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ALAMEDA POINT
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**EPA Review of the Draft Feasibility Study Report, Seaplane Lagoon
Alameda Point, Alameda, California
November 2004**

GENERAL COMMENTS

Radiological. This Draft FS does not address the issues associated with radiological and radiological issues have been largely deferred to unidentified future documents. No assurances have been provided that the proposed remediation footprint will be inclusive of the extent of radiological contamination. Radium-226 (Ra226) at concentrations of seven to nine picocuries/gram (pCi/g) should be considered a cancer risk driver and requires remediation. Since radium 226 (Ra-226) is known to be present, it is likely that the feasibility and cost of different technologies, and ultimately the conclusions about the preferred alternative will be impacted. Please include the results of the 2002 Berkeley Environmental Restoration Center (BERC) investigation, develop a remedial action objective (RAO) for radionuclides, as necessary, and include consideration of the Ra-226 concentrations in sediment in the evaluation of each alternative.

Site 1 CAMU Coordination. This FS should be coordinated with the upcoming Site 1 FS. This FS assumes that a Corrective Action Management Unit (CAMU) will be established at Site 1, but based on the December 16, 2004 Site 1 FS story board meeting, the Site 1 FS will include an Area of Contamination (AOC), not a CAMU. A CAMU is necessary if the sediment contains RCRA hazardous waste, and it would need to be specified in both the Seaplane Lagoon and Site 1 FS's and RODs.

State acceptance. The eighth of the nine evaluation criteria is state acceptance, whereas throughout the document it is described as regulatory acceptance. Wording it as regulatory acceptance implies that EPA acceptance is only one of nine criteria to be considered, whereas under CERCLA EPA must agree with the remedy. Please change the wording to "state acceptance" to mirror the National Contingency Plan, 40 CFR 300.430(e)(9)(iii)(H).

Short-term effectiveness. The description of the short-term effectiveness evaluation criterion on p. 111 appropriately includes time required to achieve protection (see 40 CFR 300.430(e)(9)(iii)(E)(4)). However, it does not appear that this aspect of short-term effectiveness was considered in evaluating the remedies (see, e.g., p. 169). It is especially misleading to say that the no-action alternative "would be highly effective in the short term" (p. 187). In addition to evaluating safety to workers and the community and short-term environmental concerns, the Navy should evaluate and compare how long it would take to achieve protection under each remedy.

Monitoring and cost calculations. (a) **30-year cutoff.** Discussion of some of the alternatives, and calculation of costs, indicates that monitoring will be for 30 years. This understates both the Navy's future obligations and the costs for certain remedies where the monitoring will actually be

in perpetuity. For the isolation capping remedy, for example, there will have to be monitoring in perpetuity both to ensure the integrity of the cap and to monitor the institutional controls. The discussion should acknowledge the fact that monitoring for some of the remedies will have to continue in perpetuity. Additionally, the cost analysis should consider the cost of monitoring past 30 years.

(b) **Discount rate.** Page 110 cost calculation uses a 7% discount rate to calculate the present value of future costs. For federal projects, the Office of Management and Budget (OMB) publishes discount rates as Appendix C to OMB Circular No. A-94. (See OSWER 9355.0-75, "A Guide to Developing and Documenting Cost Estimates During the Feasibility Study" (July 2000), p. 4-5.) The current 30-year real interest rate recommended by OMB for use for federal projects with expected lifetimes greater than 29 years is 3.2 percent. This figure should be used instead of 7%. EPA recommends the present value analysis also include a "no discounting" scenario. (See OSWER 9355.0-75, p. 4-2).

(c) **Monitoring of ICs.** In some places the need for long-term monitoring of ICs is not adequately acknowledged. For example, the discussion on page 118 of monitoring for the cap option should also discuss monitoring of the ICs.

CAMU monitoring. If there is a CAMU, there will be ICs to protect the integrity of the cap and long-term monitoring. The FS, e.g. p. 128, acknowledges the need for post-closure monitoring. Long-term monitoring, however, is not included in the cost analysis for this alternative. This may be acceptable based on the assumption that the CAMU would not require any additional ICs or monitoring over what the Navy already anticipates would be necessary for closure of the landfill. There is some mention of this on page 167, which indicates that long term monitoring of the CAMU would be completed in conjunction with the monitoring performed for the former IR Site 1 landfill. Please discuss more fully the status of the former IR Site 1 landfill, the status of the remedy selection process for the landfill, and what if any extra monitoring and IC costs would be incurred by using the landfill as a CAMU.

"Local ARARs". The reference on page 111 to "local ARARs" should be removed. While some "local" requirements may be ARARs when they derive from federal or State authority (e.g., certain requirements in the Regional Water Board's Basin Plan), these are generally analyzed as federal or State ARARs, as is done in the rest of this FS.

Permits. Page 156, last paragraph, indicates that certain permit activities would be required from the regulatory agencies to engage in this alternative (cap), and page 168 refers to the need for a consistency determination. It is not clear why permits or a consistency determination would be needed for this On-Site Superfund action.

