

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).

5.1.1 Wastes Shipped Off-Site

Wastes shipped off-site by major industries within the city limits include both RCRA (wastes identified in the Resource Conservation and Recovery Act) and non-RCRA wastes:

- o API separator wastes from Pacific Refining Company (RCRA)
- o Bio-sludge wastes from Pacific Refining Company (non-RCRA)
- o Spent catalyst and miscellaneous wastes from Pacific Refining Company
- o Halogenated and unspecified solvent waste from Bio-Rad Laboratories

No known large quantities of hazardous waste are currently generated at facilities located outside of the city limits of Hercules, but within the City's sphere of influence. There are four facilities in this zone which do not have manifested waste streams according to the most recent DHS records (1988), however, these facilities may produce small quantities of waste. These companies are:

- o Unocal, Inc. (coke plant)
- o Asbury Graphite
- o Yellow Freight System
- o Loprest Company

The waste products from the two major industrial generators, Pacific Refining Company and Bio-Rad Laboratories, are the result of individual operations which are described briefly below. King Oil Company, an oil recycling operation, apparently ceased operations and generated hazardous wastes during the period 1976-1987.

Pacific Refining Company

Pacific Refining produces API-Separator sludge at approximately 150 dry tons annually. This includes K048 and K051 wastes which are both federally classified as hazardous wastes under RCRA (Resource Conservation and Recovery Act). Actual annual tonnages are shown in Tables 1 & 2. In addition, Pacific Refining produces non-RCRA bio-sludges at approximately 130-150 tons per year (see Tables 1 & 2). These sludges result from processing at the on-site wastewater treatment plant. These sludges are dewatered on-site with the filtrate being reprocessed by the sewage treatment plant (STP). The RCRA and non-RCRA solid waste is then shipped to the Class I disposal facility at Kettleman Hills. Due to the state ban on landfills accepting untreated hazardous waste, the RCRA "K" (K048, K051) wastes may have to undergo incineration in the future or be treated or recycled on-site.

Bio-Rad Laboratories

Bio-Rad Laboratories generates several levels of State permitted radioactive waste as discussed above. State manifested waste includes approximately 1.12 tons per year of unspecified solvent waste. In addition, the facility sterilizes (auto clave) and disposes of biomedical waste through shipment to the Richmond landfill or normal trash pickup depending on material type and quantity.

Other Sites

The other sites inside and outside the City have been discussed in summary form above. Contaminated sites are discussed further under Section 5.2.4. Small quantity generators are shown in the waste generation tables (Tables 3 and 4).

5.1.2 Wastes Managed On-Site

The two major industries in Hercules both have some programs to manage portions of their wastes on-site. Pacific Refining dewateres its RCRA and non-RCRA wastes returning filtrate to the Sewage Treatment Plant (STP) and shipping only dry solid waste off-site for disposal. Bio-Rad Laboratories uses auto-claving and radioactive decay to reduce the amount of their waste streams requiring special off-site disposal methods.

Some small quantity generators may treat wastes on-site. Details of this treatment are not available on a generator-specific basis, however, oil recyclers and other recycling or mobile treatment volume reduction services are the most typical forms of on-site treatment for these generators.

5.1.3 Small Quantity Generators

Small quantity generators are defined by the California Department of Health Services (DHS) as those generators whose monthly production of hazardous waste is less than 1,000 kilograms (approximately one ton). For the purposes of this report, the definition shall be those generators who produce less than one ton per month or approximately twelve tons annually.

Small quantity generators mainly produce wastes from their commercial or industrial processes in quantities too small to warrant economical on-site treatment. The bulk of these wastes are shipped to commercial recyclers, treatment or disposal facilities outside the City of Hercules.

Table 3 is a summary of the waste generation by waste type and waste group (with the exception of waste oil) from small businesses (small quantity generators or SQG) within the City of Hercules.

Table 4 is a summary of waste oil generated by small quantity generators. Table 4 is categorized according to the total number of firms per group, the waste oil generation factor and total volume of waste oil. Further information on calculations used in compiling Table 4 is contained in Appendix A.

The estimated amount of hazardous waste generation from small businesses was calculated by utilizing the Department of Health Services "Guidelines for the Preparation of Hazardous Waste Management Plans" (DHS 1987a). The Methodology used was the "No Survey Method" modified by utilization of available lists of permitted businesses within the City. This methodology is considered valid since DHS reports that the waste streams associated with small quantity generators is basically consistent throughout the nation.

