

Adopt Proposed Amendments to District Rule 4402 (Crude Oil Production Sumps)

San Joaquin Valley Air Pollution Control District
Governing Board Meeting

December 21, 2023

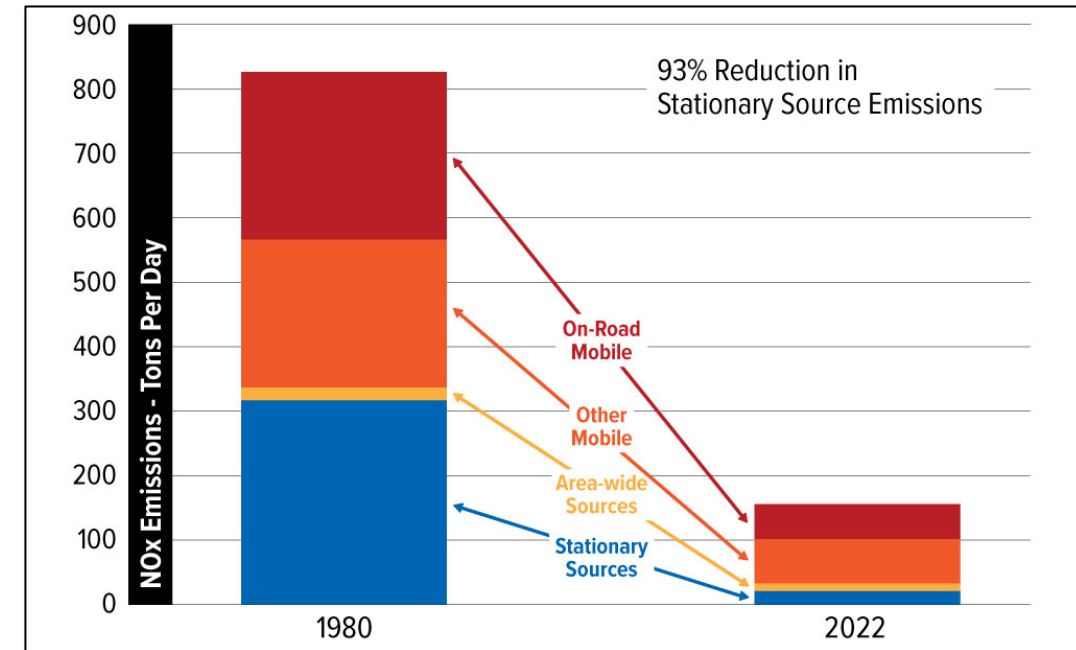
Valley's Air Quality Challenges

- Valley's challenges in meeting federal air quality standards unmatched due to unique geography, meteorology, and topography
- Valley designated as “Extreme” non-attainment of the 8-hour Ozone National Ambient Air Quality Standards; “Serious” non-attainment of federal standards for fine particulate matter (PM_{2.5})
 - Substantial emission reductions needed to achieve federal standards
- Need to go beyond already strict control limits
 - Stringent measures have already been implemented and Valley needs further emission reductions to attain federal standards



Adopted Controls Are Improving Air Quality

- Governing Board has adopted numerous attainment plans and air quality control strategies to address federal standards
 - Stationary source ozone and PM-forming NOx emissions reduced by over 90% through hundreds of regulatory actions
- California Air Resources Board adopted numerous mobile source controls
- District/CARB combined efforts represent nation's toughest emissions control program
- Strong incentive programs (\$6.2 billion in public/private investment)
- Through significant clean air investments, Valley continues to make major improvements with respect to air quality

