

**EPA, NOAA, and RWQCB Comments On the
Focused Feasibility Study for Hamilton Army Airfield Inboard Sites (February 26, 2001)**

No.	Comments	Responses
EPA Comments, no date		
1	<p><u>Estimates of exposure.</u> A major factor in the completion of the CERCLA process at this site involves the incorporation of the future land use plans into the remedial investigation (RI) and the feasibility study (FS). The remedial investigation efforts have shown a significant level of risk in various locations of the site in the direct area of the proposed wetlands. While the Army suggested that the deposition of dredge spoils at Hamilton would reduce if not eliminate the exposure pathway in the construction of the wetlands, there were little if any data to support the notion that all of the sites with significant risk would be eliminated by this assumption. There still remains questions about the final design of the wetlands and how many of the contaminated sites will be exposed to future receptors of the wetlands.</p>	<p>The Army has consistently advocated that residual contamination at sites that pose a significant risk be removed and disposed of offsite. The Army believes that no sites which pose a significant risk will remain in the project and all potential risks are addressed by the alternatives selected.</p>
2	<p><u>Estimates of toxicity/impact.</u> Questions raised of actual risk is complicated by uncertainty involving accurate measures of exposure especially in light of the final wetlands design. The best estimates of toxicity relationships between exposure concentrations and effects on important receptors include uncertainty that cannot be minimized with the available site specific data. Risk levels at locations where contaminants are proposed for leaving in place can range from low level manageable risk to high level significant risk depending upon the components of the estimates. The range of possible acute toxicity is highly uncertain depending upon the contaminant and the receptor. The toxicity tests performed did not sufficiently satisfy the questions of residual or future toxicity. The predictions of upper trophic level impacts include</p>	<p>Uncertainties associated with the accuracy of the measures of exposure are recognized and discussed in the Risk Assessment report. The Army agrees that the risk assessment has significant uncertainties and therefore, has conservatism built in.</p> <p>Since the date that the original FFS was prepared, the RART has agreed that three feet of cover would be protective of biological receptors and will prevent exposure. The FFS has been revised to describe performance criteria that the final wetland design must meet to place cover, monitor the cover and protect against erosion or excavation. Long-term monitoring will ensure that the alternatives selected meet RAOs and are protective of human health and the environment. The FFS has been revised</p>

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	uncertainty in the estimates of all the components of contaminant doses that can only be reduced by site specific observations.	to include a discussion of long-term monitoring (see also response to DTSC comments).
3	<p>The footprint of the wetland channels and berms. Discussions have taken place recently that contribute to the understanding of the overall plan, but the Army has been unable to provide any definitive information. While it is common understanding among the project members that the actual footprint of the wetland may vary, it is also common belief among the RART that sufficient information has not been presented to show that significant risk levels will be reduced by the footprint of the wetlands. This is an important assumption that must be demonstrated in a way to reassure the RART and the public that the wetlands is part of an overall plan that will provide direct benefit as well as reducing risk from contaminants. The footprint of the wetlands must show that scouring of areas left exposed in the final design will not result in significant exposure of contaminant to receptors.</p>	<p>See Response to Comment 1.</p> <p>In addition, the performance criteria for the wetland final design will specify that the design must provide a map of the residual contamination, the level of cover that will be provided, and the channel and scour areas. The design must meet the RAOs either by providing for cover or by eliminating COCs that exceed the chemical-specific RAOs. The Army will ensure that the final wetland design and the grading plans for the final wetland design meet the specified performance criteria and are protective of the future wetland receptors. Through a formal process, the regulatory agencies will review these plans.</p> <p>Areas that pose significant risk have been recommended for removal versus management on site.</p>
4	EPA recommends that the Army Corps of Engineers San Francisco District provide the footprint of the wetlands with the best estimates of movement of channels and berms.	This map will be provided as part of the final design as noted in the response to Comment #3. The performance criteria specified in Alternative 2 ensure that any channels, berms, movement of sediment etc, will meet the minimum requirements for cover necessary to protect human health and/or the environment at each site requiring action during the development and maturation of the wetland.
5	EPA recommends that the Army Corps of Engineers Sacramento District remove any contaminants in the area of the wetlands that will be exposed to receptors (less than 3 feet of cover) that is expected to result in a significant risk to future site receptors.	The FFS has been revised to indicate that if the performance criteria specified in Alternative 2 are not practical (i.e. three feet of cover, erosion protection, monitoring, and prevention of excavation), then residual contamination greater than chemical-specific RAOs should be removed and disposed of offsite in accordance with Alternative 3.
6	EPA recommends that the Army provide a monitoring plan of the site (to be jointly defined by agency and Army personnel)	The Army agrees that a monitoring plan is needed. The Army will work with the Wetland Restoration Team to develop a

