

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

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Former Sewage Treatment Plant</b>	<p>Institutional controls, prevention of scour in wetland construction</p> <p>Army estimates cost of excavation/offsite disposal \$60,872 for 148 cy</p>	<p>based on ecological for DDTs, dieldrin, chlordane; HH for dieldrin and chlordane.</p>	<p>Disagree</p> <p>Suggest excavating 1 area (near CS-001).</p> <p>The area around CS-001 should be removed only for DDTs. This would also likely remove the spot of high mercury and silver (which was not identified in the FFS).</p> <p>Wetland design concept appears to indicate that this site is close to the breach, and may be subject to erosion. Removal would reduce the potential for loadings of DDTs to SF Bay and other parts of the wetland.</p>	<p>The FFS has been revised to indicate that if the performance criteria specified in Alternative 2 cannot be met (i.e. three feet of cover, erosion protection, prevention of excavation) then residual COCs should be removed and disposed of offsite in accordance with Alternative 3.</p> <p>The Army is currently revising the comparator value for DDT and will make appropriate changes.</p> <p>The FFS did not post the data referred to by the commentor because the chemicals were not COCs for the site. The area around CS-001 is highlighted as an area that will meet the RAOs either by excavation or by providing a minimum of three feet of cover (together with excavation/erosion protection) depending on the requirements of the Wetland Restoration Plan.</p> <p>The performance criteria specified in Alternative 2 will ensure that three feet of cover is maintained.</p>
<b>Revetment 18/Building 15</b>	NFA	Minimal risk	Concur	No response required.
<b>Building 20</b>	NFA	Minimal risk	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Building 26</b>	Institutional controls, prevention of scour during wetland construction	Potential ecological risk to aquatic receptors for TPH-diesel	Defer to RWQCB.  TPH contamination is ~5 feet below current grade, but area could be in erosive area.	Based on the performance criteria requiring three feet of cover and protection against erosion or excavation, the wetland final design will consider the erosion potential for each site and will provide adequate cover and monitoring to ensure that three feet of cover is maintained.
<b>Building 35/39 Area</b>	Institutional controls, prevention of scour  Army estimates cost of excavation/offsite disposal \$13,649 for 13cy	Total DDT hit > 3 ppm.	Disagree  Suggest excavating deeper than proposed 5 foot (sample taken at 4.5 feet)  This site also had some elevated PAHs relative to comparators. This is not noted in the text but should be added to your consideration.  Wetland design concept appears to indicate that this site is close to the breach, and may be subject to erosion. Removal would reduce the potential for loadings of DDTs to SF Bay and other parts of the wetland.	As shown in Table 1-3, PAHs were not considered to be COCs for this site based on the human and ecological risk assessment which compared the 95% UCL concentration of these analytes to comparator values.  PAHs are elevated at specific sample locations at this site, but the 95% UCL concentrations for those chemicals did not exceed the comparator value and so PAHs were not listed as COCs for this site.  As previously discussed, development of the wetland design will be done so that RAOs for each site are met by providing a minimum of 3 feet of cover together with excavation/erosion protection. In addition, there will be an adaptive management plan developed in conjunction with the Wetland Restoration Plan to assure that adequate protection is maintained.
<b>Building 41</b>	Excavation and off base disposal	Risk to aquatic life	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Building 82/87/92/94 Area and Building 86</b>	Institutional controls, prevention of scour  Cost of excavation/disposal ~\$1.3M 4103 cy	Beryllium, barium, chromium risks to eco receptors. Significant PAH risk to both human and eco receptors at one location	Barium and beryllium were not identified by the regulators and trustees as contaminants to develop a target concentration, so they shouldn't drive cleanup. Chromium exceedances minimal. These contaminants at these levels are not a concern for NOAA's resources  However, PAH sample had very high levels of PAHs, at levels of concern for NOAA's trust resources.	Similar to the situation for Building 35/39 discussed above, PAHs are elevated at specific sample locations at this site, but the 95% UCL concentrations for those chemicals did not exceed the comparator value and so PAHs were not listed as COCs for the Building 82/87/92/94 Area. PAHs were listed as COCs for the Building 86 Area. PAHs listed as COCs for the Building 86 sample locations that exceed comparator values are identified in Figure B-6.  As previously discussed, development of the Wetland Design will be done so that RAOs for each site are met by providing a minimum of three feet of cover together with excavation/erosion protection. In addition, there will be an adaptive management plan developed in conjunction with the Wetland Restoration Plan to assure that adequate protection is maintained.
