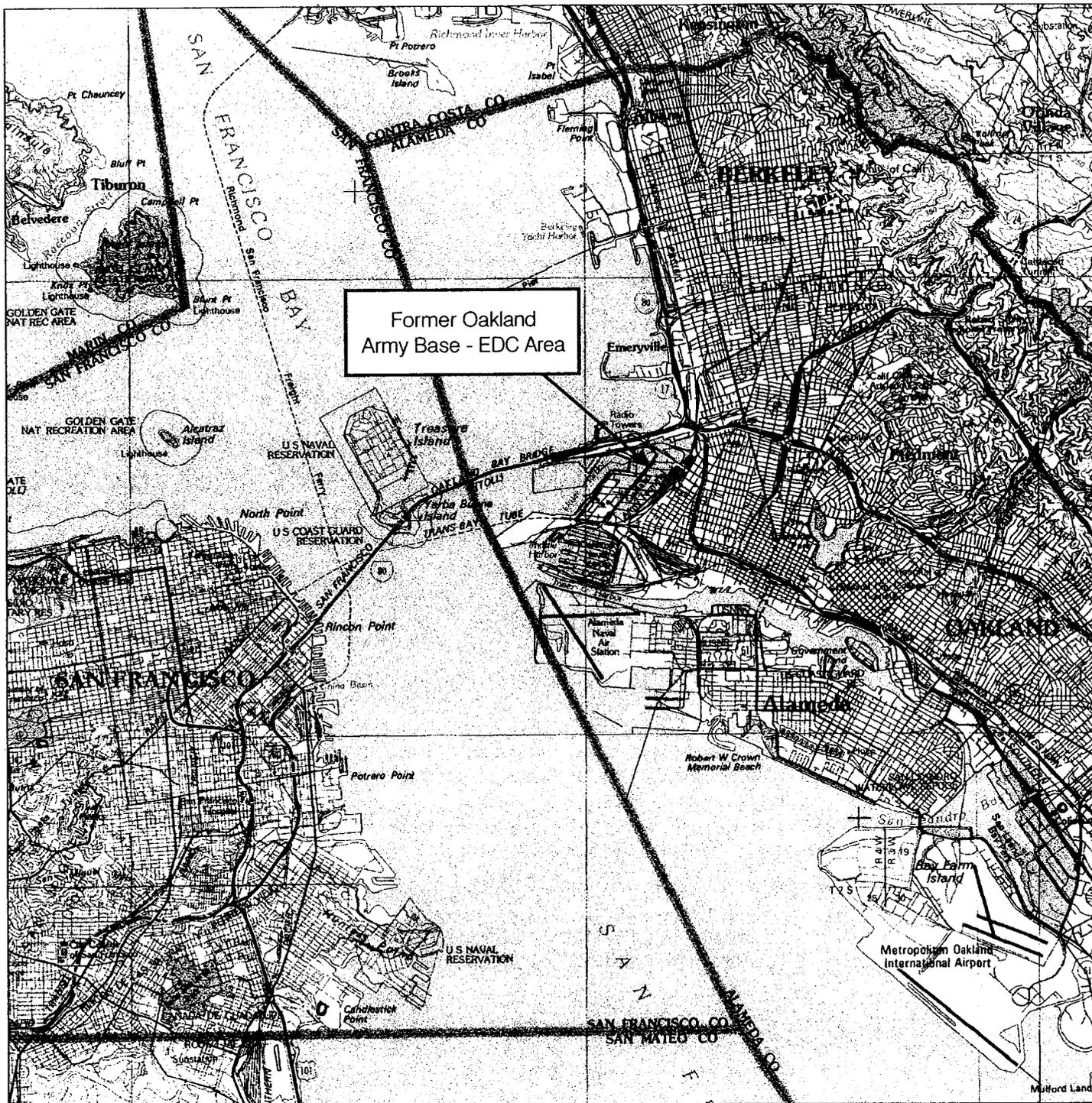


FIGURE 1

OAKLAND ARMY BASE LOCATION MAP



Reference: U.S.G.S. 1:100,000 Series Topographic Map, San Francisco Quadrangle, California, 1978.

Notes:

- 1. All locations are approximate.