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	to insure that contaminant levels remaining on the site are not impacting the overall biological productivity of the wetlands.	monitoring plan that meets the requirements of the performance criteria specified in Alternative 2. Significant monitoring will occur as part of the wetland restoration program. To be effective, the monitoring plan must be developed following the selection of a final design. See response to comment 2.
7	EPA recommends that this monitoring plan include contingency plans for stepping out as well as corrective actions.	The FFS has been revised to include examples of the types of actions that should be considered in the monitoring plan.
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RWQCB Comments, April 27, 2001		
A	<p>General Comments</p> <p>The Army presented its conclusions regarding the selected alternative for individual inboard sites in Section 5.0 of the report, and in summary at Table ES-1 (Table 5-1) entitled Preferred Remedial Alternative Summary. In general, Board staff agrees with the Army's conclusions regarding those sites identified as no further action (NFA). Board staff also agrees with the Army's conclusions regarding those sites identified for excavation. However, in some cases the excavation areas identified may need further delineation (see specific comments provided below in comment number 8). There are a few sites where the remaining contamination is somewhat elevated and Board staff is advising the Army to reconsider excavation. Those sites include: Building 35/39, near the area of the proposed channel opening, due to DDT and its metabolites, DDD and DDE (DDTs) contamination along the pump station outfall pipe; the most northern section of the Perimeter Drainage Ditch (PDD) due to DDTs contamination (4.5 to 9.5 ppm); and select locations along the onshore fuel line (incomplete data reported on figure B-13 precludes staff from making specific recommendations). The alternative selected</p>	<p>With respect to the two specific areas mentioned in this comment, the Building 35/39 pump station outfall pipe and the most northern portion of the Perimeter Drainage Ditch, the Army believes that Alternative 2 will meet RAOs and be protective of human health and the environment. The definition of Alternative 2 has been re-stated in the FFS to indicate if the performance criteria for cover cannot be met, then Alternative 2, Institutional Controls, requires that the sites be excavated in accordance with Alternative 3. If Alternative 3 is selected, then the FFS indicates that confirmation sampling would be conducted either prior to excavation activities or following excavation activities to ensure that RAOs can be met.</p> <p>The data posted on Figure B-13 was checked. All COCs with concentrations above comparator values have been posted.</p>

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	<p>for the remaining sites is Alternative 2 – institutional controls. In general, Board staff does not have major objections to the selection of this alternative for many of these sites. However, there are a few general issues that staff would like to see addressed in the FFS. Those issues are discussed below.</p>	
B	<p>The FFS is missing one major element, a discussion of the scour/erosion potential for soils left in-place for Alternative 2 – institutional controls. In particular there is concern regarding the design constraints associated with reducing scour/erosion in the area where the channel is expected to develop. This is especially true with respect to the area where the revetments are located. More information needs to be provided regarding the institutional controls and their potential impacts on the resulting habitat values established in the wetland.</p>	<p>Additional text has been added into the FFS to discuss the relationship between the final wetland design and the performance criteria for the placement, monitoring, and protection of three feet of stable cover. The performance criteria specified in the FFS are designed to provide flexibility to the final wetland design so that particular habitat values can be established within the wetland. In particular, scour/erosion control and excavation protection will be instituted to protect the minimum cover depth wherever, residual COC contamination is known to exist above the comparator values.</p>
C	<p>The discussion of Alternative 2 includes language that states “Exposure point concentrations would be reduced to acceptable levels through the placement of dredge material over the impacted areas” (see Table 4-1). For some of these sites the contamination is already buried at depth on the site and there is no complete exposure pathway for ecological receptors. A complete exposure pathway would only exist where significant scour or erosion is expected to occur. Board staff is concerned about unnecessarily burdening the wetlands design team and the restoration project with requirements for placement of fill.</p>	<p>The FFS has been revised to reflect the fact that some contamination is already buried at depth. The performance criteria for the final design does not require the design team to place additional cover in areas where the three feet of cover criteria is currently met and the requirements for control of erosion and excavation can be met in the final design. In addition, the performance criteria does not require cover on areas such as revetments that are currently covered by concrete. Erosion protection and monitoring is required for these areas however. This adjustment in the FFS should not place a burden on the design team.</p>
D	<p>Another concern regarding the FFS is that it does not discuss the area-wide DDTs contamination. The FFS only addresses DDTs found in accumulation areas. However, DDTs are the major risk driver for many of the sites screened through the FFS Alternative Selection Process (Figure 1-2), where Alternative 2 – institutional controls is recommended. Those sites include the Former Sewage Treatment Plant, Building</p>	<p>Area-wide DDT contamination is a result of years of legal application and is not considered to be a CERCLA release by the Army. Since the FFS includes only CERCLA releases, the area-wide DDTs are not addressed. This issue will be addressed in the ROD/RAP.</p>

