

TABLES

**Table 1. Preliminary Remediation Goals (PRGs)*
Interim Action Record of Decision
Fort Ord, California**

Chemical	Lowest PRG	Based on Noncancer Health Effects			Based on Carcinogenesis	
		Child Resident	Adult Resident	Construction Worker	Adult Resident	Construction Worker
Acenaphthene	960	960	4,600	31,000	NA	NA
Acetone	220	220	900	8,200	NA	NA
Antimony	27	27	290	57	NA	NA
Arsenic	0.87	20	220	44	0.87	60
Barium	1,000	1,000	4,700	4,100	NA	NA
Beryllium	0.39	340	3,700	730	0.39	28
Bis(2-ethylhexyl)phthalate	13	320	1,500	1,000	13	3,200
Cadmium	8.1	34	370	73	8.1	380
Carbon disulfide	0.96	0.96	3.9	3.7	NA	NA
Carbon tetrachloride	0.025	29	190	750	0.025	8.6
Chlordane	0.14	0.97	4.6	3.2	0.14	34
Chromium VI	0.23	7.2	30	38	0.23	11
Copper	2,500	2,500	27,000	5,300	NA	NA
4,4'-DDT	0.53	8.0	38	26	0.53	130
Dieldrin	0.011	0.80	3.8	2.6	0.011	2.8
Ethylbenzene	830	830	3,700	3,900	NA	NA
Fluorene	640	640	3,100	21,000	NA	NA
Lead (a)	240	240	3,900	460	NA	NA
Mercury	20	20	210	41	NA	NA
Methyl ethyl ketone	620	620	2,900	3,300	NA	NA
2-Methylnaphthalene	640	640	3,100	2,100	NA	NA
Petroleum Hydrocarbons (b)	500	(c)	(c)	(c)	500	120,000
Napthalene	640	640	3,100	2,100	NA	NA
Nickel	130	1,400	15,000	2,900	130	6,300
Phenanthrene	640	640	3,100	2,100	NA	NA
Pyrene	480	480	2,300	16,000	NA	NA
Selenium	340	340	3,600	710	NA	NA
Silver	340	340	3,600	710	NA	NA
Tetrachloroethylene	0.16	410	2,700	11,000	0.16	54
Thallium (as Thallic oxide)	4.7	4.7	50	100	NA	NA
Toluene	190	190	770	3,700	NA	NA
1,2,4-Trichlorobenzene	49	49	210	710	NA	NA
Vanadium	470	470	5,000	1,000	NA	NA
Xylenes	130	130	520	500	NA	NA
Zinc	20,000	20,000	210,000	42,000	NA	NA

* All PRGs are in milligrams per kilogram, and are taken from the:

Draft Technical Memorandum, Preliminary Remediation Goals, Fort Ord, California. Dated June 14, 1993.

Prepared by HLA for the Sacramento COE.

These PRGs were developed according to procedures described in:

Risk Assessment Guidelines for Superfund, Volumes 1 and 2.

Prepared by the Office of Emergency and Remedial Response, EPA documents EPA/540/I-89/006 and EPA/540/I-89/001

(a) *Draft Final Basewide Background Soils Investigation.* Dated March 15, 1993

Prepared by HLA for the Sacramento COE.

(b) This PRG is based on maximum concentrations of individual carcinogenic and non-carcinogenic constituents in used motor oil.

(c) Calculated value exceeds 100% of soil, indicating noncancer health effects would not be expected at any soil concentration.

