

Control of Emissions for Regulated Sources Stockton Community

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Nick Peirce, *Permit Services Manager*

Arnaud Marjollet, *Director of Permit Services*

San Joaquin Valley Air Pollution Control District

Community-Focused Emission Reductions

- AB 617 Community Emission Reduction Program (CERP) process provides opportunities to identify and implement community-focused emissions reductions
- Steering Committee's local knowledge and feedback vital
- 1st step in identifying new emissions reductions opportunities is to understand clean air efforts in community to date

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 permits and rules 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

Existing Stationary Source Emission Controls

- Source specific prohibitory rules adopted to reduce emissions from stationary and other sources
 - Regulation IV (Prohibitions)
 - Regulation VII (Toxic Air Pollutants)
 - Regulation VIII (Fugitive PM₁₀ Prohibitions)
 - Regulation IX (Indirect Sources)



- Web link: <http://www.valleyair.org/rules/1ruleslist.htm>

Rules Applying to Stationary Sources

[Rule 4001](#) NEW SOURCE PERFORMANCE STANDARDS

[Rule 4002](#) NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

[Rule 4101](#) VISIBLE EMISSIONS

[Rule 4102](#) NUISANCE

[Rule 4103](#) OPEN BURNING

[Rule 4104](#) REDUCTION OF ANIMAL MATTER

[Rule 4105](#) COMMERCIAL OFFSITE MULTIUSER HAZARDOUS WASTE AND NONHAZARDOUS WASTE DISPOSAL FACILITIES

[Rule 4106](#) PRESCRIBED BURNING AND HAZARD REDUCTION BURNING

[Rule 4201](#) PARTICULATE MATTER CONCENTRATION

[Rule 4202](#) PARTICULATE MATTER - EMISSION RATE

[Rule 4203](#) PARTICULATE MATTER EMISSIONS FROM INCINERATION OF COMBUSTIBLE REFUSE

[Rule 4204](#) COTTON GINS

[Rule 4301](#) FUEL BURNING EQUIPMENT

[Rule 4302](#) INCINERATOR BURNING

[Rule 4303](#) ORCHARD HEATERS

[Rule 4304](#) EQUIPMENT TUNING PROCEDURE FOR BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

[Rule 4305](#) BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - PHASE 2

[Rule 4306](#) BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - PHASE 3

[Rule 4307](#) BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - 2.0 MMBTU/HR TO 5.0 MMBTU/HR ([RULE 4307 CERTIFIED UNITS](#))

[Rule 4308](#) BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - 0.075 MMBTU/HR TO LESS THAN 2.0 MMBTU/HR ([CERTIFIED WATER HEATERS](#))

[Rule 4309](#) DRYERS, DEHYDRATORS, AND OVENS

[Rule 4311](#) FLARES

[Rule 4313](#) LIME KILNS

[Rule 4320](#) ADVANCED EMISSION REDUCTION OPTIONS FOR BOILERS, STEAM GENERATORS, AND PROCESS HEATERS GREATER THAN 5.0 MMBTU/HR ([RULE 4320 FAQs](#))

[Rule 4351](#) BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - PHASE 1

[Rule 4352](#) SOLID FUEL FIRED BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

[Rule 4354](#) GLASS MELTING FURNACES

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[Rule 4401](#) STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS ([RULE 4401 FAQs](#))

[Rule 4402](#) CRUDE OIL PRODUCTION SUMPS

[Rule 4404](#) HEAVY OIL TEST STATION - KERN COUNTY

[Rule 4405](#) OXIDES OF NITROGEN EMISSIONS FROM EXISTING STEAM GENERATORS USED IN THERMALLY ENHANCED OIL RECOVERY - CENTRAL AND WESTERN KERN COUNTY FIELDS

[Rule 4406](#) SULFUR COMPOUNDS FROM OIL-FIELD STEAM GENERATORS - 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 PRODUCTION 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 4501](#) ALTERNATE COMPLIANCE FOR BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT)

[Rule 4550](#) CONSERVATION MANAGEMENT PRACTICES - [CMP list](#)