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	35/39 Area, Perimeter Drainage Ditch - unlined portion, and Spoils Pile A, D, G, J, and K. BRAC soils contaminated with DDTs need to be addressed for the whole site and not in a piecemeal fashion. In addition, the PDD is connected to a storm drain line at the northern end of the runway that has not been fully investigated for possible DDTs contamination.	
E	It would be helpful to have all data related to contaminants of concern (COCs), as identified in the FFS, added to the Figures provided in Volume 2.	The FFS figures show all the data where the 95 UCL concentrations of COPCs exceed the corresponding comparator values (i.e. the figures show COCs). Posting all of residual concentrations that are below the comparator values would make the figures extremely difficult to read and interpret. Since the COC values are used to determine the areas requiring action, these figures should be useful to understanding the basis for remedial action.
1	<p>Specific Comments</p> <p>Figure 1-2: This flow chart seems to indicate that if the risk assessment indicates an exceedance of an ecological receptor HQ for any one constituent, but not an exceedance for human health risk, that No Further Action (NFA) will be recommended. The text differs from what is presented in Figure 1-2. Please edit the Figure to reflect the text in section 1.10. Figure 2-1 also needs to be modified.</p>	The figure and text have been revised to address this comment and clarify the information presented. Figure 1-2 has been renamed Figure 1-3 in the current version of the FFS.
2	<p>Section 1.4.1 Existing Hydrogeological Setting: Board staff agree that groundwater beneath the BRAC property is not now, nor is likely in the future to be used for drinking water, based on low yield and high TDS. However, groundwater at the site should meet surface water quality objectives where there is a likelihood of discharge to the San Francisco Bay. A better discussion of the available analytical data for groundwater and a comparison to surface water quality objectives needs to be provided somewhere in the document. Board staff has reviewed the available groundwater data presented in the Comprehensive Remedial Investigation</p>	Groundwater issues at the site have been addressed in three separate studies including the Final Environmental Investigation Report , Volumes I and II (ESI, 1993); Additional Environmental Investigation of BRAC Property, Final Report (WCFS, 1996); and the Comprehensive Remedial Investigation Report for the BRAC Property, Final Report (IT, 1999a). All of these reports have been reviewed by the RART and it was agreed during that time that further groundwater studies or long term monitoring of groundwater conditions was not warranted.