No action alternative. In Section 5.4 (p. 184 and following), Comparative Analysis of Remedial Alternatives, the no action alternative is analyzed for each of the evaluation criteria. Please remove the No Action Alternative from the detailed evaluation process since this alternative fails to meet the two threshold criteria and thus cannot be considered.

SPECIFIC COMMENTS

1. Section 2.3.1, Summary of Historical Site Investigations, Page 13: The summary of previous investigations does not appear to be complete. For example, according to the paper *Reconstruction Contaminant Deposition in a San Francisco Bay Marina*, Journal of Environmental Engineering, July 2003, two cores were collected in July 1997, but these cores are not listed in Table 2-4. In addition, analysis for radionuclides is not listed for BEREC samples 1 through 20 in 2002. Please revise this section to include all the locations sampled and all the analyses performed in the summary.
2. Section 2.4.1, Source Identification and Historical Source Control, Page 19: The text states that it is not known if “the VOC plume is entering the SPL via groundwater because the eastern boundary of the SPL consists of an engineered seawall,” but it is possible that groundwater can be discharged through a seawall, particularly if it has deteriorated over the years. Alternatively, groundwater may flow beneath the seawall and discharge to SPL sediments. Since potentiometric surface maps do not indicate that groundwater is mounding behind the seawall, it cannot be assumed that the seawall is effectively stopping migration of the volatile organic compound (VOC) plume. Please revise the text to remove inferences that the seawall is a barrier to migration of the VOC plume.
3. Section 2.4.1, Page 19: The statement “the impacted sewer lines from Building 5 were not removed as part of the 1995 to 1997 NPWC activities” may not be accurate. Much of Building 5’s storm sewer line that emptied into Seaplane Lagoon was removed due to its radium contamination.
4. Section 2.4.1, Source Identification and Historical Source Control, Page 19: A schedule for isolating the SPL from potential residual sources of contamination is not provided, but remediation at SPL is contingent on accomplishment of this isolation. The time-line for completion of this task under the non-time critical removal action (NTCRA) is not described in the FS. Please discuss when the NTCRA will occur and how the results may affect refinement of alternatives or the time-line for remediation at SPL.
5. Section 2.4.2, Nature and Extent of Contamination, Page 19: There is no mention of how non-detected values were interpreted in the calculations of total concentrations for summed chemicals (DDx, total PCBs). Various methods of handling censored data result in quite variable total concentrations with obvious implications for the remediation footprint. Please revise the text to clearly state the method used to handle censored data and provide rationale supporting the use of that method.
6. Section 2.4.2.1, Spatial Distribution of Chemistry Data, Page 20: The FS refers to reference stations for comparison of concentrations of inorganic constituents, but does not

specify the location of these stations. Please revise the FS to describe the location of these reference stations.

7. Section 2.4.2.1, Page 21: The last sentence in the second complete paragraph seems to suggest that potassium-40 (K40) is a fission product. It is a naturally occurring radionuclide and is quite abundant (~300 picocuries per liter) in seawater. This sentence needs to be revised to better explain the association of naturally occurring radionuclides and atmospheric fallout.
8. Section 2.4.2.1 Spatial Distribution of Chemistry Data, Pages 20 and 21: The FS states that no mercury, lead or PCBs were detected in the greater than 5 foot (>5 ft) depth interval. However, this statement is misleading because these contaminants were detected in 2 - 5 ft samples at locations where no deeper samples were collected (BERC 13 for example). Please revise this statement to clarify that little sampling was done in the >5 ft depth interval.
9. Section 2.4.2.2, Fate and Transport, Page 21: The discussion of the vertical extent of contamination in this section appears to conflict with the discussion in Section 2.4.2.1, Spatial Distribution of Chemistry, particularly regarding the metals. In Section 2.4.2.1, lead and mercury are reported to increase with depth with the highest concentrations in the 2 to 5 ft depth interval. However, in Section 2.4.2.2, the highest concentrations of chemicals are reported in the 0.3 to 2 ft depth interval. Please revise the text to provide a clear description of the vertical distribution of contamination which is critical for evaluating which chemicals would be addressed by the alternatives in the FS.
10. Section 2.5.2, Page 24: Radium-226 (Ra226) at 7 to 9 pCi/gram should be considered a risk driver.
11. Section 3.2.2.2, Page 36: Seven to nine pCi/gram of Ra226 requires remediation.
12. Section 3.4.6, Corrective Action Management Unit, Page 45: Item number two on this page states that the landfill cap would prevent direct future exposure to humans and the environment; however, it is not clear if the landfill cap is expected to prevent exposure to radioactive contaminants. Please revise this section to clarify whether radionuclides were taken into account in the assessment of the effectiveness of the CAMU in preventing exposure to hazardous constituents.
13. Section 3.5.2, Preliminary Remediation Goals, Page 53: The FS asserts that handling chromium and lead qualitatively will be protective of avian receptors because the concentration distribution of lead and chromium follows the distribution of Cd, total PCBs and DDX; however, no evidence is presented to support this assertion. Please revise the FS to include a figure or figures depicting the lateral extent of chromium and lead contamination with respect to Cd, total PCBs and DDX in order to demonstrate that

cleanup of Cd, PCBs and DDX would likely also address chromium and lead. Also, even though PRGs are not established for chromium and lead, they are COCs and should be listed as such. Please revise Section 3.5.1 to include chromium and lead in the list of COCs.