Legend:

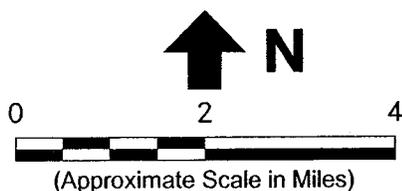
- State Highway
- Interstate Highway

Abbreviation:

EDC = Economic Development Center

**Erler &
Kalinowski, Inc.**

Site Location Map



Former Oakland Army Base - EDC Area
Oakland, CA

July 2004
EKI A10063.00

Figure 1

FIGURE 2

OAKLAND ARMY BASE SITE MAP

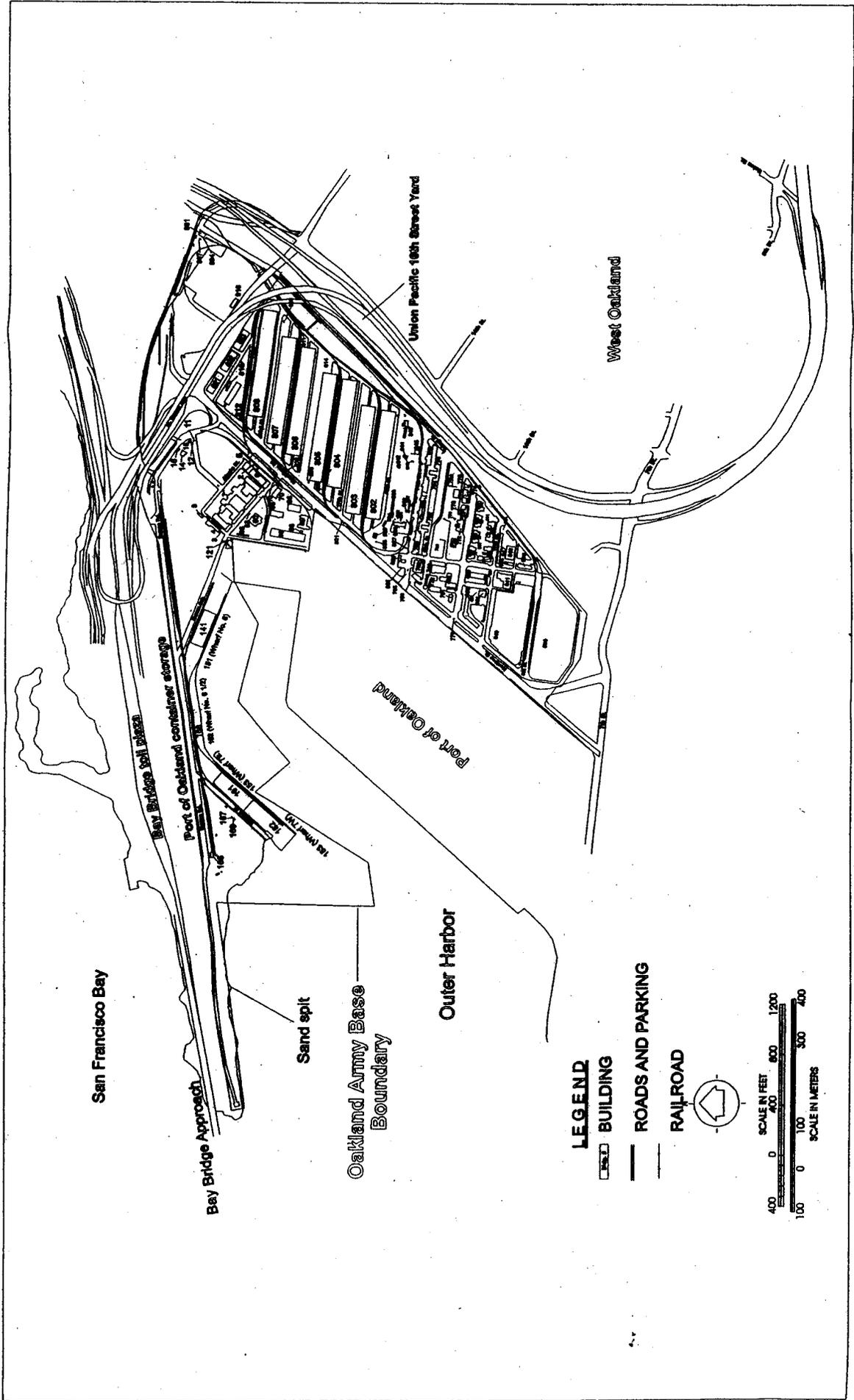


