# **Bay Area Air Quality Management District**

939 Ellis Street San Francisco, CA 94109 (415) 771-6000

# Permit Evaluation and Statement of Basis for MAJOR FACILITY REVIEW PERMIT Reopening – Revision 3

Valero Refining Co. - California Facility #B2626

# **Facility Address:**

3400 East Second Street Benicia, CA 94510-1097

# **Mailing Address:**

3400 East Second Street Benicia, CA 94510-1097

July 2005

# TABLE OF CONTENTS

| A.  | Вас  | ekground   | 3  |
|-----|------|--|----|
| B.  | Fac  | ility Description  | 4  |
| C.  | Per  | mit Content  | 4  |
| I.  | S    | tandard Conditions   | 4  |
| IJ  | . E  | Equipment  | 5  |
| IJ  | I.   | Generally Applicable Requirements                                      | 6  |
| Γ   | V.   | Source-Specific Applicable Requirements                                | 7  |
| V   | •    | Schedule of Compliance   | 20 |
| V   | I.   | Permit Conditions  | 20 |
| V   | II.  | Applicable Limits and Compliance Monitoring Requirements               | 21 |
| V   | III. | Test Methods   | 23 |
| Ľ   | Χ.   | Permit Shield  | 23 |
| D.  | Alte | ernate Operating Scenarios:  | 24 |
| E.  | Cor  | mpliance Status:   | 24 |
| F.  | Per  | mit Changes since the Final Revision 1 Permit issued December 16, 2004 | 24 |
| API | PENI | OIX A Permit Evaluations   | 27 |
| API | PENI | OIX B Source Test Section Recommendation                               | 34 |
| API | PENI | DIX C Compliance Division Summary of NOV Review                        | 38 |

# **Title V Statement of Basis**

# A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and as incorporated in BAAQMD Regulation 2, Rule 6, Major Facility Review, because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has a "potential to emit," as defined by BAAQMD Regulation 2-6-218, of more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

The District issued the initial Title V permit to this facility on December 1, 2003. On December 16, 2004, the District issued Revision 1 of the permit, which amended flare and BAAQMD Regulation 9, Rule 10 requirements, added new permitted sources, and corrected typographical and other inadvertent errors ("Revision 1 Permit"). The Revision 1 Permit is the current permit for the facility, and the phrases "Revision 1 Permit" and "current permit" are used interchageably in this document. On April 15, 2005, the District proposed Revision 2 of the permit. The primary purpose of the Revision 2 proposal was to address various issues identified in EPA's letter dated October 8, 2004 regarding the Revision 1 proposal that were not addressed in the final Revision 1 Permit. The public comment period for the Revision 2 proposal ended May 24, 2005.

On December 7, 2004, EPA received a petition from Our Children's Earth Foundation (OCE) requesting that the administrator object to the issuance of the Title V permit (the Revision 1 Permit). On March 15, 2005, EPA issued an Order Denying in Part and Granting in Part the OCE petition. The primary purpose of this Revision 3 reopening of the permit is to address the issues listed in the EPA March 15, 2005 Order.

The Revision 3 proposal also includes proposed revisions to the permit based on applications for revisions to the Title V permit. Though, there are many of these applications for revisions under review, the Revision 3 proposal addresses only the three applications listed below because they are directly or indirectly related to the issues raised in the EPA March 15, 2005 Order.

All changes to the current permit included in this Revision 3 proposal are shown in "strikeout/underline" format. The Revision 3 proposal also includes all proposed changes

included in the Revision 2 proposal, also shown using "strikethrough/underline" format. The revisions proposed in Revision 3, which are less numerous, are shown in large (14 pt) font, while the revisions proposed in Revision 2 are shown in the regular font of the document. When the permit is finalized, the "strikeout/underline" format will be removed.

This statement of basis for the Revision 3 proposal discusses changes that are proposed to be made through this limited reopening. It also provides additional analysis supporting applicability determinations made previously by the District. In some instances, the additional analysis did not result in a permit change. In those instances, the District is not reopening the permit, and the analysis is provided for information only.

This statement of basis does not address factual and legal bases for permit requirements and conditions that are not the subject of the reopening. These matters were addressed in the comprehensive statements of basis that accompanied the initial permit and the Revision 1 Permit. Those statements of basis are available upon request.

The Revision 3 proposal would produce no significant increase in facility emissions. The Revision 3 permit would incorporate the following recent Title V revision applications into the permit:

| Application | Description                          |
|-------------|--------------------------------------|
| Number(s)   |                                      |
| 12578       | Delete Grain Loading Source Tests    |
|             | from S-11, S-160 and S-233           |
| 12588/12589 | Reroute S-160 Vent to Vapor Recovery |
|             | System                               |

The incorporation of these applications would produce no increase in emissions. Deleting the source test requirements from S-11, S-160 and S-233 would not change the source emissions. Rerouting the S-160 vent to the Vapor Recovery system would reduce emissions.

Details of significant proposed permit changes are listed in Section F of this document.

# **B.** Facility Description

The facility description can be found in the statement of basis that was prepared for the current permit (Revision 1 Permit) that was issued December 16, 2004. It is available upon request.

# C. Permit Content

The legal and factual basis for the Revision 3 proposal follows. Proposed changes to each permit section are described in the order presented in the permit.

# I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

# II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24 or S-24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302. The permitted sources are shown in the Permit Table II A.

The exempt sources may or may not have a source number. The exempt sources are shown in the permit in Table II B.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant," as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A24 or A-24). This abatement equipment is shown in the permit in Table II C. If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an "S" number. An abatement device, such as a thermal oxidizer that burns fuel, may also be a source of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or "A") device. If the primary function of a device is a non-control function, the device is considered to be a source (or "S").

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

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

Following are explanations of the differences between the equipment list in this Revision 3 proposal and the equipment list in the Revision 2 proposal issued for public comment on April 15, 2005:

The following sources have been taken out of service:

- S-10 Catalyst Rail Unloading Station
- S-12 Lime Silo TK-2061

There have been no sources added to the permit since the Revision 2 proposal was issued on April 15, 2005.

As noted in the Revision 2 proposal, the following sources are no longer owned by Valero Refining Company, California:

- S-57 Crude Oil Tank TK-1701, External Floating Roof, 6300 kgal
- S-58 Crude Oil Tank TK-1702, External Floating Roof, 18900 kgal
- S-59 Crude Oil Tank TK-1703, External Floating Roof, 18900 kgal
- S-60 Crude Oil Tank TK-1704, External Floating Roof, 6300 kgal
- S-61 Crude Oil Tank TK-1705, External Floating Roof, 18900 kgal
- S-62 Crude Oil Tank TK-1706, External Floating Roof, 18900 kgal
- S-67 Gas Oil Tank TK-1715, External Floating Roof, 9450 kgal
- S-68 Gas Oil Tank TK-1716, External Floating Roof, 8820 kgal
- S-70 Resid Coker Feed Tank TK-1718, Vertical Fixed Roof, 5250 kgal
- S-71 Resid Coker Feed Tank TK-1719, Vertical Fixed Roof, 15708 kgal
- S-72 Gas Oil Tank TK-1720, External Floating Roof, 15204 kgal
- S-74 HVN TK-1734, External Floating Roof, 7980 kgal

The removal of these sources from the permit is still pending the issuance of a Title V permit to the current owner of these sources.

# III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered *significant sources* pursuant to the definition in BAAQMD Rule 2-6-239.

# IV. Source-Specific Applicable Requirements

#### **General Information**

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District rules
- SIP rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements, a description of the requirement, and an indication of whether the requirement is federally enforceable. If applicable, a future effective date for the requirement is also specified. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

# **Complex Permit Issues and Applicability Determinations**

As stated previously, the Revision 3 proposal is primarily intended to address the issues identified in the EPA's review and response to the petition regarding the Revision 1 Permit. Each item that resulted in an EPA order to reopen the Valero permit is addressed below in sections (A.) through (O.). After these EPA Order items are addressed, the monitoring changes due to Title V Revision Applications 12578 and 12589 are discussed.

# (A.) Applicability of NSPS Subpart QQQ to New Process Units.

Reference: Order Item III.A.2.c on page 6.

This item was addressed in the Revision 2 statement of basis. The District's conclusion is that Subpart QQQ does not apply. Please see page 16 of the Revision 2 statement of basis for the

detailed determination. The Revision 3 proposal does not include revisions to the permit regarding this item.

# (B.) Management of Non-aqueous Benzene Waste Streams Pursuant to 40 C.F.R. Part 61, subpart FF.

Reference: Order Item III.A.2.d on page 7.

This item was addressed in the Revision 2 statement of basis. The District's conclusion is that 61.342(e)(1) is applicable to one benzene waste stream, and this requirement is in the permit Table IV-Refinery because the waste stream does not come from a permitted source. Please see page 16 of the Revision 2 statement of basis for the detailed determination. The Revision 3 proposal does not include revisions to the permit regarding this item.

# (C.) Parametric Monitoring for Electrostatic Precipitators

Reference: Order Item III.A.2.f on page 8.

This item was addressed in the Revision 2 statement of basis. Permit Condition 22156 was included in the Revision 2 proposal to address this issue. Please see page 19 of the Revision 2 statement of basis. The Revision 3 proposal does not include revisions to the permit regarding this item.

# (D.) Assurance of Compliance with All Applicable Requirements Pursuant to the Act, Part 70 and BAAQMD Regulations

Reference: Order Item III.C.1 on page 12.

This item has been combined with the Notice of Violation Order Item III.C.1 on page 13 (discussion immediately following below).

# (E.) Notices of Violation (NOV)

Reference: Order Item III.C.1.a on page 13.

EPA required the District to address the NOVs that the District had issued to the facility – and, in particular, NOVs that had not been resolved at the time of permit issuance – because they may evidence ongoing noncompliance with applicable regulatory requirements.

No unresolved NOVs involve ongoing noncompliance. All instances of noncompliance documented in the NOVs issued to the facility have been corrected. Some NOV files remain unresolved, but only because settlement of penalties has not yet been completed.

# **Four-Year Compliance Review**

The District has conducted a compliance review of the 87 Notices of Violation (covering 95 violations) issued to Valero from January 1, 2001, through December 31, 2004. The District has found no instances of noncompliance that would justify imposition of a schedule of compliance. While the refinery received numerous violations over this 4-year period, that is not unexpected

for large, complex, and heavily-regulated facilities such as refineries. It is important to note that all of the 95 violations were cured and brought back into compliance. Furthermore, the District's analysis of all the violations for the 4-year period indicated that there is no ongoing violation or pattern of recurring violation that would require a compliance schedule.

Understanding how the District handles violations is important to understanding how the District evaluated the facility's compliance status. Whenever the District discovers a violation, it begins a two-step process. The first step is to ensure that the violation ceases and the violator comes back into compliance. Once compliance is achieved, the second step is to proceed with penalty assessment. It is District policy to not proceed with penalty assessment until compliance has been achieved. If a facility has not achieved compliance in a timely fashion, the District proceeds with additional enforcement action. The vast majority of Notice of Violation penalties are resolved through settlement negotiations. Therefore, a violation indicated as "pending" resolution does not indicate ongoing violation; it simply indicates that the penalty assessment is still pending a final disposition.

The results of the District's compliance review are shown in Appendix C, which identifies each violation that was evaluated and indicates how and when compliance was achieved. As stated earlier, all of the 95 violations have been brought back into compliance. For 84% of the violations, compliance was achieved within 1 day of discovery of the violation. In the remaining 16% of the violations, the violation occurred over a multi-day period, but compliance was eventually achieved and the violation is not ongoing. Fifty-six percent of the violations involved a source at which multiple violations occurred during the period, but causal analysis indicated different causes for each violation, and there was no recurrent pattern that that would require a compliance schedule. Based on this review and analysis of all the violations for the 4-year period, the District has concluded that no schedule of compliance is necessary because in each case the facility returned to compliance, the violation did not evidence ongoing noncompliance, there was no pattern of recurring violations with a common cause, and the source involved is currently in compliance with all applicable permit requirements.

This permit is not being reopened with respect to this issue.

# (F.) Permit Shields 40 C.F.R. 60.7(c) and (d)

Reference: Order Item III.E.1 on page 24.

In Table IX B-7 of the current permit, various reporting requirements of 40 CFR 60 Subpart A 60.7(c) and 60.7(d) are said to be subsumed by BAAQMD Regulation 1-522.8 Continuous Emission Monitoring and Recordkeeping Procedures. This is an error, and Table IX B-7 is proposed for deletion in the Revision 3 proposal.