<b>Building 84/90</b>	NFA	Minimal risk	Concur	No response required.
<b>PDD, unlined/Spoils Pile A</b>	Institutional controls, prevention of scour  Excavation/disposal costs ~\$1.5M for 4667 cy	Relatively high levels of DDTs depending on exposure to receptors	Likely habitat is freshwater or upland and is not likely to affect NOAA's resources.  However, this is the highest levels of DDTs found on the site. The removal would reduce the total mass of DDTs on site.	Spoils Pile A is highlighted in Figure B-8a as an area where RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. In addition, there will be an adaptive management plan developed in conjunction with the Wetland Restoration Plan to assure that adequate protection is maintained.
<b>Spoils Pile B</b>	Institutional Controls (no scour)	Ecological risk from Cd, Hg, Ag	Based on presentations from wetland design group, area seems unlikely to erode, thus will likely be buried	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Spoils Pile C</b>	NFA	Minimal risk	Concur	No response required.
<b>Spoils Pile D</b>	Institutional controls, prevention of scour, placement of 2 feet dredge material	Risk from DDT	<p>Not clear what current elevation is, but should be covered and not scoured.</p> <p>If restoration plans change and the Novato sewer line is moved, this area may have to be excavated.</p> <p>Why is this pile not discussed in the FFS (page 1-23, page 4-59)?</p>	<p>Spoils Pile D is highlighted in Figure B-9 as an area where RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. In addition, there will be an adaptive management plan developed in conjunction with the Wetland Restoration Plan to assure that adequate protection is maintained.</p> <p>The performance criteria in Alternative 2 provide the flexibility to excavate this area as the final design dictates as long as the RAOs are met following either Alternative 2 or 3.</p> <p>The discussions on these pages describe 1999 removal activities at Spoils Piles B, C, E, H, I, J, and L. There were no 1999 removal activities at Spoils Pile D, therefore, it is not discussed here.</p>
<b>Spoils Pile E</b>	NFA	Minimal risk	Concur	No response required.
<b>Spoils Pile F</b>	Excavation/ offsite disposal  Cost of Excavation/ disposal unknown	Ecological risk from metals and PAHs	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Spoils Pile G</b>	Institutional controls, prevention of scour  Army estimates excavation/ offsite disposal \$68,213 for 196 cy	DDTs	Why is this pile not discussed in the FFS (page 1-23, page 4-59)?	See response for Spoils Pile D above.
<b>Spoils Pile H</b>	NFA	Minimal risk	Concur	No response required.
<b>Spoils Pile I</b>	NFA	Site management consideration	The regulators and trustees did not identify a cleanup number for beryllium	No response required.
<b>Spoils Pile J</b>	Institutional controls, prevention of scour, placement of 2 feet dredge material	DDTs	Need to ID cost of monitoring this site	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.
<b>Spoils Pile K</b>	Institutional controls, prevention of scour, placement of 2 feet dredge material	DDTs	Concur with the following caveat: the FFS says that a minimum of 2 feet dredge material be placed on the pile. NOAA recommends 3 ft (as already discussed among RART group in the past)	As agreed during subsequent discussions with the RART, a minimum of three feet of cover will be applied to achieve RAOs. The cover material may consist either of dredge material or onsite borrow material.
<b>Spoils Pile L</b>	NFA	Low risk from metals	Magnitude of exceedance for metals is low	No response required.
<b>Spoils Pile M</b>	NFA	Minimal risk	Concur	No response required.
<b>Spoils Pile N</b>	NFA	Site management considerations	Lower levels (10s of ppb level DDTs)	No response required. The comparator value for DDT has been revised.