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	<p>Report (RIR), dated April 1999. While the available data do not indicate that significant potential impacts to groundwater have occurred, there are some concerns about the lack of adequate data. For example, no site was monitored over consecutive quarterly monitoring events and little dissolved metals data exist.</p>	<p>Groundwater at HAAF was impacted by Army activities. Isolated detections of contaminants were identified during site investigations at nine Parcel A Sites (FSTP, Building 35/39 Area, Building 41 Area, Building 82/87/92/94, Building 86, Northwest Runway Area, and Revetment 6, 12, and 26) and six Parcel B sites (Building 20, Building 84/90, Revetments 5, 9, 10, and Revetment 18/Building 15 area). However, the contamination at these sites did not indicate the presence of groundwater plumes.</p> <p>During the FFS, a review was completed for data collected from groundwater wells located in the vicinity of the Inboard Area sites where potential scour within channels may occur (based on mathematical modeling) during the development and maturation of the wetland (see Appendix D, Section 5.0). The review compared groundwater quality to selected surface water quality objectives in areas where groundwater might come into contact with surface water during the development and maturation of the wetland. The results of this review concluded that groundwater does not pose a threat to surface water or aquatic receptors.</p> <p>Groundwater beneath the property is not now, nor is likely to be, used for drinking water. There are 11 production wells within a 2-mile radius of HAAF and 1 well is within 1 mile of the site boundary. The majority of the wells are used for domestic or irrigation supply, and wells appear to be outside the influence of historical HAAF activities.</p>
3	<p>Section 1.7 Description of Base Realignment and Closure Sites: How will the seasonal wetland be dealt with outside of this Army cleanup process? The ball field area (location of pile N) is a Navy parcel, yet it is being addressed in the Army's FFS.</p>	<p>The seasonal wetlands is already on transferred FUDS property and will not be included in the BRAC documentation. Further any actions necessary for this site are the responsibility of the FUDS program. Spoil Pile N will continue to be included in the Army BRAC documentation.</p>

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4	<p>Section 1.7.6 Building 82: Your discussion of building 82 did not include a discussion of the follow-up work being conducted with regard to the groundwater. In September of 2000, the Army advised that a work plan for this area was being prepared. To date, Board staff has not received a work plan.</p>	<p>The workplan is currently being prepared by the Army concurrently with other tasks being completed as part of the BRAC process.</p>
5	<p>Table 2-2: Footnote m is incorrect – the TEL is a Threshold Effects Level and not Tetra ethyl lead. Footnote k should read, based on cleanup values for sediment for the Saltwater Ecological Protection Zone at the Presidio of San Francisco. Both the values for diesel/motor oil and gasoline should have the same footnote.</p>	<p>The footnotes were changed in Table 1-3 (Table 2-2 was renamed Table 1-3 during revisions of the FFS) in accordance with this comment.</p>
6	<p>Table 2-3 – Upland screening values for TPH. The values used for the inboard “to be wetland” sites are protective of benthic invertebrates which are directly exposed to the sediments. Upland soils would not have the same ecological receptors, thus the screening numbers presented are not appropriate. Appropriate screening numbers for the upland sites would be TPH-gasolines at 400 ppm; TPH middle distillates at 500 ppm and TPH residual fuels at 1,000 ppm, xylenes at 1.0 ppm and ethylbenzene at 24 ppm (RWQCB, Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater, Revision Interim Final August, 2000). These numbers would also apply to contamination in surface soils at depths greater than three feet below the ground surface, where erosion is not a concern.</p>	<p>There is currently one upland site anticipated in the current wetland design, the Northwest Runway area. This site does not have TPH or VOC concerns (e.g. TPH constituents are not COCs).</p> <p>For the Inboard Area sites, the Army proposes to use the more conservative comparator values. The comparator values are more conservative and will ensure protection of human health and the environment in the final wetland design. The Army also proposes to use the more conservative comparator values for areas where residual contamination is found at a depth greater than 3 feet bgs. The Army has chosen this approach to provide flexibility for the final wetland design to meet RAOs.</p>
7a	<p>Table 2-8: State-Specific Applicable or Relevant and Appropriate Requirements.</p> <p>Regarding SWRCB Resolution 68-16: Please add the following language to the description: “This resolution requires that high quality surface and ground waters be maintained to the maximum extent possible.” Another example is that of in-situ cleanup levels for contaminated soils.</p>	<p>The text in Table 2-3 (Table 2-8 was renamed Table 2-3 during revisions of the FFS) has been revised to include the suggested language.</p>