40 CFR 60 Subpart A 60.7(c) and 60.7(d) contain very specific reporting requirements, as can be seen by the excerpts shown below:

[60.7](c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- [60.7] (d) The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in §60.7(c) need not be submitted unless requested by the Administrator.
- (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in §60.7(c) shall both be submitted.

BAAQMD Regulation 1-522.8 simply requires monthly reports in a "format specified by the APCO". The form used for satisfying this requirement includes the information required by 60.7(c) and 60.7(d). However, the language of BAAQMD Regulation 1-522.8 itself does not require the detail of 60.7 (c) and (d). Rather than demonstrate that the form compels submittal of the information required by the federal regulations, the District concludes that this permit shield is invalid. In Revision 3, the District proposes to add 40 CFR 60 Subpart A 60.7(c) and 60.7(d) to Table IV-Refinery.

# (G.) 40 C.F.R, Part 60, Subpart J (NSPS for Petroleum Refineries)

Reference: Order Item III.G.1 on page 29.

# Monitoring for NSPS Subpart J at Flares

The Orders for Chevron and Valero state that the Air District must either impose the requirements contained in 40 CFR § 60.105(a)(3) or (4), or add monitoring to assure compliance with Chevron permit Condition 18656, Part 7 and Valero Condition 20806, Part 7 (referred to below as "prohibitory conditions"). The Orders for Tesoro and ConocoPhillips indicate EPA's intent to treat those permits similarly in the near future. The Air District interprets the Order, in this respect, to assert the need for monitoring to determine whether the refineries are properly

claiming that certain flares continue to be exempt from the H2S standard of § 60.104(a)(1), i.e., that the flares are not used to combust gases on a "routine" basis. The Order does not assert that the exemption has been improperly claimed, but rather that Title V monitoring is required to verify on an ongoing basis whether the exemption is properly claimed. As explained below, the Air District in Revision 3 is proposing to delete the prohibitory conditions, and is otherwise deferring response on this issue until there is new guidance from EPA.

Regarding this issue, the order reflects views expressed in earlier comments from EPA. In an October 6, 2004, letter responding to these comments, the Air District affirmed the importance of determining applicability of Subpart J on a continuing basis but noted that, as a Title V matter, the imposition of monitoring is authorized only for requirements determined to be applicable. The Air District reasoned that therefore, to the extent a flare is, as a factual matter, exempt per § 60.104(a)(1), then the H2S standard of Subpart J is not applicable and Title V monitoring is not authorized. The October 6 letter sought clarification from EPA on three points: 1) articulation of the broader Title V implementation principle being asserted by EPA, 2) the legal rationale for that principle, and 3) EPA's plan for ensuring national consistency. To date, EPA has not addressed the first two points.

Concurrent with the March 15, 2005, Orders, EPA also issued guidance addressing the same issue. This guidance would have served to address the Air District's concern regarding national consistency. However, on May 16, 2005, EPA issued a brief statement withdrawing the March 15 guidance and stating that new guidance would be issued "in the upcoming weeks." The Air District interprets this to mean either that EPA is reconsidering its position or, at the least, that the new guidance will serve to clarify EPA's position and rationale. The Air District therefore believes the most efficient course is to defer its response to the Orders until new guidance is issued.

Regarding the prohibitory conditions referred to above, the Air District will propose deletion of these conditions because they are neither required nor helpful. The Air District initially believed these conditions might obviate the need to resolve the disagreement over monitoring for applicability of Subpart J described above. This belief has proven false. Judging from the March 15 Orders, the effect was merely to transpose the very same monitoring issue onto the new prohibitory conditions themselves. In general, there is no requirement in Title V or the implementing regulations to impose such prohibitions. Whether the exemption from the Subpart J H2S standard has been properly claimed is determined based upon actual events at the refinery, not upon what the refinery is legally authorized to do. Consistent with this principle, if "routine" flaring does occur, then the flare is subject to the H2S standard of Subpart J and the monitoring requirements of § 60.105(a) regardless of whether any such prohibition exists in the Title V permit. The prohibitory conditions are simply redundant. Deletion of the conditions should facilitate further discussions on this issue by returning the focus to the exemption language of Subpart J.

# (H.) Cooling Tower Monitoring for Regulation 8-2-301

Reference: Order Item III.G.3.a on page 32.

This item was addressed in the Revision 2 statement of basis. The District's conclusion is that BAAQMD Regulation 8-2-301 does not apply and should be removed from Table IV-C5 for S-29 Cooling Tower. Please see page 19 of the Revision 2 statement of basis for the detailed determination. The Revision 3 proposal does not include revisions to the permit regarding this item.

# (I.) Cooling Tower Monitoring for Regulation 6-311

Reference: Order Item III.G.3.b(2) on page 35.

BAAQMD Regulation 6-311 limits the maximum particulate emission from a source even if the grain loading limitation of BAAQMD Regulation 6-310 is satisfied. The following emission calculations for S-29 cooling tower demonstrate a significant margin for compliance with BAAQMD Regulation 6-311. Therefore, periodic monitoring is not justified. The Revision 3 proposal does not include revisions to the permit regarding this item.

The PM10 factors in AP-42 are not the proper factors to use since the factor is based on a total dissolved solids content of 11,500 ppm in the cooling water. Furthermore, AP-42 states "a conservatively high PM-10 emission factor can be obtained by (a) multiplying the total liquid drift factor by the total dissolved solids (TDS) fraction in the circulating water and (b) assuming that, once the water evaporates, all remaining solid particles are within the PM-10 size range." While this method would be conservative in predicting PM-10 emissions, it would be adequate to estimate total particulate emissions. The calculations below use this method of determining particulate emissions.

# Cooling Tower Operating Data:

Design Circulation Rate: 59,375 gpm [ x(8.34 lb/gal)x(60min/hr) = 29,711,250 lb/hr ] Drift Rate: 0.02%, or 0.0002 lb drift per lb of cooling water (AP-42, Fifth Edition, Table 13.4-1) Total Dissolved Solids (TDS) = 1716 ppm averaged over a two year period TDS = 3260 maximum measured over past two years Regulation 6-311 limit for Process wt rate > 57,320 lb/hr = 40 lb/hr particulate emissions

Average Particulate Emissions = (circulation rate)x(drift rate)x(Average TDS)

- = (59,375 gpm)x(60min/hr)x(8.34lb/gal)x(0.0002 lb drift/lb water)x(1716/1000000)
- = 10.20 lb/hr average particulate emissions

Maximum Particulate Emissions = (circulation rate)x(drift rate)x(Maximum TDS)

- = (59,375 gpm)x(60min/hr)x(8.34lb/gal)x(0.0002 lb drift/lb water)x(3260/1000000)
- = 19.37 lb/hr maximum particulate emissions

Average particulate emissions are about 25% of the BAAQMD Regulation 6-311 limit. Maximum particulate emissions are 48.4% of the limit. These calculations demonstrate that S-29 Cooling Tower has a significant margin for compliance with BAAQMD Regulation 6-311. Therefore, periodic monitoring of S-29 to assure compliance with BAAQMD Regulation 6-311 is not justified.

# (J.) Sulfur Storage Pit (S-157) Monitoring for Regulations 6-301 and 6-310

Reference: Order Item III.G.5.a on page 37.

BAAQMD Regulation 6-301 limits the opacity of emissions to Ringelmann No. 1, and BAAQMD Regulation 6-310 limits grain loading to 0.15 grains per dry standard cubic foot. As explained below, monitoring for S-157 is already included in the permit, directly in the case of 6-301 and indirectly in the case of 6-310. The Revision 3 proposal does not include revisions to the permit regarding this item.

The initial permit (December 1, 2003) statement of basis stated that monitoring for S-157 was not included in the permit because the source is capable of exceeding the visible emission or grain loading standard only during process upset and that, under such circumstances, other indicators will alert the operator that something is wrong. After further investigation, the District has determined that Sulfur Storage Pit S-157 is enclosed, and the emissions are collected and directed to the main refinery stack. The main stack is monitored with a continuous opacity monitor to assure compliance with BAAQMD Regulation 6-301 Ringelmann No. 1 Limitation. Permit Condition 19466, Part 6 requires annual source tests for S-5 FCCU Regenerator and S-6 Coker Burner to determine compliance with BAAQMD Regulation 6-310. S-5 and S-6 produce the CO fuel gas used in the refinery, and the emissions from S-5 and S-6 are also exhausted at the main stack, after the CO fuel gas is combusted in S-3 and S-4 process heaters and the flue gas is treated in Electrostatic Precipitators (ESPs) A-1 through A-5. Therefore, the annual source test requirement for S-5 and S-6, which is performed on the main stack downstream of the ESPs, will also determine S-157 compliance with BAAQMD Regulation 6-310. This is also true for the other sources that discharge into the main stack (S-1, S-2 and S-7). Because the source test required by Condition 19466, Part 6 will also assure S-1, S-2, S-3, S-4, S-5, S-6, S-7 and S-157 compliance with BAAQMD Regulation 6-310, individual compliance monitoring for S-157 would be duplicative.

# (K.) Lime Slurry Tanks (S-174 and S-175) Monitoring for Regulations 6-301, 6-310, and 6-311

Reference: Order Item III.G.5.b on page 38.

BAAQMD Regulation 6-301 limits the opacity of emissions to Ringelmann No. 1, BAAQMD Regulation 6-310 limits grain loading to 0.15 grains per dry standard cubic foot, and BAAQMD Regulation 6-311 limits the total hourly particulate emissions of a source even if the grain loading limits of 6-310 are satisfied. With Revision 3, the District is proposing that visible emission monitoring be added to the permit in Condition 639 to satisfy monitoring deficiencies for S-174 and S-175 Lime Slurry Tanks. The basis for this proposal is discussed below.

In the statement of basis for the initial permit (December 1, 2003), the District stated that monitoring for S-174 and S-175 was not included in the permit because the source is capable of exceeding the visible emission or grain loading standard only during process upset and that under such circumstances, other indicators will alert the operator that something is wrong. Monitoring for BAAQMD Regulation 6-311 was not addressed, but Table VII-B3 indicates no monitoring for 6-311. Condition 639 requires that any visible emissions from S-175 be abated.

After further research, the District has determined that the Lime Slurry Tanks are primarily in a liquid slurry service. Particulate emissions would be possible only when lime powder is added

to the tank. When the lime slurry inventory becomes low, a truck delivery discharges lime powder into the tank, where it is mixed with water. During the lime unloading, the tank vents to an eductor system that uses water for the motive source. Any lime dust carryover is quenched with water and discharged into the sewer system. The eductor system does have an atmospheric vent that may allow some particulate emissions, but it is expected that very little dust will escape the water quench. The truck deliveries occur about once per week, and the transfer period is about 40 minutes. After the slurry is properly mixed, it is pumped to the water softening system.

In Revision 3, the District is proposing that an annual visibility emission test be performed at each source during an unloading operation. This test would be a visual observation performed in a manner similar to the other visual tests required by the permit (i. e. by a certified opacity reader trained in visual inspection techniques).

The reasons this annual visual monitoring is proposed are as follows:

- 1. The tanks represent a small source of particulate emissions because the unloading operations occur infrequently (40 minutes per week amounts to a potential for emissions about 0.4% of the time the equipment is in operation).
- 2. It is District experience that, in most operations, grain loading levels do not exceed the standard of 0.15 grains per dscf until well after visible emissions exceed the standard of Ringelmann No. 1. Therefore, annual visible emission observations by a certified opacity reader provide a high confidence that BAAQMD Regulation 6-310 compliance is demonstrated.
- 3. Annual visible observations are consistent with lime unloading operations in other facilities (e.g. Title V Permit for facility B1911, C&H Sugar, S-284 and S-307).
- 4. A source test would be difficult to conduct since the atmospheric vents do not conform to the source test sampling requirements for particulate grain loading set forth in the Districts Manual of Procedures.