[Rule 4565](#) BIOSOLIDS, ANIMAL MANURE, AND POULTRY LITTER OPERATIONS

[Rule 4566](#) ORGANIC MATERIAL COMPOSTING OPERATIONS

[Rule 4570](#) CONFINED ANIMAL FACILITIES

[Rule 4601](#) ARCHITECTURAL COATINGS

[Rule 4602](#) MOTOR VEHICLE ASSEMBLY COATINGS

[Rule 4603](#) SURFACE COATING OF METAL PARTS AND PRODUCTS, PLASTIC PARTS AND PRODUCTS, AND PLEASURE CRAFTS

[Rule 4604](#) CAN AND COIL COATING OPERATIONS

[Rule 4605](#) AEROSPACE ASSEMBLY AND COMPONENT COATING OPERATIONS

[Rule 4606](#) WOOD PRODUCTS AND FLAT WOOD PANELING PRODUCTS COATING OPERATIONS

[Rule 4607](#) GRAPHIC ARTS AND PAPER, FILM, FOIL AND FABRIC COATINGS

[Rule 4610](#) GLASS COATING OPERATIONS

[Rule 4612](#) MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

[Rule 4621](#) GASOLINE TRANSFER INTO STATIONARY STORAGE CONTAINERS, DELIVERY VESSELS, AND BULK PLANTS

[Rule 4622](#) GASOLINE TRANSFER INTO MOTOR VEHICLE FUEL TANKS

[Rule 4623](#) STORAGE OF ORGANIC LIQUIDS

[Rule 4624](#) TRANSFER OF ORGANIC LIQUID

[Rule 4625](#) WASTEWATER SEPARATORS

[Rule 4641](#) CUTBACK, SLOW CURE, AND EMULSIFIED ASPHALT, PAVING AND MAINTENANCE OPERATIONS

[Rule 4642](#) SOLID WASTE DISPOSAL SITES

[Rule 4651](#) SOIL DECONTAMINATION OPERATIONS

[Rule 4652](#) COATINGS AND INK MANUFACTURING

[Rule 4653](#) ADHESIVES AND SEALANTS

[Rule 4661](#) ORGANIC SOLVENTS

[Rule 4662](#) ORGANIC SOLVENT DEGREASING OPERATIONS

[Rule 4663](#) ORGANIC SOLVENT CLEANING, STORAGE, AND DISPOSAL

[Rule 4672](#) PETROLEUM SOLVENT DRY CLEANING OPERATIONS

[Rule 4681](#) RUBBER TIRE MANUFACTURING

[Rule 4682](#) POLYSTYRENE, POLYETHYLENE, AND POLYPROPYLENE PRODUCTS MANUFACTURING

[Rule 4684](#) POLYESTER RESIN OPERATIONS

[Rule 4691](#) VEGETABLE OIL PROCESSING OPERATIONS

[Rule 4692](#) COMMERCIAL CHARBROILING

[Rule 4693](#) BAKERY OVENS

[Rule 4694](#) WINE FERMENTATION AND STORAGE TANKS

[Rule 4695](#) BRANDY AGING AND WINE AGING OPERATIONS

[Rule 4701](#) INTERNAL COMBUSTION ENGINES - PHASE 1

[Rule 4702](#) INTERNAL COMBUSTION ENGINES ([CERTIFIED EQUIPMENT FOR INTERNAL COMBUSTION ENGINES](#))

[Rule 4703](#) STATIONARY GAS TURBINES

[Rule 4801](#) SULFUR COMPOUNDS

[Rule 4802](#) SULFURIC ACID MIST

[Rule 4901](#) WOOD BURNING FIREPLACES AND WOOD BURNING HEATERS

[Rule 4902](#) RESIDENTIAL WATER HEATERS ([CERTIFIED WATER HEATERS](#))

[Rule 4905](#) NATURAL GAS-FIRED, FAN-TYPE CENTRAL FURNACES

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 the Cap-and-Trade Program
 - 32 District rules subject to the BARCT review
 - 19 rules already found to meet BARCT
 - 13 rules scheduled for additional BARCT review in 2020-2021 timeframe and rulemaking as necessary

Status of BARCT Implementation Schedule

Rule	Title	BARCT Status
4454	<i>Refinery Process Unit Turnaround</i>	<i>Meets BARCT</i>
4641	<i>Cutback, Slow Cure, And Emulsified Asphalt, Paving And Maintenance Operations</i>	<i>Meets BARCT</i>
4104	<i>Reduction of Animal Matter</i>	<i>Meets BARCT</i>
4409	Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities	<p>Combined rule development public process to evaluate/implement additional BARCT requirements commencing 2020 - expediting the rulemaking efforts for three of the five rules (Rules 4623, 4624, and 4401) to streamline assessment</p>
4455	Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants	
4623	Storage of Organic Liquids	
4624	Transfer of Organic Liquids	
4401	Steam-Enhanced Crude Oil Production Wells	

