct them. We will be happy to share with the District examples of appropriate start-up and shut-down conditions from other gas-turbine permits if you would find them helpful. 52

   In addition, the proposed permit would exempt other combustion units from BACT for eight hours if they do not have SCR and 24 hours if they do have SCR (see also conditions 29, 30, 35, 36, 40, 41, 42) during start-ups and shut-downs. These exemptions also seem excessive unless there is a specific reason why a unit would need a long start-up or shut-down period without using emission controls. 53

1. In addition, conditions from the prior permit are phrased to apply to the entire permit (i.e. Title V permit), while they originally would apply only to permit condition #12271, which states the exemption. Also, the 72-hour exemption should be specifically limited to any individual unit that cannot comply with BACT under the special conditions listed on p.369. It could be interpreted to apply to all of the units, including boilers, heaters, and turbines fired on standard fuels. 54

***Combustion of Fuel Oil***

**Monitoring**

1. The permit allows combustion of fuel oil throughout Table II-A, beginning on p.9. However, p.369 prohibits fuel oil for units S4190-4193. Please change the provision on p.9 to state “low-sulfur diesel” for these units and all others subject 55

to a similar restriction. Fuel oil includes fuels with greater emissions than low-sulfur diesel #2. (We would also find it helpful to list all the ratings rather than cross-referencing a condition with those ratings, or at least listing the page number where they are listed.)

2. For all boilers allowed to burn fuel oil (1507, 1509, 1512, 1514, 4190, 4191, 4192, and 4193) please see comment #1 under Tesoro's "Combustion Units/Monitoring" (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.2). 56

3. Source 1800, table VII-BL, p.484: Please add monitoring for rule 6-301 (Ringelmann #1), or explain in the Statement of Basis why no monitoring is needed. 57

***Fuel limits***

The District needs to either 1) change the condition to low-sulfur diesel for all units; or 2) perform a new periodic monitoring evaluation. The District is currently relying on a CAPCOA-CARB-EPA Region IX periodic monitoring agreement developed for sources firing low-sulfur diesel (condition #18618, #3&4 on p. 409), but the permit does not appear to prohibit combustion of fuel oil #6 or other grades of fuel oil. These other fuels typically result in significantly higher PM emissions than the low-sulfur diesel addressed in these agreements (see Air & Waste Management Association Air Pollution Manual pp. 247-8). 58

***CO Boilers***

**Applicable Requirements**

Please explain why Rules 6-304 and 60.104(a)(1) do not apply to the CO boilers. 59

**Monitoring**

1. The monitoring frequency for SOx fuel content is listed as one sample per million gallons (p.475 for CO boilers S1507, S1509, and S1512; p. 478 for S1514 utility boiler). We believe that the original sampling in the 2002 draft permit of once per batch is appropriate based on the CAPCOA/CARB/EPA Region IX guidelines (page 8) and should not be removed. Please note that this limit is also listed a second time on the table based on BAAQMD Condition #7618, Part E. 60

2. A sliding-scale test frequency (p. 410) is proposed for the SO3/H2SO4 limit on units S1431, 1432, 1765, 4180, and particulate limits on CO boilers S1507, 1509, 1512 , with a frequency once every three years if the source passes the annual test at less than 50% of the limit. Please explain how the district would monitor parameters or otherwise verify that emissions did not increase during the three years without source testing. 61

3. We understand that the CO boilers may burn up to 28,000 tpy DAF Float; 36,500 tpy Waste Biosolids; and 4,000 gallons per minute of primary treated wastewater (page 7 of CAL EPA DTSC Hazardous Waste Facility Permit dated 12-30-95; attached to Adams & Broadwell's September 2002 comments). Please include these materials in the periodic monitoring evaluation and require additional PM source testing if necessary to accurately quantify the different emission levels that may occur due to the different materials burned in the boilers. 62

**Miscellaneous**

Table II-A states that the CO boilers burn only gaseous fuels or oil. This is inconsistent with the DTSC permit referred to above. 63