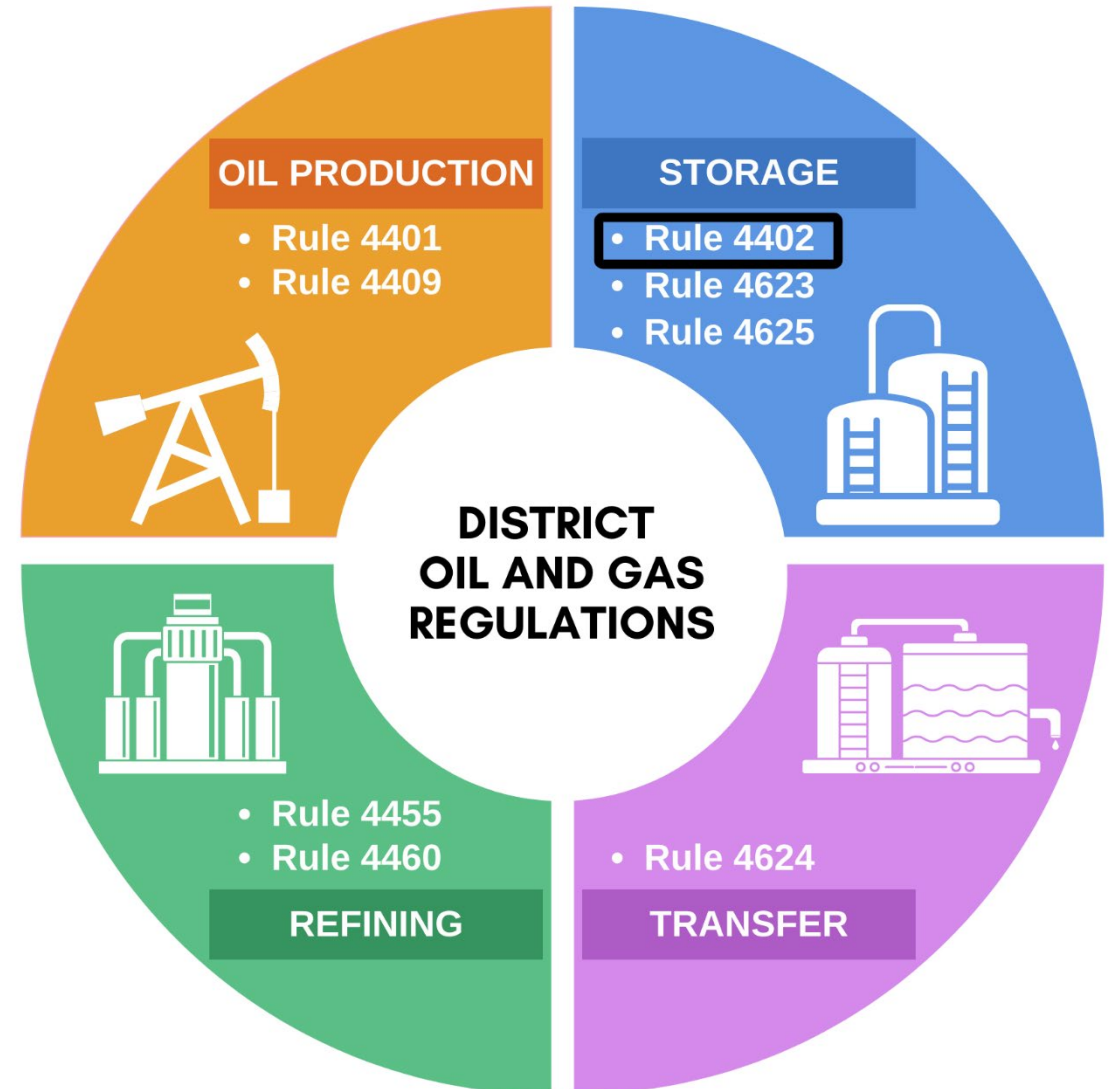


Reasons for Rule Development

- Assembly Bill (AB) 617 requires expedited Best Available Retrofit Control Technology (BARCT) review and implementation schedule for facilities in CARB's Cap-and-Trade Program
 - *2021 District BARCT Rule Analysis* found opportunities for aligning existing Rule 4402 VOC exemption threshold for produced water in ponds and sumps with limits in other air district rules
- Rule 4402 included as SIP strengthening measure in *2022 Ozone Plan* (VOC emissions are a precursor to ozone)
- District conducted an extensive rule making process to explore opportunities to enhance stringency and ensure continued implementation of BARCT

