I. SUMMARY

On December 14, 2006 the San Joaquin Valley Unified Air Pollution Control District’s (District) Governing Board amended Rule 4401 (Steam-Enhanced Crude Oil Production Well Vents) to satisfy commitments in the District 2004 Extreme Ozone Attainment Demonstration Plan (EOADP) and in the District 2003 and 2006 PM10 Plans. On July 17, 2009, upon evaluation of amended Rule 4401, EPA made the following action:

The December 14, 2006 amended Rule 4401 – Steam-Enhanced Crude Oil Production Wells implements RACT [Reasonably Available Control Technology], strengthens the SIP, and is generally enforceable. As a result, EPA staff recommends a limited approval of the rule pursuant to CAA [Clean Air Act] §110(k)(3) and §301(a). However, EPA staff simultaneously recommends a limited disapproval of the rule as a result of the deficiency in section 6.2.4 of the Rule. We do not expect this deficiency to reduce significantly the projected emission reductions from the SJVAPCD’s rule revisions. (EPA TSD, 5)

This action was published in Federal Register Vol 75, No.16 as 40 CFR Part 52 on January 26, 2010. A copy of this Federal Register publication is included as Appendix C of this Draft Staff Report.

Pursuant to §179 of the CAA, unless the deficiency identified by EPA has been corrected and approved into the State Implementation Plan (SIP) within 18 months after the disapproval, one, or more sanctions shall be imposed, as selected by the EPA, until EPA determines that the State has come into compliance. The sanctions available to the EPA are as follows:
1. **Highway Sanctions**

EPA may impose prohibitions, applicable to a nonattainment area, on the approval by the Secretary of Transportation of any projects or the awarding by the Secretary of any grants, under title 23 other than projects or grants for safety.

2. **Offsets**

In applying the emissions offset requirements of §7503 of this title to new or modified sources or emissions units for which a permit is required under this part, the ratio of emission reductions to increased emissions shall be at least two to one.

The purpose of this rule-amending project is to correct the rule deficiency in Section 6.2.4 of Rule 4401 as cited by EPA, and to clarify existing rule standards by making some rule language changes. In our continuing effort to provide excellent customer service to the affected stakeholders, staff also removed expired language from rule language to further simplify rule requirements.

**A. Background**

On April 19, 1991 the District Governing Board adopted Rule 4401 (Steam-Enhanced Crude Oil Production Well Vents). Rule 4401 has been amended four times, the most recent amendments occurring in December of 2006. The 2006 amendments added definitions, revised exemptions, added leak standards, updated and extended record maintenance requirements, and provided criteria that allowed for a waiver of annual source test provisions. The 2006 amendments were made to satisfy commitments in the District EOADP and in the District 2003 and 2006 PM10 Plans.

**B. Rule Development Process**

As part of the rule development process, District staff will hold a public workshop on March 16, 2011. Staff will solicit comments from the public and stakeholders at the workshop and for a two week commenting period after the workshop. Comments received during the commenting period would be evaluated and incorporated into the draft rule as appropriate. The proposed rule and final draft staff report would be published and provided to affected sources and interested parties prior to a public hearing to consider the adoption of the rule by the District Governing Board. The proposed amendments are scheduled to be presented to the Governing Board for the public hearing to consider adoption of the amendments to the rule during the second quarter of 2011.
II. DISCUSSION

A. Existing Rule 4401

Rule 4401 applies to crude oil production wells where production is enhanced by steam injection. Business establishments with Standard Industry Code (SIC) 1311 (Crude Oil and Natural Gas) operate such crude oil production wells. The rule establishes requirements for inspection, component replacement, re-inspection, maintenance, repair periods, and replacement/retrofit for leaking components. It also describes associated administrative and recordkeeping requirements, such as an inspection log, for determining compliance. The purpose of the rule is to limit volatile organic compound (VOC) emissions from steam-enhanced crude oil production well vents. The primary source of VOC emissions from the wells is the casing vent. The emissions from a casing vent are usually controlled through the operation of a VOC collection and control device.

B. EPA Evaluation of Rule 4401

EPA used the following memoranda, guidance, and statute to review the submitted rule to evaluate compliance with RACT requirements of CAA §182(b)(2):

- SJVAPCD’s 2009 RACT SIP Demonstration (April 16, 2009);
- “Preamble, Final Rule to Implement the 8-hour Ozone National Ambient Air Quality Standard”: (70 FR 71612 November 29, 2005);
- Letter from William T. Hartnett to Regional Air Division Directors, “RACT Qs & As – RACT Questions and Answers” (May 18, 2006); and
- Other state and local rules for this category.

