10.0 TABLES

TABLE 1. QUANTITIES OF MANIFESTED WASTE GENERATED IN HERCULES AND SHIPPED OFF-SITE

Facility Name	Waste Generation (Tons)*	
	1986	1988
King Oil Company	1,646.43	ND
Hercules Little League Field	1,603.08	ND
Pacific Refining Company	497.49	423.83
Hercules Properties Ltd	ND	53.92
Mechanics Bank of Richmond-Trustee	ND	0.08**
Caltrans District 4	ND	0.88***
Bio-Rad Laboratories	ND	1.12
TOTAL	**3,747.00**	**478.83**

* Note: These figures from DHS Manifest summary data often disagree with Annual Reports submitted to DHS by industries by up to 20%.

**Best estimate from available data.

***These wastes were not shipped off-site but were contained in wastewater discharged to storm drain.

TABLE 2. CURRENT MANIFESTED HAZARDOUS WASTE IMPORTED AND EXPORTED FROM HERCULES (1988, 1989)

Generator	Waste Stream	Manifested Waste (tons)	Imp/Exp
Pacific Refining Company (1989)	K-Waste	155.0	E
	Bio-Sludge	141.0	E
	Spent Catalyst	15.0	E
	Asbestos Waste	27.0	E
Bio-Rad Laboratories (1988)	Halogenated Solvents	0.22	E
	Unspecified Solvent Mixture	0.90	E

TABLE 3. CURRENT WASTE PRODUCTION FROM SMALL QUANTITY GENERATORS BY WASTE TYPE (1988 Estimated)

Waste Type	Waste Group	Waste Production (Tons/yr)
Arsenic Wastes	Metal Containing Liquids	0.00
Cyanide Wastes	Cyanide & Metal-Containing Liquid	0.32
Dry Cleaning (Filtration Residue)	Non-Halogenated Organic Sludges & Solids	17.79
Empty Pesticide Containers	Miscellaneous Wastes	0.68
Heavy Metal Dust	Miscellaneous Wastes	0.29
Heavy Metal Solutions	Metal-Containing Liquids	0.00
Heavy Metal Waste Material	Metal-Containing Liquids	0.54
Ignitable Paint Wastes	Dyes, Paint Sludges & Resin Wastes	10.03
Ignitable Wastes	Non-Halogenated Solvents	14.66
Ink Sludges Containing Chromium or Lead	Metal-Containing Sludges	0.04
Mercury Wastes	Metal-Containing Liquids	0.14
Other Reactive Wastes	Non-Metallic Inorganic Liquids	1.90
Paint Waste Containing Heavy Metals	Metal-Containing Sludges	0.21
Pesticide Solutions	Pesticides	1.09
Photographic Wastes	Miscellaneous Wastes	2.40
Solvent Still Bottoms	Halogenated or Non-Halogenated Sludges & Solids	0.24
Spent Plating Wastes	Metal Containing Liquids	0.30
Spent Solvents	Halogenated or Non-Halogenated Solvents	30.64
Solutions or Sludges Containing Silver	Metal-Containing Liquids & Sludges	0.00
Strong Acids or Alkalies	Non-Metallic Inorganics Liquids	11.46
Used Lead-Acid Batteries	Miscellaneous Wastes	16.95
Waste Formaldehyde	Organic Liquids	33.23
Waste Inks Containing Flammable Solvents or Heavy Metals	Metal Containing Liquids	0.38
Waste Pesticides	Pesticides	3.15
Wastewater Containing Heavy Metal Sludges	Metal Containing Sludges	0.08
Wastewater Containing Wood Preservatives	PCBs and Dioxins	0.00
Wastes Containing Ammonia	Non-Metallic Inorganic Wastes	1.35
Other	Miscellaneous Wastes	44.88
TOTAL		**192.75**