## COOLING TOWERS

**Applicable Requirements**

1. Source 4210 is subject to the source-specific applicable requirements on pages 158 (table IV-AS for sources 1457 and 1778) of the permit. This cooling tower should be added to the list of affected sources. 64

2. Rule 6-311 should be added to the list of source-specific applicable requirements for the cooling towers on page 158 (table IV-AS for sources 1457 and 1778) of the draft permit. 65

**Miscellaneous**

The applicable limits and compliance monitoring requirements for source 4210 listed on pages 456 (table VII-AJ) and 512 (table VII CJ) could be consolidated into one table for clarity and conciseness. 66

## EMISSION CAPS

***CO Increases***

We would like to note that this permit avoids several concerns that we raised in our September 26, 2003 comment letter regarding the Chevron and Tesoro emission caps. For instance, this permit does not appear to contain problematic language regarding CO increases contained in the Chevron and Tesoro permits. This is consistent with EPA's recommended revisions for those permits and we recommend removing the language from the Chevron and Tesoro permits to be consistent with the proposed Shell permit.

***NOx CEMs for Cap Compliance and Compliance with other Limits***

We would like to note that the CEMs language on p362-3 (section VI condition #12271) requiring the use of CEMs installed at the source could serve as a good model for Chevron & Tesoro caps. Page 397-8 (section VI condition #18153) specifies extensive use of CEMs for NOx.

***NSR Applicability Baselines***

We would also like to note that this permit does not appear to contain problematic language regarding NSR applicability baselines contained in the Chevron and Tesoro permits. This is consistent with EPA's recommended revisions for those permits, and we suggest using the proposed Shell permit as a model for making those revisions.

***Offset Generation***

Consistent with EPA's recommended revisions for the emission cap conditions for Chevron and Tesoro, the cap conditions in the proposed Shell permit clearly state that a source may not bank emissions just by lowering the cap (p. 326, condition 7c). Instead, the permit requires that the source meet the District's NSR rule before banking emissions. We suggest using the proposed Shell permit as a model for revising the other proposed refinery permits.

***Partial Emission Cap***

**Miscellaneous**

1. Please explain why fugitives are not included for emission caps, and whether fugitives from new sources are generally included in NSR applicability and offset calculations (p.360 section VI condition #12190; this comment also applies to other caps). 67

2. We would like to know whether the sanctions in Condition # 7618 B on p.323 are intended to be in addition to, or replace, other enforcement authorities. 68

***Variance Exemptions***

The proposed Shell permit allows the exclusion of any emissions for which a variance has been granted (p.361 section VI condition #12271). As discussed for the other Bay Area refinery permits, we understand that the District will delete these provisions or state that they do not affect federal enforceability of the cap. We believe this change is also necessary for the Shell Martinez permit. Variances may not be included in Title V permits as federally enforceable requirements, and are also prohibited from State Implementation Plans. For more information, see *Industrial Environmental Association v. Browner*, No. 97-71117 (9th Cir., May 26, 2000) and 62 FR 34641 (June 27, 1997). For instance see: FRN p80278 - middle col. 52.21 definitions 52.21(b)(48)(ii)(a & b). 69

**ELECTROSTATIC PRECIPITATORS**

**Monitoring**

As discussed in our comments for the Tesoro permit (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p.2), the District must require periodic monitoring for the Shell ESP. For example, S-1426 ESP has no monitoring per Table II B. (See also our earlier comment on PM10 testing for the CO boiler emissions routed through the ESP.) 70

**<u>FLARES</u>**

**Applicable Requirements**

1. Condition 18617, #12 (p. 411) implies that "intentional" releases to flares are allowed, in which case NSPS sub-part J applies to all units built after the date listed in the standard and a non-applicability permit shield for these flares cannot be included. 71

2. When reevaluating and documenting the determinations for NSPS J (as discussed in EPA's letter to BAAQMD, September 26, 2003, Enclosure A, p.1), please also look at the applicability of NSPS J to thermal oxidizers. 72

