

Enclosure - EPA Comments on the Proposed Permit for Valero Refinery (Benicia) (Facility #B2626)

1) Applicable Requirements

A. Section 60.18 of Subpart A of 40 CFR 60 (NSPS Subpart A)

Please add 40 C.F.R. 60.18 with sufficient specificity in the appropriate sections and tables of the permit to assure the facility's compliance with the requirements. EPA previously identified this issue in an e-mail dated June 30, 2010, in which we noted that requirements under 40 CFR § 60.18 were absent from Sections IV, VI, and VII (Source-Specific Applicable Requirements, Permit Conditions, Applicable Limits & Compliance Monitoring Requirements, respectively) of the proposed permit and from their tables, although these requirements are applicable to flares (e.g., equipment #S-16, S-17, S-18, and S-19).

District staff have explained the facility's contention that the requirements are not applicable because the facility has a flare gas recovery system and all flaring events are necessarily startup/shutdown/malfunction/emergency events. EPA's existing regulations at 40 C.F.R. Part 60, Subparts A and J, however, do not provide an exemption based upon the presence of a flare gas recovery system. Even when a flare gas recovery system is in place, design and operation and maintenance issues may result in routinely generated gases reaching the flare. Therefore, as EPA has previously stated, the requirements of Subparts A and J are applicable to flares even when the flare gas recovery system is in place.

VALERO RESPONSE

As Valero has previously explained and as detailed below, we do not believe that the requirements of 40 CFR 60.18 apply to any of the Benicia Refinery (Facility B2626) flares listed above (S-16, S-17, S-18, and S-19). Even if the requirements of 40 CFR 60.18 were to be added to our Title V permit for any of our flares, for the reasons discussed in the paragraphs below, we would not be required to comply with these requirements during any flaring event allowed under the constraints of BAAQMD Regulation 12, Rule 12 and the refinery's Flare Minimization Plan (FMP), Regulation 12-12-301 prohibits routine flaring unless it is consistent with an approved FMP. All flaring events that are consistent with the Valero FMP are startup, shutdown, malfunction, or emergency events. As we have explained in detail below, the requirements of 40 CFR 60.18 would not apply during any of these events. The full text of Regulation 12, Rule 12 and a copy of the FMP are available on the District's website (www.baaqmd.gov). A detailed applicability determination is provided below for each flare (S-16, S-17, S-18, and S-19).

S-16 Acid Gas Flare

S-16 is the refinery's Acid Gas Flare. This flare was constructed in 1969 when the refinery was constructed and has not been modified. This flare was constructed prior to the effective date of 40 CFR 60 Subpart J, and Valero is not

required to accept applicability for Subpart J for this flare by the consent decree. S-16 is subject to, and complies with BAAQMD Regulation 12, Rule 12. The operation of S-16 is detailed in Valero's FMP.

In accordance with the FMP, S-16 is designed to ensure effective destruction of gases that are primarily hydrogen sulfide and ammonia and that originate in relief vents from the SGU (Sulfur Gas Unit) (S-1 and S-2). These vent streams contain little or no hydrocarbons and combustion assist gas (fuel gas) must be added to ensure that they can be combusted in S-16. These vent streams are not continuous and are only rarely vented. There is no routine flaring at S-16.

In accordance with Valero's Title V permit, S-1 and S-2 are subject to 40 CFR 60 Subpart J as required by the consent decree. The control devices for S-1 and S-2 are A-24 (Tail Gas Hydrogenation Unit A), A-56 (Tail Gas Cleanup Unit), and A-62 (Tail Gas Hydrogenation Unit B).

S-16 is not subject to 40 CFR 60.18 because there are no flaring events consistent with the FMP under which S-16 is operated as a control device for compliance with an applicable subpart of 40 CFR Part 60 or Part 61 (60.18(a)(1)). The following specific reasons apply:

- Routinely generated emissions from S-1 or S-2 are abated by A-24, A-56, and A-62 for compliance with the requirements of 40 CFR 60 Subpart J. These emissions are routed to S-16 only during startup or shutdown of S-1 or S-2 or in case of a malfunction at S-1 or S-2 or the primary control devices. The Title V permit incorrectly states that S-16 provides "backup abatement" for A-24, A-56, and A-62. This statement implies, incorrectly, that S-16 acts as a control device for S-1 and S-2 if there is a malfunction at one of the control devices. However, as stated in paragraph 227 of the consent decree, the exemption in 60.8(c) applies to startups and shutdowns of S-1 and S-2, and to malfunctions of S-1, S-2, and their associated control devices. That means that emissions from S-1 and/or S-2 that are generated during startup or shutdown of either source or during periods of malfunction of either source or the associated control devices are not subject to the control standards of 40 CFR 60 Subpart J, and S-16 is not a control device used for compliance with Subpart J when combusting such emissions. Therefore, S-16 would not be subject to the requirements of 60.18 during periods of startup, shutdown, or malfunction (60.18(a)(1)).
- Any emissions from relief vents at S-1 and S-2 that are vented to S-16 would be caused by a process upset or equipment malfunction or during startup or shutdown conditions or during an emergency situation such as a power failure. During such events, the exemption at 60.8(c) applies and S-16 would not be subject to the requirements of 60.18 (60.18(a)(1)).