TABLE 4. WASTE OIL GENERATION BY SMALL QUANTITY GENERATORS IN THE CITY OF HERCULES FOR 1990

Business Sector	Specific Business Type	1990 No. of Firms	Waste Oil Generation Factor DHS (gal/yr)	Total Amount (tons/yr)	Generated (tons)
Vehicle Maintenance (Automotive Related)	Recycling Centers		3,222	12.10	
	Service Stations		2,998	11.26	
	Repair Shops		3,032	11.39	
	Auto Dealers		2,962	11.12	
	Auto Centers	1	3,010	11.30	11.30
	Fleet Shops		3,160	11.30	
	Airports		2,800	10.51	
				Subtotal	11.30
Industry Related (Manufacturing)	Wood Products		2,676	10.05	
	Furniture & Fixtures		2,365	8.88	
	Pulp/Paper		*	*	
	Newspapers		2,779	10.44	
	Chemicals		2,799	10.51	
	Rubber/Plastic	1	2,407	9.04	9.04
	Leather		*	*	
	Glass		*	*	
	Primary Metals		2,969	11.15	
	Fabricated Metals		2,691	10.10	
	Machinery		2,592	9.73	
	Electronics	1	2,655	9.97	9.97
	Motor Vehicles	1	2,501	9.39	9.39
	Instruments	1	2,389	8.97	8.97
	Miscellaneous Manufacturing		2,522	9.47	
	Electrical Utilities		5,319		
	Commercial Marine Terminals		*		
	Railroad Yards		*		
				Subtotal	37.37
				Estimated Total	48.67

Number of businesses based on Small Business List.
Source: "Determining Used Oil Volumes Generated by Selected Small Quantity Generators", DHS 1987
* DHS did not supply a waste oil generation factor for this industry, and, thus, a quantity cannot be calculated.

TABLE 5. HOUSEHOLD HAZARDOUS WASTE GENERATED IN 1989

Waste Group	Ton/year	Quantity Percent
Oil and Similar Lubricant Products	9.2	46%
Paint and Building	5.8	29%
Gasoline and Solvents	4.0	20%
Other Wastes	1.0	5%
Total Household Hazardous Wastes	20.0	100%

TABLE 6. KNOWN CONTAMINATED SITES WITHIN AND NEAR THE CITY OF HERCULES DESIGNATED BY THE STATE BOND EXPENDITURE PLAN

Site Name	Type of Contamination	Cleanup Status*
Hercules Properties Ltd.	Acids, Caustics, Heavy Metals, Asbestos (soil)	Ongoing (Additional Investigations)
Hercules, Inc.	Munitions and Explosives (soil) (trinitrotoluene, dinitrotoluene, dinitrobenzene, lead)	Ongoing (Pilot Test in Progress)
ASARCO*	Arsenic, Lead, and other Heavy Metals (soil)	Ongoing
American Standard Products*	Lead (soil)	Remediation to begin 1990
Cooper Chemical*	Lead, Zinc, Copper (soil)	Ongoing
FMC Corporation*	Heavy Metals in Soil; Solvents Organochlorine and organophosphorus Pesticides in Soil & Groundwater	Ongoing
Drew Sales*	Copper, Nickel, Lead and Zinc (soil)	Ongoing

*These sites are not located within the Hercules City Limit, but are within approximately 10 miles of the City.

TABLE 7. PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION IN HERCULES (Year 2000)

Facility Name	Waste Generation (Tons)*	
	1988	2000
Pacific Refining Company	423.8	423.8-847.6
Mechanics Bank of Richmond - Trustee	0.08	0.08-0.16
Caltrans District 4	0.88	0.88-1.76
Contaminated oil from existing sites	53.9	0.0
Bio-Rad Laboratories	1.12	1.12-2.3*
Small Quantity Generators	192.8	150.9-218.4
Waste oil	48.7	55.5
Household Waste	20.0	18.7- 22.6
Total	741.28	650.98-1,148.32

*This number could be considerably higher if the company's chemical division locates in Hercules.