3. Table VII-AO (p. 460) lists P/E record provision pursuant to NSPS J for S1471 and S1472 though there is no emergency only provision in the permit nor any citation to NSPS J for these units. Please explain if these units are subject to NSPS J; if they are subject please specify if they are subject to the fuel limit or exempt based on emergency/process upset use only and add continuous H2S monitoring. If these units are exempt please retain the record keeping provision and provide an explanation in the statement of basis. 73

4. In addressing the applicability of 40 CFR 60, Subpart A, please explain why these requirements, particularly 60.11, have been deleted from table IV-AXa for S-4201 and abatement devices 101, 102, and 103 (p164-165). Please ensure that all flares and thermal oxidizers subject to 60.11 have this requirement listed in the permit. We would recommend making 60.11 a refinery-wide requirement as was done for the other four Bay Area refinery permits recently submitted for review. 74

5. Similarly, when the District addresses applicability of 40 CFR 63, Subpart CC, please note that any flare subject to 63.643 must either comply with 63.11(b), or else meet the requirements of 63.643(a)(2), in which case refineries must be capable of measuring the control efficiency of the flare. Please ensure that each flare subject to 63.11 has this requirement listed in the permit. The District may want to consider making 63.11 a refinery-wide condition as was done in the permits for Chevron, Conoco, and Valero. 75

6. Table II B (p. 34) says that there are no applicable requirements for flares S-1771 and 1772. However, table IV-BW (p. 213) lists several requirements for these sources. Please correct this discrepancy. 76

7. Table IV-BXa lists condition 7618 as an applicable requirement for 1771. However, on page 322 (section VI, permit conditions, 7618) 1771 is not one of the subject sources. Instead, source 1772 is listed as subject, while table IV-BW (p.213) does not list 1772 as subject. Please correct the discrepancy. 77

8. We suggest listing Rule 12-11 as a requirement for all flares. It is currently just listed for S-4201, and A-101, 102, and 103 (Table IV-AXa, p.164). 78

**Monitoring**

1. Table VII-AN on page 459 lists continuous monitoring & records as the H2S fuel monitoring requirement for S-1470 pursuant to NSPS J. Please specify continuous H2S analyzer as is done for 1771 and 1772 (table VII-BH, p.482) in the same permit. 79

2. In the PM source table (p. 58, electronic version, engineering evaluation) the District refers to note 1, explaining why flare S-4201 is not subject to monitoring for District regulation 6-301. However, table VII-AO (p. 459) does list a monitoring requirement for S-4201. Please clarify. 80

## FUGITIVE SOURCES (PRESSURE RELIEF VALVES, PUMPS, COMPRESSORS)

We would recommend following the same format as used for the other four Bay Area Title V refinery permits, including an applicability matrix and a table of all applicable requirements and monitoring for all fugitive sources. 81

### Applicable Requirements

1. Facility-Wide Conditions (p 303-307 table IV-DV): The permit lists some facility-wide conditions in table IV-DV, but there is no way to determine what units at the facility are subject to these requirements (including NESHAP Part 61 subparts M and FF and NESHAP subparts A and CC). Please state in the permit what process units are subject to these rules. 82

2. If the district retains the current format for fugitives, please make Rules 8-18 and 8-28 facility-wide requirements. Most units at the refinery would be expected to be subject to these requirements. However, these rules are not included in the permit for most units. 83

3. Pages 286-301: Please specify which units are subject to 40 CFR Part 60, Subpart GGG, VV, and QQQ; 40 CFR Part 61, Subpart FF; and 40 CFR Part 63, Subpart CC. 84

### Monitoring

#### *Vessel Depressurization Rule*

We understand that the District will require monitoring of the pressure for all of the pressure vessels to determine compliance with SIP Reg 8-10. 85

## HYDROGEN PLANT

### Applicable Requirements

Hydrogen Plant #3 (unit 4160): We understand that the District's inventory estimates emissions from this unit alone at 600 tons per year. The Statement of Basis does not include any discussion of rules or emission limits that apply to this unit other than the general throughput limit discussion. Please add to the Statement of Basis a complete review of the limits that potentially apply and the specific limits that the unit must meet, including Reg 8-2 for the CO2 vent and any other emission points that are not limited by Reg 8 or 10, and whether a scrubber or other emission controls are required (a scrubber is required in the 86 proposed Conoco-Phillips permit). Please note that Table AM appears to have no requirements.

