

SFEA Dinner Meeting

November 12, 2015

Air Quality Compliance Management for
Surface Finishing and Metal Plating
Industry

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Overview

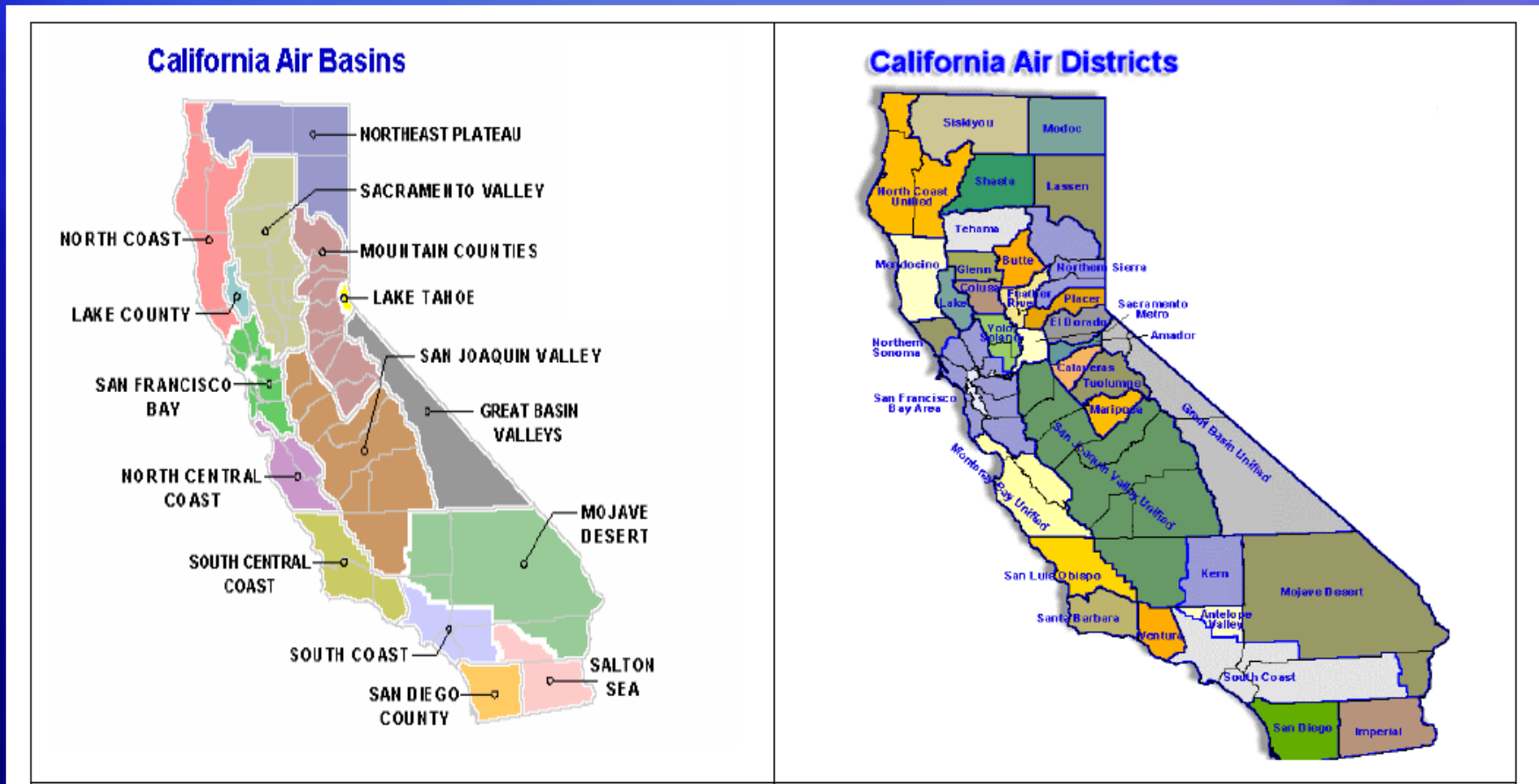
- Air Quality Primer in the SCAQMD
- Rules and Regulations Affecting Surface Finishing and Plating Industry
- Compliance Tools and Strategies
- Other Environmental Regulations
- Questions