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	Such cleanup levels must be set so that ground waters and surface waters will not be degraded, unless degradation is consistent with the maximum benefit of the people of the state.	
7b	Regarding SWRCB Resolution 88-63: Please list some of these exceptions, e.g. TDS > 3000 ppm, well yield < 200 gallons per day.	Additional text describing the exceptions in Resolution 88-63 have been added to Table 2-3 (Table 2-8 was renamed Table 2-3 during revisions of the FFS). In addition, text has been added to explain that groundwater below HAAF meets these exceptions and therefore may not be considered suitable for municipal or domestic water supply.
7c	Regarding ARAR, Title 27 CCR 20090 (d)/23 CCR 2511 (d). Please edit the description. It should read, "Actions taken by or at the direction of public agencies to cleanup unauthorized releases are exempt from Title 27/ Title 23, except that wastes removed from immediate place of release and discharged to land must be managed in accordance with classification (Title 27 CCR, Section 20200/ Title 23 CCR, Section 2520) and siting requirements of Title 27 or Title 23. Wastes contained or left in place must comply with Title 27 or Title 23 to the extent feasible."	The text in Table 2-3 (Table 2-8 was renamed Table 2-3 during revisions of the FFS) has been revised to include the suggested language.
7d	Re 23 CCR 2521 through 23 CCR 2524: Sections 2523 through 2524 have been repealed. These waste classifications are addressed in Title 27, CCR section 20200(c), 20210, 20220 and 20230. Sections 20200(c), 20210 require that designated waste be discharged to Class I or Class II waste management units. Section 20200 (c) and 20220 require that nonhazardous solid waste be discharged to a classified waste management unit. Section 20230 states that inert waste does not need to be discharged at classified units.	Table 2-3 (Table 2-8 was renamed Table 2-3 during revisions of the FFS) has been corrected to include the proper Title 27 citations.
7e	Re Title 27, Chapter 3, subchapter 2: These regulations may be applicable requirements. However, the waste needs to be characterized for placement in a waste management	A discussion on the classification of the soil and the class of unit required to manage the waste has been added to Table 2-3 (Table 2-8 was renamed Table 2-3 during revisions of the FFS) of

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	<p>unit. Leachability tests would need to be conducted to determine whether the waste would cause degradation of waters of the state. Comments regarding the classification of the soil and the Class of waste management unit required should be included in the text portion of the FS and not in the ARAR table itself.</p>	<p>the document. The ARARs table has been revised to include only those requirements that pertain to the waste management unit that is appropriate for the soil based on its classification.</p>
7f	<p>The Interim Final Sediment Screening Criteria and Testing Requirements for Wetland Creation and Upland Beneficial Reuse dated December 1992. By Resolution No. 92-145 (referenced in the San Francisco Bay Region Water Quality Control Plan, approved in 1995) the Regional Board established screening criteria to be used to evaluate the appropriateness of using dredged material for beneficial purposes. These screening criteria are considered an ARAR.</p>	<p>Resolution 92-145 has been added to the table as a TBC. The Army has determined that this document is not an ARAR because the HAAF is not reusing dredged sediments from the San Francisco Bay area. This document is, however, a TBC because the screening criteria presented in this Resolution were considered as guidelines.</p>
7g	<p>The Draft Staff Report entitled Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines dated May, 2000 is an update of the December 1992 document described above. These guidelines fall into the category of “to be considered” (TBC). Note that the screening values presented in this document are guidelines and are not intended as cleanup goals.</p>	<p>This draft report has been added to the ARARs table as a TBC document.</p>
8a	<p>Excavation Areas: Table 2-49 (also Table B-18) and associated Figures B-1 through B-21 (see volume 2) comments.</p> <p>Building 26: Please recheck the two sample locations on Figure B-3, HB-4731 and HB-4557. Based on the April 1999 RIR, Figure 5-4, these sampling locations should be reversed.</p>	<p>Figure B-3 has been revised to reflect correct sample locations.</p>
8b	<p>Building 35/39 Area: the area identified for excavation does not include the possible extent of contamination along the pump station outfall pipe.</p>	<p>It is unlikely that the area along the outfall pipe would be designated for excavation due to stability issues associated with the levee and out fall pipeline. Alternative 2 (Institutional Controls) is the preferred alternative for this site.</p>

