

**Public Scoping Meeting for Potential Amendments to District  
Rule 4401 (Steam-Enhanced Crude Oil Production Wells)  
Rule 4409 (Components at Light Crude Oil Production Facilities,  
Natural Gas Production Facilities, and Natural Gas Processing  
Facilities)  
Rule 4455 (Components at Petroleum Refineries, Gas Liquids  
Processing Facilities, and Chemical Plants)  
Rule 4623 (Storage of Organic Liquids)  
Rule 4624 (Transfer of Organic Liquid)**

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[webcast@valleyair.org](mailto:webcast@valleyair.org)

# Decades of Stringent Air Quality Regulations

- District has long evaluated and implemented stringent control measures across all sources under its jurisdiction in efforts to attain federal standards
  - Adopted over 650 rules and rule amendments in order to control emissions from stationary sources and other local sources
  - District's New Source Review permitting regulation requires the use of the Best Available Control Technology (BACT)
- District stationary sources subject to Best Available Retrofit Control Technology (BARCT) since 1980s
- Robust and ongoing analysis necessary to demonstrate that District's rules continue to meet state and federal requirements, including BARCT
  - Increasingly stringent air quality standards
  - Control technologies continually evolving

# Update on AB 617 BARCT Review

- Best Available Retrofit Control Technology (BARCT) is an air emission limit for existing sources and is maximum degree of reduction achievable, taking into account environmental, energy and economic impacts
- AB 617 requires expedited BARCT review and implementation schedule for facilities in CARB's Cap-and-Trade Program
  - District adopted schedule in December 2018
  - 109 facilities in San Joaquin Valley subject to expedited BARCT review
  - 19 rules already found to meet BARCT
  - 13 rules scheduled for additional review and rulemaking in 2020-2022 timeframe as necessary
  - 5 rules addressed through this BARCT evaluation

# Rules Under BARCT Evaluation

Rule	Title
4401	Steam-Enhanced Crude Oil Production Wells
4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities
4455	Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants
4623	Storage of Organic Liquids
4624	Transfer of Organic Liquids

# Rule 4401 Overview

- District Rule 4401 first adopted April 19, 1991
  - Has been subsequently amended 5 times
- Purpose of rule is to limit VOC emissions from steam-enhanced crude oil production wells
- District Rule 4401 requirements
  - VOC emissions from wells, or tanks if wells have closed vents, reduced by 99%
  - Leak detection and repair program required for minimizing leaks with specific repair thresholds and timelines
  - Operator Management Plan required that describes components subject to the rule and requires maintaining records of inspections
- With implementation of this rule, VOC emissions have been reduced by 99%



*Image credit: Anton-Paar, 2020*

# Rule 4409 Overview

- District Rule 4409 adopted April 20, 2005
- Purpose of rule is to limit VOC emissions from light crude oil production facilities, natural gas production facilities, and natural gas processing facilities
- District Rule 4409 requirements
  - Leak detection and repair program required for minimizing leaks with specific repair thresholds and timelines
  - Operator Management Plan required that describes components subject to the rule and requires maintaining records of inspections
- With implementation of this rule, VOC emissions have been reduced by 65%



*Image credit: BIC Magazine, Oct 2020*

# Rule 4455 Overview

- District Rule 4455 adopted April 20, 2005
- Purpose of rule is to control VOC emissions from leaking components at petroleum refineries, gas liquids processing facilities, and chemical plants
- District Rule 4455 requirements
  - Leak detection and repair program required for minimizing leaks with specific repair thresholds and timelines
  - Operator Management Plan required that describes components subject to the rule and requires maintaining records of inspections
- With implementation of this rule, VOC emissions have been reduced by 87%



Image credit: Corken 2020

# Rule 4623 Overview

- District Rule 4623 first adopted April 11, 1991
  - Has been subsequently amended 4 times
- Purpose of rule is to limit VOC emissions from the storage of organic liquid in tanks with a capacity of 1,100 gallons or greater
- District Rule 4623 requirements
  - Requires control of organic liquid storage tanks by utilizing a pressure vacuum vent, installation of a vapor control system with 95% control efficiency, or use of a floating roof depending on tank size and True Vapor Pressure (TVP) of organic liquids stored
  - Components must be maintained in a leak-free condition
- With implementation of this rule, VOC emissions have been reduced by up to 95%



*Image credit: alloiltank 2020*



# Rule 4624 Overview

- District Rule 4624 first adopted April 11, 1991
  - Has been subsequently amended 4 times
- Purpose of rule is to limit VOC emissions from the transfer of organic liquids
- District Rule 4624 requires
  - Use of a vapor control system to capture emissions and reduce emissions by at least 95%
  - Leak detection and repair program required for minimizing leaks with specific repair thresholds and timelines
- With implementation of this rule, VOC emissions have been reduced by up to 95%