The use of the "No Survey Method" for this report involved:

- o Identifying the number of businesses within the City of Hercules and categorizing the businesses into the appropriate "industry groups" as specified by the DOHS Technical Reference Manual (DHS 1987b)
- o The quantity of hazardous waste generated by each industry was calculated by multiplying the number of companies within each group by the U.S. Environmental Protection Agency generation factors
- o The small quantity waste generation was then reported as the percent of total waste for each waste type

The data base utilized for small quantity waste generation was established through the use of a business license list supplied by the City of Hercules (March 1990). The 238 operational small

businesses were categorized, by the City of Hercules, into 22 major SIC groups. Businesses not readily classifiable (33 businesses) were placed into a miscellaneous grouping (group # 20). The latter category were not included in the waste generation calculations since their waste streams could not be readily identified.

Additionally, 38 businesses were not included in the waste generation calculations since their business license had expired and the business was assumed non-operational.

A total of 238 small businesses were utilized in the waste generator calculations. The small quantity generator data base information is detailed in Appendix A. The City of Hercules reviewed the business type and categorized the business group into the appropriate SIC code group. The data base may be limited due to the fact that the SIC code was assigned to the small business rather than using the State's SIC designation based on information supplied by the business.

5.1.4 Household Wastes

Households produce hazardous waste through the use of products which contain hazardous substances or materials. Such products include:

Paints	Batteries
Solvents	Pesticides
Thinners	Photographic Chemicals
Pool Chemicals	Auto-body Products
Cleaners	Waste Oil

and similar materials. Such wastes are produced in small quantities by most households, however, the cumulative effect on a landfill or other disposal center may become significant, particularly over a long period of time.

According to the DHS, the average household produces 7.5 pounds of hazardous waste per year. The Hercules General Plan Housing Element (Sedway and Associates 1990) has identified 16,500 residents in 5,300 occupied households. Therefore, the City of Hercules generates approximately 20.0 tons of household hazardous waste per year. This quantity is further classified in Table 5. The data was calculated by using DHS methodology which is based on a study of the composition of hazardous waste within a landfill. It has been estimated that in a city of 20,000 residents, .75 tons of toilet bowl cleaner, 2.75 tons of liquid household cleaners and .69 tons of motor oil are discharged into city drains each month.

Disposal of these materials and wastes into the sanitary landfill is illegal. Currently the City's solid waste stream is serviced by Richmond Sanitary Service. The final waste disposal is at the Richmond Sanitary Landfill. Once the landfill is full, the waste will be hauled to a transfer station with the final waste disposal at a remote site within the County.

5.1.5 Contaminated Sites

Known contaminated sites in Hercules are generally contaminated from past industrial practices. Within the City of Hercules, contaminated sites included in the U.S. Environmental Protection Agency CERCLIS Data Base and the State Department of Health Services Data Base (USEPA 1989; DHS 1989a,b) are shown in Table 6. The location of the major sites are shown in Figure 9.

The contaminated sites within the city limits are primarily contaminated due to past land use activities at the Hercules Powder Works Company site. These sites are under cleanup monitoring and enforcement by the State Department of Health Services. Portions of the sites have been cleaned up during the past few years and

soon may be deleted from the list. The Final HWMP will contain these updates.

5.1.6 Designated and Non-Hazardous Waste Facilities

There are no licensed Treatment Storage or Disposal (TSD) facilities within the City for the disposal of designated waste (special state category for certain hazardous wastes which are of less threat to human health or the environment than those classified as "hazardous wastes"). Municipal solid waste is managed by Richmond Sanitary and transported to a Class III landfill in Richmond.

5.1.7 Wastes Imported and Exported

Most industrial waste generated within the city limits is exported to outside facilities with the ability to recycle, treat, store or dispose of the waste. Wastes classified as hazardous and extremely hazardous which are not amenable to treatment or recycling are transported to the Class I Waste Disposal Facility at Kettleman Hills, California managed by Chemical Waste Management, Inc; or, in the case of Bio-Rad, wastes are shipped to the Class I facility in eastern Washington State.

5.2 PROJECTED WASTE GENERATION

This section projects generation of hazardous waste in the year 2000 based on current waste generation and assumed population increases within the City. Several scenarios are given, one depending on the achievement of waste minimization goals for current industries and another based on implementation of various proposed permits now before the City. The estimated generation of hazardous waste in the City for the year 2000 may range from 643.7

to 1,189.2 tons per year (based on industry projections) as shown in Table 7.

5.2.1 Large Industrial Producers

Large industrial hazardous waste producers will continue to produce the bulk of Hercules hazardous waste into the year 2000 under all scenarios. Large industries, designated as those that produce more than 1.0 tons per month of hazardous waste, presently include only Pacific Refining Company and Bio-Rad Laboratories.

