

# Existing Control of Air Pollution Sources of Concern to AB 617 Communities

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AB 617 COMMUNITY EMISSION REDUCTION PROGRAM DEVELOPMENT



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

# Air Pollution Control: Who Does What?

## Agency Jurisdictions

Federal and state laws require emission control measures in areas where air pollution exceeds standards. The San Joaquin Valley is one of these areas. With a variety of state and federal agencies implementing air pollution reduction programs, it can be difficult to understand the mission and jurisdiction of each organization.

The federal government, primarily through the Environmental Protection Agency, sets air quality standards, oversees state and local actions, and implements programs for toxic air pollutants, heavy-duty trucks, locomotives, ships, aircraft, off-road diesel equipment, and some types of industrial equipment.

State government, through the California Air Resources Board (CARB) and Bureau of Automotive Repair, sets more stringent state standards, oversees local actions, and implements programs for motor vehicle emissions, fuels, and smog checks.

Local air pollution control districts, such as the San Joaquin Valley Air Pollution Control District (District), develop plans and implement control measures in their areas. These controls primarily affect stationary sources such as factories and plants. Local air districts also conduct public education and outreach efforts such as the District's *Healthy Air Living*, *Check Before You Burn*, and *Drive Clean in the San Joaquin* voluntary programs.

Local cities and counties are responsible for implementing air friendly community planning that promotes pedestrian traffic, commute alternatives and cleaner transit fleets. City and County governments develop land use plans and make decisions about how cities should grow and expand.

While their jurisdiction and specific programs may vary, all of these organizations share a common goal: to work cooperatively in establishing comprehensive air quality control programs to benefit all California residents.

Assembly Bill (AB) 617 allows the District an exciting opportunity to continue to improve air quality, by partnering with community members in CARB selected communities to reduce local pollution and to help further protect the health of disadvantaged communities. Local air quality monitoring and community member engagement will be critical components to further understanding pollution impacts on local neighborhoods and developing effective strategies to reduce the cumulative exposure burden in highly impacted communities.

## About the San Joaquin Valley Air Pollution Control District

The District regulates stationary sources of air pollution, implements control measures, and develops and implements plans to improve air quality in the San Joaquin Valley.

Nearly 650 rules and regulations have been adopted by the District over a period of nearly three decades, each reducing the amount of emissions that a facility may emit. A strict permitting process ensures that facilities operating in the Valley have the best available control technologies feasible to install for all permitted facility types, and ensures that new equipment and facilities in the Valley do not increase the risk of health impacts due to exposure to harmful air pollutants for local residents. These stringent requirements protect Valley communities from both regional and local air pollution and associated health impacts. See Appendix A for more information about health-protective permitting measures that apply to sources regulated by the District.

The District also works with CARB to make plans for attainment of health-protective air quality standards for the eight counties in the San Joaquin Valley. The District and CARB recently adopted the *2018 PM2.5 Plan*, which committed to make existing rules and regulations potentially even more stringent for stationary sources like boilers, glass plants, internal combustion engines, and commercial charbroilers. Emissions information gathered annually by the Air District and CARB, and scientific modeling, have shown that the majority of pollution in the Valley, and the majority of the pollution-related health impacts, come from mobile sources, and so CARB has also committed to major emission reductions from mobile sources through increased enforcement and incentive funding in the Valley. To further target sources outside of the District's regulatory jurisdiction, the *2018 PM2.5 Plan* also included a commitment to implement several different incentive programs for sources such as yard equipment, buses, and passenger cars. Emission reductions from this regional plan for attainment will benefit AB 617-selected communities by improving ambient air quality.

Additional regulatory controls and incentive programs that directly impact air pollution sources that have been discussed as being of concern to the AB 617 selected communities of Shafter and South Central Fresno are further discussed in this Community Steering Committee source categories of concern Informational packet. Visit [Valleyair.org](http://Valleyair.org) for more information about District rules, policies, and available incentive programs that address these sources and many others!

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# **Control of Mobile Sources of Air Pollution**

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## Passenger Car Pollution

State and Federal requirements control emissions from passenger vehicles. The Valley Air District does not have jurisdiction over these sources. However, due to the large amount of air pollution that originates from passenger vehicles in the Valley, the District has implemented a suite of programs to reduce pollution from these mobile sources.

- Employer Based Trip Reduction (District Rule 9410) requires large employers to implement measures to encourage employees to take alternative transportation to work through the establishment of an Employer Trip Reduction Implementation Plan (eTRIP).
  - An eTRIP is a set of measures that encourages employees to use alternative transportation and ridesharing for their morning and evening commutes
  - Each measure contributes to a workplace where it is easier for employees to choose to use ridesharing or alternative transportation
  - Through this rule, single-occupancy vehicle trips are reduced, thus reducing emissions of oxides of nitrogen (NOx), volatile organic compounds (VOC) and particulate matter (PM).
- District Healthy Air Living school program promotes no idling while picking up children at school
  - “No idling” signs are provided to schools to encourage drivers to turn off their engines
- Indirect Source Rule (District Rule 9510) accounts for mobile source emissions from construction and new development projects and ensures that emissions from these activities are mitigated through on site activities or through payment of mitigation fees
- District offers a variety of incentive programs to reduce emissions from passenger vehicles. These include the following options:
  - Tune In Tune Up vehicle repair program  
<http://valleyair.org/drivecleaninthesanjoaquin/repair/> provides up to \$850 in funding to repair high emitting vehicles identified at weekend Tune In Tune Up events
  - The Districts vehicle replacement program  
<https://www.valleyair.org/drivecleaninthesanjoaquin/replace/> provides up to \$9,500 for Valley residents to replace their 1999 or older high emitting vehicles with newer, cleaner options including battery electric, plug in hybrid, or hybrid vehicles
  - The District offers rebates up to \$3,000 for the purchase or lease of new clean air vehicles including battery electric, fuel cell, plug in hybrid, zero emissions motorcycles, and advanced technology natural gas vehicles  
<https://www.valleyair.org/drivecleaninthesanjoaquin/rebate/>



- The District provides incentives up to \$50,000 per project for electric vehicle charging infrastructure through the Charge Up Program <http://valleyair.org/grants/chargeup.htm>



- CARB mobile source strategy calls for increasing the deployment of plug in hybrid, battery electric vehicles and fuel cell vehicles in order to attain federal ozone standards, reduce greenhouse gas emissions, minimize health risks, reduce petroleum usage and increase energy efficiency.