*Image credit: Schneider 2020*

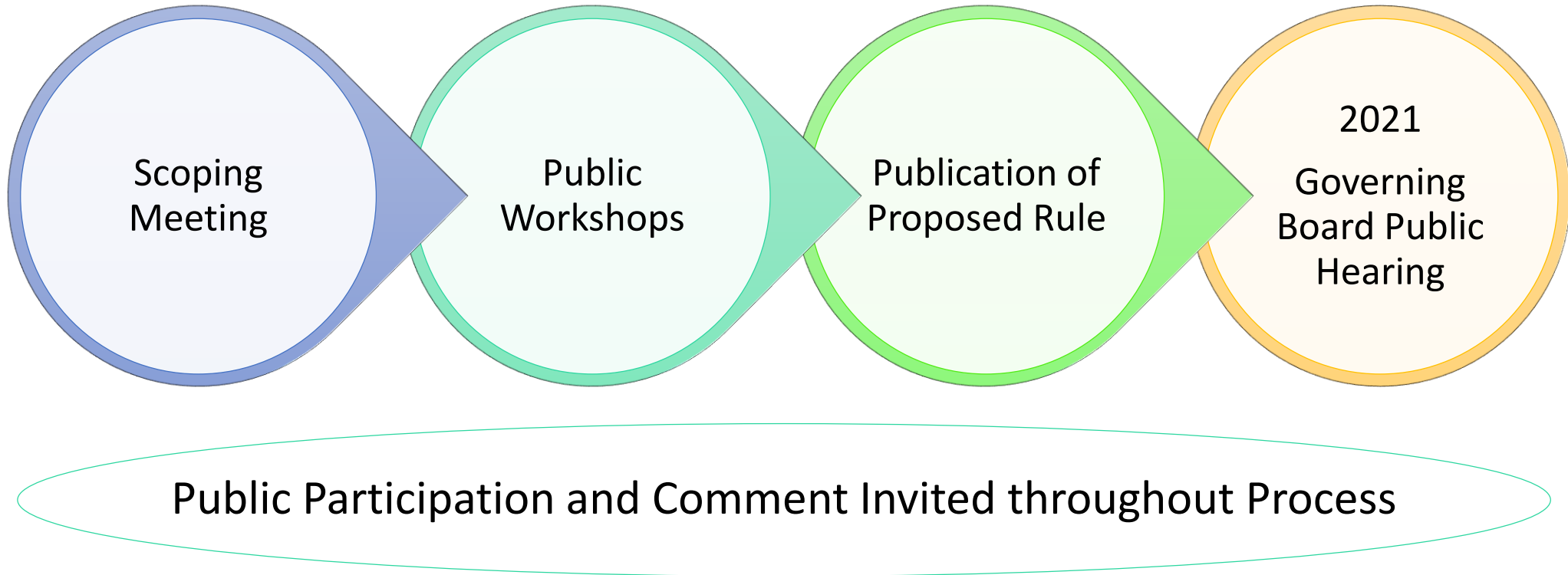
# BARCT Evaluation Process

- District will complete comprehensive analysis to determine whether these rules satisfy BARCT, including:
  - Identifying other local, state, and federal requirements
  - Identifying emission levels that have been achieved
  - Determining cost-effectiveness of requiring additional emission reductions
- Rules found to meet BARCT will not require amendments
- BARCT analyses to continue to be made publically available

# BARCT Evaluation Process (cont'd)

- If District determines that rule amendments are needed, the following steps will be taken
  - Analyze technological and economic feasibility of further controls and lower leak detection and repair thresholds
  - Evaluate cost-effectiveness and technological feasibility of potential controls
  - Review of requirements in other districts and regions
- District rules are developed through transparent public process, with emphasis placed on providing opportunities for public engagement and feedback through workshops and comment periods
  - If needed, public workshops will be scheduled in 2021
  - Regular updates will be provided at Citizens Advisory Committee (CAC), Environmental Justice Advisory Group (EJAG), and District Governing Board meetings

# Public Engagement Process for Rule Amendments



# Contact

**Contact:** Michael Corder

**Mail:** San Joaquin Valley APCD  
1990 E. Gettysburg Ave  
Fresno, CA 93726

**Phone:** (559) 230-5800

**Fax:** (559) 230-6064

**Email:** [Michael.Corder@valleyair.org](mailto:Michael.Corder@valleyair.org)

**Listserv:** [http://lists.valleyair.org/mailman/listinfo/oil\\_and\\_gas](http://lists.valleyair.org/mailman/listinfo/oil_and_gas)

# Comments/Input/Questions

[webcast@valleyair.org](mailto:webcast@valleyair.org)