Figure 2
Oakland Army Base Site Map

FIGURE 3

EXISTING OFF-BASE LAND USES

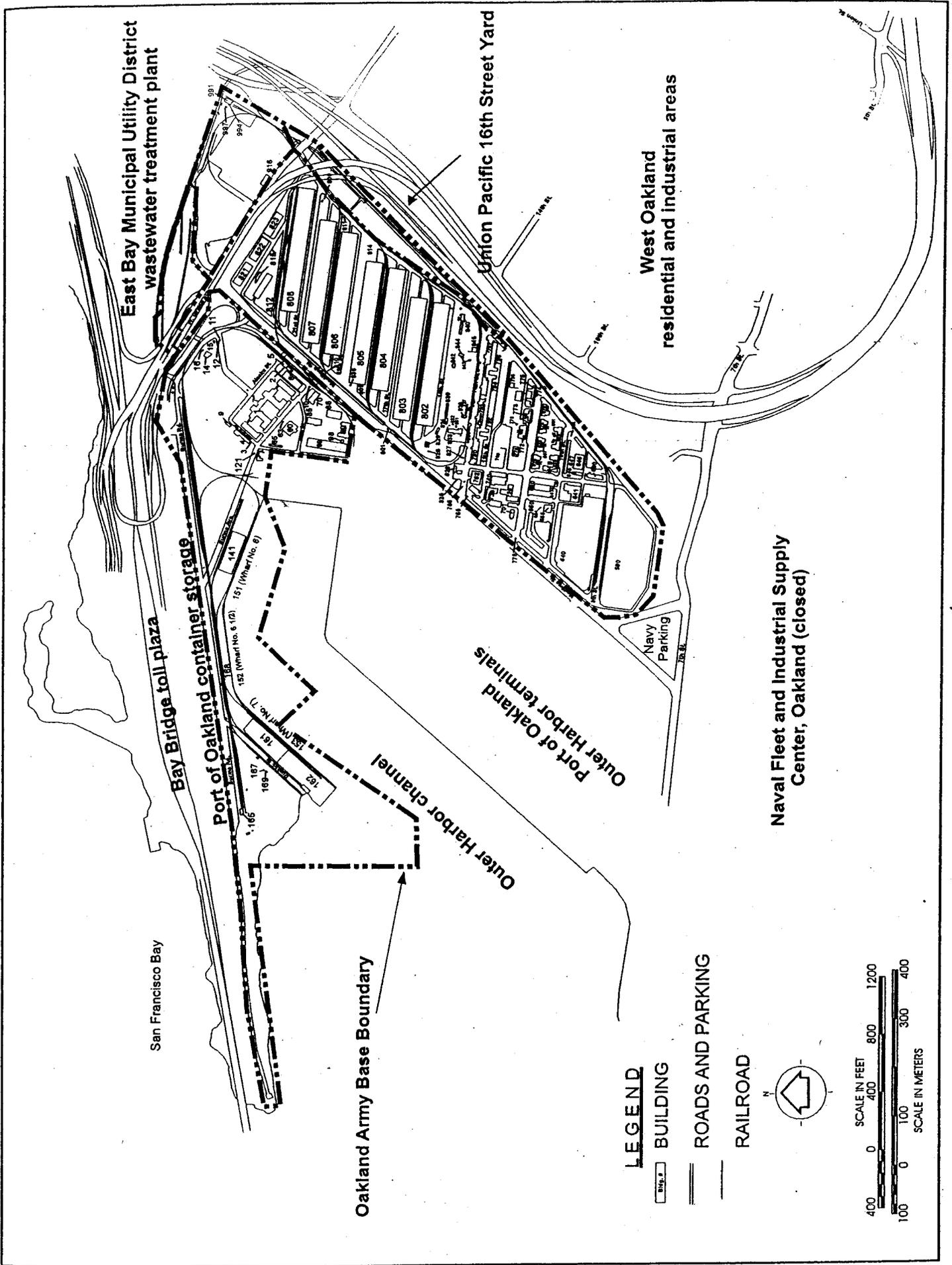


Figure 3
Existing Off-Base Land Uses

TABLE 7-11

**REMEDIATION GOALS FOR CHEMICALS OF CONCERN
IN SOIL AND GROUNDWATER**

TABLE 7-11
REMEDIATION GOALS FOR CHEMICALS OF CONCERN
IN SOIL AND GROUNDWATER
Oakland Army Base, Oakland, California