## School and Transit Buses

- Controlled by the California Air Resources Board Statewide Truck and Bus Regulation that requires transition to cleaner technology over time. Generally phased in by model year. <https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>
- District has a variety of incentive programs available for school bus fleets interested in transitioning their fleets to cleaner technology, including:
  - The District operates a local school bus replacement program. The Electric School Bus Incentive Program provides monetary incentives for the replacement of existing diesel yellow school buses that transport public school children to and from school with all electric school buses. Eligible applicants are public school districts, Joint Power Authorities (JPA), and privately owned yellow school buses that are contracted with a public school to transport public school children.
  - <http://valleyair.org/grants/electric-school-bus.htm>
- School bus replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to the Carl Moyer Program guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.
  - <https://www.arb.ca.gov/msprog/cap/capfunds.htm>
- Upcoming Volkswagen Mitigation Trust Program funding: The District is administering \$130 million in funding on behalf of the State of California to replace diesel school and transit buses throughout California with all-electric zero-emission buses. This program will be launching in the fall, 2019.
  - <http://vwbusmoney.valleyair.org/>

## Emissions from Heavy Duty Trucks

- Diesel powered heavy-duty trucks are subject to statewide ARB Truck and Bus Regulation which requires all equipment to meet 2010 emission standards by 2023. All 2009 and older heavy-duty diesel trucks will be off the road by January 1, 2023.  
(<https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>)
- District offers incentives to reduce emissions from heavy-duty diesel trucks. This includes the following options:
  - Heavy Duty Truck Replacement Program (<http://valleyair.org/grants/truck-replacement.htm>) provides up to \$200,000 in funding to replace 2009 or older heavy-duty diesel trucks with the cleanest technology available
  - The District will implement a Heavy-Duty Truck Repair Pilot Program to provide financial assistance to small fleet truck owners and operators to provide durable repairs for broken emissions components or systems in summer 2019
  - The District is developing new program for Heavy-Duty Alternative Fuel Infrastructure which will provide local businesses and agencies incentive funding to install alternative fueling infrastructure (electric, hydrogen, etc.) to support the increased deployment of heavy-duty advanced clean technology vehicles

## Locomotives

- Currently, there exist no CARB and EPA requirements controlling emissions relating to the transportation of goods via locomotive freight.
- The District offers two incentive programs for Locomotive fleets interested in transitioning to newer, clean technology, including:
  - Proposition 1B (Locomotives) (<http://valleyair.org/grants/locomotives-prop1b.htm>) incentivizes the reduction of emissions and health risks associated with freight movement along California's trade corridors via upgrading to cleaner technologies or installation of emissions capture and control systems.
    - Locomotive replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to Proposition 1B guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.
    - State Legislature Proposition 1B provides funding for the replacement of old locomotive engines under this program
    - All locomotive engines funded under Prop 1B must be EPA Tier 4 Certified and pass California Air Resources Board Verification
  - Locomotive Program (<http://valleyair.org/grants/locomotive.htm>) incentivizes the replacement of old, high-polluting locomotives to new, low-polluting Tier 4 engines.
    - Locomotive replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to the Carl Moyer Program guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.
    - Carl Moyer Grant Program provides funding for the replacement of old locomotive engines under this program



- All locomotive engines funded with Carl Moyer monies must be EPA Tier 4 Certified and pass California Air Resources Board Verification
- To date, The District has administered nearly \$66 million dollars to fund the replacement of old, high-polluting locomotive engines with new, tier 4 and CARB verified locomotive engines.
- South Coast APCD is administering Volkswagen Environmental Mitigation Trust for California Funding on behalf of the State of California to replace high-polluting locomotive engines throughout California with newer, low-polluting Tier 4, CARB verified locomotive engines. This program will be launching in the fall, 2019.
  - <http://www.aqmd.gov/vw/>
  - <https://ww2.arb.ca.gov/our-work/programs/volkswagen-environmental-mitigation-trust-california/about>

# **Control of Residential and Urban Sources**

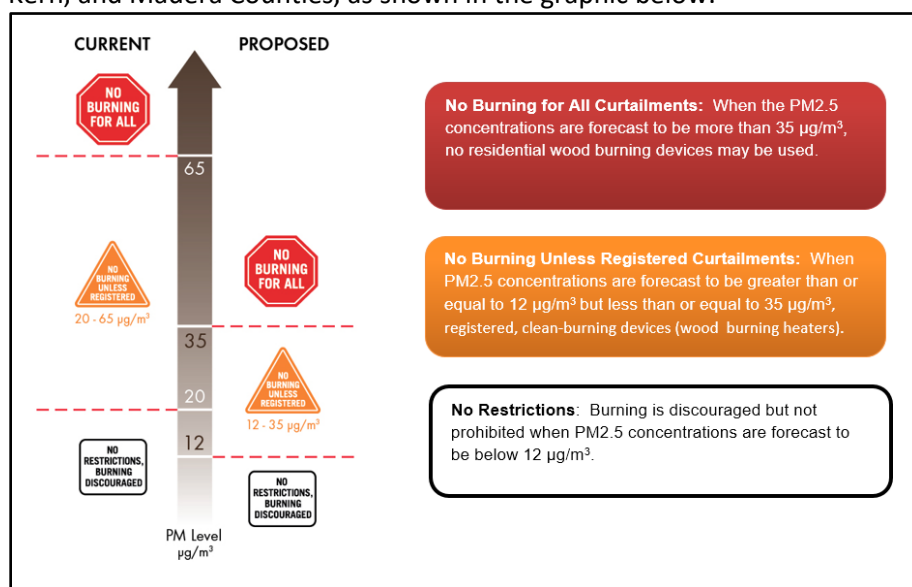
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## Residential Wood Burning

The wood burning fireplaces and wood burning heaters source category includes emissions from wood burning fireplaces, wood burning heaters, and outdoor wood burning devices. During winter, one of the largest sources of particulate pollution comes from residential wood burning. Emissions are the result of incomplete wood combustion and are emitted into Valley neighborhoods where residents live and play. Hazardous air pollutants released from residential wood burning include: PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>x</sub>, benzene, aldehydes, dioxin, and polycyclic aromatic hydrocarbons (PAHs).

Residential wood burning is subject to the following regulatory measures:

- SJVAPCD (District) Rule 4901 (<https://www.valleyair.org/rules/currnrules/r4901.pdf> )
- Check Before you Burn program (<https://www.valleyair.org/aqinfo/cbyb.htm>)
  - Through the District's Check Before You Burn program, which is based on Rule 4901, the District has declared and enforced episodic wood burning curtailments, also called "No burn" days, since 2003.
  - Check Before You Burn and District Rule 4901 reduce harmful species of PM<sub>2.5</sub> when and where those reductions are most needed, in impacted urbanized areas when the local weather is forecast to hamper particulate matter dispersion.
  - The District is currently proposing to amend the existing curtailment levels for Fresno, Kern, and Madera Counties, as shown in the graphic below.



Additionally, the District utilizes the following non-regulatory measures to reduce pollution from wood smoke in the Valley:

- Burn Cleaner Incentive Program (<http://valleyair.org/grants/apps/burncleaner/Home>): Incentive funding for the replacement of older more polluting wood burning heaters to cleaner wood burning heaters. This program has replaced over 16,600 uncertified wood stoves with EPA-certified and clean burning natural gas devices in the Valley since 2009.