Please also clarify why upsets but not routine releases from this unit are covered in the Condition # 12271 POC limit of 132.0 TPY. 87

MARINE LOADING BERTHS
Monitoring
The permit lists a 95% control requirement (p.310 condition #4288) for marine loading (sources 2001, 2002, 2003, and 2004). Table VII-BR (p.490) has only P/E recordkeeping as the method to verify compliance. Please add an appropriate method for monitoring this limit. 88

**PERMIT SHIELDS**

***Non-applicability Shields (Tables IX A-3 and IX A-10)***

There are several significant problems with the proposed permit shields. One type of problematic shields included in the proposed permit is facility-wide shields[1], which apply to the entire refinery and prospectively to an unknown universe of potential future new units. There are dozens of regulations listed in Table IX A-10 pertaining to benzene service, "SOCMI" units, hazardous waste incineration, and electric utility steam generators, among others. The permit does not contain any applicability determinations for these rules, nor any conditions to prevent the source from triggering these regulations. 89

Another facility-wide shield included in the proposed permit consists of a very large list of sources exempted from the boiler NSPS in Table IX A-3 without a specific reason. For example, table IX A-3 on p. 537 shields several units from 40 CFR, Subpart Db. The only explanation given is that "only S4191 and S4193 are subject to Subpart Db." This is not adequate justification for a permit shield. 90

[1] One example is that table IX A-10 on p. 540 gives a facility-wide shield from the requirements of 9-1-302, based on the facility meeting the requirements of 9-1-110. While table III (generally applicable requirements, p41) does list 9-1-110 as an applicable requirement, the sulfur limit referred to in rule 9-1-110 should be added to the "description of requirement" column.

The statement of basis also does not appear to give any additional information or justification for any shields. We do not believe that 40 CFR, Subpart 70 allows either of these shields.

***NSPS J***

1. Please remove the proposed permit shield from NSPS Subpart J for the thermal oxidizers at the Claus unit (A-1501, A-1517, and A-1518). Because these thermal oxidizers are a part of the Claus sulfur recovery plant, they are subject to NSPS J (including 60.104(a)(2)) unless the Claus plant itself is exempt. In addition, the District proposed the shield because the thermal oxidizers combust only natural gas. Since they are control devices at a sulfur plant, however, it is reasonable to expect that these units will be combusting more than natural gas. 91

2. Table IX A-2, p. 537: The permit shield for several units has been deleted. However, the citation to 40 CFR 60, Subpart J, 60.105 in the shield still remains. We recommend deleting this out to avoid confusion. 92

3. Table IX A-12 (p. 542) contains proposed shields against NSPS subpart J for flares 1471, 1472, 4201, 101, 102, and 103 based on an emergency/malfunction use only exemption in the NSPS. However, the permit (see Table VII-AO p.459) references condition #20747, but does not actually limit the units to emergency/malfunction unit. Please add emergency/malfunction language to the limit column. In addition, only flares 4201, 101, 102, and 103 are covered by condition 20747 (p.414). Please add an emergency/malfunction limit for flares 1471 and 1472 or else remove them from the permit shield on p. 542 and add the NSPS limits to the permit. 93

4. Table IX A-13 (p. 543) shields flares 1771 and 1772 from NSPS J with the caveat that "Not applicable only when these flares combust only process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunction that is exempt from the standard..." This shield is confusing and unnecessary because the regulation itself exempts the flares from the fuel H2S limit during emergency/malfunction releases. Instead, any shield needs to be justified by *permit conditions* limiting the source to upset/malfunctions. 94