S-17 Butane Tank Emergency Flare

S-17 is the emergency flare on the refrigerated Butane Tank (TK-1726). S-17 was constructed 1969 when the refinery was constructed and has not been modified. The flare was constructed prior to the effective date of 40 CFR 60

Subpart J, and in accordance with the consent decree, Valero will accept Subpart J applicability for S-17 by December 31, 2011. As certified in the Consent Decree Flare Compliance Plan, Valero will comply with Subpart J for S-17 in accordance with paragraph 235(b) by operating the flare as a fuel gas combustion device and complying with the H2S monitoring requirements. S-17 is exempt from Regulation 12, Rule 12 per 12-12-110 and is not addressed in Valero's FMP.

S-17 is not subject to 40 CFR 60.18 because TK-1726 is not subject to any subpart of 40 CFR 60 part 60 or part 61, therefore no requirements of 40 CFR 60 Subpart A, including 60.18 would apply to TK-1726 or to the emergency flare (S-17) associated with TK-1726 (60.18(a)(1)). TK-1726 was constructed in 1969 when the refinery was constructed and prior to the effective date for the earliest 40 CFR Part 60 subpart for organic liquid storage (40 CFR 60 Subpart K [7/11/1973]).

The Title V permit incorrectly states that S-17 provides "backup abatement for the butane recovery compressors for TK-1726 (exempt)." This statement implies, incorrectly, that S-17 is operated as a control device for TK-1726 during malfunctions of the tank's refrigeration system. This is not true. S-17 is an emergency flare and acts only as a safety device to safely combust any butane released from TK-1726 during a malfunction of the tank's refrigeration system or during an emergency event such as a power failure.

S-18 and S-19 Main Refinery Flares

S-18 and S-19 are the main refinery flares. Figure 1 is the simplified process flow diagram from Valero's FMP showing the main refinery flare system, which includes S-18, S-19 and the refinery's flare gas recovery system (S-9). S-18 (South Flare) was constructed in 1969 when the refinery was constructed, prior to the effective date of NSPS Subpart J. In accordance with the consent decree, Valero accepted NSPS Subpart J applicability for S-18 on 12/31/2007. S-19 (North Flare) was constructed after the effective date of NSPS Subpart J. In accordance with the consent decree, Valero accepted NSPS Subpart J applicability for S-19 on December 31, 2006. As certified in the Consent Decree Flare Compliance Plan, Valero complies with NSPS J for both S-18 and S-19 in accordance with paragraph 235(a) by operating a flare gas recovery system.

EPA's comment that "... the requirements of Subparts A and J are applicable to flares even when the flare gas recovery system is in place." is in direct conflict with paragraph 235(a) of the Valero consent decree which states, "use of a flare gas recovery system on a flare [to control continuous or routine combustion in the Flaring Device] obviates the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 C.F.R. §§ 60.105(a)(4) and 60.7." This consent decree exemption acknowledges that flares operated with flare gas recovery systems in compliance with paragraph 235(a) are not used to combust gases on a "routine" basis and that all flare events at such flares meet the requirements for the exemption in 40 CFR 60.104(a)(1) ["The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is

exempt from this paragraph.”]. It follows logically that flares that always meet the requirements for the exemption in 60.104(a)(1) cannot also be considered to be control devices for compliance with any applicable subpart of 40 CFR part 60 or part 61, and are, therefore, not subject to the requirements of 60.18 for such control devices (60.18(a)(1)).

EPA commented that “Even when a flare gas recovery system is in place, design and operation and maintenance issues may result in routinely generated gases reaching the flare.” This comment ignores both the consent decree exemption from the requirements of 40 CFR 60 Subpart J as discussed above, and the operational limitations placed on the flares by the District’s flare control rule (Regulation 12, Rule 12). Regulation 12, Rule 12 prohibits routine flaring unless it is consistent with an approved Flare Minimization Plan (FMP) (BAAQMD 12-12-301) and requires the refinery to have an FMP. S-18 and S-19 are subject to, and comply with BAAQMD Regulation 12, Rule 12. The operation of the main flare system, including S-18, S-19, and the refinery’s flare gas recovery system, and the allowable flaring events for the main flare system are detailed in Valero’s FMP, a copy of which is available on the District’s website.