<b>East Levee Generator Pad</b>	NFA	Minimal risk	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Onshore Fuel Line- 54-inch Line</b>	Institutional controls, prevention of scour, placement of 1-2 feet dredge material	TPH gasoline risk to aquatic organisms	Concur	No response required
<b>Onshore Fuel Line-Hangar Segment</b>	<p>Institutional controls, prevention of scour, placement of 1-2 feet dredge material</p> <p>Excavation of all areas identified is estimated at \$701748 for 2150 cy</p>	TPH and PAH contamination with potential risk to aquatic organisms. Exposure lessened with 1-2 feet of dredge material placement	<p>FFS (page 4-77) states that there would be no threats to ecological receptors if contamination were left in place (approximately 5 feet bgs) and that 1 - 2 feet of dredge material would be sufficiently protective. NOAA does not agree--- (1) many of the most contaminated areas are less than 2 feet bgs, and so we believe that 1-2 feet of dredge material is not sufficient. (2) PAH levels are sufficiently high to have potential human and ecological risk that NOAA believes some of the shallower and more elevated PAH contamination should be removed while in some areas the leave-in-place option may be sufficient (3) where a leave-in-place option is used, greater than 1-2 feet of fill will be needed, and (4) NOAA's main concern at this location is potential exposure of aquatic receptors to PAHs. The ~4 ppm "comparator" value is considered by NOAA to be on the edge of acceptability, with no site-specific information.</p> <p>Any leave-in-place option must have monitoring, both for contaminants and for depth of fill.</p>	<p>The samples with elevated PAHs mentioned by the commentor are highlighted in Figure B-13 as areas where RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of these sites will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.</p> <p>In addition, there will be an adaptive management plan developed in conjunction with the Wetland Restoration Plan to assure that adequate protection is maintained.</p>

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Onshore Fuel Line-- Northern Segment</b>	Institutional controls, prevention of scour, placement of 1-2 feet dredge material	Risk driven by TPH gasoline	Concur	No response required.
<b>Northwest runway area</b>	Institutional controls, prevention of scour, placement of 1-2 feet dredge material	beryllium, boron, 1 DDT hit	Samples used against the comparator say they are from temporary well locations. Are these water samples? If these were soil samples I would recommend NFA for this site – noting that NOAA’s resources are not likely to be affected at this site.	No response required. The action proposed by the Army will be more protective than NFA suggested by the commentor.
<b>Tarmac east of outparcel A</b>	NFA	Minimal risk	Not enough information about where site is to concur  Text incorrectly states that the site has an HI < 1. Amphipod HI = 4.4	The text has been revised to state that this site is proposed for no further action because it does not have any COCs.
<b>Revetment 1</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances  Excavation/ disposal \$211,033 for 693 cy	metals and PAH risk to birds and aquatic receptors	Disagree  Partial excavation needed, but mainly around sample 1c for PAH exceedance  With the best available information at hand, Revetment 1 appears to be within the channel footprint in a no fill alternative, potentially remobilizing PAH contamination. Primary NOAA concern here is PAH	As discussed in previous responses, RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 2</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Excavation/ disposal \$142,096 for 426 cy</p>	Metals and some PAH risk to birds and aquatic receptors	<p>Concur</p> <p>Revetment appears to be out of the channel footprint for both the no fill and fill alternatives</p>	No response required.
<b>Revetment 3</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Excavation/ disposal \$160,424 for 481 cy</p>	Barium, copper, manganese elevations	<p>Concur, with reservations</p> <p>Only concern is for copper. Revetment appears to be within the channel footprint in a no fill option, or very close to the channel in the fill option. If habitat value is lower because of increased use of berms, suggest conducting removal here.</p>	RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required.
<b>Revetment 4</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Excavation/ disposal \$227,718 for 693cy</p>	Aquatic risk from metals some PAH	<p>Disagree. Should be NFA</p> <p>Low enough levels to conclude that risk is minimal</p>	No response required. The action proposed by the Army will be more protective than NFA suggested by the commentor.
<b>Revetment 5</b>	NFA	minimal risk	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 6</b>	Excavation/disposal \$112,184 for 370 cy	Aquatic risk from TPH-gasoline	Concur	No response required.
<b>Revetment 7</b>	Excavation/disposal \$55,992 for 184 cy	Aquatic risk PAHs	Concur	No response required.
<b>Revetment 8, 9, 10</b>	NFA	Minimal risk	Concur	No response required.
<b>Revetment 11</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances  Excavation/disposal \$21,516 for 27cy	Some aquatic risk from subsurface copper	Concur  Risk would be reduced by removing the area around RVT11-ASA4  Army estimates 21 cy, but should be deeper than 1 foot	As discussed in previous responses, RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.  For the purposes of preparing a cost estimate in the FFS, EPA guidelines state that the accuracy of the cost estimate should be within plus 50% to minus 30%. Thus, the use of one foot provides a reasonable cost estimate for the purposes of the FFS.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 12</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances  Army estimated excavation and disposal  \$14,006 for 10 cy	Some aquatic risk from subsurface copper	Disagree. Suggest excavation  Revetment 12 potentially in channel in no fill alternative.  Suggest removal  Army estimated excavation and disposal  \$14,006 for 10 cy (may suggest more)	RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.