14. Section 3.5.2, Preliminary Remediation Goals, Page 54: The FS concludes that exposure to contaminants via direct contact to recreational users is not anticipated. This statement is contradictory to information presented in Appendix A and Section 2.2.2. Please see the specific comments on these sections and revise this statement to accurately reflect the potential for exposure to surface sediments during low tide.
15. Section 3.5.2, Preliminary Remediation Goals, Page 54: It is not clear from the information provided that the ecological risk-based PRGs are protective of human health. The exposure point concentration for PCBs is presented as 0.39 mg/kg, but the PRG for PCBs at SPL is 1.13 mg/kg. Please clarify how the exposure point concentration of 0.39 mg/kg PCBs was derived. It is not clear that the conclusion that meeting the PCB for avian protection would also be protective of humans if 1.13 mg/kg is used as the exposure point concentration. Furthermore, it is not clear that meeting the forage fish tissue PCB concentration at San Francisco Bay (Bay) reference stations will “effectively eliminate potential risks to humans via direct and indirect exposure pathways” as all areas of The Bay are contaminated to some degree. Please delete this statement from the FS or provide evidence that PCBs in forage fish tissue at the reference stations present no risk to humans.
16. Section 3.5.2, Preliminary Remediation Goals, Page 54: The FS states that “remedial alternatives were closely evaluated with respect to meeting nearshore ambient levels of PCBs in order to address potential biomagnification impacts;” however, concentrations of PCBs exceed the nearshore ambient levels (200 ppb) in many areas of SPL outside the remedial footprints. Even if the PCBs are reduced to less than 200 ppb within the remedial action footprints, large areas of the SPL will exceed the nearshore ambient level.
17. Section 3.5.3, Areas with PRG Exceedances, Page 54: The remedial footprint shown on Figure 3-1 is only one possible cleanup scenario and presupposes that the 1.13 mg/kg PRG is acceptable to the Agencies and the Public. In effect, the document presents a risk management decision without a complete rationale or Regulatory concurrence. Since an agreement regarding the selection of a PCB PRG has not been reached, the remedial footprint on Figure 3-1 may not accurately depict those areas of the SPL requiring remediation. Please provide the following in the draft final version of the FS: 1) figures presenting remedial footprints based on a range of PCB PRGs including the recommended 200 ug/kg PRG; 2) a discussion of the methods used to create the remedial footprint; and 3) how the range of PCB PRGs may affect the volume of sediment requiring remediation and the evaluation of the alternatives against the nine criteria.

18. Section 3.5.3, Areas with PRG Exceedances, Page 54: The area averaged concentration calculations of risk drivers in the SPL are incomplete. Concentrations of risk drivers present only within the upper 2 ft of sediment were included in the calculation. Use of this depth parameter will not provide an accurate area averaged concentration because some of the highest concentrations of risk drivers are present in the 2 to 5 ft depth interval; as evidenced by the triangles representing concentrations “off the plot scale” on Figures 3-11, 3-21, and 3-25 in the RI.
19. Section 3.5.3, Page 55: The third full paragraph on page 55 states that the area averaged concentrations were calculated in the areas identified with PRG exceedances. However, the results of the calculations shown in Table 3-3 appear to be for the entire lagoon. Please clarify the text and provide results for the areas with PRG exceedances, the entire lagoon, and the entire lagoon after dredging for the two dredging scenarios.
20. Section 3.5.3, Areas With PRG Exceedances, Page 55: It is not clear how the boundaries of the areas requiring remediation were defined as the boundaries are not drawn a consistent distance between samples exceeding and below PRGs. Also, it is not clear how these boundaries will be confirmed prior to remedial action. Please revise the FS to clarify how the remedial footprints were developed and how the areas will be refined and confirmed.
21. Figures 3-3 to 3-7 Cross Sections: The Proposed Excavation Prisms, included in the description of these figures, are not shown. Please delete this phrase from the figures or provide figures with the prisms.
22. Section 4.0, Identification and Screening of Remedial Technologies, Page 69: Previous sections of the FS indicate that radionuclides are of concern, that concentrations of radium may be higher than previously thought, and that despite not identifying radionuclides as a risk driver, the remedial alternatives address these issues; however, these issues are not addressed in Section 4.0. Remedial technologies and process options addressing contamination due to radioactive constituents are not included in the FS. The FS should be revised to include a discussion of available technologies and process options appropriate for addressing Ra-226 and other radionuclides.
23. Section 4.3.1, Natural Recovery, Page 76: The discussion of implementability includes initial characterization, but does not include monitoring. Please delete the phrase that “it requires no action” and revise this section to include monitoring in the evaluation of implementability.
24. Section 4.3.2, Implementability, Page 79: It is not clear why additional characterization would not be required for the accurate design of a cap. Please revise the description of implementability of capping to include the necessary characterization of sediments or justify why such characterization would not be required.