In accordance with the FMP and as previously explained in the Statement of Basis for Revision 2 of the Valero Title V permit in the section titled “MACT Subpart CC Applicability for Flares”, the flare gas recovery system is part of the refinery fuel gas system. Flare gas recovery system headers are located throughout the refinery and the flare gas recovery compressors route the gas collected in the headers to the refinery’s Fuel Unit as described in the FMP. Both routinely generated emissions and episodic and non-routine releases are collected in the flare gas recovery system headers. Routinely generated emissions are vented to the refinery fuel gas system for compliance with a subpart of 40 CFR part 60 or part 61. Episodic and non-routine releases such as those associated with startup, shutdown, malfunction, maintenance, depressurizing, catalyst transfer operations, and other non-routine operations are not subject to the control standards of any subpart of 40 CFR part 60 or part 61 and are vented to the flare gas recovery headers as part of the safety function of the flare system.

In accordance with the District’s Regulation 12, Rule 12 and Valero’s FMP, no routine flaring is allowed at S-18 or S-19. During normal operation, the routinely generated emissions and any episodic and non-routine releases are fully recovered to the fuel gas system by the flare gas recovery compressor(s). There are only two circumstances under which flaring events may occur at the main flare system (S-18 and S-19) that are consistent with the FMP: (1) situations in which, due to process upset or equipment malfunctions, the gas pressure in the flare gas recovery header rises to a level that breaks the water seal leading to the flare; or (2) situations in which, during process startups, shutdowns, or process upsets, the quality of the gas falls to a level such that it cannot be introduced into the fuel gas system.

Situation (1) can occur if the flare gas compressor(s) fail so that the gas collected in the flare gas recovery header cannot be recovered to the fuel gas system. This event is a malfunction in the refinery fuel gas system, which is the method of control for the routinely generated emissions in the flare gas recovery header. The exemption at 40 CFR 60.8(c) would apply during this malfunction and the routinely generation emissions would not be subject to the control standards in the applicable subparts of 40 CFR part 60 or part 61. Therefore, while the routinely generated gases would reach the flare(s) in this situation, they would not be subject to a control standard, and the flares would not be operating as control devices for compliance with an applicable control standard. Therefore, the requirements of 40 CFR 60.18 would not apply to the flares in this situation (60.18(a)(1)).

Situation (1) can also occur if, due to a large episodic or non-routine release, the total volume of gas collected in the flare gas recovery header exceeds the capacity of the flare gas recovery compressor(s). In this case, the flare gas recovery compressor(s) would continue to operate and recover as much gas as possible limited by the capacities of the compressor(s) and the fuel gas system. The excess gas that could not be recovered by the compressor(s) would cause the header pressure to rise to a level that breaks the water seal leading to the flare. In this case, the refinery fuel gas system would remain intact and would continue to be the control method for those sources that vent routinely generated gases to the refinery fuel gas system via the flare gas recovery headers for compliance with an applicable subpart of 40 CFR part 60 or part 61.

EPA has commented that all gases collected in the flare gas headers are comingled and it is not possible to determine whether the actual molecules from the routinely generated gas streams are recovered by the flare gas recovery compressor(s) or are combusted in the flare during this event. That statement is true, however, with the flare gas compressor(s) in operation, the total volume of gas recovered to the fuel gas system and not combusted would include not only the volume of routinely generated gases but also part of the volume of the episodic or non-routine release, thus minimizing the total amount of gas combusted during the flaring event.

The requirements of 40 CFR 60.18 are intended to apply to flares that routinely operate as control devices for compliance with the applicable subparts of 40 CFR part 60 and part 61. In this case, it is clear that a flaring event is a non-routine operation and that the cause of the flaring event is the excess gas from the episodic or non-routine releases, and such gases are not subject to any control standard for which the flare would be subject to 60.18. As discussed above, it is also clear that in this situation the flare gas recovery compressor(s) would recover a volume of gas at least as large as the routinely generated emissions.

It is not reasonable to assume that the flares are acting as control devices for the routinely generated emissions simply because the source of the gas combusted during a flaring event cannot be determined on a molecular basis. It is also not

reasonable to arbitrarily impose the 60.18 requirements for routine flare operation on S-18 and S-19 when a flare event is not a routine operation, and when it is clear that the total volume of gas combusted during the flare event does not include the volume of the routinely generated gases.

Situation (2) requires the flare gas compressor(s) to be shut down so that the low quality gas generated during process startups, shutdowns, or process upsets is not introduced into the fuel gas system. From the perspective of the sources that vent routinely generated emissions to the fuel gas system via the flare gas recovery system, this event would be a shutdown of the refinery fuel gas system. The exemption at 40 CFR 60.8(c) would apply during this shutdown and the routinely generated emissions would not be subject to the control standards in their applicable subparts of 40 CFR part 60 or part 61. Therefore, while the routinely generated gases would reach the flare(s) in this situation, the gases would not be subject to a control standard, and the flares would not be operating as control devices for compliance with an applicable control standard. Therefore, the requirements of 40 CFR 60.18 would not apply to the flares in this situation (60.18(a)(1)).