NEW DEVICE TO BE PURCHASED	INCENTIVE AMOUNT
Certified wood insert/freestanding stove	Up to \$1,000
Certified pellet insert/freestanding stove	Up to \$1,000
Natural gas insert/freestanding stove	Up to \$1,000
Any eligible device if applicant is eligible for low-income	Up to \$2,500
Additional incentive towards gas device (for both Standard and Low-income)	Up to \$500*

*\*Applies only to eligible installation costs beyond the funding amount*

- **Public Outreach and Education:** The District takes part in media interviews and responds to public calls phone calls and emails related to residential wood burning. The District also utilizes tools such as the Real-Time Air Advisory Network and the “Valley Air” app, and social media, and multimedia advertising campaigns (billboards, radio, tv, etc.) to spread awareness

## Development Projects - Construction and Operations

Development projects are controlled through a suite of rules, including the District’s Indirect Source Review Rule and Regulation VIII requirements, further discussed below. Additionally, the District provides city and county agencies with guidance on sustainability measures that best reduce air pollution, as well as analyzing the potential impacts of new projects and ways developers can reduce air quality impacts through the CEQA process.

### Indirect Source Review (ISR) Rule

District [Rule 9510 \(Indirect Source Review \(ISR\)\)](#) reduces NOx and PM10 emissions from mobile and area sources associated with construction and operation of new development projects in the Valley. The ISR rule applies to developers of new residential, commercial and industrial projects and to transportation and transit projects whose emissions will exceed certain thresholds contained in the rule.

- This rule was adopted in December 15, 2005, and amended in December, 2017.
- This is the only rule of its kind in the State of California and throughout the nation. The District’s rule is recognized as the benchmark, or best available control, for regulating these indirect sources of emissions, and other air districts
- The ISR rule encourages clean air designs to be incorporated into the development project, or, if insufficient emissions reductions can be designed into the project, by paying a mitigation fee that will be used to fund off-site emissions reduction projects.

### Voluntary Emission Reduction Agreement (VERA) Program

A VERA is a mitigation measure under the California Environmental Quality Act (CEQA) by which the project proponent provides pound-for-pound mitigation of air emissions increases through a process that funds and implements emission reduction projects administered through the District’s incentive grant programs. A VERA can be implemented to address air quality impacts under CEQA, from both construction and operational phases of a project.

### Regulation VIII (Fugitive PM10 Prohibition) / Dust Control Plan (DCP)

The District’s Regulation VIII series (Fugitive PM10 Prohibitions) was adopted in November 2001, and subsequently amended in 2004. This rule series contains a comprehensive suite of rules designed to

reduce fugitive PM10 emissions from a range of sources. The Regulation VIII rules are implemented via the District's Dust Control Plan (DCP) program:

[https://www.valleyair.org/busind/comply/PM10/compliance\\_PM10.htm](https://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm)

Rule 8011: General Requirements

The provisions of Rule 8011 are applicable to specified outdoor fugitive dust sources. In 2004, the District adopted amendments to Regulation VIII to upgrade existing RACM level rules to meet the more stringent BACM level required in serious PM10 nonattainment areas.

Rule 8021: Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities

Rule 8021 applies to construction or demolition related disturbances of soil, including land clearing, grubbing, scraping, excavation, extraction, land leveling, grading, cut and fill operations, travel on the site, travel access roads to and from the site, and demolition activities. The rule also applies to construction of new landfill disposal sites or modifications to existing landfill disposal sites prior to commencement of landfilling activities.

Rule 8031: Bulk Materials

Rule 8031 applies to the outside storage and handling of any unpackaged material, which emits or has the potential to emit dust when stored or handled.

Rule 8041: Carryout and Trackout

Rule 8041 applies to the prevention and cleanup of mud and dirt whenever it is deposited (carryout and trackout) onto public paved roads from activities subject to the requirements of Rules 8021, 8031, 8061, and 8071.

Rule 8051: Open Areas

Rule 8051 applies to any open area 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas that contains at least 1,000 square feet of disturbed surface area.

Rule 8061: Paved and Unpaved Roads

Rule 8061 establishes standards for the construction of new and modified paved roads in accordance with published guidelines by the American Association of State Highway and Transportation Officials for road construction and applies to any paved, unpaved, or modified public or private road, street highway, freeway, alley way, access drive, access easement, or driveway.

Rule 8071: Unpaved Vehicle/Equipment Traffic Areas

Rule 8071 is applicable to unpaved vehicle/equipment areas, including parking, fueling, service, shipping, receiving, and transfer areas.

Rule 8081: Agricultural Sources

Rule 8081 applies to "off-field" agricultural sources including, but not limited to, unpaved roads, unpaved vehicle/equipment traffic areas, and bulk materials.

## Commercial Charbroiling

The charbroiling source category consists of two types of commercial charbroilers: chain-driven and underfired. A chain-driven charbroiler is a semi-enclosed broiler that moves food mechanically through the device on a grated grill to cook the food for a specific amount of time. An underfired charbroiler has a metal "grid," a heavy-duty grill similar to that of a home barbecue, with gas burners, electric heating elements, or solid fuel (wood or charcoal) located under the grill to provide heat to cook the food. The

smoke and vapors generated by cooking on either type of charbroiler contain water, VOCs, and PM. Larger particles and grease are typically captured by the grease filter of the ventilation hood over the charbroiler. The remaining VOCs and particulate pollution are exhausted outside the restaurant, unless a secondary control is installed.

- District Rule 4692 reduces emissions by requiring catalytic oxidizers for chain-driven commercial charbroilers, such as those located at fast-food restaurants, that meet rule applicability thresholds
- Rule 4692 requires emission controls for chain-driven charbroilers that cook 400 pounds of meat or more per week
- The original rule, adopted in March 2002, reduced PM<sub>2.5</sub> emissions from chain-driven charbroilers by 84%. The September 2009 rule amendment expanded rule applicability to more chain-driven charbroilers, reducing 25% of the remaining PM<sub>2.5</sub> chain-driven charbroiler emissions

In 2018, the District amended Rule 4692 to implement a registration and reporting requirement for underfired charbroiler operations in order to gather better inventory and emissions information for this source category. Using new survey and registration information, the District will pursue reductions in commercial underfired charbroiler emissions through an incentive-based approach to fund the installation of controls for commercial underfired charbroilers within urban boundaries in hot-spot areas of Fresno, Kern, and Madera counties, with a future year regulatory requirement to encourage participation by Valley businesses.