25. Sections 4.3.3, 4.3.4, 4.4, 4.5, 4.6, 4.7, and 5.2: The evaluation of effectiveness, implementability, cost and screening results are handled differently in these sections than in other sections. These sections have multiple subsections that describe different technologies/process options, but only one evaluation of effectiveness, implementability, cost, and screening results is presented for multiple technologies/process options and this evaluation is appended to the last subsection rather than placed in its own subsection. Please reorganize these subsections to include a separate "Summary" or "Evaluation" subsection and place the evaluation of effectiveness, implementability, and cost, and the screening results in this subsection. This problem also occurs in Section 5.2; it is recommended that a separate evaluation subsection be included for each alternative.
26. Section 4.3.4, In Situ Treatment Technologies, Page 81: The evaluation of activated carbon amendment is missing current information regarding the pilot study being conducted at Hunters Point. Please re-evaluate the effectiveness and implementability of this technology given the new information that a pilot study is being conducted and revise the text as necessary.
27. Section 4.4.4, Implementability, Page 87 and Section 4.7, Page 93: The impact of the presence of radionuclides is not discussed. Please discuss how the presence of radionuclides would impact dredging and the ex-situ treatment methods.
28. Section 4.7.5, Screening Results, Page 100: Incineration is the treatment technology carried forward for further evaluation; however, the presence of radionuclides in sediment was not considered in the screening of incineration. Incineration is not popular in California, so you could screen incineration out at this phase. Otherwise, please revise the FS to discuss the special requirements for incineration of radioactive sediments including the availability and location of an appropriate facility, requirements for additional treatment such as stabilization and encapsulation, and cost. Also, it is not clear why stabilization was not retained since stabilization may be necessary as a component of a remedy (e.g., treatment to permit disposal as nonregulated fill material).
29. Section 4.8.1, Off-Site Class II or Class III Landfill Disposal, Page 102: The Altamont Landfill and Resource Recovery is located in Livermore, CA. Also, please clarify whether the Class II landfills listed will accept sediments containing radionuclides at the concentrations present at SPL and, if not, revise the FS to discuss offsite disposal at an appropriate landfill that will accept low level mixed waste.
30. Table 4-1, GRA and Remedial Technology / Process Option Screening Summary, Page 70 to 72: The screening results presented in Section 4.0 are not consistent with the results presented in Table 4-1. For example, the screening results presented on page 100 for ex situ treatment response actions indicate that stabilization was not retained due to uncertainty regarding its effectiveness; however, the text in Table 4-1 indicates that this

technology was retained due to effectiveness in treating organics. Also, the screening results on page 102 indicate that only Class II landfill disposal will be considered; however, the text in Table 4-1 indicates that Class II and Class III disposal facilities will be considered. Please revise the text and Table 4-1 to be consistent.

31. Chapter 5, All Cross-Section Cleanup Figures: Please provide the Radiation levels in the coring data tables shown on the figures.
32. Section 5.2.2.1, MNR Principles, Page 113: The discussion of the in-situ geochemical reactions of Cd in SPL sediments is incomplete. The text suggests that Cd would be permanently bound in sediments by forming stable Cd-sulfide (CdS) precipitates given the presence of anaerobic fine-grained sediments likely to be rich in sulfides. The text also states that the extent to which geochemical mechanisms function in SPL sediments remains unknown. This discussion fails to acknowledge the BERC study (BERC 1999) or incorporate the results of the geochemical characterization of SPL sediments presented in Appendix D. The BERC treatability study concludes that the release of Cd from sediments may be of concern based on leaching and bioaccumulation studies. The study provides evidence to support this statement by explaining that after 90 days, 40% of Cd in initial sediment was lost to seawater because CdS is not stable in the presence of dissolved oxygen and Cd does not efficiently sorb to secondary oxides. It would appear that some geochemical mechanisms functioning in SPL sediments are known and that Cd is not permanently bound in sediments as CdS. Please revise the discussion of geochemical processes related to Cd in sediments and include the results of the BERC geochemical characterization in the appropriate section of the FS.
33. Section 5.2.2, Page 113: The evaluation used to rule out MNR/ICs seem sufficient to have dropped this option at the screening stage. The difficulties of enforcing ICs seems to have been underplayed.
34. Section 5.2.3.1, Page 117: Please remove the discussion of the beneficial impacts of capping. It seems disingenuous to say that leaving contaminants in place is good because it provides the City a chance for mitigation. Also, the FS does not explain how the potential for damage to cap surfaces and the resulting loss of cap integrity caused by dredging and dock construction activities will be addressed.
35. Section 5.2.3.3, Implementability, Page 119: The FS includes no discussion of the ability of the soft sediments in the lagoon to support a cap over time.
36. 5.2.3.3, Implementability, Page 119: The discussion of implementability for capping does not include consideration of whether the Bay Conservation and Development Commission (BCDC) would approve an action that essentially involves filling within the Bay. Please revise the FS to include an evaluation of the likelihood of BCDC approval of this and other alternatives involving filling within the Bay.