The Title V permit incorrectly states that S-18 and S-19 provide “backup abatement” for the refinery’s flare gas recovery system (S-9) and all sources that vent to the flare gas recovery system. This implies, incorrectly, that S-18 and S-19 are operated as control devices during startup, shutdown, and malfunctions of the sources that are vented to the refinery’s flare gas recovery system. As discussed in detail in the previous paragraphs, S-18 and S-19 are operated only as safety devices and only during flare events that are consistent with Valero’s FMP.

VALERO RESPONSE

As discussed in the response to Comment 1.A above, many sources in the refinery vent routinely generated emissions to the flare gas recovery system headers, which are part of the refinery's fuel gas system. These emissions are vented to the refinery fuel gas system for compliance with the control standards of various regulations, including applicable subparts of 40 CFR part 60, part 61, and part 63 as explained below. The situations under which the gases collected in the flare gas recovery system may reach the refinery's main flares (S-18 and S-19) are also discussed in detail in the response to Comment 1.A,

NSPS Subpart Kb that refers to section 60.18 of NSPS Subpart A:

No gas streams from the emission units listed in the table below are subject to 40 CFR 60 Subpart Kb.

Fugitive Regulations that refer to section 60.18 of NSPS Subpart A:

NSPS Subpart VV(via GGG) and VVa (via GGGa) NSPS Subpart VV (via 40 CFR 63 Subpart CC)

Various pump seal and compressor seal vents and pressure relief devices (PRDs) from refinery sources are routed to the flare gas recovery system headers, which are part of the refinery fuel gas system as explained in the response to Comment 1.A. These equipment leak sources are vented to the fuel gas system for compliance with the applicable equipment leak regulations including 40 CFR 60 Subpart VV (as referenced by 40 CFR 60 Subpart GGG or 40 CFR 63 Subpart CC) or 40 CFR 60 Subpart VVa (as referenced by 40 CFR 60 Subpart GGGa).

These equipment leak sources do not routinely generate emissions, however, when vented to the refinery fuel gas system, these equipment leaks are exempt from the control and monitoring standards of the applicable subparts. Small equipment leaks that could be considered to be routine leaks in sources vented to fuel gas do cause routine flaring because they are within the capacity of the flare gas recovery compressor(s) and would be recovered in the refinery fuel gas system. These emissions would only reach the flare during a concurrent flaring event. See the discussion of allowable flaring events in Comment 1.A.

The emissions from any extraordinary process upset or equipment malfunction/failure that are large enough to cause a flaring event (e.g., malfunction/failure of the PRD or of the pump or compressor seals, or a process upset causing a PRD release) are exempt from the requirements of 40 CFR 60 Subpart J for fuel gas combustion sources per 40 CFR 60.104(a)(1). . The exclusion for such extraordinary emissions from PRDs was explained in EPA applicability determination 9800090. Any emissions generated during malfunctions or process upsets that are of sufficient quantity to cause a flare event would not be subject to the control standards of 40 CFR 60 Subpart VV or VVa per the exemption for malfunctions in 60.8(c). Therefore, the flares would

not be control devices used for compliance with 40 CFR 60 Subpart VV or Subpart VVa during such a malfunction or process upset, and they would not be subject to 60.18 for the combustion of these gases.

NESHAP/MACT Subparts CC and UUU that refer to section 63.11 of NESHAP/MACT Subpart A

S1004 Catalytic Reformer – *This source is subject to 40 CFR 63 Subpart UUU and routine emissions from this source during cyclic catalytic regenerations are vented to the refinery fuel gas system via the flare gas recovery system . Routine emissions from catalytic regenerations are not large enough by themselves to cause a flaring event and could only reach S-18 or S-19 during a flaring event that occurs concurrently with a catalyst regeneration. See the discussion in Comment 1.A concerning the applicability of 40 CFR 60.18 during flaring events.*

The applicability of 40 CFR 63 Subpart CC was discussed in detail in the Statement of Basis for Revision 2 of the Valero Title V permit and is not repeated here.