5.2.2 Small Quantity Generators

Small quantity generators will remain a small but growing component of hazardous waste generation into the year 2000. An inventory of the City's small quantity generators shows that approximately 238 businesses produce hazardous waste. Some SQG's produce or use extremely hazardous substances as defined in Health and Safety Code Section 25500 et seq. Numerous other facilities are likely to use hazardous materials or produce designated waste.

The amount of hazardous waste estimated to be generated by SQG's in the year 2000 was calculated by applying a population adjustment factor of 14.0 percent to current figures. A scenario involving application of waste minimization was then calculated as an adjustment on these figures, using DHS waste minimization estimates (Department of Health Services 1987a). Projections of small quantity generator hazardous waste generation in the year 2000 are summarized in Table 8 as based on details shown in Appendix A, Table A-2.

5.2.3 Household Hazardous Wastes

Household hazardous waste will rise due to the increase in population if waste reduction measures are not effectively implemented. Reductions in current levels of generated household hazardous wastes are possible. Effective collection days, recycling and alternative materials can achieve reduction in the total quantity of hazardous waste generated and disposed. To achieve this reduction, the program must receive citizen support and participation.

The City of Hercules has a projected population growth rate of 14 percent between the year of 1990 and 2000 (Sedway and Associates 1990). This growth rate is consistent with the growth rate of Contra Costa County. If a growth rate of 14 percent occurs, the total number of occupied households will increase to 6,048 in the year 2000. The estimated amount of household hazardous waste generation in the year 2000 is calculated by multiplying 7.5 pounds by the projected number of households; therefore, the projected amount for the year 2000 is 22.7 tons. This data is shown in Table 8.

5.2.4 Contaminated Sites

Contaminated hazardous waste sites have been documented by the State of California on the Bond Expenditure Plan List, "Cortese List" and other documentation of known hazardous sites. Most of the known sites within the city limits of Hercules result from past land use practices and historical industrial usage. The sites are listed in Table 6.

Cleanup of contaminated sites has considerably added to the quantities of manifested waste listed in DHS data (See Table 1). Large annual fluctuations in waste amounts generally indicate that

some site cleanup has occurred. Such cleanups have added waste types including metals, asbestos and contaminated soils and similar substances to the data during the period 1986-1988. Projections of cleanups from contaminated sites to the future are difficult since waste cleanups are usually relatively short-term events. Since some contaminated site cleanups have already occurred and the two known sites are listed for remediation before 1995, Table 9 projects wastes from contaminated sites as zero in the year 2000.

Two large listed contaminated sites within the city limits are owned by Hercules, Inc., and Hercules Properties Ltd. The sites are discussed below.

Hercules, Inc.

This 41 acre site is located near the corner of San Pablo Avenue and Sycamore Avenue, and was once a portion of the Hercules Powder Work Company site. Various munitions and explosives were manufactured and stored at the site from the early 1900's to the late 1950's. The primary contaminants of concern found in the soil on-site include explosives and metals: 1) trinitrotoluene (TNT), 2) dinitrotoluene, 3) dinitrobenzene and 4) lead.

The primary threats to public health and the environment are associated with direct contact with the contaminated soil, and inhalation of contaminated dust particles by nearby residents. Remedial actions have been implemented and are currently ongoing at the site. One of the interim remedial measures (IRM's) included excavation and off-site disposal of lead contaminated soils. Currently, a 6-month pilot test to determine the effectiveness and rate of biodegradation is being conducted.

Little League Field

The Little League ball field was part of the site owned by Hercules, Inc. Contaminated soil was removed from the site in 1986. Continuing cleanup measures have included aeration and biodegradation of soil containing low level contamination on nearby land owned by Hercules Ltd.

Hercules Properties, Inc.

This 105 acre site at 560 Railroad Avenue is an inoperable nitroform fertilizer plant located on a portion of land previously used by the Hercules Powder Works Company. The site was used for manufacturing and storage of nitrogen fertilizers from the 1950's to the 1970's. The primary contaminants of concern identified in soils at the site include: 1) concentrated acids, 2) caustics, 3) heavy metals, and 4) asbestos.

The primary threats to public health and the environment are associated with direct contact with the contaminated soil, and inhalation of contaminated dust particles. Several phases of remedial investigation have been completed, and additional investigations are proposed to begin in July 1990.