Chemical of Concern	Soil Remediation Goal at HI=1 or Risk = 10 ⁻⁶ (mg/kg)	Population or Pathway Governing Soil Remediation Goal (see Table 7-10)	Groundwater Remediation Goal at HI=1 or Risk = 10 ⁻⁶ (µg/L)
Metals			
Antimony	280	Construction Worker	(a)
Arsenic	20	Construction Worker	(a)
Barium	43,000	Construction Worker	(a)
Beryllium	1,300	Construction Worker	(a)
Cadmium	150	Construction Worker	(a)
Chromium (III)	MAX(100,000); (f)	--	(a)
Chromium (VI)	86	Construction Worker	(a)
Chromium, Total	600 (e)	Construction Worker	(a)
Cobalt	42,000	Construction Worker	(a)
Copper	26,000	Construction Worker	(a)
Lead	750 (h)	See Note (h)	(a)
Manganese	25,000	Construction Worker	(a)
Mercury	60	Construction Worker	(a)
Molybdenum	3,500	Construction Worker	(a)
Nickel	14,000	Construction Worker	(a)
Selenium	3,500	Construction Worker	(a)
Silver	3,500	Construction Worker	(a)
Thallium	49	Construction Worker	(a)
Vanadium	4,900	Construction Worker	(a)
Zinc	MAX(100,000)	--	(a)
Volatile Organic Compounds			
1,1,2,2-tetrachloroethane	3.8	Leaching to Groundwater (b)	1,900
1,1,2-trichloroethane	2.7	Indoor Worker	2,800
1,1-dichloroethane	2.1	Leaching to Groundwater (b)	6,700
1,1-dichloroethene	1.7	Leaching to Groundwater (b)	33,000
1,2,3-trichloropropane	0.2	Indoor Worker	100
1,2,4-trimethylbenzene	170	Construction Worker	18,000
1,2-dichloroethane	0.8	Indoor Worker	1,900
1,2-dichloropropane	0.1	Indoor Worker	110
1,3,5-trimethylbenzene	87	Construction Worker	25,000
Acetone	0.5	Leaching to Groundwater (b)	86,000,000
Benzene	0.3	Indoor Worker	420
Bromodichloromethane	0.7	Indoor Worker	850
Carbon disulfide	950	Indoor Worker	230,000
Carbon tetrachloride	0.1	Indoor Worker	72
Chloroform	0.9	Leaching to Groundwater (b)	2,500

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Volatile Organic Compounds			
Dibromochloromethane	2.0	Leaching to Groundwater (b)	2,100
cis-1,2-dichloroethene	18	Leaching to Groundwater (b)	180,000
trans-1,2-dichloroethene	38	Leaching to Groundwater (b)	190,000
Ethylbenzene	24	Leaching to Groundwater (b)	4,200,000
Isopropylbenzene (Cumene)	SAT(3,800); (g)	--	1,800,000
Methyl ethyl ketone	13	Leaching to Groundwater (b)	160,000,000
Methyl isobutyl ketone	4	Leaching to Groundwater (b)	5,300,000
Methyl tertiary butyl ether	1	Leaching to Groundwater (b)	120,000
Methylene chloride	4.8	Leaching to Groundwater (b)	19,000
n-butylbenzene	550	Construction Worker	95,000
n-propylbenzene	350	Construction Worker	100,000
p-cymene (p-isopropyltoluene)	SAT(3,700)	--	1,000,000
sec-butylbenzene	200	Leaching to Groundwater (b)	77,000
tert-butylbenzene	290	Construction Worker	75,000
Tetrachloroethene	2.8	Leaching to Groundwater (b)	960
Toluene	8.4	Leaching to Groundwater (b)	1,600,000
Trichloroethene	2.5	Indoor Worker	2,800
Trichlorofluoromethane	3,600	Indoor Worker	2,800,000
Vinyl chloride	0.05	Indoor Worker	32
Xylenes, Total	1	Indoor Worker	28,000,000
Semi-volatile Organic Compounds			
Acenaphthene	16	Leaching to Groundwater (b)	25,000,000
Acenaphthylene	120	Leaching to Groundwater (b)	(a)
Anthracene	2.9	Leaching to Groundwater (b)	330,000,000
Benzdine	0.02	Construction Worker	(a)
Benzo(a)anthracene	7.6	Construction Worker	(a)
Benzo(a)pyrene	0.8	Construction Worker	(a)
Benzo(b)fluoranthene	7.6	Construction Worker	(a)
Benzo(b,k)fluoranthene	7.6	Construction Worker	(a)
Benzo(g,h,i)perylene	5.3	Leaching to Groundwater (b)	(a)
Benzo(k)fluoranthene	7.6	Construction Worker	(a)
Bis(2-ethylhexyl)phthalate	SAT(100)	--	(a)
Chrysene	4.7	Leaching to Groundwater (b)	(a)
Dibenz(a,h)anthracene	2.2	Construction Worker	(a)
Fluoranthene	60	Leaching to Groundwater (b)	(a)
Fluorene	5.1	Leaching to Groundwater (b)	38,000,000

TABLE 7-11
REMEDIATION GOALS FOR CHEMICALS OF CONCERN
IN SOIL AND GROUNDWATER
Oakland Army Base, Oakland, California