Existing Permit Condition 639, which is in the Section VI of the Revision 1 permit, is proposed to be revised as follows:

# Existing:

Condition# 639

For Source S-175

1. The Owner/Operator shall abate the visible emissions from the lime slurry tanks. [Basis: BAAQMD Regulation 1-301]

# Proposed Revision:

Condition# 639

For Source S-174 and S-175 Lime Slurry Tanks

- 1. The Owner/Operator shall abate the visible emissions from the lime slurry tanks. [Basis: BAAQMD Regulation 1-301]
- 2. In order to demonstrate compliance with BAAQMD Regulations 6-301, 6-310 and 6-311, the Owner/Operator shall monitor and record the visible emissions from S-174 and S-175 Lime Slurry Tanks on an annual basis. The visible emissions test shall be conducted during the entire lime offloading operation and

the highest visible emissions during the period shall be recorded. If any visible emission exceeds Ringelmann No. 1, the Owner/Operator shall take corrective action to comply with Part 1 of this condition. (Basis: BAAQMD Regulation 6-301, 6-310 and 6-311)

# (L.) Diesel Backup Generators (S-240, S-241 and S-243) Monitoring for Regulation 6-310

Reference: Order Item III.G.5.c on page 38.

BAAQMD Regulation 6-310 limits grain loading to 0.15 grains per dry standard cubic foot. As discussed below, periodic monitoring is not justified for the engines. The Revision 3 proposal does not include revisions to the permit regarding this item.

Diesel engines S-240, S-241, S-242 and S-243 are for emergency backup purposes. S-240 provides raw water in an emergency, S-241 and S-242 drive emergency firewater pumps, and S-243 provides emergency electrical power to the control room.

No periodic monitoring is justified for these engines for three reasons: (1) potential to emit is low, (2) grain loading is unlikely to exceed the Regulation 6-310 limit, and (3) CAPCOA/CARB/EPA Region IX guidance does not recommend periodic monitoring for this type of source. Each of these reasons is discussed in greater detail below.

First, the potential to emit (PTE) for particulate for these engines is low. The following table shows the emissions using the factor of 0.0022 lb PM10/hp-hr for diesel engines in Chapter 3, Stationary Internal Combustion Engines, of AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Area Sources, Fifth Edition. Each engine is assumed to operate for 500 hours, using the guidance in John Seitz' memo of September 6, 1995 entitled Calculating Potential to Emit (PTE) for Emergency Generators, which states that "...500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions."

|          | Diesel Engine Potential to Emit – Particulate Matter |                   |                     |  |  |  |  |  |  |  |  |  |
|----------|--|-------------------|---------------------|--|--|--|--|--|--|--|--|--|
| Source # | HP   | lb/yr @ 500 hr/yr | tons/yr @ 500 hr/yr |  |  |  |  |  |  |  |  |  |
|          |  |                   |                     |  |  |  |  |  |  |  |  |  |
| 240      | 550  | 605               | 0.303               |  |  |  |  |  |  |  |  |  |
| 241      | 230  | 253               | 0.127               |  |  |  |  |  |  |  |  |  |
| 242      | 700  | 770               | 0.385               |  |  |  |  |  |  |  |  |  |
| 243      | 1095   | 1205              | 0.602               |  |  |  |  |  |  |  |  |  |
|          |  |                   |                     |  |  |  |  |  |  |  |  |  |
| Total    |  |                   | 1.420               |  |  |  |  |  |  |  |  |  |

The emissions would likely be lower than the above estimates because engines in California generally use low-sulfur fuel containing less than 0.05% S, which lowers emissions, but by an unknown amount. In addition, all four engines are subject to BAAQMD Regulation 9-8-330 that limits the non-emergency hours of operation to no more than 100 hours. (EPA makes the point on page 39 of the order that the limit on hours of operation is not federally enforceable. It should

be noted that in the 1995 *National Mining Association v. EPA* case, the court decided that limits did not have to be federally enforceable to limit potential to emit. EPA's treatment of a state-only limit as ineffective is contrary to case law.) Moreover, the recently enacted California Air Resources Board Airborne Toxics Control Measure for Stationary Compression Ignition Engines will significantly reduce the S-243 engine hours of operation for maintenance and reliability purposes. In a good year (i.e. one with no fires or power outages), total engine operation could be 20% (or less) of the 500 hours per year used in the Potential to Emit calculations above.

Second, grain loading is not likely to exceed the limit in BAAQMD Regulation 6-310. BAAQMD Regulation 6-310 limits PM emissions to 0.15 gr/dscf. If it is assumed that the Diesel engine exhaust gases contain 15% excess oxygen under normal operating conditions, the BAAQMD Regulation 6-310 limit can be compared to the AP-42 PM emission factor as follows:

From 40 CFR 60, Appendix A, Method 19, Table 19-1, a stoichiometric dry gas combustion factor of 9,190 dscf/MMBTU is given for distillate oil combustion. At 15% excess O<sub>2</sub> this factor becomes:

 $9,190 \times [21\%/(21\% - 15\%)] = 32,165 \text{ dscf (combustion products)/MMBTU}$ 

The conversion of 0.15 gr/dscf @ 15% O<sub>2</sub> to lb/MMBTU is then:

 $(32,165 \text{ dscf/MMBTU}) \times (0.15 \text{ gr/dscf}) \times (\text{lb/7,000 gr}) = 0.689 \text{ lb/MMBTU}$ 

In the absence of actual emissions data for these engines, the District considers the AP-42 PM10 emission factor for diesel IC engines to be representative. From AP-42 Table 3.3-1, "Emission Factors For Uncontrolled Gasoline And Diesel Industrial Engines", the PM10 emission factor (based on fuel consumption) is 0.31 lb/MMBTU. Since this assumed emission factor is well below the converted BAAQMD Regulation 6-310 emission rate, compliance is assumed.

Third, the "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources" dated July 2001 recommends that the only monitoring necessary for grain-loading for non-utility distillate-oil-fueled emergency piston-type IC engines is recordkeeping for fuel usage, which is already required for these engines.

# (M.) Coke Transport, Catalyst Unloading, Carbon black Storage and Lime Silo (S-8, S-10, S-11, and S-12) Monitoring for Regulation 6-311.

Reference: Order Item III.G.5.e on page 39.

BAAQMD Regulation 6-311 limits the total hourly particulate emissions of a source even if the grain loading limits of 6-310 is satisfied. With Revision 3, the District is proposing that the permit be revised to include BAAQMD Regulation 6-311 monitoring for S-8, Coke Transport Cyclone, by adding S-8 to Permit condition 19466, Part 9. No changes are proposed to the permit regarding BAAQMD Regulation 6-311 monitoring for S-10, Catalyst Railcar Unloading,

S-12, Lime Silo, and S-11, Activated Carbon Bin. The basis for this proposal is discussed below.

S-10 and S-12 have been out of service for many years. The Owner/Operator has retained the permits to allow a future return to service. However, it is clear at this time that the return to service option is remote, and the Owner/Operator has requested that these sources be removed from the permit.

Permit Condition 19466, Part 7, requires annual source tests for S-8 to determine compliance with BAAQMD Regulation 6-310, the grain-loading standard. It is a simple matter to derive the total particulate emission rate in lb/hr from this source test to determine compliance with BAAQMD Regulation 6-311. S-8 is therefore proposed for addition to Condition 19466, Part 9, which requires annual source tests to assure compliance with BAAQMD Regulation 6-311.

Monitoring of S-11 to assure compliance with BAAQMD Regulation 6-311 is not proposed. S-11 stores the activated carbon used in the Waste Water Treatment Plant. The bin contains a small baghouse (A-6) to abate emissions. This bin is reloaded about 2 to 3 hours each month. The exhaust point from the baghouse is small duct (~5" x ~13") on top of the bin that loops out of the bin and faces downward towards the roof of the bin. The estimated exhaust flowrate is about 6 CFM, with peaks as high as 60 CFM during pneumatic unloading.

The reasons this periodic inspection and annual visual monitoring is proposed is as follows:

- 1. Particulate matter has not been observed on top of the bin (District staff from the Source Test Section and the Permit Evaluation Section inspected the source April 20, 2004).
- 2. If the baghouse A-6 were to fail, carbon deposits would be evident on the top of the bin and in the adjacent area.
- 3. The outlet ductwork is not suitable for standard testing procedures.
- 4. The bin represents a small source of particulate emissions because the unloading operations occur infrequently (3 hours per month amounts to a potential for emissions during approximately 0.4% of the time the equipment is in operation).
- 5. It is District experience that, in most operations, grain-loading levels do not exceed the standard of 0.15 grains per dscf until well after visible emissions exceed the standard of Ringelmann No. 1. Therefore, annual visible emission observations by a certified opacity reader provide a high degree of confidence that BAAQMD Regulation 6-310 compliance is demonstrated.
- 6. Since the 0.15 grain/dscf standard represents 0.077 lb/hr during the peak 60 CFM exhaust flow (= 0.15 gr/dscf \* 60 CFM \* 60 min/hr \* 1lb/7000gr), there is high degree of confidence that the visible emissions test by a certified opacity reader will also assure compliance with BAAQMD Regulation 6-311.

It should also be noted that in Permit Application 12578, the owner has proposed a significant revision to the Title V permit regarding S-11 monitoring. This application proposes that monitoring to assure compliance with BAAQMD Regulation 6-310 (required by Condition 19466, Part 7) be deleted. Alternatively, Application 12578 proposes that monitoring include visual inspections during each loading event and during an annual visible emissions test. The

justification for this revision is reviewed and discussed below in connection with Application 12578.

# (N.) MACT 40 C.F.R Part 63, Subpart CC Applicability to Flares

Reference: Order Item III.H.1.b on page 40.

This item was addressed in the Revision 2 statement of basis. The District's conclusion is that MACT Subpart CC does not apply. Please see page 9 of the Revision 2 statement of basis for the detailed determination. No revisions were made to the Revision 3 Permit Reopening regarding this item.

# (O.) Basis for Tank Exemptions

Reference: Order Item III.H.2 on page 41.

The missing tank exemptions were added to Revision 2 of the Permit. The review and inclusion of all exemption bases will be included in a future permit revision. The Revision 3 proposal does not include revisions to the permit regarding this item.

# Applications 12578 and 12589, Monitoring Changes for S-11, S-160 and S-233.

Application 12578, a Significant Revision to the Title V permit, requests the deletion of BAAQMD Regulation 6-310 grain loading monitoring for S-11, S-160 and S-233. Application 12589, also a Significant Revision to the Title V permit, is for the modification of S-160 that will reroute the source emissions from atmosphere to the A-13/A-26 Vapor Recovery System.

# S-11

S-11, Activated Carbon Storage Bin stores the activated carbon used in the Waste Water Treatment Plant. When Permit Condition 19466, Part 7 was first proposed, the Owner/Operator identified difficulties in conducting the annual source test. The vent from S-11 is a small duct with low flow making the source test procedure detailed in the District Manual of Procedures unsuitable. Discussions ensued and it was agreed that the Owner/Operator should propose an alternative testing protocol for the District's approval. Once the proposed test procedure was approved, source testing would commence within a year, and continue annually. The Owner/Operator complied by submitting alternative test procedures to the District's Source Test Section on April 1, 2004.

The Source Test Section reviewed the proposed procedures, inspected the source, and recommended that periodic opacity readings, pursuant to EPA Method 9, be imposed in place of source testing to determine compliance with BAAQMD Regulation 6-310. The recommendation was primarily based on the S-11 exhaust duct configuration. A copy of the Source Test Section recommendation, dated February 23, 2005, is included in Appendix B.

In addition, most of the reasons that support periodic inspection and visual monitoring as a means of monitoring S-11 for compliance with BAAQMD Regulation 6-311 (discussed above in

section C.IV.(M.)) also support the proposed deletion of BAAQMD Regulation 6-310 monitoring:

- 1. Particulate matter has not been observed on top of the bin (District staff from the Source Test Section and the Permit Evaluation Section inspected the source April 20, 2004).
- 2. If the baghouse A-6 were to fail, carbon deposits would be evident on the top of the bin and in the adjacent area.
- 3. The outlet ductwork is not suitable for standard testing procedures.
- 4. The bin represents a small source of particulate emissions because the unloading operations occur infrequently (3 hours per month amounts to a potential for emissions during approximately 0.4% of the time the equipment is in operation).
- 5. It is District experience that, in most operations, grain-loading levels do not exceed the standard of 0.15 grains per dscf until well after visible emissions exceed the standard of Ringelmann No. 1. Therefore, annual visible emission observations by a certified opacity reader provide a high degree of confidence that BAAQMD Regulation 6-310 compliance is demonstrated.

# S-160

The Application 12589 modification will reduce S-160 Seal Oil Sparger emissions and a Temporary Permit to Operate has been granted (via related NSR Application 12588) under BAAQMD Regulation 2-1-106 Limited Exemption, Accelerated Permitting Program. Therefore, all emissions from S-160 are abated, and monitoring is no longer required.