Air Quality Primer for SCAQMD

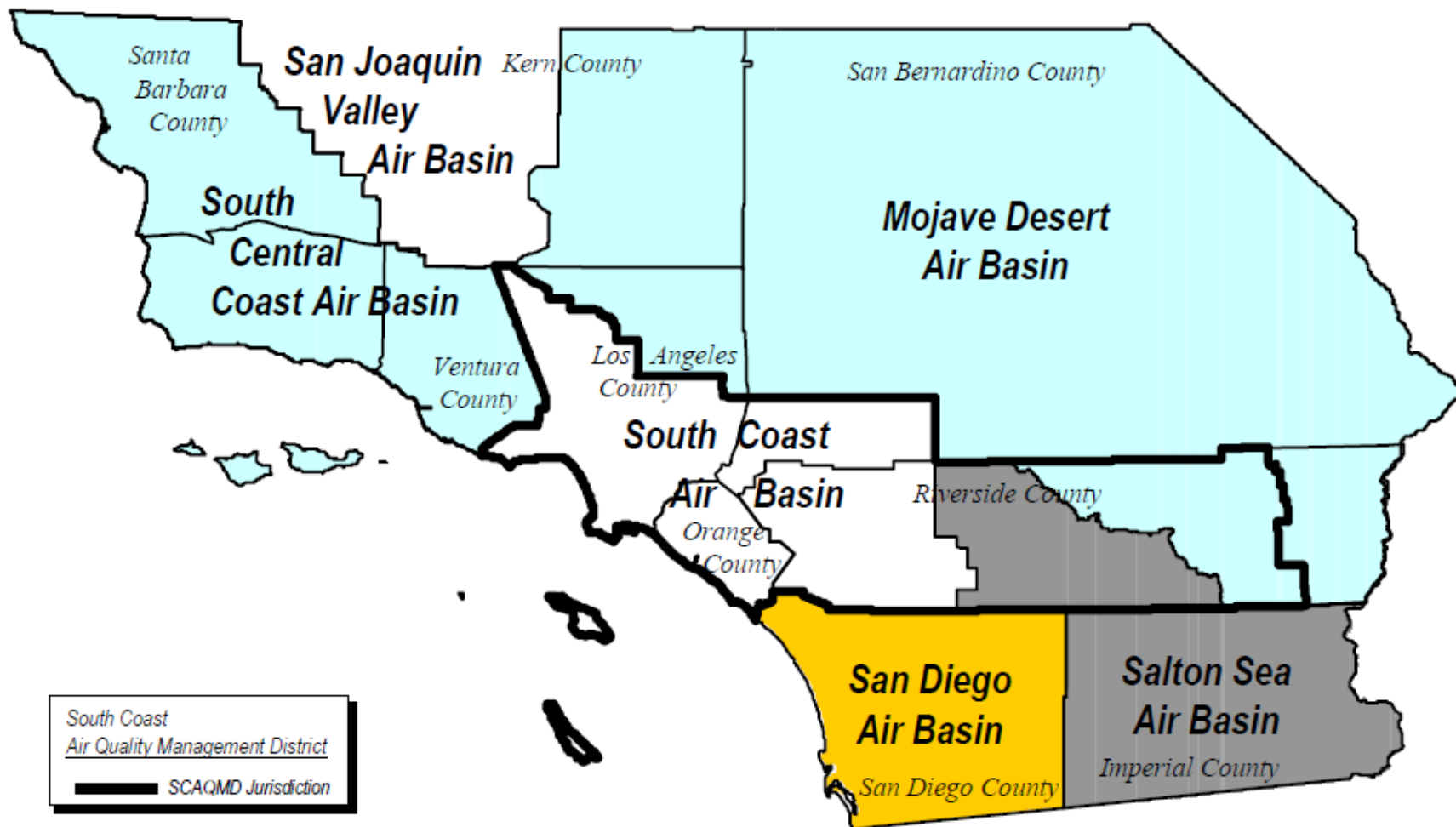
- Regulations driven by Clean Air Act (passed by Congress Dec. 17, 1963)
- Air Quality Act of 1967 (clarifications and additional authority to Secretary of Health, Education and Welfare [HEW])
- Revised CAA passed in 1970, considered as the actual CA (addressed authority, enforcement, fund issues)
- State-level rule-making and implementation begins in early 1970s

CARB, Air Basins and Districts

- California Air Resources Air Board (CARB) formed by CA state legislature under Title 17 CCR.