Next Step for BARCT Implementation Schedule

Rule	Title	BARCT Status
4702	Internal Combustion Engines (VOC only)	BARCT evaluation in progress and scheduled for 2020 completion
4694	Wine Fermentation and Storage Tanks	BARCT evaluation in progress and scheduled for 2020 completion
4603	Surface Coating of Metal Parts and Products, Plastic Parts and Products, and Pleasure Crafts	BARCT evaluation in progress and scheduled for 2020 completion
4601	Architectural Coatings	BARCT evaluation in progress and scheduled for 2020 completion
4566	Organic Material Composting Operations	BARCT evaluation scheduled for 2021 completion
4625	Wastewater Separators	BARCT evaluation scheduled for 2021 completion
4621	Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, and Bulk Plant	BARCT evaluation scheduled for 2021 completion
4402	Crude Oil Production Sumps	BARCT evaluation scheduled for 2021 completion

District Permitting of Stationary Sources

- District requires permits for stationary sources of air pollution
 - Enforceable conditions ensure compliance with air quality regulations
- District permitting applies to new and modifying sources
 - New Source Review (Rule 2201)
 - Best Available Control Technology (BACT)
 - Assure no violation of Federal Standards (NAAQS)
 - Assess health impact on local residents
 - Multilingual Public Notification
- District will not issue a permit for a new or modified source unless it meets all applicable requirements

What are Air Toxics?

- EPA has identified over 700 “Toxic Air Contaminants” or “Hazardous Air Pollutants”
- Can cause short-term (acute) health impacts, or cancer or other long-term (chronic) health impacts
- Examples: Diesel exhaust particulate, dioxins, perchloroethylene, hexavalent chrome, asbestos
- NOT the same as criteria pollutants that are addressed by National Ambient Air Quality Standards (nitrogen oxides, volatile organic compounds, particulate matter, etc.)

District's Integrated Air Toxics Program

- Integrates federal, state, and local mandates
- AB 2588 Air Toxic “Hot Spots” Program
- Evaluation of air toxics from new or modified facilities or equipment
 - Risk Management Review (RMR) process
- Regional Health Risk
 - District Risk Reduction Rules
 - State Air Toxics Control Measures (ATCM)
 - Federal Maximum Available Control Technology (MACT)
- California Environmental Quality Act

AB 2588 - Air Toxics “Hot Spots” Reporting and Assessment Act

- Facilities report air toxic emissions and are prioritized based on very conservative risk screening
- Facilities scoring between 0 and 1 are not a risk – Need no further action
- Facilities scoring between 1 and 10 – Need to provide information every 4 years or conduct Health Risk Assessment
- Facilities scoring over 10
 - Must perform HRA and report risk levels
 - If confirmed high risk, public notice required
 - After risk assessment, risk reduction plan may be required

Implementation of District's Air Toxics “Hot Spots” Program

- Began in late 1980's, requires ongoing risk analysis
 - Initially quantified toxics for over 5,700 Valley facilities
 - Notified thousands of potentially impacted residents
 - Held public meetings in Valley communities
- Began in late 2015, reassessing using the latest guidance (OEHHA) and most conservative assumptions
 - The District has been proactive in its reassessment implementation
 - Over 10,000 facilities
 - Over 5,300 reassessments have been completed
 - No high risk facilities have been identified yet

Program Implementation

- District-created facility-specific templates to promote the preparation of plans and reports by facilities
- District reviews and approves each facility report
- Screening and modeling tools to help air toxics impacts evaluation
- District assessing health risk associated with each facility
- Web-based reporting tools
- Hot Spots “Frequently Asked Questions,” technical documents, emissions calculators

Preventing Health Risk from New and Modified Sources

- Implemented through permitting and CEQA
- Evaluate health risk before permit issuance for every proposal to increase toxic emissions
- Risk Management Reviews (RMR) comprehensive and complex computerized process
- Extremely conservative, based on worst-case emissions, exposure and meteorological conditions
- Have processed over 15,000 RMRs
 - Best Available Control Technology for toxics required
 - Projects with significant risk not approvable

Working with Community Stakeholders

- Enhanced community involvement and multilingual outreach
- Reduce air toxics by ensuring business understand and comply with state and federal area source toxics standards
- Reduce or avoid health risk associated with new emissions by working in cooperation with applicants to evaluate additional control to avoid emissions
- Provide health risk guidance to and work with local land-use agencies
- Work with local businesses and CARB on enhanced state criteria and toxics emissions inventory requirements