# S-233

S-233, ESP Fines Storage Bin, stores the Cat unit catalyst fines. There are actually two emission points from S-233. One is on the top of the tank, is abated by baghouse A-55, and will only have a small, virtually undetectable flow, both inbreathing and exhaust, due to displacement. The second emission point is a 3" vent on the discharge of the catalyst fines conveyance blower, which is abated by A-54 baghouse. Based on the blower capacity, the estimated exhaust flowrate is about 25 CFM.

When Permit Condition 19466, Part 7 was first proposed, the Owner/Operator identified difficulties in conducting the annual source test. The vent from S-233 is a small 3" pipe with low flow making the source test procedure detailed in the District Manual of Procedures unsuitable. Discussions ensued and it was agreed that the Owner/Operator should propose an alternative testing protocol for the District's approval. Once the proposed test procedure was approved, source testing would commence within a year, and continue annually. The Owner/Operator complied by submitting alternative test procedures to the District's Source Test Section on April 1, 2004.

The Source Test Section reviewed the proposed procedures, inspected the source, and recommended that periodic opacity readings, pursuant to EPA Method 9, be imposed in place of source testing to determine compliance with BAAQMD Regulation 6-310. The recommendation was primarily based on the S-233 exhaust pipe being untestable. A copy of the Source Test Section Recommendation dated February 23, 2005, is included in Appendix B.

# V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10, which provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

The BAAQMD Compliance and Enforcement Division have conducted a review of compliance over the past year and have no records of compliance problems at this facility during the past year.

#### VI. Permit Conditions

Conditions that are proposed to be changed in this revision of the permit are as follows:

- Condition 639 visible emission monitoring requirements for S-174 and S-175 Lime Slurry Tanks are proposed to be added.
- Condition 19466, references to S-10 and S-12 in Parts 3 and 7 are proposed for deletion since the sources are out of service and removed from the permit.
- Condition 19466, Part 7, S-11, S-160 and S-233 are proposed for deletion per Permit Applications 12578 and 12589. S-160 no longer vents to atmosphere and has been rerouted to the vapor recovery system. S-11 and S-233 are not suitable for standard particulate testing, and visual emission monitoring is proposed as an alternative.
- Condition 19466, Parts 2c and 2d –Part 2c is proposed for deletion and Part 2d is proposed to be added to reflect the modification of S-160 that results in emissions being abated by the vapor recovery system.
- Condition 19466, Part 9—S-8 is proposed to be added to the list of sources subject to the annual source test requirements to demonstrate compliance with BAAQMD Regulation 6-311.

Condition 20806, Part 7 – proposed for deletion since the limitation of the gases burned at S-19 did not resolve the intention of compliance with NSPS Subpart J. See details at the end of Section C.VI in this document.

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in BAAQMD Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to BAAQMD Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to BAAQMD Regulation 2, Rule 2.
- TRMP: This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

# VII. Applicable Limits and Compliance Monitoring Requirements

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

The tables below contain only proposed monitoring changes, or proposed clarifications to the reasoning behind a no-monitoring requirement as addressed in this Revision 3 statement of basis.

# **NOx Discussion:**

There are no proposed changes in the permit regarding NOx monitoring.

#### **CO Discussion:**

There are no proposed changes in the permit regarding CO monitoring.

# **SO2 Discussion:**

There are no proposed changes in the permit regarding SO2 monitoring.

# **PM Discussion:**

The table below summarizes determinations made in the Revision 3 proposal regarding PM monitoring. Discussions follow the table.

# **PM Sources**

| <br>S# &      | Federally<br>Enforceable Limit | Federally Enforceable         |                           |
|---------------|--------------------------------|-------------------------------|---------------------------|
| Description   | Citation                       | Limit                         | Monitoring                |
| S-11,         | BAAQMD                         | 0.15 grain per dscf           | No monitoring (Note 6)    |
| Activated     | 6-310                          |                               |                           |
| Carbon        |                                |                               |                           |
| Storage Bin   |                                |                               |                           |
| S29, Cooling  | BAAQMD                         | 40 lb/hr Total Particulate    | No monitoring (Note 1)    |
| Tower         | 6-311                          | Emissions                     |                           |
| S-157, Sulfur | BAAQMD                         | Ringelmann 1 for more         | No individual source      |
| Storage Pit   | 6-301                          | than 3 minutes in any hour    | monitoring (Note 2)       |
|               | BAAQMD                         | 0.15 grain per dscf           | No individual source      |
|               | 6-310                          |                               | monitoring (Note 2)       |
| S160 Seal Oil | BAAQMD                         | Ringelmann 1 for more         | No monitoring (Note 3)    |
| Sparger       | 6-301                          | than 3 minutes in any hour    |                           |
|               | BAAQMD                         | 0.15 grain per dscf           | No monitoring (Note 3)    |
|               | 6-310                          |                               |                           |
| S-174, S-175, | BAAQMD                         | Ringelmann 1 for more         | Monitoring added (Note 4) |
| Lime Slurry   | 6-301                          | than 3 minutes in any hour    |                           |
| Tanks         | BAAQMD                         | 0.15 grain per dscf           | No monitoring (Note 4)    |
|               | 6-310                          |                               |                           |
|               | BAAQMD                         | 4.10 P0.67 lb/hr particulate, | No monitoring (Note 4)    |
|               | 6-311                          | where P is process weight     |                           |
|               |                                | rate in lb/hr                 |                           |
| S-233, ESP    | BAAQMD                         | 0.15 grain per dscf           | No monitoring (Note 6)    |
| Fines Storage | 6-310                          |                               |                           |
| Bin           |                                |                               |                           |
| Emergency     | BAAQMD                         | 0.15 grain per dscf           | No monitoring (Note 5)    |
| Diesel Backup | 6-310                          |                               |                           |
| Engines       |                                |                               |                           |
| S240, S241,   |                                |                               |                           |
| S242, S243    |                                |                               |                           |

Note 1: No 6-311 monitoring is required for S-29 Cooling Tower primarily because the potential to emit is low. See detailed response to EPA March 15, 2005 Order Item III.G.3.b(2) in section C.IV.(I.) of this document.

Note 2: S-157 emissions are discharged at the refinery main stack, which has a continuous opacity monitor and is subject to annual source tests. See detailed response to EPA March 15, 2005 Order Item III.G.5.a in section C.IV.(J.) of this document.

Note 3: S-160 was modified and now vents to the A-13/A-26 vapor recovery system.

Note 4: Monitoring for 6-301 is proposed for addition to Permit Condition 639 for S-174 and S-175 in response to EPA March 15, 2005 Order Item III.G.5.b. Monitoring for 6-310 and 6-311 is not required due to the infrequent operation that could emit lime dust. This is consistent with the monitoring required in other Title V permits for lime mixing operations. See detailed discussion in section C.IV.(K.) of this document.

Note 5: Monitoring for 6-310 is not required for Diesel engines S-240, S-241, S-242 and S-243 because of a low potential to emit. See detailed response to EPA March 15, 2005 Order Item III.G.5.c in section C.IV.(L.) of this document.

Note 6: Application 12578 requested the deletion of S-11 and S-233 from BAAQMD Regulation 6-310 monitoring due to low potential to emit, non-conforming exhaust ducting, and the high confidence of compliance based on visible emissions monitoring. Detailed discussion can be found at the end of section C.IV in this document.

#### **POC Discussion:**

#### **POC Sources**

| <br>S# &      | Federally<br>Enforceable Limit | Federally Enforceable    |                        |
|---------------|--------------------------------|--------------------------|------------------------|
| Description   | Citation                       | Limit                    | Monitoring             |
| S160 Seal Oil | BAAQMD                         | 300 ppm and 15 lb/day of | No monitoring (Note 1) |
| Sparger       | Regulation 8-2-301             | total carbon, dry basis  |                        |

Note 1: S-160 was modified and now vents to the A-13/A-26 vapor recovery system.

#### VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

#### IX. Permit Shield

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has the first and second types of permit shield. However, since the December 16, 2004 permit, no additional permit shields have been added. With Revision 3, the permit shield shown in **Table IX B-7, CEMS** is proposed for deletion because BAAQMD Regulation 1-522.8 does not require the detailed reporting that is required in 40 CFR 60.7 (c) and (d).

# D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

# **E.** Compliance Status:

The facility is not currently in violation of any requirement. Moreover, the District has updated its review of recent violations and has not found a pattern of violations that would warrant imposition of a compliance schedule.

# F. Permit Changes since the Final Revision 1 Permit issued December 16, 2004

List of changes to Final Revision 1 Permit that are included in the Revision 3 proposal.

Section I, II, III changes

1. In Table IIA, S-10 and S-12 would be removed from the table because they have been removed from service. This proposed revision is in response to EPA Petition Response Item III.G.5.e.

# Section IV, Applicable Requirements

- 1. In Table IV-Refinery, Notification and record keeping requirements of 40 CFR 60.7 would be added. 60.7 (c) and (d) would be added in response to EPA Petition Response Item III.E.1 and Permit Shield Table IX B-7 would be deleted. Other parts of 60.7 would be added because they also apply.
- 2. In Table IV-B1 and VII-B1, Permit Condition 19466, Part 9 would be added to determine S-8 compliance with BAAQMD Regulation 6-311. In Section VI, Condition 19466, Part 9 would be revised to include S-8. This proposed revision is in response to EPA Petition Response Item III.G.5.e.
- 3. Changes would be made to other Section IV tables to be consistent with the changes made in Section VI.

4. In Table IV-A9, Permit Condition 20806, Part 7 would be deleted. See details at end of Section C.VI in this document.

# Section VI, Permit Conditions

- 1. Condition 19466, Part 9 would be revised to include S-8. This change would result in changes in the appropriate tables in Section IV and VII. This proposed revision is in response to EPA Petition Response Item III.G.5.e.
- 2. Condition 639 would be revised to include visible emission monitoring for S-174 and S-175 Lime Slurry Tanks. This proposed revision is in response to EPA Petition Response Item III.G.5.b.
- 3. Condition 19466, would be revised to delete references to S-10, S-12 and S-160 in Parts 3 and 7. S-10 and S-12 are out of service and removed from the permit. S-160 now vents to the vapor recovery system. This change also caused changes in the appropriate tables in Section IV and VII. This revision is in response to EPA Petition Response Item III.G.5.e and Application 12589.
- 4. Condition 19466, Part 7, would be revised to delete S-11, S-160 and S-233 per Permit Applications 12578 and 12589. S-160 no longer vents to atmosphere and has been rerouted to the vapor recovery system. S-11 and S-233 are not suitable for standard particulate testing and alternative monitoring is proposed. This proposed change would also result in changes in the appropriate tables in Section IV and VII.
- 5. Condition 19466, Parts 2c and 2d –Part 2c would be deleted and Part 2d would be added to reflect the Application 12589 modification of S-160 that results in emissions being abated by the vapor recovery system. This proposed change would also result in changes in the appropriate tables in Section IV and VII.
- 6. Permit Condition 20806, Part 7 would be deleted. See details at end of Section C.VI in this document.

# Section VII, Monitoring Requirements

- 1. In Table IV-B1 and VII-B1, Permit Condition 19466, Part 9 would be added to determine S-8 compliance with BAAQMD Regulation 6-311. In Section VI, Condition 19466, Part 9 would be revised to include S-8. This proposed revision is in response to EPA Petition Response Item III.G.5.e.
- 2. Changes would be made to other Section VII tables to be consistent with the changes made in Section VI.

# Section VIII, Test Methods

No changes would be made in this section.

# Section IX, Permit Shield

1. Table IX B-7 permit shield for 40CFR60.7 (c) and (d) would be deleted. This proposed revision is in response to EPA Petition Response Item III.E.1.

H:\Engineering\TITLE V Permit Appls\1 ALL T5 Application Files here\B2626\REV 3 - 12600\1.0 Working docs\B2626sbA-4d.doc

# **APPENDIX A Permit Evaluations**

for

Application 12588 Reroute S-160 Seal Oil Sparger to Vapor Recovery System.

# VALERO REFINING COMPANY APPLICATION 12588, PLANT 12626

#### INTRODUCTION

Valero Refining Company has submitted a permit application for a modification of the following equipment:

# S-160 Alkylation Unit Compressor C-1031 Seal Oil Sparger

The modification is to reroute the source outlet from atmosphere to the vapor recovery system.

