storage malodors are insignificant in comparison to those odors emitted from cookers and driers. Rule 64 was enacted in 1959 to combat noxious odors from inedible rendering operations. It requires, essentially, that all gases and vapors created in the heated reduction of inedible animal matter be incinerated at 1200° F, or treated in a manner equally effective for purposes of air pollution control. All rendering equipment is vented to adequate odor control devices as of this date.

Since 1961 the total quantity of feedstocks handled in local rendering systems has increased by approximately 40 per cent while reduction in total odor emission due to control measures has remained at better than 99 per cent. A quantitative measurement of odors developed by the Engineering Division has enabled the Air Pollution Control District to check constantly on the degree of control maintained by the rendering industry, and on industrial compliance with the standards specified in Rule 64.

Since 1959, nuisance complaints of rendering odors received by the Air Pollution Control District have decreased sharply. Where source identification has been possible these have been traceable either to malfunctioning of control equipment, to operator negligence, or to inadequate housekeeping practices. The exact quantity of odors exhausted to the atmosphere during these excursions is impossible to assess, but it is apparent that any one of the plants engaged in rendering operations is capable of producing more odors, if uncontrolled, than the total quantity of odors emitted from all Rule 64 control equipment combined. Under the impetus of Rule 64, and with guidance from the District, industry developed and placed in operation much original control equipment. As an example, the first unit in the U.S.A. to control odors from fish meal driers by mixing effluent gases with chlorine and scrubbing with sea water began in operation in May 1962.

Since 1948, metallurgical melting operations in Los Angeles County have been subject to vigorous air pollution control measures. Both ferrous and non-ferrous metal melting operations have been affected. Ferrous operations include gray iron foundries and steel foundries. Non-ferrous operations include foundries making castings of brass, bronze, aluminum, zinc, lead, and magnesium, as well as secondary smelters used in the recovery of these metals. Air contaminating emissions from metallurgical industry melting operations consist principally of smoke, dusts, and metallic fumes. Characterized by their extremely small particle size, control of metallic fumes emissions requires highly efficient collection equipment.

Four types of ferrous melting furnaces now operated in Los Angeles County include gray iron cupolas, reverberatory and open hearth furnaces, electric arc furnaces, and electric induction furnaces. Aerosol emissions resulting from cupola furnace operations consist of dust, smoke, and metallic fumes in varying quantities depending upon the materials charged. The voluminous opaque emissions from cupola furnaces were an air pollution problem which required early attention of the Air Pollution Control District. Detailed source tests showed the emissions to be in excess of weight limits as well as opacity limits. Enforcement and application of permit standards secured proper control of all cupola furnaces.