Executive Summary

This Focused Feasibility Study (FFS) was originally prepared by IT Corporation (IT) for the U.S. Army Corps of Engineers (USACE), Sacramento District, under Contract No. DACW05-95-D-001, Delivery Order 0006, of the Total Environmental Restoration Contract. Based on comments received from regulatory agencies, the February 2001 version of the FFS prepared by IT was revised by CH2M HILL at the request of USACE. The feasibility study is focused in the sense that development of remedial alternatives was streamlined to consider only applications that are consistent with the future wetland land use scenario. This final FFS reflects the revisions made by CH2M HILL.

This FFS was prepared for the Hamilton Army Airfield (HAAF) Inboard Area. HAAF is a former military installation located on a diked and subsided bayfront parcel in the City of Novato, California. The Inboard Area sites and other portions of HAAF were identified for operational closure under the Base Realignment and Closure (BRAC) Act of 1988. For the purpose of environmental remediation under the Comprehensive, Environmental, Resource, Compensation and Liability Act (CERCLA), the Inboard Area sites are distinguished from other BRAC areas at the former HAAF.

Historically, the Inboard Area was part of a tidal wetland. The Inboard Area will be transferred to the California State Coastal Conservancy (SCC) through the BRAC process and become part of the Hamilton Wetland Restoration Project. The USACE, San Francisco District, will manage the project, and the SCC is the local sponsor.

The purpose of the FFS is to identify sites within the Inboard Area that require further action and to develop, evaluate, and recommend an alternative for each Inboard Area site that would be protective of human health and the environment during the development and maturation of the wetland. The following steps were conducted for the FFS effort:

- Develop a conceptual model for the FFS evaluation based on estuarine and human receptors at each of the Inboard Area sites (except the Northwest Runway Area which has only upland receptors) and additional freshwater receptors at Building 82/87/92/94 Area; Spoils Piles A, B, and N; and the PDD-Unlined Portion.
- Review data collected by remedial investigation (RI) activities and during previous and subsequent investigative activities.
- Analyze the results of the human health and ecological risk assessment (U.S. Army, 2001) provided in Appendix A to determine what sites proceed forward for further evaluation.
- Review hazard indexes (HI) for receptors at each site and determine if any HIs are greater than 1.0. If no HIs are greater than 1.0, no further action is required. If any HIs are greater than 1.0, determine if site-specific FFS chemicals of potential concern (COPCs) are present.

- Review ecological hazard quotient (HQ), human health HQ, and human health incremental lifetime cancer risk (ILCR) and determine if the HQ's are greater than 1.0 or the ILCR is greater than $1x10^{-6}$. If the HQs are less than 1.0 and the ILCR is less than $1x10^{-6}$, the chemical is not a site-specific FFS chemical of potential concern (COPC). If either HQ is greater than 1.0 or the ILCR is greater than $1x10^{-6}$, the chemical is a site-specific FFS COPC.
- Review comparator values developed through negotiations with the Regulatory Agencies and Resource Trustees.
- Compare the site-specific FFS COPCs to the comparator values.
  - If all 95 UCL (or maximum in some cases) COPC concentrations are less than the comparator values, the site does not require further action.
  - If all 95 UCL (or maximum in some cases) are greater than the comparator value, the site requires further evaluation, and the site-specific FFS COPC becomes a chemical of concern (COC).
- Develop remedial action objectives (RAO) and applicable or relevant and appropriate requirements (ARAR).
- Identify remedial alternatives.
  - Alternative 1 – No Further Action
  - Alternative 2 – Institutional Controls
  - Alternative 3 – Excavation and Offsite Disposal
  - Alternative 4 – Excavation and Onsite Disposal
- Conduct detailed and comparative analyses of the remedial alternatives for each Inboard Area site with COCs.
- Recommend the preferred alternative for each Inboard Area site.

The FFS evaluates 57 Inboard Area sites. However, during the FFS evaluation of alternatives, the number of sites was reduced to 56 when Building 86 was combined with the Building 82/87/92/94 Area. The FFS recommends No Further Action for 18 sites, Institutional Controls for 34 sites, and Excavation and Offsite Disposal for four sites. Table ES-1 provides a list of the preferred remedial alternatives recommended for each of the 56 Inboard Area sites.

TABLE ES-1
Preferred Remedial Alternative Summary
Focused Feasibility Study Evaluation

Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation and Offsite Disposal	Alternative 4 – Excavation and Onsite Disposal
Former Sewage Treatment Plant		X		
Revetment 18/ Building 15	X[a]			
Building 20	X[b]			
Building 26		X		
Building 35/39 Area		X		
Building 41 Area			X	
Building 82/87/92/94 Area and Building 86		X		
Building 84/90 Area	X[b]			
Perimeter Drainage Ditch (PDD)		X		
PDD Spoils Pile A		X		
PDD Spoils Pile B		X		
PDD Spoils Pile C	X[b]			
PDD Spoils Pile D		X		
PDD Spoils Pile E		X		
PDD Spoils Pile F			X	
PDD Spoils Pile G		X		
PDD Spoils Pile H	X[b]			
PDD Spoils Pile I		X		
PDD Spoils Pile J		X		
PDD Spoils Pile K		X		
PDD Spoils Pile L	X[c]			
PDD Spoils Pile M		X		
PDD Spoils Pile N		X		
East Levee Generator Pad	X[b]			
Onshore Fuel Line (ONSFL)-54-inch Line		X		
ONSFL-Hangar Segment		X		
ONSFL-Northern Segment		X		

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Site	Alternative 1 – No Further Action	Alternative 2 – Institutional Controls	Alternative 3 – Excavation and Offsite Disposal	Alternative 4 – Excavation and Onsite Disposal
Northwest Runway Area		X		
Tarmac East of Outparcel A-5	X[b]			
Revetment 1		X		
Revetment 2		X		
Revetment 3		X		
Revetment 4		X		
Revetment 5	X[a]			
Revetment 6			X	
Revetment 7			X	
Revetment 8	X[b]			
Revetment 9	X[b]			
Revetment 10	X[b]			
Revetment 11		X		
Revetment 12		X		
Revetment 13		X		
Revetment 14		X		
Revetment 15	X[c]			
Revetment 16		X		
Revetment 17	X[b]			
Revetment 19		X		
Revetment 20	X[c]			
Revetment 21		X		
Revetment 22		X		
Revetment 23		X		
Revetment 24	X[b]			
Revetment 25		X		
Revetment 26		X		
Revetment 27	X[b]			
Revetment 28	X[a]			

[a] Site did not have a site hazard index exceeding 1.0; therefore, it was screened out when compared to risk assessment results.
[b] Site did not have site-specific FFS chemical of potential concern 95 UCL (or maximum in some cases) concentrations exceeding the comparator value; therefore, it does not require remedial action.
[c] Site suitable for risk management considerations. COCs are at their comparator values.