## Lawn and Garden Equipment

- CARB has a small off-road engine (SORE) program, which includes lawn and garden equipment. In 2020, CARB will consider new standards for small engines to help California meet its goal of reducing smog-forming pollutant emissions from mobile sources by 80 percent in 2031 (<https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore>).
- District offers incentives to help reduce emissions from gas-powered lawn and garden equipment. The Clean Green Yard Machines (CGYM) Program includes the following:
  - Residential CGYM provides rebates for the replacement of an old gas-powered mower with a new electric mower and for the purchase of eligible new electric lawn and garden electric equipment without replacements (<http://www.valleyair.org/grants/cgym.htm>). To date, this program has replaced over 6,700 mowers with over \$1.5 million in funding.
  - Commercial CGYM launched in May 2019 and provides funding for the replacement of eligible old gas-powered lawn and garden equipment with battery-powered options for public agencies, private entities, and businesses <http://valleyair.org/grants/cgym-commercial.htm>

## Mitigation Measures for Schools

- Managed by Outreach and Communications team
- The Healthy Air Living Schools program provides free tools, resources, and education to Valley schools and their communities (<http://healthyairliving.com/schools>)
- Encourages schools to adopt Real-time Air Advisory Network (RAAN), modify outdoor activities, communicate air quality challenges and progress, request educational speakers, adopt anti-idling initiatives, and stay engaged through ongoing personalized support

- Deployed Real-time Electronic Air-Quality Display (READ) technology for more than 25 schools, which provides real-time air quality data and is a highly visible alternative to the retired Air Quality Flag Program. Additional schools are now participating using their own monitor to display a customized URL provided by the District
- Currently 959 schools in the Valley utilize the District's air quality notifications to adjust outdoor activities and notify staff, students and parents

## General Outreach

- Managed by the Outreach and Communications team
- Improves public health through education, partnership, outreach, and cooperation with the media, public, businesses, government, and others
- Coordinates events, delivers presentations, responds to the media 24/7, manages social networks, pilots innovative outreach campaigns like the HAL Schools and Check Before You Burn programs, and connects with the public in multiple languages across any medium
- Executes annual comprehensive multi-lingual advertising campaigns for Healthy Air Living/Summer Ozone season, Check Before You Burn and a variety of grant programs utilizing various media resources including television, radio, billboards, social media, digital networks and more.
- Provides air quality data from the Real Time Air Advisory network (RAAN) of monitors across the Valley, to more than 8,000 registered users who receive alerts via text or email for locations they choose to follow
- Provides a free mobile app for android and iOS that allows users to save up to 10 Valley locations to view current air quality data from RAAN, report air quality issues and check wood burning status during Check Before You Burn season.

# **Control of Agricultural Sources of Concern**

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## Open Burning

State laws require Districts to have provisions for the disposal of agricultural waste through open burning. The San Joaquin Valley has the toughest restrictions on burning of agricultural materials in the state. State legislation is phasing out such activity, but it is still allowed for a few crop types where there are no economically or technologically feasible alternatives to burning available. In accordance with state law, on a daily basis District staff determines when, how much, and where burning can occur.

The limited open burning still allowed is managed under the District's comprehensive Smoke Management System (SMS) to minimize ambient air quality impacts. Burn permits issued by the District and daily authorization is required for all open burning of agricultural waste. Each day, District staff analyze potential impacts, local meteorology, air quality conditions, atmospheric holding capacity, and other factors when making determinations on how much material may be burned in each of the over 100 burn zones that the Valley is broken into in the SMS. Open burning is only allowed if atmospheric conditions are such that no adverse air quality impacts are expected. The goal of the SMS is to protect public health and prevent significant deterioration in air quality as the result of open burning.

- Controlled by District Rule 4103 (Open Burning)  
(<https://www.valleyair.org/rules/curnrules/r4103.pdf>)
- Alternative to Open Ag Burning Incentive Pilot Program
  - Provides incentives for chipping or shredding agricultural material, with the materials being required to be used for soil incorporation or land application on agricultural land
  - A total of \$1,644,320 has been offered to fund these projects to date
  - This program has resulted in approximately 200 tons of NO<sub>x</sub>, 241 tons of VOC, and 337 tons of PM emission reductions to date

## Agricultural Tractors

- Agricultural tractors are not controlled by a regulation.
- To be eligible the facility must be engaged in agricultural operations as defined by the California Air Resources Board. <http://valleyair.org/grants/documents/tractor/Guidelines.pdf>
- Agricultural tractor replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to the Carl Moyer Program guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.
  - <https://www.arb.ca.gov/msprog/cap/capfunds.htm>
- Projects are funded on a first come first serve  
<http://valleyair.org/grants/documents/tractor/Ag-Off-Road-Repalcement-App.pdf>

## Agricultural Trucks

- Controlled by the California Air Resources Board Statewide Truck and Bus Regulation that requires transition to cleaner technology over time. Generally phased in by model year.  
<https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>

- The FARMER Ag Truck Replacement Program provides incentive funds for the replacement of heavy-duty diesel agricultural trucks.  
<http://valleyair.org/grants/documents/FARMER/guidelines.pdf>
- Eligible agricultural trucks must be in current compliance with the State of California’s On-Road Truck and Bus Regulation under the following compliance options
  - Agricultural Vehicle Extension
  - Low-Use Exemption
  - Specialty Agricultural Vehicle Extension
  - Model Year Schedule and the truck must operate as an “agricultural vehicle” as defined in the truck and bus regulation.  
<https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>
- Agricultural truck replacements can be funded as an eligible project category utilizing funding from the FARMER program. These projects are administered according to the FARMER Program guidelines.  
<http://valleyair.org/grants/documents/FARMER/application.pdf>

## Agricultural Pump Replacement Program

- Controlled by the San Joaquin Valley Air Pollution Control District that required a transition to cleaner technology over time. Generally phased in by tier level.
  - [https://www.valleyair.org/rules/currnrules/R4702\\_Clean.pdf](https://www.valleyair.org/rules/currnrules/R4702_Clean.pdf)
- District has a variety of incentive programs available for agricultural operations interested in transitioning their engines to cleaner technology, including:
  - The District operates a local agricultural replacement program. The Agricultural Pump Incentive Program provides monetary incentives for the replacement of Tier 3 engines to Tier 4f engines and Tier 3 or Tier 4f engines to electric motors
  - <http://valleyair.org/grants/agpump.htm>
- Agricultural Pump Replacements can be funded as an eligible project category utilizing funding provided to support AB 617. These projects are administered according to the Carl Moyer Program guidelines and are subject to additional requirements contained within the approved AB 617 Community Air Protection Guidelines. This program is operated by the District.
  - <https://www.arb.ca.gov/msprog/cap/capfunds.htm>

## Dust from Orchards, Vineyards, and Row Crops

The District requires that growers implement conservation management practices to reduce air pollution from agricultural operations

- Growers must submit a conservation management plan to the District for approval, as required by District Rule 4550 (Conservation Management Practices)
  - Within this plan, farmers detail specific measures they will be implementing to reduce dust emissions from their facility
  - District staff regularly inspect Valley farms to ensure compliance with rule requirements
  - Emission reductions achieved by the implementation of these practices by Valley farmers has helped the Valley be in attainment of the federal air quality standards for PM10
- The District has worked closely with representatives from the agricultural community to evaluate new harvesting equipment and practices that can effectively reduce dust from harvest activities

- Based on the significant dust emission reductions that low-dust harvesting equipment can provide, the District is offering funding for the replacement of older, conventional nut harvesters or sweepers with new, low-dust technology equipment for use in nut harvesting operations
  - This incentive funding can also be packaged with our Tractor Replacement funding to upgrade the tractor used to pull harvesting equipment
  - Eligible Equipment must be low-dust harvesting equipment achieving at least 40% reduction in particulate matter emissions as demonstrated by available peer-reviewed information and/or District-approved methodology
  - More information is available here: <http://valleyair.org/grants/low-dust-nut-harvester.htm>

## Pesticide application control and monitoring

The Valley Air District is prohibited by state law from regulating pesticides. The Department of Pesticide Regulation (DPR) regulates pesticides under a comprehensive program that encompasses enforcement of pesticide use in agricultural and urban environments. DPR oversees a multi-tiered enforcement infrastructure and is vested by the [U.S. Environmental Protection Agency](#) with primary responsibility to enforce federal pesticide laws in California. DPR directs and oversees County Agricultural Commissioner enforcement of pesticide and environmental laws and regulations locally, including enforcement for the Department of Consumer Affairs' Structural Pest Control Board.