District VOC Oil and Gas Rules

- In addition to Rule 4402, District currently has complimentary, stringent VOC rules regulating other facets of the oil and gas industry
- Coordinated implementation with CARB, EPA, and other agency oil and gas regulations (e.g. California Oil and Gas Regulation)



Current Rule 4402 Overview

- Rule 4402 adopted April 1991, last amended in Dec. 2011
- Applicability: All first/second/third stage sumps at facilities producing, gathering, separating, processing, and/or storing crude oil in an oil field
- Ponds and sumps store produced water that is remaining after significant processing, including initial separation, extraction, and further separation of oil
- Purpose: Limit VOC emissions from sumps
- Requirements:
 - First stage sumps are prohibited
 - Second or third stage sumps must be equipped with an intact flexible floating cover, rigid floating cover, or fixed roof cover that is impermeable to VOCs and covers entire perimeter of sump
 - Ponds and sumps storing produced water <35 mg/L VOC currently exempt

Produced Water VOC Exemption Threshold Comparison

District - Rule	Produced Water VOC Exemption Threshold
South Coast AQMD - Rule 1176	5 mg/L
Ventura County APCD - Rule 71.4	5 mg/L
San Luis Obispo APCD - Rule 419	5 mg/L
SJVAPCD - Rule 4402	35 mg/L





VOC Control Technologies

- District staff analyzed cost and effectiveness of control technologies to determine potential VOC limits for exempt ponds
- Oil/Water Separation Control Technology
 - American Petroleum Institute oil/water separators
 - Dissolved air flotation systems
 - Parallel plate oil/water separators
 - Hydro cyclone oil/water separators
 - Walnut shell filters
 - Other media filters



Inventory Evaluation

- District created updated inventory of facilities subject to the rule:
 - Contacted facilities and requested updated VOC data for sumps and produced water ponds
 - Comprehensive review of Central Valley Regional Water Quality Control Board records of ponds storing produced water in Valley
- Based on District's analysis of test data provided, vast majority of ponds/sumps contain VOC concentration at or below 5 mg VOC/L



May 4, 2023

RE: Request for Records for Rule 4402 Crude Oil Production Sumps
XXXXXXX Company
S-XXXX

The San Joaquin Valley Air Pollution Control District (District) is requesting information from the following:

Operator	Lease	Oil Field	Status	Latitude	Longitude
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District Rule 4402 (Crude Oil Production Sumps) has exemptions in Section 4.1.2 for second and third stage sumps containing clean produced water and Section 4.1.7 for Ponds. Pursuant to the recordkeeping requirements in Section 6.1.2 and 6.1.6 of Rule 4402, operators claiming this exemption shall maintain records to justify the exemption, including results of an independent laboratory analysis, and the records shall be made available to the District upon request.

The District is requesting copies of the most recent sample results from an independent laboratory analysis. Please provide these records **within 10 days from the date of this letter**. Please submit the requested records with attention to the District's **Compliance Department** via one of the following methods:

Mail: San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Avenue, Fresno, CA 93726-0244
ATTN: Compliance Department, Rule 4402 Records
E-MAIL: compliance@valleyair.org
FAX: (559) 230-6112

If you have any questions, please contact District staff at (559) 230-6000 and they will be happy to assist you. **Please be sure to reference your Facility ID as appropriate.**