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8c	<p>Building 41 Area: the area identified for excavation under building 41 may underestimate the total extent of contamination. The source and possible extent of the contamination adjacent to the asphalt area is also unclear.</p>	<p>The highlighted areas on the FFS figures (B-1 through B-17) are based upon existing data and represent areas where residual contamination of COCs has been detected above the comparator values. Excavation in these areas will be completed to a limit where remaining soils satisfy the chemical-specific RAOs or the exposure-specific RAOs. If excavation is selected, the amount of material is not limited to the amount used in the FFS evaluation. The actual amount may be more or less than what is depicted on the FFS figures, depending upon the objectives of the final design.</p>
8d	<p>Aircraft Maintenance and Storage Facility Area: Much of the area identified for excavation is based on sampling conducted adjacent to the storm drain, at depths greater than 6.5 feet below ground surface. Applying the RART screening values to this contamination as cleanup levels would be relevant only if the area will be subject to significant erosion and scour. Other areas are included in this site due to beryllium contamination, at greater than background concentrations. The source of the beryllium is not well defined and many of the risk-based target concentrations calculated by the Army are higher than the concentrations identified in soils. Much of the site is also overlain with asphalt/concrete and thus exposure pathways are incomplete. The amount of excavation required at this site should be less than indicated and/or no fill may be required. Additionally, please check to make sure that all potentially relevant data have been posted on Figure B-6. For example, chromium of 142 mg/kg at sample location AM-SB-7 (3.5 - 4 ft) is not posted on the figure.</p>	<p>For the reasons stated, excavation was not recommended. The Army's recommendation is to prohibit scour by using Alternative 2, institutional controls. The FFS text has been modified to explain the decision process that will occur as the result of existing conditions and the wetland design requirements. The decision process is intended to allow flexibility for the wetland designers while still providing the required degree of protection for potential human and ecological receptors. Where excavation and removal of the affected soils does not occur, the institutional controls (i.e., cover or excavation prevention and/or erosion control) will adequately address risks associated with site contaminants.</p> <p>Data posted on the figures in Appendix B only include COC values. Where the COCs are greater than the chemical-specific RAOs, the specific analyte results are posted. Since chromium is not a COC at the Building 82/87/92/94 Area, the detection noted is not listed. The analysis here is somewhat confusing since the FFS evaluates COCs for Building 86 separately from the Building 82/87/92/94 Area but combines these sites for the evaluation of alternatives. Thus chromium is a COC for Building 86 but is not a COC for the Building 82/87/92/94 Area.</p>
8e	<p>Spoils Piles: Spoils Pile F is not included on Table 2-49.</p>	<p>Area and volume estimates for Spoils Pile F have been added to</p>

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	Figure B-10 does not include sampling data results for Spoils Pile K.	Tables 4-1 (Table 2-49 was renamed Table 4-1 during revisions of the FFS) and B-18 based on historical estimates of the potential size of Spoils Pile F. Analytical results for Spoils Pile K have been added to Figure B-10.
8f	Onshore Fuel Line - 54 inch and Northern Segment: Much of the area identified for excavation is based on data collected at depths greater than 3 feet below ground surface. Applying surface sediment risk-based screening values to this contamination may not be relevant. The RIR identified two additional areas that are of more concern than those presented on Figure B-14. Samples taken at the pump pit sump indicated lead levels of 1100 mg/kg in sediment and TPH gasoline at 370-470 mg/kg. One sample identified as Pipe envelope HB-4941, (at 1 ft) indicates unknown hydrocarbons -diesel at 2900 mg/kg. (See Figures 5-83 and 5-84). Other than these locations, the remaining areas of contamination should be considered NFA.	The Pump Pit Sump has been added as a highlighted area that requires action in Figure B-14 because analytical results showed lead and gasoline levels greater than the comparator values for these two COCs. The second area corresponding to sample HB-4941 in the pipe envelope was not added because diesel was not a COC for this site.
8g	Onshore Fuel Line - Hangar Segment: Soil sample HB-5238 has not been included on Figure B-13. This sample represents the highest contaminant levels for TPH for the onshore fuel line. Other COCs are missing from the tables, e.g., Unknown hydrocarbon-diesel at 1500J at HB-5106 (0.5ft), lead at sample location HB-5129 (5 ft) and motor oil (0.5 ft) at HB-5120. Please recheck the figure to make sure all COC relevant sampling data have been posted.	Figure B-13 has been cross-checked with data table to confirm that all relevant data (i.e., COCs that were detected above comparator values) were posted. The figure is correct as shown. Diesel and lead are not COCs for this site and so those data were not posted on the figure.
8h	Northwest Runway Area: This site needs to be addressed for area-wide pesticides. The contaminants identified as being of concern by the Army present minimal risks to ecological receptors.	Refer to the first general comment response for the Army's position on site-wide pesticides.
8i	Revetments 6 and 7: The area of excavation should include all of revetment 6.	See response to comment 8c. The specific area requiring excavation will be determined in the final wetland design. RAOs can be met by partial excavation if exposure-specific