EPA used the following memoranda, guidance, and statute to review the submitted rule to evaluate compliance with CAA §110(a)(2)(A) requirement for enforceability:

- The Bluebook (“Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations,” EPA, May 25, 1988);
- The Little Bluebook (“Guidance Document for Correcting Common VOC & Other Rule Deficiencies,” EPA Region 9, August 21, 2001); and

C. EPA Recommendations

On January 26, 2010, EPA published a limited approval and limited disapproval of revisions to the District portion of the California SIP. This action was proposed in the Federal Register on July 17, 2009 regarding VOC emissions from steam-enhanced
crude oil production well vents. Under authority of the CAA as amended in 1990, this action simultaneously approves local rules that regulate these emission sources and directs California to correct rule deficiencies.

EPA finalized a limited approval of the submitted rule, as authorized in §110(k)(3) and §301(a) of the CAA; EPA also simultaneously finalized a limited disapproval of a portion of the rule. Because of the limited disapproval, sanctions will be imposed on the District unless EPA approves subsequent SIP revisions that correct the rule deficiencies within 18 months of the effective date of this action. These sanctions will be imposed under §179 of the CAA according to 40 CFR 52.31. In addition, EPA must promulgate a federal implementation plan (FIP) under §110(c) unless EPA approves subsequent SIP revisions that correct the rule deficiencies within 24-months of the effective date of this action. Note that EPA’s final limited disapproval does not prevent the District from enforcing the rule.

The Technical Support Document for the Notice of Proposed Rulemaking requires the District to remove the following sentence from Section 6.2.4 of Rule 4401: “The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request.”

The previously mentioned sentence in Section 6.2.4 is a rule deficiency because it effectively provides executive officer discretion in conflict with CAA §110(a) and (i) and long-standing national policy as discussed in the bluebook and little bluebook. CAA §110(i) specifically prohibits EPA and the states from taking any “action modifying any requirement of an applicable implementation plan with respect to any stationary source” except as otherwise authorized by the CAA. Section 6.2.4 of Rule 4401 effectively allows the District to grant a waiver to federally-approved SIP requirements if EPA does not object within 45 days of receiving the District’s request for concurrence. Without a process that ensures that any such waiver is granted only upon EPA approval in accordance with CAA requirements, this provision is inconsistent with the requirements of the CAA and cannot be approved.

D. Draft Amendments to Rule 4401

In addition to correcting the deficiency to Section 6.2.4 identified by EPA, the District is also removing expired language and redundant language from the rule for improved clarity. Draft revisions to rule requirements are as follows:

**Section 3.0 Definitions**

Sections 3.7 and 3.31 would be modified to exclude wells as process units or as critical process units. The following sentence would be added to both definitions: “For purposes of this rule, an individual well is not a process unit, and can not be a critical process unit.” As currently enforced by the District, wells are not considered process
units or critical process units; as such this amendment would be to clarify current compliance practice and does not constitute a change to current standards.

Section 3.54 would be added to rule language to clarify the definition of “Year” for purposes of this rule. The new definition is a clarification of current rule standards as currently enforced by the District. This clarification would be added to rule language to prevent operators from misinterpreting the meaning of rule language and inadvertently perform required tests once every two years; for example, if a facility were to perform a test on the first day of January of one year and perform the next test on the last day of December of the following year, the operator would circumvent the meaning of the rule requirement by allowing 24 months between tests.

Section 4.0 Exemptions
Currently, Section 4.6.2 exempts “Components buried below ground.” Well casings are partially buried below ground; as such, there could be a misinterpretation that the components would be exempt. Therefore, we are proposing the following language "Components buried below the ground where no part of the component is accessible to check for leaks. Well casings are not considered buried components." This additional language will clarify the exemption and it is consistent with current compliance practices.

Section 5.0 Requirements
Section 5.2.1 would be modified to clarify that all leaks must be repaired for a facility to be in compliance. The following sentence would be added to this section: "The violation shall persist until all leaking components are repaired according to the requirements of Section 5.5.” This amendment is to clarify a current standard as enforced by the District. This amendment would prevent facilities from misinterpreting this section of the rule to mean that only one leak would need to be fixed in order to bring a facility back into compliance.