Annual source tests required by the Title V permit condition 19466, Part 2c and Part 7, were performed in March 2005. The results indicated that S-160 did not comply with District Regulations. The source test results indicated that the organic emissions are in the range of 133 to 150 lb/day (average = 142 lb/day), and a total carbon load of 285,000 to 369,000 ppmv. Valero immediately stopped operation of S-160 and added fresh seal oil to the compressor instead of recycling sparged (nitrogen stripped) seal oil. This resulted in the use of 8-12 barrels of fresh seal oil per day, an uneconomic operation.

This modification will return S-160 to compliance by sending the emissions to the vapor recovery system A-13/A-26.

#### **EMISSIONS**

Current emissions shown in databank are shown below:

Source No.: 160 Desc.: SEAL OIL SPARGER FOR COMPRESSOR C1031

Downstream Train: S160

Fraction of Emissions to Downstream Train: n/a

Source Code: G5999419 Material Processed: Lube oil

Throughput: - 9500.0 thou gallons Eff. Date: 12-31-01

(Annual) X (Emission) = (Unabated) X (Abatement) = (Abated) (Usage) (Factor) (Emissions) (Factor) (Emissions)

| Pollutant Name     | Code  | Emission<br>Factor<br>lb/thou g | EF<br>Type<br>allons | Unabat<br>Emissi<br>lb/da | ion Fac | te<br>tor | Abated<br>Emission<br>lb/day |
|--------------------|-------|---------------------------------|----------------------|---------------------------|---------|-----------|------------------------------|
| Organics (part not | s 990 | 5.00E-02                        | Gen                  | 1.30                      | o14 n/  | a         | 1.3014                       |
| PONSCO Split       | Part  | 0rg                             | POC                  | NOx                       | SOx     | CO        | Other                        |
| Unabated           | .0    | 1.3                             | 1.3                  | . 0                       | .0      | .0        | .0                           |
| Abated             | .0    | 1.3                             | 1.3                  | . 0                       | .0      | .0        | . 0                          |

This modification will result in virtually no emissions since all gases are recovered and sent to the fuel gas system. Using 99.7 % efficiency for the furnaces and heaters that consume the fuel gas, the new emissions are:

Average POC emissions = 142 lb/day (1-.997) = 0.426 lb/day. Valero has not requested emission reduction credits for this modification.

(Note: The POC emission factor for S-160 has been revised to reflect the actual emissions of 142 lb/day. Once the annual update cycle for 2004 has been completed, the EF will be revised again.)

# PLANT CUMULATIVE INCREASE

Since S-160 is a grandfathered source, there is no impact on the facility cumulative emissions.

# TOXIC RISK SCREEN

There are no toxic compounds in this operation that would trigger a risk screen.

# **COMPLIANCE**

S-160 is subject to Regulations 6-301, 6-310, 6-311 and 8-2-301. Source testing conducted in March, 2005 has demonstrated S-160 to be out of compliance with some of these regulations. This modification will allow S-160 to be in compliance with all applicable regulations.

BACT, Offsets, CEQA and PSD are not applicable.

# **CONDITIONS**

The permit condition 19466 will be modified for S-160 as shown below.

Note that there are four versions of this permit condition in various places:

- 1), Revision 1 Title V Permit version (currently enforceable),
- 2) Revision 2 Title V Permit version (in the draft permit issued for Public Comment),
- 3) Revision 3 Title V Permit version (currently under internal review), and
- 4) the version shown below.

Only Parts 2c, 2d, 3 & 7 are pertinent to S-160 and only the changes associated with S-160 are shown below. There are boldface notes that indicate pertinent information regarding the Part, but detailing each version is beyond the scope of this engineering evaluation.

#### Condition 19466

- 1. The Owner/Operator shall conduct an annual District-approved source test on the S-1 and S-2 Claus Units to demonstrate that 95% of the H2S in the refinery fuel gas is removed and recovered on a refinery-wide basis and 95% of the H2S in the process water streams is removed and recovered on a refinery-wide basis AND 95% of the ammonia in the process water stream is removed. The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. The test shall include sampling of the inlet and outlet of the fuel gas scrubber and sour water stripper towers. [Basis: Regulation 9-1-313.2] **This Part Deleted in the Rev 2 draft Title V Permit**. (Basis: Sampling is a safety problem and there is reasonable assurance that compliance with Regulation 9-1-313.2 is achieved. See detailed analysis in Statement of Basis)
- 2a. Deleted. (Basis: S-188 vents to the refinery fuel gas system).
- 2b. Deleted. (Basis: S-189 vents to the refinery fuel gas system).
- 2c. Deleted. (Basis: S-160 was modified in May, 2005 and now vents to Vapor Recovery System A-13/A26) The Owner/Operator shall conduct an annual District approved source test on the S-160, Seal Oil Sparger, to demonstrate compliance with Regulation 8-2-301. The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 2-6-503]
- 2d. The Owner/Operator shall operate S-160 Seal Oil Sparger only when abated by A-13/A-26 Vapor Recovery Compressor to be returned to the refinery fuel gas system. (Basis: Cumulative Increase)
- 3. The Owner/Operator shall monitor and record on a monthly basis the visible emissions from Sources S-1, S-2, S-8, S-10, S-11, S-12, S-160, S-176, S-233 and S-237 to demonstrate compliance with Regulation 6-301 (Ringlemann 1 or 20% opacity). For S-10 and S-12 only, this monitoring is required only when these sources are returned to service. For S-176 only, this monitoring is only required when dry salt is added to the tank. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 6-301] **Does not reflect all changes made in the Draft Revision 3 Title V Permit.**
- 4. The owner/operator shall notify the District in writing by fax or email no less than three calendar days in advance of any scheduled startup or shutdown of any process unit and as soon as feasible for any unscheduled startup or shutdown of a process unit, but no later than 48 hours or within the next normal business day after the unscheduled startup/shutdown. The notification shall be sent in writing by fax or email to the Director of Enforcement and Compliance. The requirement is not federally enforceable. [Regulation 2-1-403]
- 5. The Owner/Operator shall abate the emissions from the S-3 and S-4, CO Boilers, by at least four of the five A-1 through A-5 Electrostatic Precipitators and the Owner/Operator shall

exhaust those emissions through the main stack (P-1). [Basis: Regulation 6-301 and Regulation 6-304].

- 6. The Owner/Operator shall perform an annual source test on Sources S-5 and S-6 to demonstrate compliance with Regulation 6-310 (outlet grain loading no greater than 0.15 grain/dscf). The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 6-310]
- 7. The Owner/Operator shall perform an annual source test on Sources S-8, S-10, S-11, S-12, S-160, and S-176 and S-233 to demonstrate compliance with Regulation 6-310 (outlet grain loading no greater than 0.15 grain/dscf). For S-11, S-160 and S-233 only, the Owner/Operator shall submit a source test plan and procedure to the Manager of Source Test for approval by April 1, 2004. The first source test shall commence for S-11, S-160 and S-233 no more than one year from the date of the S-11, S-160 and S-233 source test plan and procedure is approved. The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. For S-10 and S-12 only, this annual source test is required only when these sources are returned to service. For S-176 only, this source test is only required when dry salt is added to the tank. [Basis: Regulation 6-310] **Does not reflect all changes made in the Draft Revision 3 Title V Permit.**
- 8. The Owner/Operator shall perform annually a source test on S-1 and S-2 to determine compliance with Regulation 6-330 (Outlet grain loading not to exceed 0.08 grain/dscf of SO3 and H2SO4). The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 6-330]
- 9. The Owner/Operator shall perform an annual source test on Sources S-5, and S-6 and S-8 to demonstrate compliance with Regulation 6-311 (PM mass emissions rate not to exceed 4.10P0.67 lb/hr). The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 6-311]
- 10. The Owner/Operator shall conduct a District-approved source test on a semi-annual basis on Sources S-7, S-20, S-21, S-22, S-23, S-24, S-25, S-26, S-30, S-31, S-32, S-33, S-34, S-40, S-41 and S-220 and on an annual basis on sources S-35 and S-173 to demonstrate compliance with Regulation 9-10-305 (CO not to exceed 400 ppmv, dry, at 3% O2, operating day average). The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 9-10-305]

- 11. The Owner/Operator shall conduct a semi-annual District-approved source test on Sources S-43, S-44 and S-46 to demonstrate compliance with Regulation 9-9-301.1 (NOx not to exceed 55 ppmv, dry, at 15% O2, fired on refinery fuel gas). The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Permit Services Division no less than 45 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: Regulation 9-9-301.1]
- 12. The Owner/Operator shall abate the VOC emissions from the S-159 Lube Oil Reservoir using the S-36 Boiler. [Basis: Cumulative Increase]
- 13. The Owner/Operator shall vent the VOC emissions from S-167 and S-168 Seal Oil Spargers in a closed system to the flare gas recovery header to be returned to the refinery fuel gas system. [Basis: Cumulative Increase]
- 14. The Owner/Operator shall use the continuous emission monitors required by Regulation 9, Rule 10, to monitor compliance for all NOx limits at the following sources:

CO Furnaces: S-3, S-4

Process Furnaces: S-21, S-22, S-23, S-25, S-30, S-31, S-32, S-33, S-220

Steam Generators: S-40, S-41

- 15. The Owner/Operator shall use the continuous opacity monitors required by Regulation 1-520 to monitor compliance for the opacity limits at the Main Stack for the following sources:
- S-5 Fluid Catalytic Cracking Unit, Catalyst Regenerator
- S-6 Fluid Coker, Burner
- 16. To allow sufficient time to prepare test plans, train employees, and install any necessary equipment, the monitoring requirements Parts 1, 2c, 3, 6, 7, 8, 9, 10, 11, 14 and 15 are effective April 1, 2004.

#### RECOMMENDATION

I recommend that a conditional Permit to Operator be granted to Valero for the modification of the following equipment:

S-160 Alkylation Unit Compressor C-1031 Seal Oil Sparger

| S/ |  |  |  |
|----|--|--|--|
|    |  |  |  |

# Arthur P. Valla Air Quality Engineer II

# **APPENDIX B Source Test Section Recommendation**

for

Application 12578 S-11, S-160 and S-233 monitoring for BAAQMD Regulation 6-310.

# MEMORANDUM February 23, 2005

To:

A. Valla

Via:

K. Kunaniec concur KMK 2/23/05

From:

T. Underwood

Enforceability and necessity of specific permit conditions

Re: Enforceability and neces Plant No: B2626; Valero Refining

Source 1: S-11>A-6; WWTP carbon bin abated by cartridge baghouse

Source 2: S-160; seal oil sparger

Source 3: S-233>A-55; ESP fines storage bin abated by baghouse

A/C No: Title V

Cond No. 19466; annual source testing requirement

The annual source testing requirement on these three sources is not necessary, not justified and does not help ensure emissions be minimized. Instead, monthly to yearly opacity readings, pursuant to EPA Method 9, will better ensure compliance with Regulation 6. Additionally, the suggested procedures will be far more cost effective and better document the consistency of compliance than can be hoped for by requiring annual particulate testing. Eric Hengst, consultant for Valero, has written to request that the Title V permit be changed to allow an alternative method of demonstrating compliance (his memo is attached). I concur with the basis of this request. The following observations and recommendations are made to guide Permits in drafting permit language that is necessary and reasonable with regard to these three sources.

S-11: The WWTP activated carbon bin is reloaded from 2 to 3 hours per month. The exhaust points down to the deck of the silo top. If significant particulate is being exhausted, evidence of those emissions would be easily observed on the deck surface on top of the silo.

**Recommendation:** Inspect the baghouse top platform at the conclusion of any loading event. Require a Plume Evaluation Reading (PER) once per year during a loading operation. Maintenance activity should be initiated any time the platform deck suggests particulate emissions are getting through the A-6 baghouse. Eliminate the requirement for an annual particulate test.

**S-160:** The seal oil sparger is not testable. Its 2 inch size precludes any particulate sampling. There is no access to the emission point. Visible emissions are negligible. This source easily meets Regulation 6 limitations

**Recommendation:** Require semi-annual PER on an "as-found" basis. Eliminate the requirement for an annual particulate test.

S-233: The ESP fines storage bin exhaust (3 inch diameter) is not testable. Its 3 inch size precludes any particulate sampling. Monthly visual monitoring would adequately address the need to document continued compliance with Regulation 6 limits.

**Recommendation:** Require monthly PER on an "as-found" basis. Eliminate the requirement for an annual particulate test.