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		RAOs can then be met. The area estimated in the FFS was used to develop a reasonable basis for evaluation and cost estimating.
8j	<p>Remaining Revetments: Excavation may be important on this portion of the BRAC Airfield, for those revetments located within the planned major wetland channel. However, areas of excavation for some revetments are driven by low levels of COCs or by COCs located underneath the revetment. A better discussion of the erosion/scour potential of the preferred wetlands design would help in evaluating the adequacy of the areas identified for excavation.</p>	<p>We agree that excavation may be important on this portion of the BRAC Airfield, for those revetments located within the planned major wetland channel. Additional clarification has been provided to explain how the performance criteria for the final wetland design will require that three feet of stable cover is maintained and monitored and that erosion and excavation are prohibited in areas where Alternative 2 is implemented.</p>
10	<p>Section 3.4 Alternative 4 - Excavation and On-base Disposal: this alternative would also require that the waste be classified prior to determining what type of waste management unit would be required.</p>	<p>Text has been added to reflect that any soils designated for excavation would be characterized to determine the type of waste management unit that would be required. Non-hazardous wastes would be evaluated for their suitability for containment within an onsite disposal area.</p>
11	<p>Appendix C, Cost Estimates and Assumptions: Board staff did a limited review of Appendix C, Cost Estimates and Assumptions. The FFS states that costs associated with implementing the Institutional Controls Alternative 2 are minimal. The discussion of Alternative 2 in Section 3.0 states that the Army will develop a monitoring profile tailored to each specific control. It is unclear what this means. Costs associated with short and long-term monitoring should be included in the FFS and be detailed in Appendix C.</p>	<p>Because long-term monitoring will be conducted by the wetland development team to monitor the physical development of the wetland, it is not expected that the incremental costs to monitor for environmental remediation under CERCLA will be significant. Therefore, costs for the monitoring program were not included.</p>
12	<p>Editorial Comments: Section 2.3 et seq. refers to potential completed exposure pathways. This should read "Potentially complete exposure pathways...." The term comparator may confuse the public. Screening value or preliminary remediation goal would be more appropriate and would not create a new noun without meaning in this process.</p>	<p>The phrase 'potential completed exposure pathways' has been replaced with 'potentially complete exposure pathways' or has been replaced entirely.</p> <p>The term comparator has become a standard term to the RART. Random House defines the word comparator as a noun meaning any of various instruments for making comparisons. To avoid confusion and coin yet another term, we recommend</p>

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		using comparator value.
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1.	<p>General comments:</p> <p>Over the last few months, the Regulators and Resource Trustees (RART) team have listened to several presentations on hydrologic and geomorphic modeling results for a potentially modified wetland design. This modified design was a result of the desire of the Army to ascertain whether the wetland could be designed to modify future exposure of ecological receptors to remaining contamination on site. However, it is NOAA's position that we have not had a full discussion on the effects of this modified design on habitat value to fisheries species and other NOAA trust estuarine resources. It is important to NOAA that the design allows for a fully functioning tidal wetland, without undue restraint put on tidal channel development, of importance to NOAA's trust resources. For that reason, there are several sites, given the large uncertainty, where NOAA advocates removal, rather than the institutional controls option based on our understanding of the project to date. Knowing that the wetland design is a still-evolving process, NOAA is willing to discuss and possibly modify the comments given below with further information.</p>	<p>The Army's intent was to determine if minor changes in the wetland design could mitigate potential risks from remaining residual contamination. Alternative 2 provides flexibility to the design in it allows either cover or removal depending upon which works best for the habitat values necessary.</p>
2.	<p>In general, NOAA agrees that sites that are highly likely to be depositional environments in the future wetland environment, with clean dredged material placement, are good candidates for leaving in place, with appropriate controls. However, where cover or lack of scour is identified as a remedial action, monitoring will be necessary to ensure the effectiveness of the remedy and to assist when preparing for 5-year and future reviews required by CERCLA. Monitoring and resulting potential future response actions should be considered as part</p>	<p>The FFS has been revised to include monitoring in the description of Alternative 2.</p>