Section 6.0 Administrative Requirements
The primary purpose of this rule-amending project is to satisfy requirements as stated in the Technical Support Document (TSD) for EPA’s Notice of Proposed Rulemaking on revisions to the California State Implementation Plan by correcting the rule deficiency as identified by EPA. As such, Section 6.2.4 would be amended to remove the following sentence as specified by EPA: “The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request.” As previously explained, this language is not approvable because is in conflict with CAA §110(a) and (i) and long-standing national policy as discussed in the bluebook and little bluebook.
III. ANALYSIS

A. Emission Reduction & Cost Effectiveness Analysis

No emission reductions and no costs are anticipated from this rule-amending project due to the administrative nature of the draft amendments.

B. Socioeconomic Analysis

Pursuant to California Health and Safety Code (CH&SC) 40728.5(a), “Whenever a district intends to propose the adoption, amendment, or repeal of a rule or regulation that will significantly affect air quality or emissions limitations, that agency shall, to the extent data are available, perform an assessment of the socioeconomic impacts of the adoption, amendment, or repeal of the rule or regulation. This section does not apply to the adoption, amendment, or repeal of any rule or regulation that results in any less restrictive emissions limit if the action does not interfere with the district's adopted plan to attain ambient air quality standards, or does not result in any significant increase in emissions.” Proposed changes are based on federal requirements and current compliance practices and do not change the meaning of the current rule language. This rule-amending project does not significantly affect air quality or strengthen any emission limitations nor does this rule-amendment project result in any significant increase in emissions; therefore, no socioeconomic analysis is required.

C. Environmental Impact Analysis

Pursuant to §15061 of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), District staff investigated the likely environmental impacts of the proposed amendments to Rule 4401. The purpose of this rule-amending project is to correct the rule deficiency in Section 6.2.4 as cited by EPA, and to clarify existing rule standards by making minor changes to rule language. Draft amendments are based on federal requirements and current compliance practices and do not change the meaning of current rule language. As such, District staff concludes that it can be seen with certainty that the proposed amendments to the rule will not have any significant adverse effect on the environment. Staff recommends filing a Notice of Exemption under the provisions of California Code of Regulations §15061(b)(3).

D. Rule Consistency Analysis

Pursuant to CH&SC, §40727.2, District staff has prepared a rule consistency analysis of Rule 4401; the analysis is in Appendix A of this draft staff report.

E. RACT Analysis

CAA §182(b)(2) states that ozone attainment plans shall assure that RACT for VOC is applied at certain sources. A RACT analysis requires an examination of a rule against
Federal rules, regulations, and technology guidelines as well as comparing it against rules from other air districts in California. On April 16, 2009, the District adopted its “2009 RACT SIP,” which provides the District’s demonstration that RACT is implemented for all appropriate activities. The District made the following two findings: (1) There is no national guidance or regulation to help define RACT for this activity; and, (2) overall, Rule 4401’s requirements are as stringent as other large California nonattainment areas. As documented in the TSD for EPA’s Notice of Proposed Rulemaking on “EPA concurs with SJVAPCD’s findings and concludes that Rule 4401 implements RACT for three reasons.”

1. Rule 4401 requires significant emissions control; for example, steam-enhanced crude oil production wells can not be operated unless uncontrolled VOC emissions from any well vent are reduced by at least 99 percent by weight.

2. Rule 4401 leak detection and repair (LDAR) requirements for crude oil production wells are consistent with other similar LDAR rules, such as District Rule 4409 and Monterey Bay APCD Rule 427 – Steam Drive Crude Oil Production Wells.

3. SJVAPCD, South Coast AQMD, and other large California large nonattainment agencies generally gave the most stringent stationary source requirements nationwide, and EPA is unaware of other reasonably available technological or operational controls likely to reduce significantly emissions from this activity.

In summary, EPA believes that Rule 4401 implements relevant RACT requirements. The RACT analysis is in Appendix B of this draft staff report.

IV. REFERENCES


SCAQMD Rule 1173 (Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants). Adopted 7/7/89; Amended 12/7/90, 5/13/94, 12/6/02, 6/1/07, 2/6/09.

SJVUAPCD Extreme Ozone Attainment Demonstration Plan for 1-Hour Ozone Standards. Adopted 10/8/04; Amended 8/21/08.

SJVUAPCD 2007 8-Hour Ozone Plan. Adopted 4/30/07; Amended 10/18/08.