

An important breakthrough in the overall sulfur dioxide program came with the commercial development of the Claus sulfur recovery process, and with the expansion of hydrogen sulfide extraction facilities in the refineries. The Claus sulfur recovery process converts hydrogen sulfide into elemental sulfur. Refineries which previously burned their hydrogen sulfide in combustion equipment to sulfur dioxide now send this hydrogen sulfide to sulfur recovery plants.

In 1949, the first sulfur recovery plant constructed in this area began operation to produce elemental sulfur from the hydrogen sulfide extracted by four refineries. In 1950, two more refineries began recovering their hydrogen sulfide and trucking it to a sulfuric acid plant. Today, nine sulfur recovery plants are operated by or for refineries in the area and as of January 1966 were preventing emissions of 885 tons of sulfur dioxide per day.

Early in the Los Angeles County air pollution control program, it was determined that severe local nuisances and daily emissions of hundreds of tons of organic compounds and particulate matter resulted from open fires, single chamber incinerators, and burning dumps. These emissions contributed to local nuisances, visibility reductions, and other typical smog symptoms.

Soon after the activation of the Air Pollution Control District on October 14, 1947, action was started to prohibit these obvious and serious contributions to air pollution. The first abatement efforts of the District were directed at the open burning dumps. Injunctive actions brought against the dump operators proved very effective, and by the end of 1949, the open burning of refuse in all but one of the 54 dumps in Los Angeles County had been effectively eliminated. The last burning dump was eliminated in the following year. In 1955, Rule 57 was added to the Rules and Regulations of the District, prohibiting, with but few exceptions, the open burning of any combustible refuse in the Los Angeles Basin.

Efforts of the District next were directed to the elimination of more than one and one-half million domestic single chamber incinerators and several thousand of their inefficient industrial and commercial counterparts. On June 9, 1955, Rule 58 banned the use of all single chamber incinerators after September 30, 1957, the deadline date being fixed to permit the incorporated communities of the County sufficient time to provide for other means of refuse disposal. On March 14, 1957, the Board of Supervisors adopted Rule 58.1, which advanced the deadline for the ban to July 1, 1957, for single chamber incinerators at commercial and industrial establishments, as well as at multiple dwellings.

Those operations, which require the burning of combustible waste products, now can be conducted only in multiple chamber incinerators. Emission standards applicable to this equipment were tightened in 1958 so as to reduce allowable concentrations of combustion contaminants from 0.4 to 0.3 grains per standard cubic foot of gas at 12 per cent CO_2 . Multiple chamber incinerators which meet this new standard decreased emission of combustion contaminants about 90 per cent compared with the operation of single chamber incinerators.

Refuse presently being burned in approved multiple chamber incinerators is principally from commercial and industrial establishments. There are also several large industrial incinerators, ranging in size from 500 pounds per hour to 6,000 pounds per hour, and designed primarily to dispose of wood, paper, and cellulose type waste material created by mass production industries. The number of multiple chamber incinerators constructed since the ban of single chamber incinerators has not been as great as expected. Instead, most of the rubbish formerly burned now is being hauled to sanitary landfill sites. In general, rubbish collection charges have decreased since the ban, and most commercial and industrial establishments find it more economical to use refuse collection services than to construct a multiple chamber incinerator.

Asphaltic concrete batching plants have been controlled in Los Angeles County with the use of water scrubbers. Most collection systems consist of simple cyclone, used as a precleaner, followed by one or more long, internally fluted cylindrical spray chambers in which the dust-laden gases are admitted tangentially at high velocities.

Emissions from concrete batching plants have been reduced by process changes and cloth filter devices.

Malodors are the principal air contaminants caused by inedible rendering operations. Noxious odors are evolved from the handling and storage of "dead stock," packing house scrap, blood, etc.; but, by far, the largest odor sources are heated rendering cookers and driers. It is generally considered that handling and