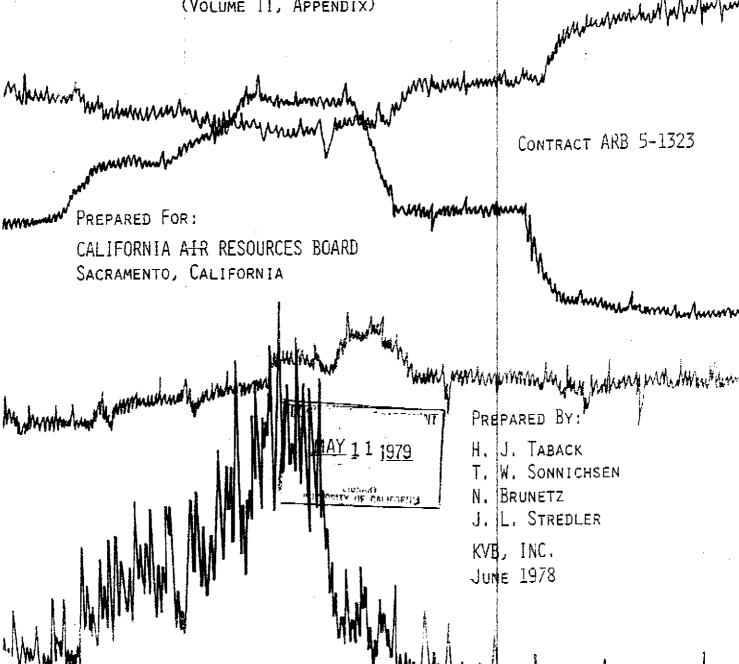
FROM STATIONARY SOURCES IN THE CALIFORNIA SOUTH COAST AIR BASIN

FINAL REPORT, VOLUME I (VOLUME II, APPENDIX)



KVB 5804-714



17332 IRVINE BLVD., TÚSTIN, CALIFORNIA 92680 + (714) 832-9020 DUSTON, TX (713) 780-8316 + MINNEAPOLIS, MN (612) 545-2142 + SCARSDALE, NY (914) 723-370 2. Orchard heaters—Orchard heaters were in common use in Ventura, san Bernardino and Riverside Counties to protect the citrus orchards from frost damage. It was estimated by the Ventura APCD (Ref. 2-48) that there were approximately 22 heaters per acre in citrus growth in that county.

Organic compound emissions resulted primarily from the evaporation of fuel oil and not as a result of the combustion process (Ref. 2-4). Therefore, even if the orchard heaters were used relatively infrequently, organic compound emissions were still present any time there was standing fuel exposed to the atmosphere. Emission estimates have been made in Reference 2-48A. The summer evaporation (March through November) averaged 2 gal./heater while the winter evaporation averaged 0.25 gal./heater, for a total of 2.25 gal./heater-year.

Emission estimates for the current program were based on published figures by the local control agencies. Total emissions from these sources were estimated to be 1200 tons per year.

3. Animal wastes—The existence of methane and other components in the gas generated by the biological decomposition of animal wastes had been extensively studied. These investigations had been aimed both at the potential for energy recovery (Ref. 2-49) as was the case with landfill gases and also to assess the harmful effects of these gases on livestock production in confined areas (Ref. 2-50).

Results from a recent study (Ref. 2-51) were employed to estimate the emission rates from these sources. A summary of the calculations is presented in Table 2-34. Inventories of the livestock population for each county were obtained from the County Agricultural Reports (Ref. 2-46). For these data, it was estimated that 77 tons per day of gases from animal wastes were generated in the agricultural areas shown in Figure 2-2.

TABLE 2-34. ORGANIC COMPOUND EMISSIONS FROM ANIMAL WASTES

	Total Inventory (10 ³ Head)	Emission Factor (lb TOC/10 ³ head-da	Emissions v) (tons/day)
Cattle Chickens Pigs Gorsas Gheep	147 9992 5 73 87	440.5 7.0 160.0 229.3 33.2	32.4 35.0 0.4 8.4
Total			<u>1.4</u> 77.6

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 - 2-53. Harrison, P. R. and Maas, S. J., "Monitoring of Natural Seeps in the Santa Barbara Channel Off Coal Oil Point," Meteorology Research, Inc., Report 76-R-1408, March 1976.
 - 2-54. Personal communication with E. R. Wilkinson, California Division of Oil and Gas.
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 - 2-56. Personal communication with P. R. Zimmerman, Washington State University.
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