37. Section 5.2.5.2, Construction Quality Control Monitoring and Confirmation Testing, Page 125: This section appears to justify the elimination of silt curtains from consideration due to their high cost; however, silt curtains are included in the cost estimates in Appendix C. Please resolve this discrepancy.
38. Section 5.3.2, Alternative 3: Isolation Capping/Monitoring/Institutional Controls, Page 153: The long-term monitoring components proposed for this alternative are inadequate. In addition to the proposed coring and bathymetric surveys, long-term monitoring at sediment sites should investigate habitat characteristics, sediment behavior, monitored natural recovery rate, chemical concentrations, water quality, recovery and health of the benthic community, sediment toxicity, and bioaccumulation. The proposed analysis for the cores collected to investigate large variations in cap depth (i.e. greater than 50%) should be presented; and further, variations less than 50% may affect cap integrity or its ability to isolate contaminants from the environment and receptors and therefore should be investigated. Also, settling plates should be proposed to monitor changes in thickness of the cap. Please revise the long-term monitoring proposed for this alternative so that it provides direct feedback on the performance of this system toward meeting the RAOs by including all applicable parameters.
-  Section 5.3.3, Alternative 5: Dredging/Monitoring/Dewatering/Upland Confinement, Page 157: The text does not explain which constituents will be analyzed in the confirmation samples collected following dredging activities. Sediments at SPL are contaminated with more than the three constituents identified in the FS as risk drivers. Please include radionuclides and all other COPCs and COPECs from the RI in the confirmation sampling analyses.
40. Section 5.3.3, Alternative 5: Dredging/Monitoring/Dewatering/Upland Confinement, Page 157: The proposed construction quality control does not address potential water quality impacts during dredging activities resulting from the presence of risk drivers identified during the RI, including those risk drivers that were not carried forward into the FS. For example, metals concentrations in Bay waters are of concern; however, no attention is given to the possibility for contaminants to exceed acceptable levels during dredging activities due to resuspension in the water column. Please discuss the relevance of total maximum daily loads (TMDLs), which define how much of a pollutant a water body can tolerate and still meet water quality standards during dredging or capping operations at the SPL. Please include water quality criteria for all risk drivers identified for SPL. Please revise this alternative, and all dredging or capping alternatives, to include monitoring of water quality during remedial activities and mitigative techniques to be implemented following any exceedances of applicable water quality criteria.
41. Section 5.3.3.5, Short-Term Effectiveness, Page 169: The list of potential hazards to workers does not include radiological hazards. Since radionuclides are known to be

present at the site, please revise the FS to include exposure to radiation in the list of hazards.

42. Section 5.3.3.6, Implementability, Page 169: This section discusses possible options if radioactive contaminants exceed landfill background concentrations including treatment (if an appropriate treatment method were available) or disposal in an alternate site; however, appropriate treatment methods are not described in the FS and alternate disposal sites are not identified. Since radionuclides are known to be present in SPL, it appears likely that at least some of the sediments will exceed landfill background concentrations. Therefore, please revise the FS to discuss appropriate treatment methods for this material and identify the alternate disposal site.
43. Section 5.3.4, Alternative 6: Focused Dredging/Monitoring/Dewatering/Upland Confinement, Page 170: This section does not mention the requested near shore goal for PCBs of 200 ppb. For example, Cross-Section A02 shows data from outside the dredging zone (core BERC 12) with a PCB concentration of 431.97 ppb. Please provide a discussion on the final average PCB levels and highest remaining levels after the proposed focused dredging. Navy guidance on sediment remediation (Navy, 2003) suggests evaluating a range of cleanup goals and evaluating their effectiveness and costs. Either show that the proposed remediation zone will achieve an average near shore ambient level of 200 ppb for PCBs or evaluate a variety of footprints.
44. Section 5.4.1, Overall Protection of Human Health and the Environment, Page 185: The FS ranks Alternative 5 and Alternative 6 the same in terms of protection of human health and the environment; however, Alternative 6 as presented in the FS may result in radionuclides left in place at unacceptable levels. Protection of human health and the environment would depend on the integrity of the backfill and effectiveness of institutional controls. Therefore, Alternative 6 should be not scored as highly as Alternative 5 in terms of overall protection of human health and the environment. Please change the ranking of these alternatives in this section and on Table 5-2.
45. Section 5.4.5, Page 187, Last Paragraph: The text states that both dredging options would likely take several months to a few years to implement. The estimate of a few years seems overly pessimistic and should be removed.
46. Section 5.4.6, Page 189: EPA disagrees that capping is more implementable than dredging. The potential difficulties of placing and maintaining a cap on a soft substrate is probably as difficult as the potential problems for dredging. Also, capping comes with the implementation difficulties of long-term IC enforcement. Please remove the first and last sentences from the last paragraph in this section.
47. Threshold criteria, Page 190, Table 5-2: The first two criteria, overall protection of human health and the environment, and compliance with ARARs, need to be a toggle

switch: an alternative either meets them or it does not. Differences between alternatives actually go to other factors such as long term effectiveness and reduction in toxicity, mobility, and volume.

48. Section 6.0 Summary, Page 191: The summary is not complete. The development and evaluation of alternatives are not included. In order to provide a useful summary for decision makers, please revise this section to include a summary of the evaluation and comparison of remedial alternatives. Also, please remove the third paragraph, as calculation details and formulas should not be in a summary. Please also include in the results table the average concentrations for 0-4 feet.