- More information about DPR's Air Program is available here: <https://www.cdpr.ca.gov/docs/emon/airinit/airmenu.htm>
- DPR requires farmers to notify the department before they apply any form of pesticide
- Additionally, agricultural operators are subject to strict rules that limit overspray and drift from the approved site of application, and may be subject to fines for violations
- Schools near a pesticide application must be notified by DPR to allow the school to take precautions to prevent exposure. Please visit the DPR website for more information about DPR's regulation of pesticide spraying near schools: [https://www.cdpr.ca.gov/docs/enforce/pesticide\\_applications\\_near\\_schoolsites.htm](https://www.cdpr.ca.gov/docs/enforce/pesticide_applications_near_schoolsites.htm)

## Dairy Operations

Dairy Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4570 \(Confined Animal Facilities\)](#) and [Rule 4550 \(Conservation Management Practices\)](#)

The purpose of Rule 4570 is to limit VOC emissions from Confined Animal Facilities (CAFs). This rule applies to facilities where animals are corralled, penned, or otherwise caused to remain in restricted areas and primarily fed by a means other than grazing for at least 45 days in any twelve-month period. In addition to limiting VOC emissions, Rule 4570 also includes measures that limit ammonia (NH<sub>3</sub>) emissions from these operations. The purpose of Rule 4550 is to limit fugitive dust emissions from agricultural operations. Dairy operations are subject to stringent enforcement provisions, including ongoing mitigation measures and annual inspections.

Dairy operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)

Dairy operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Dairy Digesters

- California Department of Food Agriculture (CDFA) Dairy Digester Research and Development Program (DDRDP) provides financial assistance for the installation of dairy digesters in California.
  - <https://www.cdfa.ca.gov/oefi/ddrdp/>
- CDFA receives funding from California Climate Investments for methane emissions reductions from dairy and livestock operations.
- Current DDRDP projects are expected to reduce greenhouse gas emissions by an estimated 12.9 million metric tons of CO<sub>2</sub>e.
- CDFA has a list of the projects they have funded on their website
  - [https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP\\_ApplicationsReceived.pdf](https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP_ApplicationsReceived.pdf)

## Alternative Manure Management Program (AMMP)

- California Department of Food and Agriculture (CDFA) Alternative Manure Management Program (AMMP) provides financial assistance for the implementation of non-digester manure management practices
  - Currently, eligible practices for funding through AMMP include: pasture-based based management; solid separation or conversion from flush to scrape in conjunction with some form of drying or composting of collected manure.
  - [https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP\\_ApplicationsReceived.pdf](https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP_ApplicationsReceived.pdf)

# **Control of Stationary Sources of Concern**

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## Glass Manufacturing Plants

Glass melting furnaces in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4354 \(Glass Melting Furnaces\)](#)

Rule 4354 is among the most stringent rules in the nation for glass melting furnaces. The purpose of this rule is to limit NO<sub>x</sub>, SO<sub>x</sub>, volatile organic compounds (VOC), carbon monoxide (CO), and PM emissions from glass melting furnaces. The NO<sub>x</sub> emission limits contained within Rule 4354 require the installation of the best available NO<sub>x</sub> technology (i.e. oxy-fuel firing or SCR systems). Facilities with glass melting furnaces are subject to stringent enforcement provisions, including the installation of continuous emissions monitoring equipment and annual inspections.

In addition to Rule 4354 requirements, glass manufacturing plants are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - [40 CFR 60 Subpart CC – Standards of Performance for Glass Manufacturing Plants](#)
  - 40 CFR 60 Subpart PPP (Standards of Performance for Wool Fiberglass Insulation Manufacturing Plants)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - [40 CFR 61 Subpart N – National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants](#)
  - 40 CFR 63 Subpart NNN (National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing Plants)
  - [40 CFR 61 Subpart SSSSS – Glass Manufacturing Area Sources](#)
- EPA – Alternative Control Technology (ACT)
  - 435/R-94-037 (Alternative Control Techniques Document—NO<sub>x</sub> Emissions from Glass Manufacturing)

Glass manufacturing plants are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4202 \(Particulate Matter – Emission Rate\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)
- [40 CFR 64 – Compliance Assurance Monitoring](#)

Glass manufacturing plants in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Biomass Plants

Biomass facilities in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4352 \(Solid Fuel Fired Boilers, Steam Generators, and Process Heaters\)](#)

The purpose of Rule 4352 is to limit NOx and CO emissions from any boiler, steam generator or process heater fired on solid fuel. The most recent amendments, in December 2011, strengthened the rule by lowering NOx emissions limits for biomass facilities and for municipal solid waste facilities and for all other solid fuel fired units. Facilities with solid fuel fired boilers, such as biomass plants are subject to stringent enforcement provisions, including annual source testing requirements and annual inspections.

In addition to Rule 4352 requirements, biomass plants are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - 40 CFR 60 Subpart Cb – Emission Guidelines and Compliance Times for Municipal Waste Combustors that are Constructed on or before December 19, 1995
  - 40 CFR 60 Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction is Commenced after August 17, 1971
  - 40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - [40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters](#)
- EPA – Alternative Control Technology (ACT)
  - 453/R-94-022 (Alternative Control Techniques Document– NOx Emissions from Industrial/Commercial/ Institutional Boilers)
  - 453/R-94-023 (Alternative Control Techniques Document– NOx Emissions from Utility Boilers)

Biomass plants are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)
- [40 CFR 64 – Compliance Assurance Monitoring](#)

Biomass plants in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Autobody Coating Operations

Autobody Coating Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4612 \(Motor Vehicle and Mobile Equipment Coating Operations\)](#)

The purpose of Rule 4612 is to limit VOC emissions from coatings of motor vehicles, mobile equipment, and associated parts and components, and associated organic solvent cleaning, storage, and disposal. This rule applies to any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating for use within the District, as well as any person who uses, applies, or solicits the use or application of any automotive coating within the District. Facilities that perform autobody coating operations are subject to stringent enforcement provisions, including annual inspections.