Valero Grain Loading Proposal

Page 1 of 2

#### Tim Underwood

From: Hengst, Eric [Eric.Hengst@valero.com]

**Sent:** Friday, February 18, 2005 12:28 PM

To: Tim Underwood

Subject: Valero Grain Loading Proposal

Tim, Valero's Title V permit includes Condition 19466 Part 7, which requires annual source tests for several potential sources of particulate emissions to demonstrate compliance with Regulation 6-310, (outlet grain loading less than 00.15 grains/dscf). This permit condition became effective on April 1, 2004, per Condition 19466 Part 16

Condition 19466 Part 7 also recognized that three sources, specifically S-11 WWTP activated carbon bin, S-160 Alky compressor seal oil sparger vent, and S-233 ESP fines storage bin, had small or non-uniform vents which did not conform with the source test sampling requirements for grain loading set forth in the District's MOP. Accordingly, the Condition required that Valero submit an alternate source test plan for these sources to the District by April 1, 2004, and that the source tests be conducted within one year of approval of the alternate source test plans. Valero submitted the alternate source test plan on April 1, 2004, and recently contacted the District to obtain an update on alternate test plan approval.

In addition to the annual source tests for particulate grain loading required by Condition 19466 Part 7, Valero's Title V permit includes Condition 19466 Part 3, which requires monthly visible emissions monitoring of several potential sources of particulate emissions to demonstrate compliance with Regulation 6-301 (Ringlemann No. 1 or 20% opacity). This permit condition also became effective on April 1, 2004, per Condition 19466 Part 16. To comply with this task, Valero has retained an environmental contractor who is a certified opacity reader, to perform the monthly visible emissions observations. Monthly visible emissions monitoring is required for the above three sources (S-11, S-160, and S-233), in addition to annual source testing for grain loading for these sources.

Based on recent discussions with District staff and visible emissions monitoring data for these three sources, Valero believes that the annual source tests for grain loading are not justified for the following reasons:

- 1. Monthly visible emissions inspections over the past 10 months for all three sources have recorded 0% opacity for both the average and highest Ringlemann readings. Based on District experience, a visible emissions observation of Ringlemann No. 1 is comparable to a particulates grain loading of about 0.15 grains/dscf. Continued visible emissions observations of 0% opacity for these three sources by a certified opacity reader provides adequate assurance of compliance with the grain loadings limit of 0.15 grains/dscf.
- 2. The three sources represent small sources of particulate emissions.

S-11 WWTP activated carbon bin unloads about one truck of carbon per month for about 2-3 hours. Truck deliveries can occur at any time, day or night. During this brief timeframe, the bin vents to atmosphere through A-6 baghouse. The rest of the time, the bin downgauges as activated carbon is injected into the wastewater. Hence, the bin intermittently vents (abated) to atmosphere less than 0.5% of the time. The emission point is a rectangular vent which points downward at the top platform of the bin. If the bin were venting particulates, there would be some accumulation of particulates on the platform. To date, there has been no evidence of particulates on the platform.

S-160 Alky compressor (C-1031) seal oil sparger has a small 2" diameter vent, which would require scaffolding to safely access and sample this emission point. As discussed above, consistent visible emissions observations of 0% opacity indicate that the corresponding grain loading is negligible. Even if the grain loading were 0.15 grains/dscf, a typical nitrogen sparger rate of about 12 scfm would result in less than 0.5 lbs/day of PM emissions. This very low potential for PM emissions does not justify the high cost of performing a source test to determine a grain loading for this vent, based on its excellent compliance history of no visible emissions.

2/18/2005

Valero Grain Loading Proposal

Page 2 of 2

S-233 Electrostatic Precipitator (ESP) fines storage bin vents to atmosphere through A-55 baghouse and a 3" diameter vent located about 10' above grade. As discussed above, consistent visible emissions observations of 0% opacity indicate that the corresponding grain loading is negligible. Even if the grain loading were 0.15 grains/dscf, a typical air blower rate of about 260 scfm would result in only about 8 lbs/day of PM emissions. This very low potential for PM emissions does not justify the high cost of performing a source test to determine a grain loading for this vent, based on its excellent compliance history of no visible emissions.

In summary, Valero believes that monthly visible emissions monitoring by a certified opacity reader is appropriate and cost effective for assuring compliance with the grain loading limit, based on the excellent compliance history to date for monthly visible emissions monitoring. For S-11 intermittent vent, if there is evidence or accumulation of particulates on the top platform by A-6 baghouse or visible emissions are observed, then Valero will perform maintenance on the baghouse and/or adjust carbon truck unloading to mitigate emissions. For S-160 and S-233 continuous vents, if there is any significant increase in visible emissions, Valero will initiate an investigation and take appropriate action to correct the situation.

If you have any questions on this issue, please contact me at (707) 745-7385. Thanks. Eric.

2/18/2005

# **APPENDIX C Compliance Division Summary of NOV Review**

# Key to Abbreviations used in this Appendix:

| Column Title: | Description:   |
|---------------|--|
| V#            | The District violation identification number                                 |
| S#            | The District permitted source identification number                          |
| Occur         | The violation or occurrence date   |
| Issued        | The date the Notice of Violation was issued                                  |
| Reg           | The regulation allegedly violated  |
| Violation     | Summarized description of the alleged violation                              |
| Comments      |  |
| Compliance    | The date the District determined the violation to cease and/or to be back in |
| Achieved      | compliance   |
| # NOVs        | The number of violations issued during the 4-year period for this source     |
|               | (1/1/2001-12/31/2004)  |
| Ongoing       | Ongoing Violations Code:   |
|               | A-Single-day Violation, Single Violation in 4-year period                    |
|               | B- Single-day Violation, Multiple/Repeat Violations in 4-year period,        |
|               | Different Causes   |
|               | C-Multi-day Violation, Single Violation in 4-year period                     |
|               | D-Multi-day Violation, Multiple/Repeat Violations in 4-year period,          |
|               | Different Causes   |
|               | E-Ongoing/recurring violation requiring a compliance schedule                |

| V#      | S#    | Occur    | Issued   | Reg       | Violation Comments   | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|---------|-------|----------|----------|-----------|--|------------------------|-----------|---------|---|
| A03849A | 239   | 1/9/01   | 02/01/01 | 8-5-301.1 | No Submerge Fill Pipe                                      | 02/13/01               | 1         | С       | This violation was corrected within 36 days of discovery, by engineering and installing a submerged fill pipe for an existing sump tank at the marine terminal.   |
| A10626A | 210   | 4/24/01  | 05/02/01 | 8-5-320.2 | Gasket Problem<br>Misplaced                                | 05/02/01               | 1         | С       | This violation was corrected within nine days of discovery by degassing and taking the tank out-of-service, in order to replace the gasket on the center column well.   |
| A10628A |       | 8/1/00   | 07/17/01 | 9-2-301   | GLM #3 (site 8303) H2S<br>(tank T-401) ID #02W93           | 08/01/00               | 1         | Α       | This violation was corrected the day of discovery by isolating a sour water leak at a process unit.   |
| A10627A | 2     | 3/26/01  | 07/17/01 | 9-2-301   | H2S GLM #3 (Site 8303)<br>ID #7421                         | 03/26/01               | 2         | В       | This violation was corrected on the day of discovery, by re-starting the sulfur recovery unit, and H2S emissions stopped. The repeat violations were over 2 years apart, and were for different sulfur compounds. |
| A10860A | 1,005 | 4/21/01  | 09/13/01 | 9-2-301   | Failed to Report<br>Breakdown Within 24<br>Hours           | 04/21/01               | 2         | В       | This violation was corrected the day of discovery by repairing a feed pump and re-starting the unit.  |
| A10861A | 45    | 5/12/01  | 10/03/01 | 9-9-301.3 | Exceeded NOx Emission<br>Limit of 9 PPM                    | 05/12/01               | 6         | В       | This violation was corrected the day of discovery by installing new injectors on the SCR unit. The repeat violations occurred between 2001 and 2002, and for different problems.                                  |
| A10862A | 150   | 10/1/01  | 10/03/01 | 8-5-311.3 | Inspection Hatches (2) > 10,000 PPM                        | 10/01/01               | 4         | В       | This violation was corrected the day of discovery by cleaning and plugging two hatch covers on the tank. The repeat violations occurred in 2001 and 2004.   |
| A10863A | 45    | 6/21/01  | 11/01/01 | 9-9-301.3 | Exceeded 3 Hour NOx<br>Average 9 PPM                       | 06/26/01               | 6         | D       | This violation was corrected within six days of discovery by installation of a slide gate on the unit. The repeat violations occurred between 2001 and 2002, and for different problems.                          |
| A10866A | 45    | 10/19/01 | 12/06/01 | 9-9-301.3 | > 9 PPM NOx 3<br>Hour/Average                              | 10/19/01               | 6         | В       | This violation was corrected the day of discovery by replacing the ammonia injection quill. The repeat violations occurred between 2001 and 2002, and for different problems.                                     |
| A10868A | 89    | 1/9/02   | 01/10/02 | 8-5-320.2 | Gauge Well No Lid On<br>Well                               | 01/09/02               | 2         | В       | This violation was corrected the day of discovery by re-installing a gauge well lid on the tank. The repeat violation occurred 26 months apart, and for different sections of the regulation.                     |
| A10869A | 1,005 | 4/20/01  | 04/11/02 | 10        | Exceeded H2S Excess of 160 PPM 3 Hour Period               | 04/20/01               | 2         | В       | This violation was corrected the day of discovery by repairing a feed pump and re-starting the unit.  |
| A10870A | 45    | 1/3/02   | 04/23/02 | 9-9-301.3 | NOx Excess BD<br>#03K3/ED #03K32                           | 01/03/02               | 6         | В       | This violation was corrected the day of discovery by replacing a faulty switch on the SCR power supply panel. The repeat violations occurred between 2001 and 2002, and for different problems.                   |
| A10874A | 97    | 5/15/02  | 05/16/02 | 8-18-307  | Liquid Leak > 3<br>Drops/Minutes May @ 90<br>Drops/Minutes | 05/15/02               | 1         | Α       | This violation was corrected the day of discovery by installing an isolation blind to stop a liquid leak.   |

| V#      | S#    | Occur    | Issued   | Reg       | Violation Comments  | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule   |
|---------|-------|----------|----------|-----------|---|------------------------|-----------|---------|--|
| A13634A | 19    | 6/3/02   | 06/17/02 | 1-301     | Public Nuisance 5 -<br>Confirmed Complaints of<br>Smoke   | 06/03/02               | 2         | В       | This violation was corrected the day of discovery by restoring power to the refinery units. The repeat violation occurred during the same power outage in 2003, but for a different regulation.                                |
| A13635A | 19    | 6/3/02   | 06/17/02 | 6-301     | Excessive Emissions > Ringlemann #1/ 3 Minutes            | 06/03/02               | 2         | В       | This violation was corrected the day of discovery by restoring power to the refinery units, and the flare stopped smoking. The repeat violation occurred during the same power outage in 2003, but for a different regulation. |
| A13636A | 18    | 6/3/02   | 06/17/02 | 6-301     | Excessive Emissions > Ringlemann # 1/ 3 Minutes           | 06/03/02               | 4         | В       | This violation was corrected the day of discovery by restoring power to the refinery units, and the flare stopped smoking. The repeat violations occurred between 2002 and 2004, and for different regulations.                |
| A10875A | 45    | 12/18/01 | 06/17/02 | 2-1-307   | NOx Excess 3 Hour Avg.<br>Exceeded                        | 12/18/01               | 6         | В       | This violation was corrected the day of discovery by repairing an electrical problem on a blower. The repeat violations occurred between 2001 and 2002, and for different problems.  |
| A13184A | 6     | 1/6/02   | 07/01/02 | 6-302     | > 30% Opacity For More<br>Than 3 Minutes                  | 01/06/02               | 1         | Α       | This violation was corrected the day of discovery by unplugging the catalyst system.   |
| A13185A | 1,010 | 2/25/02  | 07/01/02 | 2-1-307   | Failure to Route S #1010 to S #40 and S #41               | 02/26/02               | 1         | С       | This violation was corrected the next day after discovery by repairing a boiler feedwater pipe and re-routing emissions back to the control device.  |
| A13186A |       | 5/21/02  | 07/02/02 | 6-301     | Visible Emission Greater<br>Ringelmann 1 For 3<br>Minutes | 05/21/02               | 1         | Α       | This violation was corrected the day of discovery by extinguishing a fire on an electrical breaker cabinet.  |
| A13189A | 220   | 6/3/02   | 07/25/02 | 2-1-307   | P/C # 10574 - 23; NOx<br>Exceedence                       | 06/03/02               | 4         | В       | This violation was corrected the day of discovery by restoring electrical power to the unit. The repeat violations occurred more than 6 months apart from each other.  |
| A13190A | 5     | 6/3/02   | 07/25/02 | 6-302     | Opacity Excess  | 06/03/02               | 10        | В       | This violation was corrected the day of discovery by restoring power to the refinery units. The repeat violations occurred between 2002 and 2004, and for different causes.  |
| A13188A | 5     | 1/28/02  | 07/25/02 | 6-302     | ED # 03K84 Opacity<br>Excess                              | 01/29/02               | 10        | D       | This violation was corrected the next day after discovery by repairing an air blower on the FCC unit. The repeat violations occurred between 2002 and 2004, and for different causes.  |
| A13191A | 237   | 6/3/02   | 08/15/02 | 2-1-307   | NOx Excess >9 ppm 3-hr<br>Ave. , PC#16027                 | 06/04/02               | 4         | D       | This violation was corrected the next day after discovery by restoring electrical power to the unit. The repeat violations occurred several months apart in 2002.  |
| A13192A | 5     | 6/6/02   | 08/27/02 | 6-302     | Excess Opacity<br>Emissions 20% 73 Min/Hr                 | 06/06/02               | 10        | В       | This violation was corrected the day of discovery by restoring power to the refinery units. The repeat violations occurred between 2002 and 2004, and for different causes.  |
| A13194A | 62    | 10/2/02  | 10/03/02 | 8-5-320.2 | Gap In Vacuum Breaker<br>Gasket                           | 10/02/02               | 1         | Α       | This violation was corrected the day of discovery by replacing the gasket on a vacuum breaker on a tank.   |