5.2.5 New Waste Streams

New waste streams are indicated in Tables 8 and 9 in terms of increases in waste generation between 1986 and 1988. Further increases in waste streams are possible from existing industry and from new industries (see Section 5.2.6 below). Data on projected new waste streams from existing industry have been based on interviews of Pacific Refining Company (Knight, personal communication) and Bio-Rad Laboratories (McAll, Young, personal communication) and are included in Table 9. Potential new waste

streams for both facilities depend on general business growth. In addition, increases in present wastes streams depend on a potential facility expansion at Pacific Refining and a potential relocation to Hercules of the Bio-Rad chemical division.

5.2.6 Wastes from New Industries

There are no current applications for new major industries projected to locate within the Hercules city limits. Both Bio-Rad and Pacific Refining are currently discussing, with the City, potential plans for expanding new facilities (Garrett, personal communication). Small research and development firms, service businesses, gasoline service stations, drycleaners and other small quantity generators are expected to locate in the City during the 1990's in accordance with the City's plans for growth and development (City of Hercules General Plan, 1990). These facilities are expected to individually generate only relatively small amounts of hazardous waste.

Three areas within the City of Hercules are shown on potential siting maps for hazardous waste treatment, storage or disposal (TSD) facilities in the Contra Costa County Hazardous Waste Management Plan (Contra Costa County 1989). The City believes that county and city siting criteria coupled with buffer zones, health risks and other environmental factors make considerable portions of these potential areas unsuitable for use by most TSD facilities. Any waste streams from TSD's or other facilities which might apply for permits in these areas would be facility specific and cannot be projected at this time.

5.3 TSDF FACILITY INVENTORY

Currently there are no commercial treatment, storage or disposal facilities for hazardous waste within the Hercules city limits.

Previous operations in Contra Costa County included IT Vine Hill and Acme Landfill which previously accepted RCRA wastes and substances regulated as hazardous under Title 22 of the California Code of Regulations (CCR). These facilities are located approximately 15-20 miles east of Hercules and neither facility is currently active as a disposal facility, although the County currently operates a solid waste transfer station at the Acme Landfill site.

5.4 TSDF NEEDS ANALYSIS

The need for Treatment, Storage or Disposal (TSD) facilities in Hercules depends strongly on the interpretation of need for the City to process wastes other than amounts equivalent to those it produces. Industry within the City presently generate a relatively small amount of waste which is probably not easily or economically treatable except through expanded on-site treatment of at a larger regional facility.

The Contra Costa County Hazardous Waste Management Plan shows only three areas which meet potential siting criteria within the City of Hercules. These are a light industrial area, located between Interstate 80 and San Pablo Avenue, the Pacific Refinery Company site and the original site of the Hercules Powder Works Company (see Figure 7). Other areas of the City are precluded by the County's TSDF Siting Criteria.

The City of Hercules has recognized a need to pursue industrial and commercial growth in order to balance its residential community with an appropriate amount of jobs and services. The City's Economic Development Strategy Plan (City of Hercules 1990b) cites the need for strong economic development to be balanced against conservation and protection of environmental concerns. This report also recognizes that industrial development may lead to the need

for consideration of additional hazardous waste management issues. The City intends to deal with such issues for new facilities primarily through focusing on waste minimization and on-site treatment requirements when appropriate.

Table 10 shows a capacity needs analysis for the City of Hercules based on the assumption that the City should treat an amount of hazardous waste equivalent to that which it generates. The needs analysis shows that no hazardous wastes are treated or disposed within the City, and that 600-800 tons of hazardous waste generated (from the present to the year 2000) annually within its boundaries will be transported out of the county for treatment or disposal. Table 10 has been constructed based on small quantity generator and household hazardous waste information supplemented by DHS records and contacts with the City's large generators.

The large generator industry within the City does not treat wastes on-site, although Pacific Refining Company significantly reduces the weight and volume of its STP wastes through dewatering, filtration and sludge separation. Pacific Refining exports 300-400 tons per year to sites outside the City. This industry is expected to increase waste disposal to potentially 250 tons per year on-site and 550-1,000 tons per year off-site by the year 2000 if proposed expansion project is approved. On-site treatment/disposal capacity is presently non-existent, but could increase to 250 tons/year if Pacific Refining perfects a contemplated treatment/recycling-recovery project for waste which is currently shipped to off-site hazardous waste facilities. The proposed project would reduce waste toxicity through on-site processing.

The Richmond Landfill is expected to continue collecting municipal waste until full at which time solid waste will be shipped to a transfer station en route to a permanent permitted facility. As Contra Costa County and west-county cities further implement their

household hazardous waste programs, hazardous waste from these facilities are expected to be separated from other municipal waste and shipped to appropriate treatment/disposal facilities outside the County. Hercules' portion of household hazardous waste will increase slightly to up to 22.7 tons per year in the year 2000 without waste reduction programs.