***Wastewater Treatment***

The proposed permit contains Table IX A-8, a permit shield from Reg 8 Rule 8 sections 301, 302, 306, and 308 based on the exemptions in Rule 8-8-114. However, there is no apparent reason why section 114 would exempt these operations, and it never authorizes any exemption from sections 306 nor 308. Therefore, the proposed permit shield is not allowed under 40 CFR part 70. The District may wish to discuss in the statement of basis for the initial Title V permit whether the Reg 8 Rule 8 section 113 exemption could apply to these units and consider whether a permit shield based on section 113 could be justified in a future permit revision. 95

***Process Drains***

Table IX A-9, "Process Drains:" The Proposed Permit contains a permit shield for the process drains from Reg 8 Rule 8 based on a statement that no requirements exist. Rule 8-8 includes stormwater sewer systems, junction boxes, and sewer lines (sections 216-218). If the District wishes to provide a shield, please document that process drains are excluded from these definitions and are not covered by other sections of the rule; or document why each process drain that is covered by Rule 8-8 would not be subject to any requirements under Rule 8-8. 96

***Steam Methane Reformer***

Table IX A-11, S4161 - DC H-101 HP3: The District has proposed a permit shield based on NSPS alternate monitoring provisions that require approval by the EPA Administrator. We were not able to locate an EPA approval document in the limited amount of time available to review this permit. Please provide us with either a copy of the EPA approval document or the date and official who signed this approval or remove the shield. 97

## <u>SULFUR TREATMENT EMISSIONS</u>

### Applicable Requirements

Please add Rules 9-1-301, 9-1-307, and 6-305 to the applicable requirements for the Sulfur Plants or explain in the statement of basis why these rules do not apply. 98

### Federal Enforceability

Rule 9-1-313.2 should be marked federally enforceable (see table IV-AQ, p. 155). 99

### Monitoring

1. SCOT Unit: The monitoring conditions on p. 378, condition #12271- SOx CEMs, total sulfur gas chromatography as BACT may be useful to evaluate for other refineries. 10
2. Less frequent testing based on a 50% compliance margin is proposed on p410 for $SO_3$/$H_2SO_4$ and particulate limits - see comment under combustion units/CO boilers/periodic monitoring, above. 10

3. 95% $H_2S$ limit: annual test is proposed for sulfur plants S1431, S1432, S1765, S4180 (table VII-AH, p. 455). See Tesoro comments under Sulfur Treatment Units/Monitoring (EPA letter to BAAQMD, September 26, 2003, Enclosure B, p. 10). 10

4. Please explain in the statement of basis the origin of the $H_2S$ limit that changes based on % SJV crudes in table VII-AW for S1494 (p. 471), for S1504, etc (p. 474), and for utility CO boilers 1, 2, and 3 (p. 476). 10

5. Sources 1431, 1432, 1765, and 4180 are all subject to Rules 6-301 (visible emissions) and 6-310 and 6-311 (particulates). However, no monitoring is included for any of these rules in table VII-AH (p. 455). The statement of basis says that for sources 1431 and 1432 no monitoring for Rule 6-301 is required and refers the reader to note 5 for 10

an explanation (see PM sources and discussion). However, there is no note 5. The District exempts sources 1765 and 4180 from Rules 6-301, 6-310, and 6-311, explaining in the Statement of Basis that these units are subject to an annual source test to determine compliance with the sulfur emissions limit of 6-330 (sulfur recovery units). Similarly, for units 1431 and 1432, the statement of basis requires annual source tests to monitor for compliance with 6-330. An annual source test for sulfur is not sufficient to monitor for compliance with visible emissions and particulate limits. Please include more frequent monitoring to determine compliance with the requirements of 6-301, 6-310, and 6-311. In addition, please explain how the district will monitor for compliance with 6-330 between annual tests.

