

## **I. PURPOSE**

The purpose of the workshop is to provide information and to open discussions on proposed control measures. Staff will discuss the process used to identify candidate control measures that staff believe are necessary to address separate ozone and particulate matter requirements. Staff is not proposing specific rule language at this meeting, but will describe proposed controls in general terms. A preliminary schedule of rule development and implementation will also be presented.

The Kern County Air Pollution Control District (KCAPCD) is required by the federal Clean Air Act to adopt reasonably available control technology (RACT) for all stationary sources of ozone and must include that as part of the KCAPCD's 8-hour Ozone State Implementation Plan. RACT is the lowest emission limitation that a source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. KCAPCD's staff has reviewed the District's rules and identified two RACT deficiencies that staff is proposing to address.

Senate Bill 656 (Sher), codified as Health and Safety Code §39614, was adopted in the previous legislative session to reduce public exposure to PM10 and PM2.5 (collectively referred to as PM). KCAPCD staff are required to review the state's list of most readily available, feasible and cost effective particulate matter (PM) control measures and identify those controls that could reduce PM exposure. Staff has identified several PM control strategies from that list that are appropriate to consider.

## **II. BACKGROUND**

### **KCAPCD Setting**

The Kern County Air Pollution Control District (KCAPCD) is located on the western edge of the Mojave Desert and includes the Indian Wells Valley. This high desert area is separated from valleys and coastal areas by several large mountain ranges. The climate is characterized as extremely arid and hot. Relative humidity commonly falls below 10 percent during the hottest part of the day. Temperatures rise above 100° Fahrenheit for sixty to seventy days between May through September with almost no rainfall. The desert's dry conditions contribute to the formation of fugitive dust and sunlight interacts with pollutants creating ozone, a major component of smog.

### **Regulatory Background of Ozone**

Ozone is a reactive toxic gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy and ozone precursors, such as hydrocarbons and oxides of nitrogen. Hydrocarbons and oxides of nitrogen (or NO<sub>x</sub>) are air contaminants resulting from chemical evaporation or combustion processes, respectively. Ozone is found in two distinct and different layers of the atmosphere, the upper atmosphere and at the Earth's surface. Ozone located at the earth's surface causes numerous adverse health effects.

The US Environmental Protection Agency has developed legal definitions of clean air, known as national ambient air quality standards (NAAQS), to protect public health. Each air quality

management district or air pollution control district in California has been given a federal designation of attainment or non-attainment of a NAAQS according to air quality monitoring data. NAAQS have been adopted for a variety of different pollutants, including ozone. A non-attainment designation for ozone is further divided into different classifications separated according to pollution concentration for the purposes of applying mandatory pollution control measures, requirements and deadlines. The current 8-hour ozone NAAQS replaces the former 1-hour ozone NAAQS. The new ozone NAAQS provides for a more conservative method of considering health impacts over a longer exposure period, i.e. eight hours instead of one hour.

KCAPCD has been designated as attainment for the 8-hour ozone NAAQS for the Indian Wells Valley and Subpart I non-attainment for the remainder of the District.

The federal Clean Air Act requires non-attainment areas to develop plans addressing the future attainment and maintenance of the NAAQS. These State Implementation Plans (SIPs) are a series of documents containing an air pollution control district's or air quality management district's proposed control measures for reducing emissions. A RACT determination is a required SIP element. The determinations also promote consistency of control measures for similar emission sources among districts with the same air quality attainment designations.

### **Regulatory Background of Particulate Matter**

Particulate matter pollution consists of very small liquid and solid particles suspended in the air and includes particulate matter smaller than 10 microns in size (PM10) and smaller than 2.5 microns in size (PM2.5). The sources contributing to PM problems in different areas of the State are very diverse. In some areas, specific source types are a major part of the problem, ranging from windblown dust to residential wood combustion. In other areas of the State, particularly in urban areas, many different sources are significant, reflecting various urban activities ranging from road dust and wood burning, to motor vehicles, diesel engines and other combustion sources.

As a first step in the implementation of Senate Bill 656, the Air Resource Board has approved a list of the most readily available, feasible, and cost-effective control measures that can be employed by air districts to reduce PM10 and PM2.5. The list is based on rules, regulations, and programs existing in California as of January 1, 2004. There a total of 103 control measures and the measures can be grouped according to thirteen categories:

1. Wood-burning fireplaces and heaters,
2. Non-agricultural open burning,
3. Fugitive dust,
4. Stationary combustion sources,
5. Composting and related operations,
6. Storage, transfer and dispensing operations,
7. Leaks and releases,
8. Product manufacturing,
9. Coatings,
10. Solvent cleaning and degreasing,
11. Miscellaneous operations
12. General rules to reduce directly emitted PM, and
13. Mobile source programs.

As a second step, each air district has prioritized the particulate matter control measures based on the nature and severity of the PM problem in their area and cost-effectiveness. The Districts are also required to adopt control measure implementation schedules. Addressing the identified control measures will require formal District rule development. The implementation of the air district schedules, coupled with state's ongoing programs, will ensure continued progress in reducing public exposure to PM and attainment of the State and federal standards.

### **III. CONCLUSION**

KCAPCD plans the following rule development in order to fulfill the requirements of RACT:

- Adopt a new Polyester Resin rule by no later than June 15, 2007; and  
(The Polyester Resin Rule would affect sources that use polyester resin material. The KCAPCD is considering requirements similar to Ventura County APCD Rule 74.14 or Butte County AQMD Rule 232.)
- Adopt a new Aerospace Manufacturing and Rework Facilities rule by no later than June 15, 2007.  
(The Aerospace Manufacturing and Rework Rule would affect sources using aerospace coatings and adhesives. Requirements include VOC limitations, solvent cleaning, solvent storage, and solvent disposal. The KCAPCD is considering requirements similar to San Joaquin Valley APCD Rule 4605.)

KCAPCD plans the following rule development in order to fulfill the requirements of SB 656:

- Develop and consider adoption of a modification of District Rule 402, Fugitive Dust, by no later than December 31, 2007;  
(The KCAPCD is considering reducing the thresholds for various components within the existing rule including the requirements for road paving, plumes, trackout, and fugitive dust plans.)
- Develop and consider adoption of a modification of an existing rule or a new rule, Agricultural Operations, by no later than December 31, 2008;  
(The Agricultural Operations Control Measure would address tilling and mulching during high wind events.)
- Develop and consider adoption of a new rule, Windblown Dust, by no later than December 31, 2008;  
(The Windblown Dust Rule would address operations during high wind events for non-agricultural activities.)

These control measures will be discussed during the workshop and comments will be accepted prior to commencing of the formal rule development process.