Source specific analysis – *The following applicability determinations are for sources listed in the table above whose routine emissions are vented to the refinery fuel gas system via the flare gas recovery system. Where these sources are subject to a subpart of 40 CFR part 60, part 61, or part 63, they are controlled for compliance with that subpart by venting to the refinery fuel gas system.*

- **S-133 Spent Acid Tank (TK-2712)** – *Condition 7559.1 requires VOC emissions from S-133 to be vented to the Flare Gas Recovery System (S-9). This tank is not subject to any subpart of 40 CFR Part 60 or Part 61 or Part 63. If the routine emissions from this tank were to reach a flare, the flare would not be a control device used for compliance with any subpart of 40 CFR Part 60 or Part 61 or Part 63 and would not be subject to 60.18 or to 63.11.*
- **S-160 Seal Oil Sparger** – *Condition 19466.2d requires S-160 emissions to be vented to A-13/A-26 Flare Gas Recovery System Compressors (i.e., to S-9). This source is not subject to any subpart of 40 CFR Part 60 or Part 61 or Part 63. If the routine emissions from this source were to reach a flare, the flare would not be a control device used for compliance with any subpart of 40 CFR Part 60 or Part 61 or Part 63 and would not be subject to 60.18 or to 63.11.*
- **S-188 Oil/Water Separator/S-189 Oil/Water Separator** – *Condition 4882.1 requires emissions from S-188 and S-189 to be vented to the Flare Gas Recovery System (S-9). These oil-water separators are subject to 40 CFR 61 Subpart FF (via 40 CFR 63 Subpart CC), but are exempt from the control standards per the exemption at 61.340(d) for emissions routed to fuel gas. The emissions from these wastewater sources are specifically excluded from the definition of fuel gas in 40 CFR 60 Subpart J. Routine*

emissions from these sources are not large enough by themselves to cause a flaring event and could only reach S-18 or S-19 during a flaring event. See the discussion in Comment 1.A,

GAS STREAMS

S5 FCCU Catalyst Regenerator and S6 Fluid Coker – *After the turnaround that is scheduled to begin on or about December 29, 2010 (and be completed on or about February 1, 2011), the combined CO gas stream from the S-5 FCCU Catalyst Regenerator and S-6 Fluid Coker will be combusted in new CO Furnaces S-1059/S-1060 (F-105/F-106) which are abated by dual SCRs (A-1059/A-1060), a Belco Pre-Scrubber followed by a Cansolv regenerative amine wet gas scrubber (A-1047). These CO furnaces are replacing the existing CO furnaces F-101 and F-102 and a bank of five Electrostatic Precipitators. The emissions from either or both sources S-5 and S-6 could also be vented to atmosphere through the P-69 Dump Stack in the event of a CO furnace trip. There is no physical path for these emissions to reach the flare gas recovery system or the main refinery flares S-18/S-19.*

C. Applicability of NSPS Subpart J (of 40 CFR 60) to S-16 (Acid Gas Flare) and S-17 (Butane Flare)

Please clarify the applicability of NSPS Subpart J to equipment S-16 Acid Gas Flare and S-17 Butane Flare. Tables IV-A8.1 and IV-A8.3 for S-16 and S-17, respectively, of the proposed permit state: "Subpart J not Applicable: Flare constructed/reconstructed/modified after 6/11/1973 and before 6/24/2008." However, according to §60.100(b), "[] any fuel gas combustion device [] that meets the definition of a flare as defined in §60.101a which commences construction, reconstruction, or modification after June 11, 1973, and on or before June 24, 2008, [] is subject to the requirements of this subpart [J] except as provided under paragraphs (c) and (d) of this section." If either of these flares meets the applicability criteria, it would seem that Subpart J applies. If the District believes Subpart J does not apply, the District's rationale for non-applicability must be included in the permit's Statement of Basis.

RESPONSE

Neither S-16 nor S-17 is subject to 40 CFR 60 Subpart J. Both were constructed in 1969, prior to the effective date for 40 CFR 60 Subpart J as documented in the Statement of Basis for Revision 2 of the B2626 Title V permit. The description for 60.100(b) in Tables IV-A8.1 and IV-8.3 for S-16 and S-17, respectively, were edited incorrectly in the proposed Title V renewal markup. The descriptions of 60.100(b) should not have been changed for these sources and should continue to read: "Subpart J Not Applicable. Constructed/modified before 6/11/1973". The applicability of these sources with respect to NSPS J has not changed and the editorial error in the description of 60.100(b) will be corrected in both tables. The explanations in the Statement of Basis for the erroneous changes (attributed incorrectly to AN 18164/18165) will be removed. There is no need to document a finding of non-applicability for these sources in the Statement of Basis because their applicability with respect to NSPS J has not changed.

2) Consent Decree

On June 16, 2005, a consent decree was entered in the case of United States, et al. v. Valero Refining Company (Civil Action No. SA-05-CA-0569) by the United States District Court for the Western District of Texas. (See 70 FR 36410, June 23, 2005). The consent decree is a settlement between the United States, et al., and Valero Refining Company over alleged violations of the Clean Air Act. The Valero refineries covered in the consent decree include the Benicia Refinery in California.