The South Coast Air Basins



Regulated Chemicals and Compounds

- **CRITERIA POLLUTANTS**

- Pollutants for which federal regulations have established National Ambient Air Quality Standards (NAAQS)
- Sulfur Dioxide (SO₂), ozone, lead, Nitrogen Dioxide (NO₂), Carbon Monoxide (CO), Sulfate, and PM₁₀

- **NON-CRITERIA POLLUTANTS**

- No NAAQS established by Federal or state regulations
- Typically Air Toxics (benzene, VOCs, other metals, Global Warming, and ozone depleting chemicals, etc.)

Permits

CAHSC 42300 Requires SCAQMD to establish a permit system.

1. Permit to Construct (PTC)(allows to build, erect, install, alter replace equipment) – Rule 201
2. Permit to Operate (PTO)(allows to begin production and emissions per permit conditions, operation of control equipment) – Rule 203
3. Some equipment does not require a PTC or PTO (Rule 219 Exempt Equipment, as long as no air toxics are emitted).

Typical Process Permitted

The top 10 categories of applications processed since 2008 are as follows:

1. Fuel dispensing and storage (gasoline stations) for new construction and modifications
2. Internal combustion engines for emergency electrical generation- diesel fired.
3. Dry-cleaning equipment
4. Drying Ovens
5. Boilers
6. Abrasive Blasting
7. Soil treatment/vapor extraction
8. Printing press -Lithographic
9. Powder coating systems
10. Internal combustion engines for non emergency; natural gas fired.

Applicable Rules and Regulations

The main rule is Rule 1426 – Emissions from Metal Finishing Operations.

Applicability:

“Owner or operator of any facility performing chromium, nickel, cadmium, lead or copper electroplating operations, or chromic acid anodizing. This rule shall also apply to the owner or operator of any facility with process tanks containing sulfuric acid, nitric acid, hydrochloric acid, chromic acid (excluding chromic acid used in electroplating and anodizing tanks), and sodium hydroxide used in spraying operations associated with electroplating and anodizing operations”.

Compliance with Rule 1426

1. Submit PTC and PTO
2. Submit an Initial Compliance Plan and Report (description of process, facility information, amount of metal purchased in the preceding 12 months, conc. Of electrolyte, tank dimensions, rectifier amp-hour meter data for last 4 months, etc. [See Appx 1 in rule])
3. Submit Compliance Report document any changes since initial report was submitted
4. Collect data within 60 days of operations
5. Air Sparging of Tanks Containing Chromic Acid: Tanks containing chromic acid shall not be air sparged when the tank is not in use, and shall only be air sparged up to one hour prior to parts being placed in the tank, and one hour after parts are removed from the tank.

Rule 1426 Compliance (Continued)

6. Housekeeping Practices for Nickel, Cadmium, Lead and Copper

1. For reducing fugitive emissions of powders and metal salts
2. Store in closed containers in an enclosed area
3. Transport to electroplating tank in closed containers
4. Maintain storage area and removed dust and powders immediately by vacuuming, mopping, and by using non-toxic dust suppressants.
5. Wastes generated should not result in emissions, store and handle in closed containers with labels, recycle.

Rule 1426 Compliance (Continued)

Inspection, Maintenance, Record-Keeping.

- Follow manufacturer specified inspection frequency, other at least once per quarter
- Monitoring data per the permit, including time and date of readings, cumulative ampere-hours using dedicated ampere meters and annual readings
- Logs of waste disposal, personnel performing operations
- Maintain records for 5 years, at least 2 years onsite
- Keep tanks covered with lids when not in use
- Avoid unnecessary tank agitation

Permits

Permit Forms are available at:

<http://www.aqmd.gov/home/permits/permit-application-forms>

- Submit Form 400-A, 400-CEQA, Form E-GI (if process not listed in Form 400-A), Form E-XX Series for some individual equipment [e.g., E-14-Open Process Tank]
- Each separate process requires individual permit application, but one Form 400-CEQA for facility
- Submit permit processing and equipment-specific fee (varies by type of equipment and process)
- Initial review takes 30 days; if application complete actual permit process takes 90 to 180 days
- For special cases, an expedited permit review and approval process is available if submitted by a CPP

Other Applicable Environmental Programs

Enforced by CUPAs, EPA, or SWRCB/RWQCB

- Business Emergency Plan (via CERS)
- Storm Water Plans under the General Industrial Permit (RWQCB/SWRCB)
- SPCC Plans (EPA/CUPA)
- Form R TRI Reporting
- Biennial Reporting (large quantity generators)
- SB 14 Waste minimization plans