**SUPPORT FACILITIES**

Source Aggregation: It appears that there may be potential support facilities at the Shell facility. For instance, the Shell Martinez Catalyst plant and Shell Chemical (SIC Code 2911) located on 10 Mococo Rd may be contiguous and/or adjacent to the refinery. The address for Landry Services is listed as the Shell Refinery, although we did not find additional information on emissions or source type in the CARB database[2] beyond the SIC Code (2911) to indicate whether Landry Services could be a support facility. Please inform us whether the District has evaluated potential support facilities in Standard Industrial Classification Code 2911 or other SIC Codes for the Shell Martinez refinery. 10

## TANKS

### Applicable Requirements

Rule 8-5-311 has been deleted from the District's rules and the SIP, but is still cited throughout the permit. Please delete this citation and replace it with a citation to 8-5-306. 10

### Monitoring

1. Rules 8-5-320, 8-5-321, and 8-5-322 are applicable requirements for several tanks. However, all monitoring for these requirements has been removed from section VII of the permit. Please add monitoring for these rules. For the appropriate monitoring requirements please refer to Tesoro tank comments (EPA letter to BAAQMD, September 26, 2003, Enclosure A, p. 11-13). 10

10

[2] http://www.arb.ca.gov/app/emsinv/facinfo/factox.php?dd=&grp=1&sort=FacilityNameA&dbyr=2001&ab_=&dis_=BA&co_=&fname_=&city_=&fzip_=&fsic_=2911&facid_=&display_1=Risk&showpol=

2. Table VII-Y on page 439 mistakenly refers to 328.2 as the emission limit citation. This should be 328.1.2

3. It is not clear why the monitoring requirements specified in section 8-5-402 were deleted from Table VII - P for the internal floating roof tanks on page 530. Tanks that are subject to the requirements of section 8-5-305 should be inspected per section 402. In addition, the monitoring requirements specified in this table pursuant to NSPS Subpart Kb are incomplete. The district should add the additional applicable requirements found in 60.113b. 10

4. Please explain why the monitoring requirements for NSPS Subpart Kb have been deleted from tables VII-X and VII-CN. 11

5. Source 952 should be added to the table of applicable limits and compliance monitoring requirements for the internal floating roof tanks (Table VII - P) on page 530. 11

**<u>THROUGHPUT LIMITS ON GRANDFATHERED UNITS</u>**

The permit appears to be missing the general discussion that is included for other permits to avoid any misunderstanding that these limits could be relied upon to avoid NSR applicability. Please add this language to the permit to clarify that these limits trigger reporting requirements and cannot be relied upon to presume that a unit is, or is not, subject to NSR (Throughput Limits section VI condition #18618 on p.402, etc). 11

**Federal Enforceability**

We understand that other throughput limits are federally enforceable limits. Are the capacities listed in condition #4303 p.314 limited to the permit limit, or can Shell exceed them based on "maximum allowable capacity?" 113

**<u>WASTEWATER TREATMENT</u>**

**Applicable Requirements**

1. Table IV-DQ (p.291) details the applicable requirements of 40 CFR 60, Subpart QQQ for individual drain systems. Please note that the oil-water separators, including slop oil vessels, are also subject to Subpart QQQ. 11

2. Please verify that sludge dewatering does not occur at the facility. If this process does occur, rule 8-8-304 may apply. 11

3. Table IV-M, Tank 532 (p.103): Please add citations for 61.357(d)(2), (d)(6), and (d)(7). Please also add to monitoring citations in table VII for this source. Please do the same for all tanks subject to 61.357(d). 11

4. Table IV-DV (p.305), refinery-wide requirements: 61.357(d)(2) and (5) are included as applicable requirements. Please add 61.357(d)(6), (7), and (8) or explain why these requirements are not applicable. Also, the monitoring requirement of 61.357(d)(5) applies if the owner/operator elects to comply with 61.342(e). If 61.342(e) is the 11

chosen option, then the applicant should demonstrate that the flow-weighted annual average water content of facility waste is >= 10%, as described in 61.342(e)(2). Facility waste with less than 10% would be subject to 61.342(c)(1).