In addition to Rule 4612 requirements, autobody coating operations may also be subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - 40 CFR 60 Subpart MM (Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operations)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - [40 CFR 63 Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources](#)
  - 40 CFR 63 Subpart IIII (National Emission Standards for HAPs: Surface Coating of Automobiles and Light-Duty Trucks)
- EPA – Control Technique Guidelines (CTG)
  - 450/2-76-028 (Control of Volatile Organic Emissions from Existing Stationary Sources – Volume I: Control Methods for Surface Coating Operations)
  - 450/2-77-008 (Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks)
  - 453/R-08-006 (Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings)
- EPA – Alternative Control Technology (ACT)
  - EPA-453/R-94-017 (Alternative Control Techniques Document – Surface Coating of Automotive/Transportation and Business Machine Plastic Parts)

Autobody coating operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#) – if using booth heater
- [District Rule 4801 \(Sulfur Compounds\)](#) – if using booth heater

Autobody coating operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)



## Gasoline Pipeline Terminals

Gasoline Pipeline Terminals in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4623 \(Storage of Organic Liquids\)](#) and [Rule 4624 \(Organic Liquid Loading\)](#)

The purpose of Rule 4623 is to limit VOC emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored. The purpose of Rule 4624 is to limit VOC emissions from the transfer of organic liquids. This rule applies to organic liquid transfer facilities. Facilities that store or transfer organic liquids, such as gasoline pipeline terminals are subject to stringent enforcement provisions, including quarterly leak inspection requirements and annual inspections.

In addition to Rule 4623 and Rule 4624 requirements, gasoline pipeline terminals may also be subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - [40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels \(Including Petroleum Liquid Storage Vessels\)](#)
  - [40 CFR 60 Subpart XX - Standards of Performance for Bulk Gasoline Terminals](#)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - Subpart BBBB – Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities
  - 40 CFR 63 Subpart EEE – Organic Liquids Distribution (Non-Gasoline)
  - [40 CFR 63 Subpart R - National Emissions Standards for Gasoline Distribution Facilities](#)
- EPA – Control Technique Guidelines (CTG)
  - 450/2-77-035 (Control of Volatile Organic Emissions from Bulk Plants)
  - 450/2-77-036 (Control Techniques Guideline Document for Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed Roof Tanks)
  - 450/2-78-047 (Control Techniques Guideline Document for Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks)
- EPA – Alternative Control Technology (ACT)
  - 453/R-94-001 (Alternative Control Techniques Document for Volatile Organic Liquid Storage in Floating and Fixed Roof Tanks)

Gasoline pipeline terminals typically have auxiliary equipment that are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)

Gasoline pipeline terminals in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Rendering Operations

Rendering Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4104 \(Reduction of Animal Matter\)](#)

The purpose of Rule 4104 is to limit air contaminants from source operations used for the reduction of animal matter by requiring gases, vapors, and gas-entrained effluent from the process to be incinerated at temperatures not less than 1200 degrees Fahrenheit or processed in an equally effective manner. Facilities that perform rendering operations are subject to stringent enforcement provisions, including annual source testing requirements and annual inspections.

Rendering operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)

These facilities generally use steam from a boiler (indirect-fired) or a rotary dryer (direct-fired) for their operations, which generates NOx emissions from these combustion units; these combustion units are regulated by other District rules. Rendering operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Fiberglass Boat Manufacturing Operations

Fiberglass Boat Manufacturing Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4684 \(Polyester Resin Operations\)](#)

The purpose of Rule 4684 is to limit VOC emissions from commercial and industrial polyester resin operations, fiberglass boat manufacturing operations, organic solvent cleaning, and the storage and disposal of all solvents and waste solvent materials associated with such operations. Facilities that perform fiberglass boat manufacturing operations are subject to stringent enforcement provisions, including annual inspections.

In addition to Rule 4684 requirements, fiberglass boat manufacturing operations are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - 40 CFR Part 61 Subpart VVVV (National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing)
- EPA – Control Technique Guidelines (CTG)
  - 450/3-83-006 (Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins)
  - 453/R-08-004 (Control Technique for Fiberglass Boat Manufacturing Materials)

Fiberglass boat manufacturing operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)

Fiberglass boat manufacturing operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Pump Manufacturing Operations

Pump Manufacturing Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4603 \(Surface Coating of Metal Parts and Products, Plastic Parts and Products, and Pleasure Crafts\)](#)

The purpose of Rule 4603 is to limit VOC emissions from the surface coating of metal parts or products, large appliances' parts or products, metal furniture, plastic parts and products, and pleasure crafts, and to the organic solvent cleaning and storage and disposal of all solvents and waste solvent materials associated with such coatings. Facilities that perform pump manufacturing operations are subject to stringent enforcement provisions, including annual inspections.

In addition to Rule 4603 requirements, pump manufacturing operations are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - 40 CFR Part 63 Subpart M (NESHAP for Surface Coating of Miscellaneous Metal Parts and Products)
- EPA – Control Technique Guidelines (CTG)
  - 450/2-78-015 (Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products)
  - 453/R-08-003 (Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings)
- EPA – Alternative Control Technology (ACT)
  - 453/R-94-015 (Alternative Control Techniques Document – Industrial Cleaning Solvents)

Pump manufacturing operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4202 \(Particulate Matter – Emission Rate\)](#)

Pump manufacturing operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Oil and Gas Operations

Oil and Gas Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) Rules:
  - [Rule 2260 \(Registration Requirements for Equipment Subject to California's Oil and Gas Regulation\)](#)
  - [Rule 4311 \(Flares\)](#),
  - [Rule 4401 \(Steam-Enhanced Crude Oil Production Wells\)](#)
  - [Rule 4402 \(Crude Oil Production Sumps\)](#)
  - [Rule 4404 \(Heavy Oil Test Station - Kern County\)](#)
  - [Rule 4407 \(In-Situ Combustion Well Vents\)](#)
  - [Rule 4408 \(Glycol Dehydration Systems\)](#)
  - [Rule 4409 \(Components at Light Crude Oil Production Facilities, Natural Gas Processing Facilities, and Natural Gas Processing Facilities\)](#),
  - [Rule 4453 \(Refinery Vacuum Producing Devices or Systems\)](#)
  - [Rule 4454 \(Refinery Process Unit Turnaround\)](#)
  - [Rule 4455 \(Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants\)](#),
  - [Rule 4623 \(Storage of Organic Liquids\), and](#)
  - [Rule 4624 \(Transfer of Organic Liquid\)](#)

The purpose of Rule 2260 is to provide a registration process that satisfies the requirements of California's Oil and Gas Regulation, which limits methane emissions and leaks from equipment used in the oil and gas industry.

The purpose of Rule 4311 is to establish flaring requirements and reduce VOC, NO<sub>x</sub>, and SO<sub>x</sub> emissions from operations involving the use of flares.

The purpose of Rule 4401 is to limit VOC emissions from steam-enhanced crude oil production wells and related piping. These operations are subject to stringent emission control and leak detection and repair requirements.

The purpose of Rule 4402 is to limit VOC emissions from sumps used to store crude oil and produced water in crude oil production operations.

The purpose of Rule 4404 is to limit VOC emissions from the operation of heavy oil test stations, i.e. a tank setting used to measure and collect crude oil from individual wells.