5.5 TSDF CAPACITY EXCESS OR SHORTFALL

There are currently no on-site or off-site TSD facilities within the City of Hercules. The need for TSD facilities, defined as equivalent to the amount of hazardous material the City produces shows a relatively small current shortfall of TSD capacity within the City, based on two large quantity generators, small quantity generators and household hazardous waste.

In the year 2000 the presence of an excess or shortfall will be partly determined by hazardous waste reduction and on-site treatment programs that may be implemented at the major generators facilities and by the addition of waste treatment or recycling programs for small quantity generators and households.

5.6 HAZARDOUS WASTE REDUCTION

Hazardous waste reduction efforts may strongly affect the quantity of excess or shortfall TSD facility capacity. If all major facilities can process or significantly reduce their own waste or implement effective on-site treatment programs then the TSD facility need is only for processing hazardous waste from small quantity generators and households, plus whatever surplus waste cannot be treated by those major facilities.

Hazardous waste reduction in facilities outside Hercules would reduce the overall need for hazardous waste TSD facilities. The

extent of such potential reduction will be limited by institutional, physical and technical constraints. Projected reduction through implementation of source reduction and recycling programs is shown in Table A-2.

5.6.1 Projection of Hazardous Waste Reduction; Impacts on Facility Siting Needs

Table 8 shows estimated potential for hazardous waste reduction from SQG's and households based on the DHS Technical Reference Manual (DHS 1987) and information from local industry. This waste reduction will decrease the shortfall of TSD capacity, although projection data is presently insufficient to calculate the exact difference. Both Pacific Refining and Bio-Rad Laboratories plan to expand existing facilities and to reduce hazardous waste through waste management and possibly some forms of on-site treatment, recycling or resource recovery. The projected reductions cannot be closely quantified at this time (Knight, McAll, personal communication). This change will reduce the local need for siting new TSD Facilities.

Household hazardous waste reduction has been recently mandated by the State in AB 939, the integrated waste management bill. Reduction of solid hazardous waste and reduction of all solid waste by 50 percent in the year 2000 is required under this law. We have used the 50 percent volume reduction requirement as applying to household hazardous waste in Table 8 in order to generate projections to the year 2000.

Regional and statewide needs for TSD facilities will probably remain during the next decade. The decision regarding the relative perspectives of local versus regional or statewide needs as to the siting of TSD Facilities has yet to be resolved.

5.6.2 Barriers to Waste Reduction

Potential barriers to hazardous waste reduction include the following:

- o Technical barriers - impede a firm's ability to develop, evaluate or implement waste reduction methods. These barriers include 1) lack of information on waste reduction methods, 2) lack of in-house expertise to evaluate and implement waste reduction and 3) absence of readily available technologies.
- o Financial barriers - prevent a firm from undertaking a waste reduction project because of funding inadequacies.
- o Institutional barriers - can be either regulatory constraints or lack of awareness and commitment at the decision-making level in companies.
- o Physical barriers - such as lack of space on the property of the waste generator to install a facility or process, can impede waste reduction.

These barriers can often be overcome at the local government level through programs of communication and education on available hazardous waste reduction techniques and technologies. Often a joint program between local government and industry has proven highly effective at overcoming these barriers.

5.6.3 Local Waste Reduction Programs

The City presently has no in-place hazardous waste reduction program, however, one of the programs recommended by this plan would be to implement such a program as part of a JPA. Certain industries have already implemented waste reduction programs. Pacific Refining reduces its API Separator sludge and bio-sludge through dewatering, filtration and sludge separation processes. Bio-Rad Laboratories reduces biomedical hazardous waste through sterilization and its low-level radioactive waste through storage and subsequent half-life decay.

5.7 SITING OF HAZARDOUS WASTE FACILITIES

Section 25135.1 (d)(6) of the California Health and Safety Code specifies that each Hazardous Waste Management Plan shall include:

- o an identification of existing hazardous waste management facilities which can be expanded to accommodate projected needs
- o general areas or specific sites for new hazardous waste management facilities determined to be needed

In lieu of specific site identification, the HWMP may identify siting criteria to be used in selecting sites for future hazardous waste management facilities and should designate general areas where such criteria may be applicable. These requirements were formulated for the County Hazardous Waste Management Plans and it is not clear whether the intent of the legislation was to apply this criteria directly to cities where the amount of land available and existing land use may not lend itself to development for hazardous waste management facilities.