A. Permit Conditions 125 and 126

Please clarify Part 9 of Conditions 125 and 126 to properly reflect the requirements of paragraph 224 of the consent decree. Specifically, paragraph 224 requires “all emission points (stacks) to the atmosphere for tail gas emissions from each of its SRPs will be monitored and reported upon in accordance with 40 C.F.R. §§ 60.7(c), 60.13, and 60.105.” It is not clear how Part 9 of these permit conditions would ensure compliance with these consent decree requirements. Thus, please provide such clarification to the proper places in the permit.

RESPONSE

Valero agrees that Parts 9 of Conditions 125 and 126 do not fully reflect the requirements of paragraph 224 of the consent decree. The following changes will be made in Conditions 125 and 126 to fully reflect the requirements for S-1 and S-2 with respect to the Consent Decree:

Condition# 125

Valero Refining Company - California

3400 E. Second Street

Benicia, Ca 94510

S-1 Sulfur Recovery Unit A

Previous Applications: 26227 (1977), 26878 (1979), 29808 (1984), 17850 (1997), 8028 (Oct 2003) 8427 (Dec 2003), 14443 (Aug 2006), 14604 (Oct 2006)

For Source S-1 Claus (F-1301A, Natural Gas)

1. The Owner/Operator shall provide reasonable access to 24 hour sulfur production data whenever the APCO or his/her designated representative performs compliance determination on the Sulfur Recovery Unit (SRU), Tail Gas Clean-up Unit and main stack. [Basis: Banked POC credits]
2. Deleted [Basis: H2S monitor installation completed for S-1.]
3. Except during upset conditions, the Owner/Operator shall not open the motor operated valve (MOV-001), which allows Tail Gas from S-1 to flow to the incinerator (F-1302A; A-14), when either of the sour gas feed valves (F002, F004) to source (S-1) are open. A closed block valve or blind in the pertinent

lines shall be considered sufficient to fulfill this requirement. [Basis: Regulation 9-1-313.2, odors]

4. Except during upset conditions, the Owner/Operator shall route and clean the tail gases from the S-1 Sulfur Recovery Unit to the Beavon and Flexsorb SE Tail Gas Treatment Units (A-24, A-62 and A-56). The Owner/Operator shall return the recovered hydrogen sulfide to the S-1 and/or S-2 SRU for recovery as elemental sulfur. [Basis: Regulation 9-1-313.2, odors]
5. The total emissions from natural gas firing in both A-24 and A-62 Reducing Gas Generators shall not exceed the following limits:

Pollutant	lb/hr	tons/yr
NOx:	1.842	8.064
CO:	1.547	6.774
POC:	0.102	0.444
PM10:	0.140	0.613
SO2:	0.011	0.048

(Basis: Offsets, Cumulative Increase)

6. The Owner/Operator of A-24 shall fire the Reducing Gas Generator only with natural Gas not to exceed a maximum heat release of 9.1 MMBtu/hr, a maximum natural gas fuel rate of 13,500 SCFH, and a maximum annual natural gas consumption of 108 MMSCF (12,275 annual average). (Basis: Cumulative Increase, Toxics)
7. Within 60 days of the start up of the parallel operation of A-24 and A-62 Tail Gas Treatment Units, the Owner/Operator shall conduct an initial District approved source test to demonstrate the emission changes caused by the operation of the two Beavon Process Reducing Gas Generators simultaneously. This source test shall measure the NOx, CO, POC, PM10 and SO2 emissions before and after the startup of the second Tail Gas Treatment unit. Reasonable steps shall be taken in the refinery to maximize natural gas firing to both units. The Owner/Operator shall submit the results of the source test to the Source Test Section within 60 days of the source test. (Basis: Compliance determination, Cumulative Increase, Offsets)
8. The owner/operator shall conduct a District approved source test annually to demonstrate compliance with the NOx limits of Part 5. The Owner/Operator shall submit the results of the source test to the Source Test Section within 60 days of the source test. (Basis: Cumulative Increase, Offsets)
9. In order to determine compliance with the 10 ppm H2S limit of NSPS Subpart J 40 CFR Part 60.104(a)(2)(ii), the owner/operator shall conduct an initial District approved source test. The owner/operator shall obtain approval for all source test procedures from the District's source Test Section prior to conducting any tests. The owner/operator shall notify the District's source Test Section in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s). Source test results shall be submitted to the District within 60 days of conducting the tests. (Basis: NSPS 60.104(a)(2)(ii) and 60.8, Consent Decree XII.B Paragraphs 221, 222 & 224.)