ERRATA

1. Section 2.2.3, Sediment Characteristics and Subsurface Geology, Page 7: *Ampelisca spp.* are arthropods not annelids. Please remove "(i.e., worms)."
2. Table 2-3, Water Contents and Sediment Characteristics of Recent Deposits at SPL, Page 10: This table appears to be incomplete because it is missing information regarding the void ratio. Please provide these values in the draft final version of the FS.
3. Figure 2-8, Storm Sewer Lines and Outfalls, Page 18: The figure does not include the location of Outfall I which is discussed in Section 2.4.1. Please revise the figure to show Outfall I.
4. Section 3.5.1, Remedial Action Objectives, Page 51: In the second sentence in the last paragraph on this page, the numerical TBC criteria appears to be missing. Please revise this sentence to read: "TBC criteria of 200 ug/kg..."

REFERENCES

1999. *Treatability Study Report, Intrinsic Sediments Processes Study at West Beach Landfill Wetlands (Site 2) and Seaplane Lagoon (Site 17), Alameda Point, Alameda, California (Preliminary Draft Final Report)*. Contract No. N62474-94-D-7430, Delivery Order No. 004. Berkeley Environmental Restoration Center, University of California, Berkeley, California. (BERC 1999).

2003. *Final Implementation Guide for Assessing and Managing Contaminated Sediment at Navy Facilities*. (Navy 2003)

GENERAL COMMENTS ON ARARS

Transportation. The FS does not consider whether United States Department of Transportation and California Department of Transportation regulations are ARARs for off-site remedial actions. These Federal regulations at 40 CFR Part 263 and State requirements would apply to the off-site transportation of hazardous materials. These transportation requirements are incorporated by reference into California's Resource Conservation and Recovery Act (RCRA) regulations at 22 CCR and the California Health and Safety Code, Sections 25167.1 through 25169.3.

Turbidity & dissolved oxygen. Discussions on pages 47, 125 and 156 indicate concerns regarding increased turbidity and decreased dissolved oxygen concentrations as a result of some of the remedial alternatives, yet there is no mention of the Regional Board's water quality objectives for turbidity and DO as potential ARARs. The FS should discuss whether these objectives should be considered ARARs; if not, why not; and if so, how they would be complied with, especially given the statement on page 47 that re-suspension of sediment during dredging could temporarily exceed turbidity limits.

RCRA. The statement on pages 29 and B-2 that under the dredged material exclusion of 40 CFR Sec. 261.4(g) RCRA is not considered an ARAR is an overstatement. As discussed on page 34, dredged material is not considered to be a hazardous waste if it is subject to a CWA 404 or MPRSA permit. Thus, the dredged material exclusion would not apply to a deposit of dredged sediments at the CAMU. Additionally, the statements that RCRA is not an ARAR are contradicted by the pages and pages of RCRA ARARs in Table B-5 and the statement under "Comments" on page B-10 that there is a potential for sediments from SPL to be classified as RCRA hazardous waste. EPA requests that the Navy include in Section 3.1.4., Waste Characterization (p. 30), a discussion of whether waste from SPL has the potential to be RCRA waste, and how that determination will be made.

Section 3.2, Page 31: The second paragraph of this section states that radiological ARARs largely cannot be discussed in this FS. ARARs for transport and disposal must be discussed, and any potential ARARs for leaving in place should still be discussed whatever the risk determination ends up being.

DDx. P. 31, Table 3-1, indicates that for DDx, the controlling ARAR is .001 micrograms/L, while the discussion on page 181 indicates that the controlling ARAR is .13. This should be clarified. (It appears that the .001 is the continuous criterion and .13 the maximum criterion for saltwater.)

Cadmium. EPA recommends selection of the NAWQC criteria for cadmium as the controlling ARARs as they were developed subsequent to the CTR and are the result of more recent analyses. Furthermore, the federal level is more stringent in this case than the state criteria.

NOAA thresholds and EPA Ecotox thresholds. If these are being considered as TBCs, the discussion (p. 34-35) should include the relevant values that could be TBCs. Also, we would

recommend including these and other TBCs in the ARARs tables.

Page 36, LTMS. It is unclear from the discussion of the Long-Term Management Strategy on page 36 whether the Navy considers this to be a TBC, and, if so, what requirements potentially apply.

Page 36: Discussion of radium at the bottom of page 36 appears to be out of place.

Pages 37 and 44 Air ARARs: The discussion of BAAQMD regulations as air ARARs should also indicate that these could be relevant and appropriate for construction of the CAMU.

Tissue ARARs. Has the Navy considered various fish tissue regulations or guidances as chemical-specific ARARs or TBCs? For example, previous EPA cleanups of contaminated sediment included as ARARs or TBCs various screening or tolerance levels for PCBs and DDT from FDA, EPA, NAS, and Great Lakes International Joint Commission guidelines. Additionally, the draft PCB TMDL for the San Francisco Bay includes a fish tissue target of 22 ng/gram. The draft TMDL also suggests that there may be guidances containing screening levels for PCB bioaccumulation in benthic organisms (January 8, 2004 draft TMDL, p. 19-20)

Page 39, ESA: The discussion of ESA is confusing and not entirely accurate. The text seems to say that the ESA's consultation requirements are TBC. This is a misinterpretation of what a TBC standard is; TBCs refer to nonpromulgated standards, not procedural requirements. Nevertheless, EPA does recommend that the Navy comply with the consultation requirements in the ESA to ensure compliance with the substantive requirements that are ARARs. Text on p. 39 also needs to indicate that substantive portions of the ESA are ARARs.