TABLE 8. ESTIMATE OF HOUSEHOLD AND SQG HAZARDOUS WASTE IN THE YEAR 2000 (Tons/Year)

Waste Group	Without Waste Min.	With Waste Min.
HOUSEHOLD HAZARDOUS WASTE		
Oil and Similar Lubricant Products	10.5	9.6
Paint and Building	6.6	6.2
Gasoline and Solvents	4.5	2.3
Other Wastes	1.1	0.6
Total Household Hazardous Waste	22.7	18.7
SMALL QUANTITY GENERATOR HAZARDOUS WASTE		
Arsenic Wastes	0.00	0.00
Cyanide Wastes	0.36	0.03
Dry Cleaning Filtration Residues	20.28	20.08
Empty Pesticide Containers	0.77	0.75
Heavy Metal Dust	0.33	0.25
Heavy Metal Solutions	0.00	0.00
Heavy Metal Waste Materials	0.62	0.46
Ignitable Paint Wastes	11.43	10.86
Ignitable Wastes	16.71	15.21
Ink Sludges Containing Chromium or Lead	0.05	0.04
Mercury Waste	0.16	0.12
Other Reactive Wastes	2.17	2.13
Paint Wastes Containing Heavy Metals	0.24	0.18
Pesticide Solutions	1.24	1.22
Photographic Wastes	2.74	2.07
Solvent Still Bottoms	0.27	0.25
Spent Plating Wastes	0.34	0.25
Spent Solvents	33.65	30.62
Solutions or Sludges Containing Silver	0.00	0.00
Strong Acids or Alkalies	13.06	9.79
Used Lead-Acid Batteries	19.32	14.49
Waste Formaldehyde	37.88	36.36
Waste Inks Containing Flammable Solvents or Heavy Metals	0.43	0.32
Waste Pesticides	3.59	3.52
Wastewater Containing Heavy Metals	0.09	0.07
Wastewater Containing Wood Preservatives	0.00	0.00
Waste Containing Ammonia	1.54	1.51
Other	51.16	50.14
Total SQG Hazardous Waste	218.43	200.72

The year 2000 Household Hazardous Waste Projection was based on information obtained from the State DOHS; and the ABAG projection (1987).

TABLE 9. PROJECTED QUANTITIES OF CLEANUP WASTES AND NEW WASTE STREAMS

Facility Name		Waste Generation (Tons) 1988	2000
Pacific Refining Company	K-Waste	155.0	155.0-310.0
	Bio-Sludge	141.0	141.0-282.0
	Spent Catalyst	15.0	15.0- 30.0
	Asbestos Waste	27.0	< 1.0
	Other Waste	85.8	85.8-171.6
Bio-Rad Laboratories	Solvents	1.12	1.12-2.3
	Other Waste	0.2	0.2-0.4
Contaminated Sites	Contaminated Soil	53.9	0

TABLE 10. PROJECTED CITY OF HERCULES NEEDS ASSESSMENT
YEAR 2000 (TONS/YEAR)*

Waste Type	Projection	Current Capacity
Waste Oil	58.3	0.0
Halogenated Solvents & Non-Halogenated Solvents	33.5	0.0
Organic Liquids	37.5	0.0
Pesticides	4.8	0.0
PCB's & Dioxins	0.0	0.0
Oily Sludges & Halogenated Organic Sludges & Solids	0.3	0.0
Dye & Paint Sludges & Resins	11.3	0.0
Metal Containing Liquids	1.6	0.0
Cyanide & Metal Liquids	0.0	0.0
Non-Metallic Inorganic Liquids	2.1	0.0
Metal Containing Sludges	0.4	0.0
Non-Metallic Inorganic Sludges	444.0	0.0
Contaminated Soil	0.0	0.0
Miscellaneous Wastes	74.7	0.0
TOTAL	**668.5**	**0.0**

TABLE 11. METHODS FOR REDUCING EXPOSURE TO HOUSEHOLD TOXICS
(Source: Golden Empire Health Planning Center)

- Purchase less toxic or non-toxic items whenever possible.
- Buy only the amount needed to do the job.
- Give leftover paint (not lead-based) to a neighbor to use.
- Avoid use of aerosols. They are a high source of indoor air pollution.
- Recycle motor oil at a participating service station. Call the California Waste Management Board at (800) 925-5545 for locations.
- Keep products in their original containers.
- Use products in well-ventilated areas. An open door or window may not be enough.
- Wear protective clothing.
- Never mix products unless instructions call for it. Adverse chemical reactions can occur.
- Use only the recommended amount. "More" is not better.
- Consider whether the product can be used less frequently.
- Keep products out of reach of children and pets.
- Use the free collection program to rid your home of old and unwanted products containing toxic chemicals.