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-8400 FAX: (209) 557-8476

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

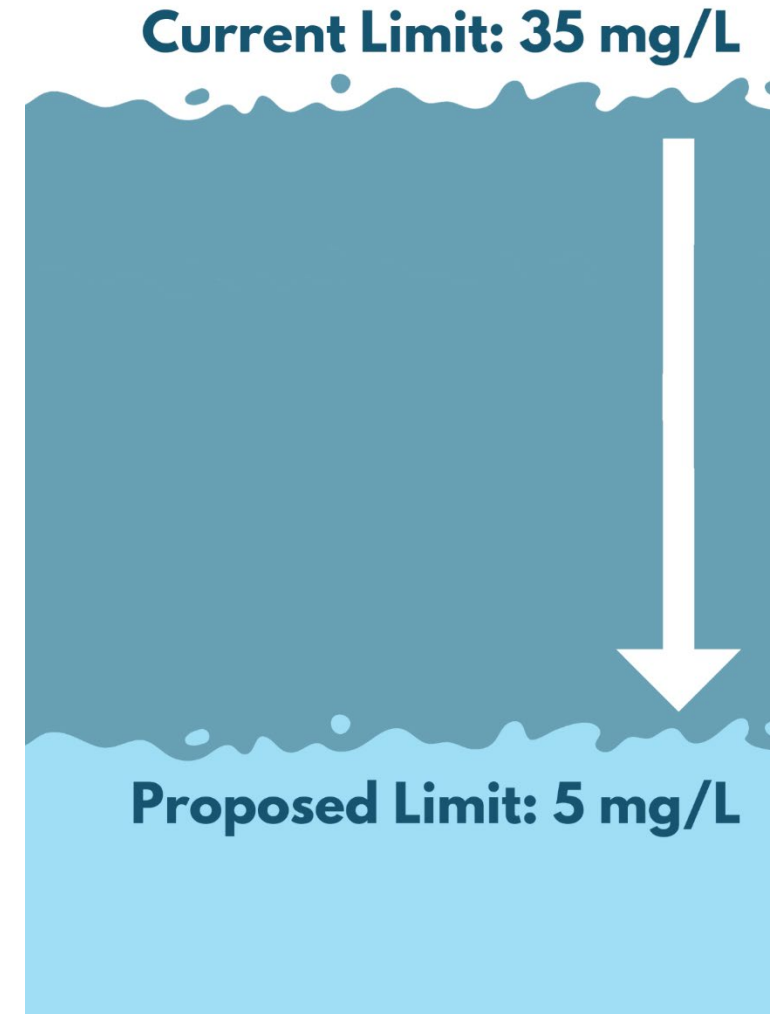
Southern Region
34846 Flyover Court
Bakersfield, CA 93308-8725
Tel: 861-392-5500 FAX: 861-392-5585

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Proposed Amendments to Rule 4402

- Lower VOC exemption threshold for ponds and sumps from 35 mg/L to 5 mg/L
 - Addresses BARCT and Ozone SIP requirements
 - Aligns Rule 4402 VOC limit with other California air district rules
- Other minor changes to improve clarity
- Based on submitted test results:
 - No emission reductions quantified at this time
 - No significant costs expected



Health Benefits of Emissions Reductions

- Exposure to ozone has been linked to a variety of health issues, including, chest pain, coughing, throat irritation, congestion, reduced lung function, and inflammation of the lining of the lungs
 - People with asthma, children, older adults, people active outdoors, and outdoor workers at higher risk from exposure to high levels of ozone
- District has worked with CARB and EPA to lower ozone precursor emissions throughout Valley
 - NO_x and VOC emissions key precursors to ozone formation
 - Fugitive VOC emissions may also contain hazardous air pollutants, such as benzene and other carcinogens known to cause adverse health impacts
- Further limiting VOC emissions through proposed amendments contributes to additional public health benefits in San Joaquin Valley

Public Process

- Proposed amendments were developed through an involved public process with multiple opportunities for public comment
- Public meetings held over two years on proposed amendments:
 - AB 617 BARCT schedule adopted Dec. 2018 through public process
 - Public workshops held Dec. 2022 and Sept. 2023
- Draft rule published for review Sept. 2023
- Proposed rule posted for public review/comment on Nov. 21, 2023
- Updates at Governing Board meetings, Citizen Advisory Committee meetings, and Environmental Justice Advisory Group meetings
- No public comments received (EPA suggestion recently received regarding ongoing review)

Recommendations

1. Adopt proposed amendments to Rule 4402 (Crude Oil Production Sumps)
2. Authorize the Chair to sign the attached Resolution