| V#      | S#    | Occur    | Issued   | Reg       | Violation Comments  | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|---------|-------|----------|----------|-----------|---|------------------------|-----------|---------|---|
| A13195A | 237   | 9/2/02   | 10/24/02 | 1-522.4   | Failure to Report On Time                                       | 09/09/02               | 4         | В       | This administrative violation was corrected the day of discovery by filing a late report of an in-operative emission monitor. The repeat violations occurred several months apart in 2002.                |
| A13196A | 165   | 10/30/02 | 10/30/02 | 8-7-302.5 | Liquid Gas Leak ~ 120<br>Drops/Minutes                          | 10/30/02               | 1         | Α       | This violation was corrected the day of discovery by installing a new gasket on a gasoline pump.  |
| A13197A | 237   | 9/28/02  | 11/07/02 | 2-1-307   | Exceedence 3-Hr NOx<br>Averaged > 9 PPM                         | 09/28/02               | 4         | В       | This violation was corrected the day of discovery by cleaning and unplugging the ammonia injection quill on the SCR unit. The repeat violations occurred several months apart in 2002.                    |
| A13198A | 197   | 11/26/02 | 12/05/02 | 8-18-301  | Open ended line leaking > 100 ppm                               | 11/26/02               | 1         | Α       | This violation was corrected the day of discovery by installing a plug on an open-ended line.   |
| A13199A | 195   | 12/3/02  | 12/05/02 | 8-18-301  | Open Ended Line -<br>Leaking > 100 PPM                          | 12/03/02               | 1         | Α       | This violation was corrected the day of discovery by installing a plug on an open-ended line.   |
| A13200A | 75    | 12/11/02 | 12/11/02 | 8-18-307  | Liquid Leak > 3<br>Drops/Minutes                                | 12/11/02               | 1         | Α       | This violation was corrected the day of discovery by installing a plug on a valve to stop a liquid leak.  |
| A44751A | 237   | 10/3/02  | 12/16/02 | 2-1-307   | Exceed NOx Limit of 9<br>PPM/3 Hour Avg                         | 10/03/02               | 4         | В       | This violation was corrected the day of discovery by installing new fuses for the power supply on the SCR unit. The repeat violations occurred several months apart in 2002.                              |
| A44752A | 5     | 11/8/02  | 12/16/02 | 6-302     | Exceeded Opacity Limit > 20%                                    | 11/08/02               | 10        | В       | This violation was corrected the day of discovery by reducing the loading to the electrostatic precipitators. The repeat violations occurred between 2002 and 2004, and for different causes.             |
| A44753A | 5     | 11/9/02  | 12/16/02 | 6-302     | Exceeded Opacity Limit > 20%                                    | 11/09/02               | 10        | В       | This violation was corrected the day of discovery by restoring power to the electrostatic precipitators. The repeat violations occurred between 2002 and 2004, and for different causes.                  |
| A44755A | 45    | 10/1/02  | 12/26/02 | 2-1-307   | Exceeded NOx 3 Hour<br>Average                                  | 10/01/02               | 6         | В       | This violation was corrected the day of discovery by performing repairs on the ammonia vaporizer heater. The repeat violations occurred between 2001 and 2002, and for different problems.                |
| A44757A | 46    | 1/9/03   | 01/09/03 | 8-18-304  | 8-18-304.2.2 Failure to repair leaking connections in 24 hours. | 01/09/03               | 1         | Α       | This violation was corrected the day of discovery by tightening a leaking connector.  |
| A44758A | 1,020 | 1/16/03  | 01/16/03 | 8-18-301  | Open ended line leaking > 10,000 PPM                            | 01/16/03               | 1         | Α       | This violation was corrected the day of discovery by installing a plug on an open-ended line.   |
| A44761A | 58    | 1/29/03  | 02/20/03 | 1-301     | Public nuisance - six complaints                                | 01/29/03               | 2         | В       | This violation was corrected the day of discovery by patching a leak on a tank and cleaning up an oil spill. The repeat violation occurred during the same event in 2003, but for a different regulation. |

| V#      | S#    | Occur   | Issued   | Reg       | Violation Comments   | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|---------|-------|---------|----------|-----------|--|------------------------|-----------|---------|---|
| A44764A | 58    | 1/29/03 | 03/25/03 | 8-2-301   | Crude Oil Spill  | 01/29/03               | 2         | В       | This violation was corrected the day of discovery by patching a leak on a tank and cleaning up an oil spill. The repeat violation occurred during the same event in 2003, but for a different regulation.         |
| A44765A | 220   | 1/19/03 | 03/25/03 | 2-1-307   | NOx excess > 10 PPM 3 hr/long  | 01/19/03               | 4         | В       | This violation was corrected the day of discovery by cleaning and unplugging the ammonia injection quill on the SCR unit. The repeat violations occurred more than 6 months apart from each other.                |
| A44766A | 5     | 2/23/03 | 03/25/03 | 6-302     | Excess opacity E#03V07   | 02/23/03               | 10        | В       | This violation was corrected the day of discovery by re-starting two CO furnaces. The repeat violations occurred between 2002 and 2004, and for different causes.   |
| A44767A | 5     | 2/23/03 | 04/08/03 | 6-302     | Vent dump stack loss<br>E#03V09  | 02/23/03               | 10        | В       | This violation was corrected the day of discovery by restoring the water seal level on the emergency dump stack for the FCC unit. The repeat violations occurred between 2002 and 2004, and for different causes. |
| A44769A | 79    | 4/24/03 | 04/24/03 | 8-5-320.3 | 8-5-320.3.1 - Vacuum<br>breaker gap  | 04/24/03               | 1         | Α       | This violation was corrected the day of discovery by replacing the gasket on a vacuum breaker on a tank.  |
| A44769B | 79    | 4/24/03 | 04/24/03 | 8-5-320.5 | 8-5-320.5.2 - Gauge pole<br>gap.   | 04/24/03               | 1         | Α       | This violation was corrected the day of discovery by sealing the gap on a solid gauge well of the tank.   |
| A44771A | 1,024 | 5/7/03  | 05/07/03 | 8-18-307  | Liquid leak greater than 3 drops/minute.                                   | 05/07/03               | 2         | В       | This violation was corrected the day of discovery by re-packing and tightening a valve at this process unit. The repeat violation occurred one week apart, and were for different leaking components.             |
| A44774A | 1,024 | 5/14/03 | 05/14/03 | 8-18-307  | Liquid leak > 3<br>drops/minute.   | 05/14/03               | 2         | В       | This violation was corrected the day of discovery by installing a plug on a valve at this process unit. The repeat violation occurred one week apart, and were for different leaking components.                  |
| A44850A | A-56  | 3/26/03 | 07/10/03 | 9-2-301   | Excess ID #03V62, H2S > 60 PPB/3-Min. & > 30 PPB/1-Hr.                     | 03/26/03               | 2         | В       | This violation was corrected the day of discovery by repairing a malfunctioning instrument at the sulfur plant. The repeat violation occurred 3 months apart and was for different problems.                      |
| A45551A | 61    | 7/10/03 | 07/15/03 | 8-5-320.5 | Slotted well was missing the float (left out on tank).                     | 07/10/03               | 1         | Α       | This violation was corrected the day of discovery by re-installing a missing gauge well float on a tank.  |
| A45555A | 1,031 | 6/5/03  | 08/11/03 | 2-1-307   | Excess (ID-03X12); CO > 6 PPM/3hrs.  | 06/05/03               | 3         | В       | This violation was corrected the day of discovery by changing the operating parameter to lower the CO emissions. The repeat violations occurred during the last two years, and for different problems.            |
| A45556A | 1,007 | 8/27/03 | 08/28/03 | 8-18-307  | Hydrocarbon liquid leak<br>on a nitrogen line > 4<br>drops/min & > 100 ppm | 08/27/03               | 1         | Α       | This violation was corrected the day of discovery by tightening a plug to stop a liquid leak.   |

| V#      | S#    | Occur    | Issued   | Reg       | Violation Comments  | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|---------|-------|----------|----------|-----------|---|------------------------|-----------|---------|---|
| A45558A | 133   | 10/1/03  | 10/02/03 | 8-5-306   | Gauging hatch not gastight (leaking > 10,000 ppm).                    | 10/01/03               | 1         | Α       | This violation was corrected the day of discovery by installing a new gasket on the gauge hatch cover of the tank.  |
| A45559A | 220   | 8/13/03  | 10/02/03 | 2-1-307   | Excess (ID-03449); CO > 28 ppm/8-hours (38.4 ppm)                     | 08/13/03               | 4         | В       | This violation was corrected the day of discovery by changing and adjusting the furnace firing rates, to lower the CO emissions. The repeat violations occurred more than 6 months apart from each other.   |
| A45560A | 5     | 5/31/03  | 10/02/03 | 6-301     | Excess (ID # 03X03)<br>Dump Stack Lost Water 5<br>Gallon              | 05/31/03               | 10        | В       | This violation was corrected the day of discovery by restoring the water seal level on the emergency dump stack for the FCC unit. The repeat violations occurred between 2002 and 2004, and for different causes.                                   |
| A45561A | 1,014 | 6/5/03   | 10/02/03 | 8-28-402  | PRV venting (ID-03X02):<br>not inspected within 5<br>days.            | 06/18/03               | 1         | Α       | This administrative violation was corrected the day of discovery by inspecting a PRV late on this process unit.   |
| A45562A | A-56  | 6/1/03   | 10/16/03 | 9-2-301   | Excess (ID-<br>03X04/03X05); H2S > 60<br>ppb/3-minutes.               | 06/01/03               | 2         | В       | This violation was corrected the day of discovery by clearing the flooding inside the Flexsorb unit tower. The repeat violation occurred 3 months apart and was for different problems.   |
| A45563A | 77    | 10/17/03 | 11/21/03 | 8-5-304   | 8-5-304.4: Tank roof landed & caused odor complaint.                  | 10/17/03               | 2         | В       | This violation was corrected the day of discovery by re-floating the tank roof to seal the vacuum breaker gaps. The repeat violation occurred 9 months apart, and for different sections of the regulation.   |
| A45565A | 207   | 4/12/03  | 01/08/04 | 2-1-307   | CO > 3.7 tons/365-day<br>rolling average (MTBE<br>deliveries)         | 11/26/03               | 3         | D       | This violation was corrected within a 201 day period, by suspending all marine deliveries into the tank, while the rolling emission average came back into compliance with permit condition limits. The repeat violations occurred 20 months apart. |
| A45566A | 1,031 | 7/16/03  | 01/08/04 | 2-1-307   | POC emissions > 2.037<br>lbs/hr (source test<br>average = 4.26 lb/hr) | 07/16/03               | 3         | В       | This violation was corrected the day of discovery by performing a subsequent source test, to show that the CoGen unit was in compliance with the POC limit. The repeat violations occurred during the last two years, and for different problems.   |
| A45567A | 60    | 2/3/04   | 02/05/04 | 8-5-320.3 | Two vacuum breakers with gap > 1/8"                                   | 02/03/04               | 1         | Α       | This violation was corrected the day of discovery by replacing the gaskets on two vacuum breakers on a tank.  |
| A45569A | 2     | 1/4/04   | 03/04/04 | 9-1-307   | (Excess ID - 04B41) -<br>SO2 > 250 PPM/1-hr.                          | 01/04/04               | 2         | В       | This violation was corrected the day of discovery, by restarting the sulfur recovery unit and the tail-gas unit. The repeat violations were over 2 years apart, and were for different sulfur compounds.  |
| A45571A | 87    | 3/17/04  | 03/23/04 | 8-5-320.3 | Center column well not covered.                                       | 03/17/04               | 1         | Α       | This violation was corrected the day of discovery by re-installing the gasketed cover around the center column opening of the tank.   |