NA = Not available

**Table 2. Summary of Interim Action Alternative Screening Evaluation
Interim Action Record of Decision
Fort Ord, California**

Selection Criteria	Alternative 1: No Action	Alternative 2: Excavation with Soil Treatment, Recycling, and/or Disposal
Protection of human health and the environment	Not protective	Protective
Compliance with ARARs	May not trigger ARARs if soil left in place	In compliance, except a waiver is invoked as noted in Section 2.12.2
Long-term effectiveness and permanence	Not effective in the long-term	Likely to be effective in the long-term considering the use of conservative Target Cleanup Concentrations
Reduction of waste toxicity, mobility, and volume through treatment	No reduction of toxicity, mobility, or volume	Reduction of toxicity and mobility of chemicals in soil. May reduce volume of contaminated soil through treatment
Short-term effectiveness, including timeliness	Not effective or timely	Effective and timely
Implementability	Implementable	Implementable
Cost (Estimated maximum net present value)	\$19,000,000 ⁽¹⁾	\$24,000,000 ⁽²⁾
State acceptance	Not acceptable	Acceptable
Community acceptance	Not acceptable	Acceptable

Notes:

(1) Based on a 5 percent interest rate over 30 years.

(2) Estimated maximum cost based on excavating soil at all 41 sites. Actual costs are likely to be significantly lower.

Table 3. Applicable or Relevant and Appropriate Requirements
 Alternative 2: Excavation with Soil Treatment, Recycling, and/or Disposal
 Interim Action Record of Decision
 Fort Ord, California

Source	Regulation, Standard, or Level of Control	Description	Applicable or Relevant and Appropriate	Comments
Coastal Zone Management Act	16 USC 1451	These regulations require activities conducted in the coastal zone (the area west of Highway 101) to be completed in a manner that is consistent with the state's coastal zone management program.	Applicable* Location-Specific Requirement	The coastal zone at Fort Ord lies between U.S. Highway 1 and the ocean. None of the nine preliminary identified IA areas lie within this coastal zone; but three of the 41 CERCLA sites are within the coastal zone.
Toxic Substances Control Act	40 CFR 761(D)	This regulation covers the handling and disposal of PCB-containing materials.	Applicable* Chemical-Specific Requirement	Although PCBs have not been detected in soil samples from any of the preliminarily identified IA areas, several of these areas contained heavy oils. If PCBs are present in these oils, these requirements would be considered applicable.

* Site characterizations for all of the proposed IA sites are currently being completed. Thus, several requirements listed here as ARARs may be found to be not applicable once these reviews are completed for all the IA areas.

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Source	Regulation, Standard, or Level of Control	Description	Applicable or Relevant and Appropriate	Comments
Land Disposal Restrictions	Title 22 CCR, Chapter 18, Article 1, Section 66266.7	Requires laboratory analysis of wastes intended for landfill disposal to establish that the waste is not restricted from landfill disposal.	Applicable Action-Specific Requirement	Soil excavated from IA areas may subsequently be found to be hazardous or designated waste. Treated and untreated hazardous or designated soil that cannot be recycled will be shipped for disposal off Fort Ord.
Monterey Bay Unified Air Pollution Control District (MBUAPCD)	Regulation II (New Sources) and Regulation X (Toxic Air Contaminants)	Establishes requirements for new stationary sources of air pollution, and the appropriate level of abatement control technology for toxic air contaminants.	Relevant and Appropriate Chemical-Specific Requirement	The FOSTA would need to meet the substantive requirements of these MBUAPCD regulations because soil treatment, such as SVE or biodegradation, may generate toxic air emissions. Levels of these emissions are anticipated to be minimal to none.
National Primary and Secondary Ambient Air Quality Standards (NAAQS)	40 CFR Part 50	Establishes NAAQS for criteria pollutants: particulate matter (PM10), sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone, and lead.	Applicable Chemical-Specific Requirement	Although none of these pollutants are present at the preliminarily identified IA areas, they may be encountered or generated during IA excavation activities.
Standards for the Management of Hazardous Waste	Title 23 CCR, Chapter 15, Article 2; Waste Classification and Management	This regulation establishes and defines procedures and criteria for identification and listing of designated and hazardous wastes.	Applicable Chemical-Specific Requirement	This provision applies to the discharge of soil leaving the FOSTA.
Federal Endangered Species Act	50 CFR Parts 200 and 202	These regulations provide for the protection of endangered or threatened species through an evaluation of affected habitats in the IA area, as well as consultation with the appropriate government agencies.	Applicable Location-Specific Requirement	Fort Ord does contain endangered species of plants and animals. Each IA area will be screened for potential environmental impacts to such species and results will be included as part of the IA area Approval Memorandum that will recommend measures, as necessary, to ensure compliance with this ARAR.
National Archaeological and Historic Preservation Act	36 CFR Part 65	These regulations provide for the protection of any historically significant artifacts that may be unearthed during excavation activities.	Applicable Location-Specific Requirement	No historically significant artifacts have been uncovered during previous investigation activities at Fort Ord, and none are expected to be unearthed at the IA areas. Appropriate actions will be taken, however, should any such artifacts be unearthed.

