

## 5.0 TOPICS

This Chapter covers first the detailed information on current and projected hazardous waste generation in the City of Hercules based on shipping manifest data from the California Department of Health Services and information provided by Contra Costa County Planning and Environmental Health Departments. Small quantity generator information is based on business lists and categories provided by the City of Hercules. The remainder of the Chapter covers various aspects of hazardous waste treatment, storage and disposal facilities as mandated by AB 2948 (1986) and AB 1205 (1989).

To determine need for waste treatment, existing facilities are inventoried, followed by examination of the need for such facilities, effects of waste reduction on such needs and siting criteria for such facilities. The final sections of the Chapter deal with a variety of special topics including transportation and storage of hazardous waste, facility inspection and enforcement of regulations, implementation and emergency response procedures, existing contaminated sites and hazardous waste generated by small quantity generators and households.

### 5.1 CURRENT WASTE GENERATION

Hazardous waste within the city limits of Hercules (Figure 3) is generated primarily by two industrial facilities which deal with petroleum products, chemicals and biomedical products (Figure 4). The one large quantity generator is Pacific Refining Company. Bio-Rad Laboratories generates smaller quantities of waste, but does generate and handle flammable solvents as well as biological and low level radio active waste. Other small generators which have produced waste manifested on the DHS data base include the Mechanics Bank of Richmond Operations Center and the Caltrans District 4 Maintenance yard.

The substances and quantities of hazardous waste generated by these facilities and shipped off-site for treatment or disposal, based on DHS manifest data, is shown in Table 1 for the years 1986, and 1988. A brief description of the operations of these facilities follows in this section. The wastes from these facilities fall into a variety of waste categories which are discussed in detail below in Section 5.1.1.

#### Pacific Refining Company

Pacific Refining Company is a medium sized refinery with capability to produce fuel grade products from crude oil. The refinery generates air emissions which are permitted by the Bay Area Air Quality Management District (BAAQMD), effluents which are dischargeable directly to San Pablo Bay under the Company's National Pollutant Discharge Elimination System Permit (NPDES) and other effluents treated at the on-site sewage treatment plant (STP) prior to discharge. Process components at the facility include a crude unit, a vacuum unit, a catalytic refiner, a hydro-cracker, a stack gas concentration unit, boilers, cooling towers and the wastewater treatment facility.

#### Bio-Rad Laboratories

Bio-Rad Clinical Division is a facility located in the North Shore Business Park together with the Bio-Rad Laboratories corporate headquarters. The Bio-Rad Chemical Division is located in Richmond approximately 10 miles south of Hercules. Bio-Rad activities include radioactive materials research connected with biomedical/diagnostic test kits, testing and research using small quantities of flammable solvents and biological research including viral testing and associated biomedical technologies.

The Bio-Rad Hercules facility has two permits on file with the Bay Area Air Quality Management District (BAAQMD). One is an abatement permit for the use of HEPA equipment and the second is for use of ethanol spray disinfectant in an amount greater than five gallons annually. Radioactive wastes are permitted by the California Department of Health Service and are disposed of at approved off-site Class I facilities in Washington State (high level waste), held until half-life decay makes the material safe for sanitary landfill disposal (low level handling waste such as gloves and gowns), or concentrated using activated carbon and discharge of treated water to the sewer system as specified by State Permit (low level liquid waste). Other waste streams include solvent waste and biomedical waste which are discussed in detail in Section 5.1.1 below.

The Mechanics Bank of Richmond has its Operations Center in Hercules, where a large amount of document film developing is done. The resulting silver from photographic laboratory waste is diluted and discharged with wastewater to storm drains, and is thus not "shipped" off-site.

At the Caltrans District 4 Maintenance Yard, wastes include a diesel/asphaltic emulsion as well as waste motor oil. Total manifested waste quantities were reduced since some wastes were unnecessarily manifested as hazardous in 1988 (see Table 1).