| V#      | S#  | Occur   | Issued   | Reg         | Violation Comments  | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule   |
|---------|-----|---------|----------|-------------|---|------------------------|-----------|---------|--|
| A45572A | 89  | 3/17/04 | 03/23/04 | 8-5-320.3   | 8-5-320.3.2 - Visible gap<br>through slotted well,<br>above float.            | 03/17/04               | 2         | В       | This violation was corrected the day of discovery by installing a longer float inside the gauge well on the tank. The repeat violation occurred 26 months apart, and for different sections of the regulation.   |
| A45573A | 91  | 3/17/04 | 03/23/04 | 8-5-320.3   | 8-5-320.3.2 - Visible gap on 25% of the gauge well gasket missing.            | 03/17/04               | 1         | А       | This violation was corrected the day of discovery by installing a new gasket around the gauge well of the tank.  |
| A45574A | 80  | 3/22/04 | 03/23/04 | 8-5-320.4   | Gap > 1/2-inch on solid<br>well sleeve; and thermo<br>well.                   | 03/22/04               | 1         | Α       | This violation was corrected the day of discovery by sealing gaps on a solid gauge well and a thermowell of a tank.  |
| A45575A | 26  | 1/21/04 | 04/22/04 | 1-523.3     | Excess ID# 04B69/04B70 - both reported late.                                  | 01/21/04               | 1         | Α       | This administrative violation was corrected the day of discovery, by filing a late report of a parametric monitor excess.  |
| A46254A | 18  | 2/17/04 | 05/26/04 | 12-11-502.2 | Sample not taken within 30 minutes of flaring.                                | 02/17/04               | 4         | В       | This administrative violation occurred for only one day, due to a failure to obtain a flare gas sample within 30 minutes of a flaring event. The repeat violations occurred between 2002 and 2004, and for different regulations.  |
| A46255A | 18  | 3/26/04 | 05/26/04 | 12-11-502.3 | Flare sample not taken every 3 hours during flaring.                          | 03/26/04               | 4         | В       | This administrative violation occurred for only one day, due to a failure to manually sample the flare gas every 3-hours during a flaring event. This was corrected by completing the installation of an auto-sampling system. The repeat violations occurring between 2002 and 2004, and for different regulations. |
| A46257A | 81  | 5/7/04  | 06/29/04 | 8-5-321.4   | 3-gaps > 1/2-inch on primary seal.  | 05/07/04               | 1         | Α       | This violation was corrected the day of discovery by patching the three gaps on the primary seal of the tank.  |
| A46258B | 103 | 4/7/03  | 06/29/04 | 10          | Federal Regulations<br>Should Also Have Been<br>Cited                         | 08/30/04               | 1         | С       | This was an administrative violation for failing to inspect a tank seal on a 10-year interval, as required by Federal Regulations. Compliance was achieved once the tank was taken out-of-service, the primary seal was inspected, and found in compliance.  |
| A46258A | 103 | 12/1/03 | 06/29/04 | 8-5-402     | Full Circumference of<br>Primary Seal Not<br>Inspected In 10 Years<br>(402.1) | 08/30/04               | 1         | С       | This was an administrative violation for failing to inspect a tank seal on a 10-year interval, as required by District Regulations. Compliance was achieved once the tank was taken out-of-service, the primary seal was inspected, and found in compliance.   |
| A46259B | 105 | 4/1/04  | 07/01/04 | 2-6-307     | Deviation reported late.  | 04/01/04               | 1         | Α       | This administrative violation was corrected the day of discovery, by filing a late report of a Title-V deviation.  |
| A46259A | 105 | 4/1/04  | 07/01/04 | 8-5-305     | 8-5-305.5 - Liquid product on top of floating roof.                           | 04/01/04               | 1         | Α       | This violation was corrected the day of discovery by cleaning up the product on top of a floating-roof tank.   |
| A46261A | 124 | 7/14/04 | 07/23/04 | 8-5-306     | 24-inch flange not gas-<br>tight; leaking at 5000 ppm                         | 07/14/04               | 1         | Α       | This violation was corrected the day of discovery by injecting sealant into the flange to stop the fugitive emission leak.   |

| V#      | S#    | Occur   | Issued   | Reg       | Violation Comments   | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|---------|-------|---------|----------|-----------|--|------------------------|-----------|---------|---|
| A46264A |       | 6/1/04  | 08/06/04 | 8-5-404   | Late certification (38 tanks in 2003/19 tanks in 2004)                 | 06/01/04               | 1         | С       | This was an administrative violation for the late submittal of 57 tank certification reports, that were due in 2003 and 2004.   |
| A46265A |       | 7/3/03  | 08/06/04 | 8-5-401   | Tank inspection interval<br>(8 tanks > 6 months/2<br>tanks < 4 months) | 12/29/03               | 1         | С       | This was an administrative violation, related to the inspection intervals on floating-roof tank seals. This violation was for 8 tanks operating at the refinery. The tank inspection schedule was corrected for the new inspection requirements from recent rule revisions. |
| A46265B |       | 7/3/03  | 08/06/04 | 8-5-403   | Tank inspection interval (8 tanks > 8 months/2 tanks < 4 months).      | 12/29/03               | 1         | С       | This was an administrative violation, related to the inspection intervals on P/V valves on tanks. This violation was for 2 tanks operating at the refinery. The tank inspection schedule was corrected for the new inspection requirements from recent rule revisions.      |
| A46268A |       | 8/18/04 | 08/31/04 | 8-18-301  | 8 open ended lines<br>leaking > 100 ppm {LPG<br>Rack}                  | 08/18/04               | 1         | Α       | This violation was corrected the day of discovery by re-installing plugs on the open-ended line.  |
| A46267A | 220   | 5/27/04 | 09/03/04 | 2-6-307   | Excess (ID-04E20) NOx > 10 ppm/3-hours                                 | 05/27/04               | 4         | В       | This violation was corrected the day of discovery by placing the furnace parameters back to automatic computer control. The repeat violations occurred more than 6 months apart from each other.  |
| A46269A | 1,004 | 9/15/04 | 09/15/04 | 8-18-301  | Open ended line leaking > 100 ppm                                      | 09/15/04               | 1         | Α       | This violation was corrected the day of discovery by installing a plug on an open-ended line.   |
| A46270A | 150   | 7/21/04 | 09/17/04 | 8-5-306   | Hatch on tank not gas tight (Deviation Ref. #118)                      | 07/22/04               | 4         | D       | This violation was corrected the next day after discovery, by replacing a missing hatch gasket on the tank. The repeat violations occurred in 2001 and 2004.  |
| A46271A | 163   | 1/1/04  | 09/17/04 | 8-5-403   | P/V valve not inspected<br>during calendar year -<br>2003 {Dev #119}   | 01/01/04               | 1         | Α       | This administrative violation was corrected the day of discovery by adding a P/V to the monitoring list.  |
| A46272A | 77    | 7/27/04 | 09/20/04 | 8-5-322.5 | 100 feet of secondary<br>seal gap > 0.06"                              | 07/27/04               | 2         | В       | This violation was corrected the day of discovery by temporarily sealing the gaps in the secondary seals of the tank. Additionally, this entire seal was later replaced. The repeat violation occurred 9 months apart, and for different sections of the regulation.        |
| A46273A | 30    | 8/3/04  | 09/20/04 | 1-522.4   | Inoperative monitor<br>(04F48) - reported 1 day<br>late.               | 08/03/04               | 1         | Α       | This administrative violation was corrected the day of discovery, by filing a late report of an in-operative emission monitor.  |
| A46274A | 1,031 | 9/8/04  | 11/24/04 | 2-6-307   | Excess (ID 04G24) - NOx > 2.5 ppm/3-hrs.                               | 09/08/04               | 3         | В       | This violation was corrected the day of discovery by re-starting the ammonia vaporizer to lower the NOx emissions. The repeat violations occurred during the last two years, and for different problems.  |
| A46275B | 5     | 10/7/04 | 11/24/04 | 1-522.7   | Addition of Reg 1-522.7<br>for Late Reporting of<br>Event              | 10/07/04               | 10        | В       | This administrative violation was corrected the day of discovery, by filing a late report of a CEM excess. The repeat violations occurred between 2002 and 2004, and for different causes.  |

| <b>V</b> # | S#  | Occur    | Issued   | Reg         | Violation Comments  | Compliance<br>Achieved | # of NOVs | Ongoing | Basis for No Compliance Schedule  |
|------------|-----|----------|----------|-------------|---|------------------------|-----------|---------|---|
| A46275A    | 5   | 10/7/04  | 11/24/04 | 6-302       | Excess (ID 04G89)<br>opacity > 20%/3 minutes                | 10/07/04               | 10        | В       | This violation was corrected the day of discovery by completing the shutdown of two furnaces for maintenance. The repeat violations occurred between 2002 and 2004, and for different causes.   |
| A46827A    |     | 9/9/04   | 12/06/04 | 1-510       | Failure to maintain GLM - operated outside temp. range.     | 09/09/04               | 1         | Α       | This was an administrative violation for failing to repair a GLM air conditioner, in a timely manner.   |
| A46828A    | 18  | 9/12/04  | 12/09/04 | 12-11-502.3 | Failed to obtain 8 flare samples on 4 days (Dev. #136, 141) | 10/05/04               | 4         | D       | This administrative violation was corrected within a 4-day period, by reviewing the proper operating procedures, with operations staff, for the new auto-sampling system. The repeat violations occurring between 2002 and 2004, and for different regulations. |
| A46830A    | 207 | 12/7/04  | 12/09/04 | 8-5-320.3   | Vacuum breaker open = 14"                                   | 12/07/04               | 3         | В       | This violation was corrected the day of discovery by repairing and re-installing a vacuum breaker leg on the tank. The repeat violations occurred 20 months apart.  |
| A46830B    | 207 | 12/7/04  | 12/09/04 | 8-5-322.5   | Two gaps in secondary > 0.06"                               | 12/07/04               | 3         | В       | This violation was corrected the day of discovery by installing additional tension brackets on the secondary seal of the tank. The repeat violations occurred 20 months apart.  |
| A46831A    | 150 | 11/22/04 | 12/16/04 | 8-5-303     | 8-5-303.2 0- P/V valve<br>leaking > 500 ppm                 | 12/15/04               | 4         | D       | This violation was corrected on each day of discovery, for 3 different inspections, by removing and replacing a leaking P/V valve with a spare valve. The repeat violations occurred in 2001 and 2004.  |
| A46831B    | 150 | 12/15/04 | 12/16/04 | 8-5-306     | 4 hatches not gas-tight on 12/15/04.                        | 12/15/04               | 4         | В       | This violation was corrected the day of discovery by installing new gaskets on four hatch covers on the tank. The repeat violations occurred in 2001 and 2004.  |
| A46832B    | 131 | 12/15/04 | 12/16/04 | 8-18-301    | Open-end line on flame arrestor leaking > 100 ppm.          | 12/15/04               | 1         | Α       | This violation was corrected the day of discovery by re-sealing the open-ended line to stop a fugitive emission leak.   |
| A46832A    | 131 | 12/15/04 | 12/16/04 | 8-5-306     | Hatch not gas tight.  | 12/15/04               | 1         | Α       | This violation was corrected the day of discovery by installing a new gasket on the hatch cover of the tank.  |