

Tentative Order: Hamilton Army Airfield

TABLE 1
Army BRAC Program Sites

From ROD/RAP

Inboard Area Sites

Revetment 18/Building 15
Building 20
Building 26
Building 35/39 Area
Building 41 Area
Building 82/87/92/94/Area (including storm drains)
Building 84/90
Building 86 (including storm drains)
East Levee Generator Pad
Former Sewage Treatment Plant (including sanitary and industrial waste lines)
Northwest Runway Area
Onshore Fuel Line

- 54-inch-diameter storm drain segment
- Northern segment
- Hangar segment

Perimeter Drainage Ditch (PDD)

- Lined outside HWRP-proposed channel cut
- Lined within HWRP-proposed channel cut
- Unlined

PDD Spoil Piles A, B, C, D, E, F, G, H, I, J, K, L, M, and N
Revetments 1 through 17 and 19 through 28 (including storm drains)
Tarmac East of Outparcel A-5

Coastal Salt Marsh Sites

Antenna Debris Disposal Area
Area 14
Boat Dock

- Channel area
- Nonchannel area

East Levee Construction Debris Disposal Area (including burn pit)
Former Sewage Treatment Plant Outfall
High Marsh Area

- Proposed channel cut
- Nonchannel cut

Historic Outfall Drainage Ditch
Outfall Drainage Ditch

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TABLE 2
Summary of Preferred Alternatives

Alternative	From ROD/RAP Sites
1—No Further Action	Revetment 18/Building 15 Building 20 Building 84/90 Perimeter Drainage Ditch (PDD) Spoils Piles E and H East Levee Generator Pad Tarmac East of Outparcel A-5 Northwest Runway Area Revetments 5, 8 through 10, 15, 17, 20, 24, 27, and 28 Radiological Waste Disposal Cylinders
2—Excavation and Offsite Disposal	East Levee Construction Debris Disposal Area (including burn pit) High Marsh Area <ul style="list-style-type: none"> • proposed channel cut • nonchannel cut Historic Outfall Drainage Ditch Outfall Drainage Ditch Boat Dock <ul style="list-style-type: none"> • nonchannel area • channel area Area 14 Former Sewage Treatment Plant Outfall Antenna Debris Disposal Area Building 35/39 Area PDD Unlined (Addressing DDTs > 1 ppm) Building 41 Area PDD Spoils Pile F Revetments 6 and 7 PDD, lined portion within proposed wetland channel
3—Manage In-Situ, with Monitoring, Maintenance, for Army BRAC Sites	Former Sewage Treatment Plant (including sanitary and industrial waste lines) Building 26 Building 35/39 Area Building 82/87/92/94/Area (including storm drains) Building 86 (including storm drains) PDD (lined portion outside proposed wetland channel) PDD (unlined) PDD Spoil Piles A, B, C, D, G, I, J, K, L, M, and N Onshore Fuel Line <ul style="list-style-type: none"> • 54-inch-diameter Storm Drain Segment • Northern Segment • Hangar Segment Revetments 1 through 4, 11 through 14, 16, 19, 21 through 23, 25, and 26
4—Manage Onsite, with Monitoring and Maintenance, for Army Civil Works Issues	Inboard Area-Wide DDTs and PAHs in soils adjacent to the runway

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TABLE 3
Environmental Action Goals

From ROD/RAP

Contaminant	Environmental Action Goals ^a (ppm)		Source ^b	
	Coastal Salt Marsh	Inboard Area	Coastal Salt Marsh	Inboard Area
	Metals			
Arsenic	23	16.7	Site-Specific Sediment Ambient	BRAC Soils Ambient
Barium	188	190	Site-Specific Sediment Ambient	BRAC Soils Ambient
Beryllium	1.68	1.03	Site-Specific Sediment Ambient	BRAC Soils Ambient
Boron	71.6	36.9	Site-Specific Sediment Ambient	BRAC Soils Ambient
Cadmium	1.8	1.2	Site-Specific Sediment Ambient	ER-L
Chromium	149	112	Site-Specific Sediment Ambient	SF Bay Ambient
Cobalt	26.7	27.6	Site-Specific Sediment Ambient	BRAC Soils Ambient
Copper	88.7	68.1	Site-Specific Sediment Ambient	SF Bay Ambient
Lead	46.7	46.7	ER-L	ER-L
Manganese	1260	943	Site-Specific Sediment Ambient	BRAC Soils Ambient
Mercury	0.58	0.43	Site-Specific Sediment Ambient	SF Bay Ambient
Nickel	132	114	Site-Specific Sediment Ambient	BRAC Soils Ambient
Silver	1	1	ER-L	ER-L
Vanadium	136	118	Site-Specific Sediment Ambient	BRAC Soils Ambient
Zinc	169	158	Site-Specific Sediment Ambient	SF Bay Ambient
Semivolatile Organic Compounds (including PAHs)				
PAHs, total	4.022	4.022	ER-L	ER-L
Pentachlorophenol	0.017	--	HHERA—Marine Invertebrate	--
Phenol	0.13	--	HHERA—Marine Invertebrate	--
Petroleum Hydrocarbons				
TPH-dl/TPH-motor ^c	144	144	Presidio—Saltwater Ecological Protective Zone	Presidio—Saltwater Ecological Protective Zone
TPH-g/JP-4	12	12	Presidio—Saltwater Ecological Protective Zone	Presidio—Saltwater Ecological Protective Zone
Pesticides/Herbicides/PCBs/Dioxins				
BHCs, total	0.0048	--	Lindane AET (polychaete)	--
Chlordanes, total	0.00479	--	PEL	--
DDTs, total ^d	0.03	0.03	RART—California clapper rail	RART—California clapper rail
Dichlorprop	0.14	--	HHERA—California clapper rail	--
Endrin Aldehyde	0.0064 ^e	--	HHERA—Marine Invertebrate	--
Heptachlor	0.0088 ^f	--	HHERA—Marine Invertebrate	--
Heptachlor epoxide	0.0088	--	HHERA—Marine Invertebrate	--
MCPA	7.9 ^g	--	HHERA—Marine Invertebrate	--