Chemical of Concern	Soil Remediation Goal at HI=1 or Risk = 10 ⁻⁶ (mg/kg)	Population or Pathway Governing Soil Remediation Goal (see Table 7-10)	Groundwater Remediation Goal at HI=1 or Risk = 10 ⁻⁶ (µg/L)
Semi-volatile Organic Compounds			
Hexachlorobutadiene	46	Leaching to Groundwater (b)	(a)
Indeno(1,2,3-c,d)pyrene	7.6	Construction Worker	(a)
Naphthalene	4.9	Leaching to Groundwater (b)	100,000
Phenanthrene	11	Leaching to Groundwater (b)	520,000,000
Pyrene	55	Leaching to Groundwater (b)	200,000,000
Total Petroleum Hydrocarbons			
TPH Diesel	8,000 (c)	See Note (c)	9,600 (c)
TPH Gasoline	2,400 (c)	See Note (c)	7,280 (c)
TPH Motor Oil	58,000 (c)	See Note (c)	(a)
TPH Recoverable	(d)	--	(a)
PCBs, Pesticides, and Herbicides			
Aldrin	1.2	Construction Worker	(a)
Alpha BHC	7.1	Construction Worker	(a)
Alpha endosulfan (Endosulfan I)	1,300	Construction Worker	(a)
Alpha chlordane	16	Construction Worker	(a)
Gamma chlordane	16	Construction Worker	(a)
Dieldrin	0.002	Leaching to Groundwater (b)	(a)
Endosulfan sulfate	1,500	Construction Worker	(a)
Endrin	0.001	Leaching to Groundwater (b)	(a)
Endrin aldehyde	91	Construction Worker	(a)
Endrin ketone	91	Construction Worker	(a)
Gamma BHC (Lindane)	17	Construction Worker	(a)
Heptachlor	0.013	Leaching to Groundwater (b)	(a)
Heptachlor epoxide	0.014	Leaching to Groundwater (b)	(a)
4,4'-DDD	89	Construction Worker	(a)
4,4'-DDE	54	Construction Worker	(a)
4,4'-DDT	4.3	Leaching to Groundwater (b)	(a)
Pentachlorophenol	42	Leaching to Groundwater (b)	(a)
Toxaphene	1.4	Construction Worker	(a)
PCB-1248 (Aroclor 1248)	1.8	Construction Worker	(a)
PCB-1260 (Aroclor 1260)	1.8	Construction Worker	(a)
Dioxin-like Compounds			
2,3,7,8-tetrachlorodibenzo-p-dioxin	0.0001	Construction Worker	(a)

TABLE 7-11
REMEDIATION GOALS FOR CHEMICALS OF CONCERN
IN SOIL AND GROUNDWATER
Oakland Army Base, Oakland, California

Notes:

- (a) Vapor intrusion is the only potentially complete exposure pathway for COCs in groundwater. Consequently, as described in Table 7-9, risk-based remediation goals for non-volatile compounds in groundwater were not calculated. However, the narrative goal is to prevent further significant increases of metals and other non-volatile COC concentrations in groundwater.
- (b) A more detailed evaluation should be considered if remediation goals based on leaching to groundwater govern the need for future remediation at RAP sites or RMP locations.
- (c) The Army's Fuel Storage Tank Sites Cleanup Levels (IT, 2000n) have been adopted as the site-specific remediation goals for petroleum hydrocarbons in soil and groundwater at the OARB.
- (d) No site-specific goal established for "TPH recoverable," which is general considered to be weathered, high molecular weight residual TPH. TPH recoverable is normally managed to control nuisance conditions (e.g., odor or deficiency of impacted soil for structural purposes).
- (e) The remediation goal for total chromium was calculated from the chromium (III) and chromium (IV) remediation goal assuming a 1:6 ratio of chromium(VI) to chromium(III), consistent with U.S. EPA Region IX Preliminary Remediation Goals (U.S. EPA, 2000).
- (f) Prefix "MAX" denotes that the calculated risk-based concentration is 100,000 mg/kg or greater. A non-risk based "ceiling limit" concentration for metals and certain SVOCs that are solids at ambient temperatures is given as 100,000 mg/kg, consistent with U.S. EPA Region IX Preliminary Remediation Goals (U.S. EPA, 2000).
- (g) Prefix "SAT" denotes risk-based value exceeds calculated soil saturation concentration, thus, the estimated saturation value is listed inside the parenthesis.
- (h) The U.S. EPA Region IX Preliminary Remediation Goal (U.S. EPA, 2000) has been adopted as the site-specific remediation goal for lead in soil.