10. S-1 shall be an affected facility pursuant to 40 CFR Part 60 Subpart J and shall comply with all applicable requirements in 40 CFR Part 60 Subparts A and J. All

emission points (stacks) to the atmosphere for tail gas emissions from S-1 will be monitored and reported upon in accordance with 40 CFR §§ 60.7(c), 60.13, and 60.105. During the life of the Consent Decree and for the purpose of determining compliance with the SRP emission limits, the owner/operator shall apply the “startup” and “shutdown” provisions set forth in NSPS Subpart A to S-1 but not to the independent startup or shutdown of its corresponding control device(s). However, the malfunction exemption set forth in NSPS Subpart A shall apply to both S-1 and its control device(s). (Basis: Consent Decree XII.B Paragraphs 221, 222 & 224, 227)

Condition# 126

Valero Refining Company - California
3400 E. Second Street
Benicia, Ca 94510

S-2 Sulfur Recovery Unit B

Previous Applications: 26227(1977), 26878(1979), 29808 (1984), 17850 (1997), 8028 (Oct 2003) 8427 (Dec 2003), 14443 (Aug 2006), 14604 (Oct 2006)

For Source S-2 Claus (F-1301B, Natural Gas)

1. The Owner/Operator shall provide reasonable access to 24 hour sulfur production data whenever the APCO or his/her designated representative performs compliance determinations on the Sulfur Recovery Unit (SRU), Tail Gas Clean-up Unit and main stack. [Basis: BAAQMD 9-1-313.2]
2. Deleted [Basis: H2S monitor installation completed for S-2.][3. Except during upset conditions, the Owner/Operator shall not open the motor operated valve (MOV-003), that allows Tail Gas from S-2 to flow to the incinerator (F-1302B; A-15) when either of the sour gas feed valves (F052, F054) to source S-2 are open. A closed block valve or blind in the pertinent lines shall be considered sufficient to fulfill this requirement. [Basis: Regulation 9-1-313.2]
4. Except during upset conditions, the Owner/Operator shall route and clean the tail gases from the S-2 Sulfur Recovery Unit to the Beavon and Flexsorb SE Tail Gas Treatment Units (A-24, A-62 and A-56). The Owner/Operator shall return the recovered hydrogen sulfide the S-1 and/or S-2 SRU for recovery as elemental sulfur. [Basis: Regulation 9-1-313.2]
5. The total emissions from natural gas firing in both A-24 and A-62 Reducing Gas Generators shall not exceed the following limits:

Pollutant	lb/hr	tons/yr
NOx:	1.842	8.064
CO:	1.547	6.774
POC:	0.102	0.444
PM10:	0.140	0.613
SO2:	0.011	0.048

(Basis: Offsets, Cumulative Increase)

6. The Owner/Operator of A-62 shall fire the Reducing Gas Generator only with natural Gas not to exceed a maximum heat release of 9.1 MMBtu/hr, a maximum natural gas fuel rate of 13,500 SCFH, and a maximum annual natural gas consumption of 108 MMSCF (12,275 annual average). (Basis: Cumulative Increase, Toxics)
7. Within 60 days of the start up of the parallel operation of A-24 and A-62 Tail Gas Treatment Units, the Owner/Operator shall conduct an initial District approved source test to demonstrate the emission changes caused by the operation of the two Beavon Process Reducing Gas Generators simultaneously. This source test shall measure the NO_x, CO, POC, PM₁₀ and SO₂ emissions before and after the startup of the second Tail Gas Treatment unit. Reasonable steps shall be taken in the refinery to maximize natural gas firing to both units. The Owner/Operator shall submit the results of the source test to the Source Test Section within 60 days of the source test. (Basis: Compliance determination, Cumulative Increase, Offsets)
8. The owner/operator shall conduct a District approved source test annually to demonstrate compliance with the NO_x limits of Part 5. The Owner/Operator shall submit the results of the source test to the Source Test Section within 60 days of the source test. (Basis: Cumulative Increase, Offsets)
9. In order to determine compliance with the 10 ppm H₂S limit of NSPS Subpart J 40 CFR Part 60.104(a)(2)(ii), the owner/operator shall conduct an initial District approved source test. The owner/operator shall obtain approval for all source test procedures from the District's source Test Section prior to conducting any tests. The owner/operator shall notify the District's source Test Section in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s). Source test results shall be submitted to the District within 60 days of conducting the tests. (Basis: NSPS 60.104(a)(2)(ii) and 60.8, Consent Decree XII.B Paragraphs 221, 222 & 224.)
10. S-2 shall be an affected facility pursuant to 40 CFR Part 60 Subpart J and shall comply with all applicable requirements in 40 CFR Part 60 Subparts A and J. All emission points (stacks) to the atmosphere for tail gas emissions from S-2 will be monitored and reported upon in accordance with 40 CFR §§ 60.7(c), 60.13, and 60.105. During the life of the Consent Decree and for the purpose of determining compliance with the SRP emission limits, the owner/operator shall apply the "startup" and "shutdown" provisions set forth in NSPS Subpart A to S-2 but not to the independent startup or shutdown of its corresponding control device(s). However, the malfunction exemption set forth in NSPS Subpart A shall apply to both S-2 and its control device(s). (Basis: Consent Decree XII.B Paragraphs 221, 222 & 224, 227)