No.	Comments	Responses
	of the cost of the institutional controls option. NOAA is happy to offer assistance on any monitoring plan needed.	
3.	NOAA's specific comments for the FFS take into account the lack of a site-specific ecological risk assessment for the inboard site. Because site toxicity tests were not performed for various reasons, the remaining sediment contamination cleanup targets ("comparators") rely exclusively on literature values – that is, Regional Water Quality Control Board (RWQCB) beneficial reuse numbers, Long & Morgan (1995) sediment quality guidelines, or similarly derived numbers. RWQCB draft beneficial reuse numbers, while potentially useful for dredge material management, are not risk-based numbers and were not derived for the purpose that are used in the FFS. Other numbers, such as Long and Morgan ER-Ls, which are based on effects-based studies, are not numbers that NOAA would normally advocate for cleanup at any site. Normally, NOAA's approach for Long and Morgan numbers is to use them to identify areas where site-specific biological testing should be done to arrive at site-specific cleanup numbers. In the case of Hamilton, because of the lack of site-derived numbers, we are forced to defer to these non site-specific literature values, with high site-specific uncertainty as to future risk to aquatic receptors. However, since the FFS uses rather more conservative numbers such as the ER-Ls (which are roughly the same magnitude as the RWQCB surface reuse numbers) rather than the ER-M, it is likely that the comparators err on the side of protection of aquatic species that will eventually occupy the site.	Comment is informational – no response required.
1.	<p>Specific Comments</p> <p>The following table constitutes NOAA's comments on the Army's proposal given in the FFS, reflecting potential concern to NOAAs trust resources (estuarine and anadromous species) that will eventually occupy the site. NOAA's comments and</p>	Specific comments are provided in the attached NOAA Table.

No.	Comments	Responses
	<p>recommendations are given despite the lack of the good information regarding where potential channels and potential erosional areas overlap with areas of elevated contamination. NOAA's analysis is a best-effort using limited tools, but is based on the hydrology modeling results from maps given to the RART to date. NOAA is happy to discuss areas of disagreement with the RART, the Army, and the restoration team, particularly where remedial concerns conflict with future habitat value.</p>	
2.	<p>NOAA's disagreements with the Army are mainly to move sites away from institutional controls and into either removal or no further action.</p>	<p>The Army believes that the institutional controls will meet RAOs to protect human health and the environment. And looks forward to discussing each individual site with NOAA.</p>
3.	<p>For areas of only TPH diesel or gas exceedances, NOAA will defer to the RWQCB's judgement regarding whether remedial action is needed (see table on revetments), but NOAA notes where areas appear to be likely to scour.</p>	<p>No response needed.</p>
4.	<p>For PAH hits around the runway and the runway as a source: NOAA is unwilling to agree to future PAH exposure from sealant or other sources from the runway, and urges a design to accommodate both a minimal exposure, yet allow the maximum development of the site as a fully functioning wetland. Although this is not addressed in the FFS, it needs to be addressed through the future use. NOAA is happy to work with the Army on this issue.</p>	<p>The Army does not consider the presence of grouting materials containing PAHs to be a CERCLA release. The Army also does not consider weathering of these materials to be a CERCLA release. Therefore, the soil along the margins of the runway containing PAHs are not addressed in the FFS. This issue will be addressed in the ROD/RAP. The issue of grouting materials on the runway will be addressed by the Coastal Conservancy.</p>
5.	<p>Regarding the sitewide DDT issue, it should be noted that the DDT issue is primarily due to risk to natural resources that are not in NOAA's primary trusteeship. However, NOAA believes that every effort should be made to ensure that DDTs are not transported to SF Bay from this project and that exposure to future site receptors is minimized. NOAA's comments in the table below generally support conducting removals at BRAC sites that have elevated DDTs, with the thought that those removals would remove the more elevated</p>	<p>The site-wide DDT concentrations are the result of the legal application of pesticides. The Army has determined that the DDT concentrations do not constitute a CERCLA release and are therefore, not examined in the CERCLA process. The Army has agreed to include a discussion of them in the ROD/RAP.</p>

No.	Comments	Responses
	potential future sources to the wetland and to the bay. Further, NOAA suggests that an estimate of total mass of sitewide DDTs be calculated, with a thought towards strategic removals of surface soils in the future to minimize potential risk.	
4[sic]	Finally, NOAA did not review the Army's cost estimates, and so is not offering any comment on the costs presented	Comment is informational - no response needed.