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Source	Regulation, Standard, or Level of Control	Description	Applicable or Relevant and Appropriate	Comments
Standards Applicable to Generators of Hazardous Waste	Title 22 CCR, Chapter 12, Article 3, Section 66262.34, Accumulation Time	A generator may accumulate hazardous waste: for 90 days or less.	Applicable Action-Specific Requirement	A waiver of this requirement will be invoked to allow storage for excavated hazardous soil until sufficient volumes are obtained for treatment, recycling, or disposal.
Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities	Title 22 CCR, Chapter 14, Article 2, Section 66264.14	Owners and operators of hazardous waste treatment, storage, or disposal (TSD) facilities must prevent the unknowing entry of persons or livestock onto the active portions of the facility; in addition, warning signs must be posted.	Applicable Action-Specific Requirement	IA areas will be restricted from public access.
Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities	Title 22 CCR, Chapter 14, Article 7, Section 66264.119; Post Closure Notices	Under this requirement, a restriction is placed on the deed which constrains future uses of the property.	Applicable Action-Specific Requirement	No unacceptable concentrations of chemicals are expected to remain at the FOSTA site after closure. Further remedial actions, as well as possible deed restrictions, may be required as part of the final base-wide ROD for an IA area.
Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities	Title 22 CCR, Chapter 14, Article 16, Section 66264.601	These regulations apply to facilities that treat, store, or dispose of hazardous waste in miscellaneous units. Owners and operators of TSDs at which hazardous waste is stored in miscellaneous units must locate, design, construct, operate, maintain, and close those units in a manner that is protective of human health and the environment.	Applicable Action-Specific Requirement	Carbon drums may be used as part of the FOSTA treatment activities. These carbon drums may be considered miscellaneous treatment units.

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Source	Regulation, Standard, or Level of Control	Description	Applicable or Relevant and Appropriate	Comments
Standards for owners and operators of hazardous waste treatment, storage, and disposal facilities	Title 22 CCR, Chapter 14, Use and Management of Containers; Article 9, Sections 66264.171-178	Establishes requirements for the use of containers to store hazardous waste.	Applicable Action-Specific Requirement	Excavated soil or decontamination water subsequently characterized as hazardous may be stored in containers at an A-1 area or at the FOSTA.
	Section 66171; Condition of Containers	Containers for hazardous waste must be maintained in good condition.	Applicable Action-Specific Requirement	See above
	Section 66172; Compatibility of Waste in Containers	Containers for hazardous waste must be compatible with the wastes stored in them.	Applicable Action-Specific Requirement	See above
	Section 66173; Management of Containers	Containers holding hazardous waste must be closed during storage except when necessary to add or remove waste.	Applicable Action-Specific Requirement	See above
	Section 66174; Inspections	Containers and container storage areas must be inspected weekly for leaks or deterioration.	Applicable Action-Specific Requirement	See above
	Section 66175; Containment	Container storage areas must be designed according to the requirements of this section.	Applicable Action-Specific Requirement	See above
	Section 66176; Special Requirements for Ignitable or Reactive Waste	Container of ignitable or reactive wastes must be stored at least 15 meters from a facility's property line.	Applicable Action-Specific Requirement	See above
	Section 66177; Special Requirements for Incompatible Waste	Incompatible wastes must not be placed in the same container, or in unwashed containers which previously held incompatible wastes.	Applicable Action-Specific Requirement	See above
	Section 66178; Closure	At closure, all hazardous waste and waste residues must be removed and remaining containment structures decontaminated.	Applicable Action-Specific Requirement	See above