B. Permit Condition 23446

Please clarify how the facility complies with paragraph 226 of the consent decree that requires “any SRP sulfur pit emissions [to be re-routed] such that all sulfur pit emissions to the atmosphere are either eliminated or included as part of the applicable SRP’s emissions subject to NSPS Subpart J limit for SO₂, as a 12-hour rolling average, of 250 ppmvd SO₂, or 300 ppm reduced sulfur, each at 0% oxygen, as required by 40 C.F.R. § 60.104(a)(2).” While Part 1 of this condition appears to be pertinent, it is not clear whether and how this condition meets the requirements of paragraph 226.

RESPONSE

Valero complied with paragraph 226 of the Consent Decree through AN 15317 by constructing a closed loop system in which the emissions from the S-157 Sulfur Storage Pit were rerouted to the inlet of the facility sulfur recovery plants S-1 and/or S-2. As explained in AN 15317 (engineering evaluation included in Statement of Basis for Revision 4 of the Facility Title V permit), this modification meets the requirement in paragraph 226 to “re-route any SRP sulfur pit emissions from the refineries subject to this Consent Decree such that all sulfur pit emissions to the atmosphere are either eliminated or included as part of the applicable SRP’s emissions subject to NSPS Subpart J limit for SO₂”. This abatement requirement was subsequently modified by AN 16656 (Jan 2008) to add the 240 hour/year maintenance allowance.

C. Compliance Schedule

Please add into the permit a compliance schedule (pursuant to 40 CFR 70.6(c)(3)) for all consent decree requirements that have not been met and certified by Valero. Alternatively, the District could add (1) a facility-wide condition in the permit to require the Valero refinery to comply with all conditions in the consent decree; (2) a table to the statement of basis that lists consent decree requirements that have not yet been fulfilled and dates of compliance; and (3) a condition in the permit to require semi-annual updates regarding compliance with the consent decree. Examples of such tables and updates can be found via the following internet link:

[http://yosemite.epa.gov/R9/air/EPSS.NSF/6924c72e5ea10d5e882561b100685e04/450c77235b686a82882575080081e4bd/\\$FILE/ConocoPhillips%20Carson_800362_337522_110408_Final%20Statement%20of%20Basis%20-%20Initial%20Title%20V%20Permit.pdf](http://yosemite.epa.gov/R9/air/EPSS.NSF/6924c72e5ea10d5e882561b100685e04/450c77235b686a82882575080081e4bd/$FILE/ConocoPhillips%20Carson_800362_337522_110408_Final%20Statement%20of%20Basis%20-%20Initial%20Title%20V%20Permit.pdf).

For either option, we recommend that the District work with EPA and the company to develop the list of consent decree requirements and compliance deadlines.

VALERO RESPONSE:

Valero has submitted and will continue to submit all permit applications required by the consent decree. Through these permit applications, we have incorporated permit conditions into our Permit to Operate and our Title V Permit to memorialize the requirements of the consent decree. Also as required in the consent decree, Valero submits semi-annual reports that detail the facility's compliance status. The consent decree does not require that Valero include a compliance schedule in its Title V permit as specified in either option in this comment and we do not feel that including this redundant information in the permit will provide any added value to Valero, to BAAQMD, or to EPA. .

3) NOV / Compliance information

Please ensure that any compliance issues including NOVs, variances and stipulated orders are identified and described in the statement of basis. For each outstanding or unresolved compliance issue, including those that the facility is operating under conditions set forth in a Hearing Board decision such as a variance or stipulated order of abatement, the District should either add any necessary compliance schedules in the permit or explain in the statement of basis why one is not necessary. Also please ensure that the compliance discussion in the Statement of Basis is up to date at the time of permit issuance. Examples of such tables and updates can be found via the following internet links:

[http://yosemite.epa.gov/R9/air/EPSS.NSF/6924c72e5ea10d5e882561b100685e04/791c9e346f93eead88257508007f1257/\\$FILE/ConocoPhillips%20Carson_800362_337522_110408_Final%20Initial%20Title%20V%20Permit.pdf](http://yosemite.epa.gov/R9/air/EPSS.NSF/6924c72e5ea10d5e882561b100685e04/791c9e346f93eead88257508007f1257/$FILE/ConocoPhillips%20Carson_800362_337522_110408_Final%20Initial%20Title%20V%20Permit.pdf).

RESPONSE:

The District has updated the Compliance summary in the Statement of Basis.