The purpose of Rule 4407 is to limit VOC emissions from in-situ combustion wells and related piping. This process is largely no longer in use by oil production companies in the District. These operations are subject to stringent emission control and leak detection and repair requirements.

The purpose of Rule 4408 is to limit VOC emissions from glycol dehydration system; a process in water vapor is removed from produced gas.

The purpose of Rule 4409 is to limit VOC emissions from leaking components at light crude oil production facilities, natural gas production facilities, and natural gas processing facilities.

The purpose of Rule 4453 is to limit VOC emissions from refinery vacuum producing devices or systems by requiring that gasses from these systems be collected and controlled.

The purpose of Rule 4454 is to limit VOC emissions resulting from the purging, repair, cleaning, or otherwise opening or releasing pressure from a refinery vessel during a process unit turnaround, i.e. taking equipment out of service for maintenance.

The purpose of Rule 4455 is to limit VOC emissions from leaking components at petroleum refineries, gas liquids process facilities, and chemical plants.

The purpose of Rule 4623 is to limit VOC emissions the storage of organic liquids, including crude oil.

The purpose of Rule 4624 is to limit VOC emissions the transfer of organic liquids.

In addition to the above District requirements, oil and gas operations are also subject to Federal regulations, which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - [40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels \(Including Petroleum Liquid Storage Vessels\)](#)
  - [40 CFR 60 Subparts OOOO and OOOOa Crude Oil and Natural Gas Production, Transmission, and Distribution](#)
- EPA – Control Technique Guidelines (CTG)
  - 450/2-77-036 (Control Techniques Guideline Document for Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed Roof Tanks)
  - 450/2-78-047 (Control Techniques Guideline Document for Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks)
- EPA – Alternative Control Technology (ACT)
  - 453/R-94-001 (Alternative Control Techniques Document for Volatile Organic Liquid Storage in Floating and Fixed Roof Tanks)

Oil and gas operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)

Oil and gas operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## Landfill Operations

Landfill Operations in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4642 \(Solid Waste Disposal Sites\)](#) and [Rule 4311 \(Flares\)](#)

The purpose of Rule 4642 is to limit VOC emissions from solid waste disposal sites. The provisions of this rule apply to any solid waste disposal sites with a gas collection system and/or control device in operation, or undergoing maintenance or repair. The purpose of Rule 4311 is to establish flaring requirements and reduce VOC, NO<sub>x</sub>, and SO<sub>x</sub> emissions from operations involving the use of flares. Flaring is a high temperature oxidation process used to burn combustible components, primarily hydrocarbons, of waste gases from industrial operations, primarily for the purpose of controlling emissions and as a safety device. Landfill operations are subject to stringent enforcement provisions, including surface testing, and annual inspections.

In addition to Rule 4642 and Rule 4311 requirements, landfill operations are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - 40 CFR 60 Subpart CC (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - 40 CFR 63 Subpart AAAA (National Emission Standards for Hazardous Air Pollutants from Municipal Solid Waste Landfills)

Landfill operations are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 2520 \(Federally Mandated Operating Permits\)](#)

Landfill operations in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

## General Industrial Equipment (Boilers greater than 5 MMBtu/hr)

Boilers greater than 5 MMBtu/hr in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4306](#) and [Rule 4320 \(Boilers, Process Heaters, and Steam Generators Greater than 5 MMBtu/hr\)](#)

Boilers are used to produce hot water or generate steam and are used in many different industries throughout the District. The purpose of these rules is to limit NO<sub>x</sub>, carbon monoxide (CO), and particulate matter (PM) emissions from boilers, steam generators, and process heaters of this size range. Boilers are subject to stringent enforcement provisions, including source testing, and annual inspections.

In addition to Rule 4306 and Rule 4320 requirements, boilers are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - 40 CFR 60 Subpart D (Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction Is Commenced After August 17, 1971)
  - 40 CFR 60 Subpart Db (Standards of Performance for Industrial- Commercial-Institutional Steam Generating Units)
  - 40 CFR 60 Subpart Dc (Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - 40 CFR 63 Subpart DDDDD (NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters)
- EPA – Alternative Control Technology (ACT)
  - 453/R-93-022 (Alternative Control Techniques Document – NO<sub>x</sub> Emissions from Industrial/Commercial/Institutional Boilers)
  - 453/R-93-023 (Alternative Control Techniques Document – NO<sub>x</sub> Emissions from Utility Boilers)
  - 453/R-93-034 (Alternative Control Techniques Document – NO<sub>x</sub> emissions from Process Heaters)

Boilers are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)

Boilers in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)



## General Industrial Equipment (Internal Combustion (IC) Engines)

IC engines in the San Joaquin Valley are subject to the following regulatory measures:

- SJVAPCD (District) [Rule 4702 \(Internal Combustion Engines\)](#)

IC engines are used to produce mechanical power or generate electricity by powering a generator and are used in many different industries throughout the District. The purpose of this rule is to limit NO<sub>x</sub>, CO, VOC, and SO<sub>x</sub> emissions from any internal combustion (IC) engine rated at 25 brake horsepower (bhp) or greater. IC Engines are subject to stringent enforcement provisions, including source testing, and annual inspections.

In addition to Rule 4702 requirements, IC engines are also subject to Federal regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than Federal regulations.

- [District Rule 4001 \(New Source Performance Standards\)](#)
  - 40 CFR 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)
  - 40 CFR 60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)
- [District Rule 4002 \(National Emission Standards for Hazardous Air Pollutants\)](#)
  - 40 CFR 63 Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines)
- EPA – Alternative Control Technology (ACT)
  - 453/R-93-032 (Alternative Control Techniques Document – NO<sub>x</sub> Emissions from Stationary Reciprocating Internal Combustion Engines)

IC engines are also subject to state regulations which requires specific types of new, modified, and reconstructed facilities to directly reduce emissions of criteria and/or toxic air pollutants. However, District prohibitory rules are typically more stringent than state regulations.

- Air Toxic Control Measures (ATCM)
  - 17 CCR 93114 (ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines—Standards for Nonvehicular Diesel Fuel)
  - 17 CCR 93115 (ATCM for Stationary Compression Ignition Engines)

IC engines are also subject to other applicable rules and regulations and must demonstrate continued compliance with these additional requirements.

- [District Rule 4101 \(Visible Emissions\)](#)
- [District Rule 4201 \(Particulate Matter – Concentration\)](#)
- [District Rule 4301 \(Fuel Burning Equipment\)](#)
- [District Rule 4801 \(Sulfur Compounds\)](#)
- [District Rule 1080 \(Stack Monitoring\)](#)
- [District Rule 1081 \(Source Sampling\)](#)

IC engines in the Valley are also subject to other generally applicable regulations, ensuring that these operations have installed the most stringent control technologies feasible and are meeting the other stringent requirements of these rules. (See Appendix A)

# **Enforcement Programs**

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## Enforcement Programs

The District's Compliance Department performs a full suite of enforcement and compliance assistance related activities to ensure compliance with District, state and federal rules and regulations. The program objectives for the Compliance Department are set forth in federal and state law and the District's air quality attainment plans. In order to meet these program objectives, District staff perform inspections at approximately 9,200 permitted facilities, responds to approximately 3,000 public complaints each year, investigates equipment breakdowns at facilities, and verifies emissions reductions at thousands of locations where emission reduction incentive projects have been implemented. When violations are discovered, Notices to Comply are issued for first-time minor violations. Notices of Violation, which generally carry a monetary penalty, are issued for more serious, typically emissions-based violations as well as repeat minor violations.