5. In our review of the permit, we did not see any permit conditions or requirements for S1467 and S5117 (biotreaters). These units may be subject to 40 CFR Part 61, Subpart FF (e.g., 40 CFR 61.348 and/or CFR 63 Subpart CC). Please explain if these units have any applicable requirements. 118

6. No sewer pipelines or process drains were listed in Section II of the permit, though some may be subject to 40 CFR Part 61, Subpart FF and/or 40 CFR Part 63, Subpart CC. Please explain if these units have any applicable requirements. 11

7. It appears that the emissions from the LOG API Separator (S1469) and CPI Oil/Water Separator (S1779) are routed to a water scrubber and subsequently to a carbon adsorption system. If the entire system (API separator, water scrubber, and carbon adsorption system) is a closed vent system, please add a permit condition to include the requirements of 61.347(a)(1). 12

8. Please provide an explanation as to whether the wastewater ponds (S-1466, S-1468), wastewater separator dubbs box (S-2009), wastewater junction boxes (S-2010), wastewater collection sumps (S-2011), Final EPT 1&2 Holding Ponds 5C & 5D (S-2014), and Bioclarifiers (S-5118 & S-5119) are subject to 40 CFR 61 Subpart FF and/or 40 CFR 63 Subpart CC. 12

9. Please explain why there are no permit conditions regarding the carbon adsorption systems for the oil/water separators. See comment for DNF Units below. 12

10. DNF Units S-2007 and S-2008: Since emissions from these units are abated by carbon adsorption systems, please include corresponding requirements for S-2007 and S-2008, per 40 CFR 61.354(d). Please also provide an explanation as to how the ppm limits in the permit will result in compliance with 40 CFR 61.354(d). 12

11. If the CPI Oil/Water Separator (S1779) is part of the wastewater treatment system, it may be subject to 40 CFR 61.347 and any related monitoring, recordkeeping, and reporting requirements in this Subpart FF, as well as MACT Subpart CC. Please provide a determination in the statement of basis. 12

**Federal Enforceability**

Applicable requirement 60.692-1(d) should be denoted as federally enforceable on page 291 (table IV-DQ, Subpart QQQ for individual drain systems) of the draft permit. 12

**Monitoring**

1. Benzene Waste NESHAP: Please explain the basis for 61.354(d) alternate monitoring in the statement of basis (Condition #4298 on p312). As noted in prior comments, EPA approval is necessary for NSPS alternate monitoring. 12

2. Tank 532: Please add monitoring citations for 61.357(d)(2), (d)(6), and (d)(7). Please do the same for all tanks subject to 61.357(d). 12

3. Please spell-out the recordkeeping requirements of 61.356. 12

**<u>GENERAL COMMENTS (MISCELLANEOUS UNITS AND STATEMENT OF BASIS)</u>**

**Applicable Requirements**

1. MACT Subpart UUU conditions listed on p. 414 (section VI, condition #18646) could be used as an example for other facilities. 12

2. Coke Handling conditions may serve as an example for other permits (p380-3, section VI, condition #12271): 8 % moisture content to limit crusher emissions; analyze once per day; and other dust-control measures. 13

**Monitoring**

1. In the PM source table (starts p. 57, electronic version, statement of basis), the District refers to note 5 to explain why several sources are not subject to PM monitoring. Note 5 is not included in the PM discussion. Please explain why all sources that refer to note 5 are not subject to PM monitoring. 13

2. Sources 1502, 1503, 1540, 4021, 4171, and 4161 (various units) are subject to Rules 6-301 and 6-310. However, no monitoring requirements are included in table VII, nor is any explanation given in the Statement of Basis. Please add appropriate visible emissions monitoring to table VII for these sources or provide an explanation in the Statement of Basis to justify why none is needed. 13

3. The table VII-CE (p. 501) “process swing gas” limit monitoring should be continuous, since the facility is subject to continuous monitoring of the fuel gas H2S pursuant to NSPS Subpart J. If the facility has requested alternate monitoring under 60.13(i), please explain whether EPA has approved this request. Also, please explain how record keeping would demonstrate compliance with the Flexigas H2S limit when fuel gas is continuously monitored for H2S. 13