Page 40, California ESA: The discussion on p. 40 should indicate why this is included as an ARAR in addition to the federal FSA. Would the State ESA have more stringent requirements as applied to SPL?

CAMU. (a) Statement p. 47, 3.4.7.1, "There are no specific regulations promulgated for design and construction of CAMUs" is not correct. Specific design and treatment regulations are in 22 CCR 66264.552(e) (2004).

(b) It does not appear that the Navy has considered the 2004 CAMU regulations at 66264.552 and 66264.552.5.

California Ocean Plan. P. 47 at Sec. 3.4.8 and other places in the document reference the California Ocean Plan. The Ocean Plan, however, does not apply to San Francisco Bay. Rather, the applicable water quality standards are those in the Basin Plan.

Storm sewers. Discussion on page 52 indicates that there may be some ongoing contamination through the storm sewers, and that remediation will not occur until all potential ongoing sources of contamination have been isolated. The Navy should clarify when they expect to conclude

their investigation and remediation of ongoing sources.

SPECIFIC COMMENTS ON ARARS

- 1. Section 3.1.1, Summary of CERCLA and NCP Requirements, Pages 25 and 26:** The definitions provided in this section differ from those in the National Contingency Plan (NCP), 40 CFR Section 300.5; italics indicate where the definitions vary. The text states that “applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under *federal or state law* that specifically address *the situation* at a CERCLA site.” The NCP defines applicable requirements as “those cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under *federal environmental or state environmental or facility siting laws* that specifically address a *hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance* at a CERCLA site...” The text defines “relevant and appropriate requirements” as “those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations, promulgated under *federal or state law* that, while not *applicable*, address problems or *situations similar to the circumstances of the proposed response action and are well suited to the conditions of the site.*” The NCP defines relevant and appropriate requirements as “those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under *federal environmental or state environmental or facility siting laws* that, while not *‘applicable’ to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site*, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site.” Please revise the text to provide more accurate definitions from the NCP.
- 2. Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 25:** The text states that, “An applicable state requirement is an ARAR only if it is more stringent (i.e., conservative) than a related Federal ARAR. The NCP definitions of an “applicable requirement” and a “relevant and appropriate requirement” state that a State requirement may be applicable or relevant and appropriate only if it is both more stringent than a related Federal standard and identified by a State in a timely manner. Please revise this sentence to reflect this dual requirement and include these requirements in the paragraph defining “relevant and appropriate requirements.”
- 3. Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 26:** The text appears to confuse or combine the criteria for substances and actions. Specifically, the third bullet states that in determining relevance and appropriateness a comparison is made between the substances regulated by the requirement and the response action contemplated at the CERCLA site. According to the criteria outlined in 40 CFR Section

300.400(g)(2)(iii), the comparisons to be made are between “the substances regulated by the requirement and the substances found at the CERCLA site”; and “the actions or activities regulated by the requirement and the remedial action contemplated at the CERCLA site.” Please revise the bullets to correctly state the substance comparison and the action comparison.

4. **Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 27:** The text states that, “Provisions of generally relevant Federal and State statutes and regulations that were determined to be procedural or not environmental in nature, including permit requirements, are not considered ARARs.” This sentence is confusing in that it suggests that procedural requirements are never required in remedial actions because they are administrative requirements. However, according to ARARs guidance (as cited in the FS), administrative requirements, such as permit requirements, while not ARARs for on-site actions, must be complied with for remedial actions conducted off-site. To ensure clarity, please revise this section to identify the differential treatment of administrative requirements between on-site and off-site remedial actions.
5. **Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 27:** The identification and definition of TBC criteria is provided between the discussion of administrative requirements and the identification of the different types of ARARs. The relevance of this material gets lost due to its placement in the text. Please move this paragraph to Page 26, before the paragraph discussing the ARAR summary tables in Appendix B or to another part of the FS, or revising the paragraph to more clearly outline the relevance of TBC criteria to CERCLA remedial actions.
6. **Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 27:** The text states that, “Potential federal ARARs that have been identified for the remediation of SPL are discussed below in Section 3.1.2.2.” Section 3.1.2.2 does not include a discussion of the Federal ARARs for actions at the SPL but merely discusses the method of evaluating Federal ARARs for the SPL. The discussion of Federal ARARs is found in Sections 3.2 and 3.3. Please revise this sentence to refer to Sections 3.2 and 3.3 of the FS.
7. **Section 3.1.1, Summary of CERCLA and NCP Requirements, Page 27:** The text states that, “Regulatory requirements that apply to off-site actions are not ARARs.” This statement is confusing because the text goes on to state that off-site actions are only required to comply with “applicable” requirements and that the “relevant and appropriate” requirements identified for on-site actions do not apply to off-site actions. Please consider deleting the first sentence or revising it to clarify that off-site actions are required to comply with “applicable” ARARs.
8. **Section 3.1.2.2, Identifying and Evaluating Federal ARARs, Page 29 and Section 3.2.1.2, Sediment ARARs, Page 34:** The text states that, “Under the Dredged Material Exclusion of 40 CFR Section 261.4(g) RCRA is not considered an ARAR for IR Site 17,”