The major functions of the District's Compliance Department are as follows:

### **Inspections of Stationary Sources**

The District performs thousands of comprehensive on-site inspections each year to ensure compliance with District requirements. Inspections are a vital to ensuring that emission reductions called for in rules, regulations and permits are achieved in practice. With very few exceptions, all inspections are conducted unannounced because it is important to observe facilities as they normally operate to most effectively determine compliance.

### **Complaint Investigations**

The District receives thousands of complaints each year for which timely responses and investigations of alleged sources of non-compliance are given top priority. Inspectors are on-call 24 hours per day and use automated voicemail and computer systems to facilitate the timely response to complaints in order to abate potential public nuisances and other in progress violations. Along these same lines, the District has developed online tools to enable easy submittal of complaints, including video and photographs, online and through mobile smartphone applications. The District provides a bilingual (Spanish-English) telephone complaint line and also has the capability to utilize translation services to ensure that all communities and groups within the Valley are properly served.

### **Open Burning**

Open burning is strictly regulated under District rules 4103 (Open Burning) and 4106 (Prescribed Burning and Hazard Reduction Burning). The District conducts thousands of inspections each year to ensure compliance with permits and plans for agricultural operations, land management agencies, and residences. Furthermore, District inspection staff conduct routine surveillance throughout the Valley to enforce illegal burning rules, including, but not limited to, illegal residential trash burning.

### **Wood Burning Heater and Fireplaces**

The District has a robust enforcement program to ensure compliance with District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters). The District assigns inspectors to conduct proactive surveillance of neighborhoods in counties with declared wood burning curtailments and responds to complaints from the public regarding potential illegal fireplace burning. The District also routinely conducts surveillance on weekends, holidays, and evenings throughout the winter season when the mandatory curtailments are in effect.

### **Fugitive Dust Regulations**

Inspections are routinely conducted on potential sources of outdoor fugitive dust such as construction and earthmoving operations, unpaved roads and traffic areas, bulk material storage piles, open areas, and agricultural operations. During these inspections the District ensures compliance with dust mitigation plan measures, visible dust emission standards, and surface stabilization requirements.

#### **Emissions Testing and Monitoring**

District inspectors oversee thousands of third-party source tests conducted at facilities for the purpose of measuring air pollutants and demonstrating compliance with permitted emission limits. The District also utilizes its own source testing van and portable exhaust gas analyzers to assess the emissions from engines, boilers, and other combustion devices to ensure they are operating according to specifications and complying with all requirements.

#### **Emission Reduction Incentive Program Inspections**

To ensure that the emission reduction projects funded by the District's incentive programs are real and permanent, the District monitors the pre-project and post-project contract performance of grant recipients. Thousands of inspections are conducted to verify that equipment is appropriately controlled or replaced and that it is adequately maintained. Furthermore, the District also conducts inspections to verify that older equipment has been destroyed when required as part of the grant contract.

#### **Compliance Assistance**

The District's Compliance Assistance program emphasizes an educational approach to help Valley businesses and residents comply with a variety of air pollution regulations. Businesses and residents throughout the Valley are provided with individualized assistance, compliance assistance bulletins, education training courses, and certification programs to aid in their understanding and compliance with District, state and federal rules and regulations.

#### **California Air Resources Board Enforcement**

CARB inspects a variety of sources for compliance with State air quality regulations. More information about CARB's enforcement policy and programs is available at the CARB Enforcement Programs website: <https://www.arb.ca.gov/enf/enf.htm>

# Appendix A

## **District Rule 2201, New and Modified Stationary Sources Review**

[District Rule 2201, New and Modified Stationary Source Review](#), applies to all new stationary sources and all modifications to existing stationary sources that are subject to District permit requirements. Under Rule 2201, new facilities or facilities modifying equipment must obtain an Authority to Construct (ATC) permit prior to construction, and are subject to stringent requirements, including:

- **Best Available Control Technology (BACT)**
- **Risk Management Review (RMR)**
- **Toxic Best Available Control Technology (T-BACT)**
- **Ambient Air Quality Analysis (AAQA)**

**Best Available Control Technology (BACT):** For each emissions unit (specific piece of equipment) that has the potential to emit over the 2 lb/day BACT threshold, the District requires the use of the best available air pollution control technology commonly used to control emissions from similar type of equipment. The District is also conducting an analysis to determine if, based on specific criteria, cleaner technologies that are not commonly used for these type of equipment could be used to further reduce emissions from the proposed equipment. This very stringent requirement ensures that the most effective air pollution control technique is utilized resulting in reduced public exposure to air pollutants and toxic air contaminants.

**Risk Management Reviews (RMR):** As required under [California Health and Safety Code 41700](#) and [Rule 4102 \(Nuisance\)](#), the District conducts RMRs to ensure that the public exposure to toxic air contaminants from projects required to obtain an ATC, is less than significant. Very complex computer models and the most conservative assumptions are used to assess the project's maximum impact on resident's health. Projects resulting in estimated significant health risk for the public are not approved.

**Toxic Best Available Control Technology (T-BACT):** When T-BACT is triggered under a Risk Management Review (RMR) analysis, the District conducts a T-BACT analysis to ensure the most stringent control technique is utilized resulting in reduced public exposure to toxic air contaminants. T-BACT is required for units emitting air toxic emissions that result in a cancer risk of greater than one-in-a-million, and projects that would pose significant impacts to nearby residences or businesses. Projects resulting in estimated significant health risk for the public are not approved.

**Ambient Air Quality Analysis (AAQA):** The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively, for numerous pollutants. Under Rule 2201, the District conducts AAQAs to ensure that project related emissions would cause or make worse a violation of the State or National ambient air quality standard. This analysis ensures that the public exposure to certain criteria air pollutants is less than the maximum allowed concentration in outdoor air without harm to public.

## **AB 2588 (Air Toxics Hot Spots Information and Assessment Act)**

The District's implementation of [AB 2588](#), California's Air Toxics "Hot Spots" Information and Assessment Act, has resulted in dramatic reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with 5,700 Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report

emissions and any significant risks through written public reports and neighborhood public meetings, and take steps to reduce such risks. As a result of these efforts, and the subsequent reductions in air toxics, since 2007 there have been no Valley facilities posing a significant risk to any Valley resident under the “Hot Spots” program.

**California Environmental Quality Act (CEQA)**

CEQA is the state law that requires environmental impacts to be assessed on projects and disclosed to the public, and also requires significant impacts be mitigated to a less than significant level when feasible. Through the implementation of CEQA, the District carefully reviews land developers’ project proposals, new stationary source permits, and attainment plans and rules for compliance with CEQA requirements.