<b>Revetment 13</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances  Army estimates excavation/disposal  \$142,596 for 428 cy	Aquatic Risk from metals, PAHs, HH risk from PAHs	Disagree  Propose excavation  Revetment 13 appears to be located in the middle of the channel footprint for either the fill or no fill alternative, and thus should be removed.  Army estimates excavation/ disposal  \$142,596 for 428 cy	RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the Wetland final design and the performance criteria specified in Alternative 2.
<b>Revetment 14</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances	Aquatic Risk from diesel	Disagree  NFA  Lower level TPH diesel, no metal exceedances	No response required. The action proposed by the Army will be more protective than NFA suggested by the commentor.
<b>Revetment 15</b>	NFA	Minimal risk	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 16</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances	Barium exceedances	Disagree  Site should be NFA	No response required. The action proposed by the Army will be more protective than NFA suggested by the commentor.
<b>Revetment 17</b>	NFA	Minimal risk	Concur	No response required.
<b>Revetment 19</b>	Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances  Army estimates excavation and disposal to be \$242,280 for 735 cy	Aquatic Risk from PAHs and metals. HH risk	Disagree  Excavation/offsite disposal for at least part of the area-- consider be a smaller area around Sample 19A  Army estimates excavation and disposal to be \$242,280 for 735 cy (most of the revetment)  Revetment 19 appears to be located in the main channel for both the fill and no fill alternatives. Uncertainty is too high that dredge material would be left in place here.	RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 20</b>	NFA	Risk management considerations	<p>Need more information.</p> <p>Revetment 20 does not appear to be a high risk area, although there are a few PAHs and cadmium greater than ERLS. However, the revetment is likely to be in the middle of the channel, so it appears that it will be removed anyway. Suggest that the material from this area NOT be used for surface material, but perhaps may be suitable for levee material or foundation materials.</p>	<p>RAOs will be achieved by having a minimum of three feet of cover together with excavation/erosion protection. The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2.</p>
<b>Revetment 21</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Army estimates excavation and disposal to be \$167,867 for 505 cy</p>	Aquatic risk from copper, TPH	<p>Disagree</p> <p>Excavate. Army estimates excavation and disposal to be \$167,867 for 505 cy</p> <p>Volume based on one sample estimate.</p> <p>Revetment 21 potentially very close to wetland main channel, so uncertainty regarding erosion and cover high.</p> <p>One sample used to characterize the area gives higher uncertainty.</p>	<p>The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required. Alternative 3 includes pre- or post- excavation sampling to determine the excavation boundaries.</p>

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 22</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Army estimates excavation and disposal to be \$156,872 for 461 cy</p>	Aquatic risk from TPH	<p>Defer to RWQCB</p> <p>Revetment 22 very close to wetland main channel, so uncertainty regarding erosion and cover high.</p>	<p>The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required.</p>
<b>Revetment 23</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Army estimates excavation and disposal to be \$226,934 for 762 cy</p>	Aquatic Risk from copper (subsurface)	<p>Disagree</p> <p>Excavate. Army estimates excavation and disposal to be \$226,934 for 762 cy</p> <p>Revetment appears to be in an area with potential to scour.</p>	<p>The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required.</p>
<b>Revetment 24</b>	NFA	Minimal risk	Concur	No response required.

Site	Army proposal	Basis	NOAA Comment	Army Response
<b>Revetment 25</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Army estimates excavation and disposal to be \$164,373 for 491 cy</p>	Aquatic risk from diesel	<p>Defer to RWQCB</p> <p>Revetment appears to be in an area with potential to scour</p> <p>In an no fill alternative, this revetment appears to be in the channel</p> <p>One sample used to characterize the area gives higher uncertainty.</p>	<p>The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required. Alternative 3 includes pre- or post- excavation sampling to determine the excavation boundaries.</p>
<b>Revetment 26</b>	<p>Institutional controls, minimum of 3 ft dredge material over impacted revetments, with 4 feet of dredge material in non concrete areas with exceedances</p> <p>Army estimates excavation and disposal to be \$156,810 for 465 cy</p>	Risk from diesel and gasoline	<p>Defer to RWQCB</p> <p>In a no fill option, this revetment appears to be in the channel</p> <p>One sample used to characterize the area gives higher uncertainty.</p>	<p>The final disposition of this site will be dictated by the requirements of the wetland final design and the performance criteria specified in Alternative 2. The performance criteria allows for excavation to occur in accordance with Alternative 3 if the final design determines that excavation is required. Alternative 3 includes pre- or post- excavation sampling to determine the excavation boundaries.</p>
<b>Revetment 27</b>	NFA	minimal risk	Concur	No response required.
<b>Revetment 28</b>	NFA	minimal risk	Concur	No response required.