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Environmental Action Goals

From ROD/RAP

Contaminant	Environmental Action Goals ^a (ppm)		Source ^b	
	Coastal Salt Marsh	Inboard Area	Coastal Salt Marsh	Inboard Area
	MCPP	3.0	--	PQL
Methoxychlor	0.09	--	HHERA—Marine Invertebrate	--
PCBs, total	0.09	--	HHERA—California clapper rail	--
Dioxins (Total TCDD TEQ) ^h	0.000021	--	EPA	--

NOTE: This is a comprehensive list of action goals. All action goals do not apply at each site. Site-specific action goals are discussed in Sections 2.2 and 3.2. of the ROD/RAP

-- Not applicable

TCDD = tetrachlorodibenzo-p-dioxin

TEQ = toxicity equivalence

^a If contamination above the Environmental Action Goals is found in the coastal salt marsh beyond those areas already identified as requiring remediation, the Army and State will determine whether additional or continued excavation is warranted by considering the potential risk to public health and the environment from the residual contaminants and the resulting habitat destruction.

^b The sources of the Environmental Action Goals are:

- **Metals:** Site-specific ambient levels from Appendix A - U.S. Army, 2001, *Final Human Health and Ecological Risk Assessment*; Effects Range-Lows (ER-Ls) from Long, E.R, D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995, "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," *Environmental Management*, 19:81-97; *San Francisco Bay RWQCB Staff Report: Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments*, May 1998.
- **DDTs:** Value developed using exposure parameters proposed by USFWS and agreed to by the DTSC, RWQCB, and the Army.
- **Petroleum hydrocarbons:** *Report of Petroleum Hydrocarbon Bioassay and Point-of-Compliance Concentration Determinations; Saltwater Ecological Protection Zone; Presidio of San Francisco, California*, Dated December 1997.
- **PAHs:** ER-Ls from Long, E.R, D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995, "Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments," *Environmental Management*, 19:81-97.
- **SVOCs:** US Army, 2001, *Final Human Health and Ecological Risk Assessment*.
- **Pesticides, Herbicides, PCBs, and Dioxins:** Table 5-1 from the US Army, 2001, *Final Human Health and Ecological Risk Assessment* (marine invertebrate-amphipod and California clapper rail); practical quantitation limits (PQLs) from previous sampling events; U.S. EPA, 1993a, *Interim Report on Data and Methods for Assessment of 2,3,7,8-Tetrachlorodibenzo-p-dioxin Risks to Aquatic Life and Associated Wildlife*. (EPA/600/R-93/055); for lindane, Screening Quick Reference Tables (SQiRTs), NOAA, updated September 1999. DDT value developed using exposure parameters proposed by USFWS and agreed to by DTSC, RWQCB, and the Army.

^c The action goal for TPH diesel/TPH motor oil is also used as the action goal for UHE (unknown hydrocarbons extractable)

^d The total DDT concentration in the Coastal Salt Marsh Area or Inboard Area shall not exceed 1.0 ppm. Areas with total DDT concentrations greater than 1.0 ppm shall be excavated and disposed of offsite.

^e The goal for Endrin Ketone is used as a surrogate for Endrin Aldehyde

^f The goal for Heptachlor Epoxide is used as a surrogate for Heptachlor

^g The goal for 2,4,D is used as a surrogate for MCPA

^h Dioxin is only considered a COC at the ELCCDA Burn Pit