but it is unclear why this exclusion precludes the consideration of RCRA substantive requirements as “relevant and appropriate.” According to ARARs Guidance, RCRA substantive requirements, while not “applicable,” can be “relevant and appropriate” if the “CERCLA action involves treatment, storage or disposal” and the “wastes are similar or identical to RCRA hazardous wastes.” Further, this exclusion only applies to dredging done under certain permits when the material is not hazardous. Please discuss whether RCRA substantive requirements (e.g., requirements at 40 CFR Part 264 relating to capping, closure, and the transport of waste off-site) would be “relevant and appropriate” to response actions conducted at IR Site 17.

9. **Section 3.1.4.1, California-Regulated, Non-RCRA Hazardous Waste, Page 30:** This section states that it is unlikely that site sediments will be determined to be California-regulated, non-RCRA hazardous waste but does not provide a reason for this conclusion. Please discuss why the sediments are not likely to be California-regulated, non-RCRA hazardous waste or reserving this conclusion for the Record of Decision.
10. **Section 3.1.4.2, Other California Waste Classifications, Page 30:** The text states that Title 27 CCR Sections 20210, 20220, and 20230 determine the applicability of waste management requirements for waste discharged after July 18, 1997 but does not state whether these requirements are ARARs for the response action alternatives. Please identify whether these requirements are considered ARARs for response actions at SPL.
11. **Section 3.2, Chemical-Specific ARARs, Page 31:** The text in this section states that the ARARs and TBCs related to radiological constituents cannot be discussed in the FS because the requirements related to radiological contamination require negotiation between the Navy and regulatory agencies. Federal and State requirements and other guidance do exist that may constitute ARARs or TBC criteria for radionuclides. Please cite the statute or policy governing this agreement and explain why other guidance was not considered.
12. **Section 3.2.2.1.2, State, SWRCB Resolution No. 92-49, Policies, and Procedures for Investigation and Cleanup and Abatement of Discharges Under California Water Code Section 13304, Page 34:** The text in this section states that this resolution is not a potential ARAR because the surface water of the Bay is already considered to be at background levels and the contaminated sediment is not considered a threat to water quality. This analysis is confusing since earlier in the FS the text states that remediation activities could release sediment-bound contaminants to surface water at levels exceeding chemical-specific Federal and State water quality criteria or standards. If remediation activities do result in the release of sediment-bound contaminants into surface water then the surface water background level may be exceeded. Resolution 92-49 provides that “any person who has discharged or discharges waste into waters of the state in violation of any waste discharge requirement or other order or prohibition issued by a Regional Water Board or the State Water Board, or who has caused or permitted, causes or permits,

or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance may be required to clean up the discharge” and restore the “affected water to background conditions.” Please consider whether the requirements of this resolution would be an “applicable” ARAR if remedial actions result in the release of sediment-bound contaminants to surface water.

13. Section 3.2.2.2.2, State Sediment ARARs, Title 23, Division 3, Chapter 15, Page 35:

The text in this section states that 23 CCR 2550.4 is not an ARAR because it is essentially the same as “federal ARARs identified at Title 22 CCR Section 66264.94(a)(1)(3), (c), (d), and (e).” The requirements of 23 CCR 2550.4 apply to discharges to land that may affect water quality. Title 22 of the California Code of Regulations codifies California’s RCRA program. While Title 22 requirements represent the controlling “applicable” ARAR, the requirements of 23 CCR 2550.4 may still be “relevant and appropriate” to discharges to land that may affect surface water within IR Site 17. Please revise this section to include a discussion of whether the requirements of 23 CCR 2550.4 are “relevant and appropriate” to remedial actions that will result in discharges to land.

14. 16. Section 3.2.2.2.2, State Sediment ARARs, Title 27 CCR Division 2, Subdivision 1, Page 35:

The text in this section states that 27 CCR Division 2, Subdivision 1 may be a relevant and appropriate ARAR but did not identify the specific sections of Subdivision 1 that may be relevant. It is possible that the second sentence is out of place, since it seems to imply that a list of relevant sections immediately follows. Please revise this section to indicate the specific substantive provisions of Subdivision 1 that are potential ARARs.

15. Section 3.2.2.2.2, State Sediment ARARs, Long-Term Management Strategy for Bay Area Dredged Material. Page 36.

The text in this section states United States Army Corps of Engineers (USACE) San Francisco District Public Notice 93-2 provides the criteria for determining whether dredged material is acceptable for in-Bay disposal. The section goes on to provide the concentrations of Ra-226 in the SPL and states that “one of the objectives of the remedial alternatives analysis is to ensure that radium is not present at levels that potentially would result in adverse health effects to human and ecological receptors.” This section does not state whether Public Notice 93-2 is an ARAR or TBC for site actions. Also, the significance of the Ra-226 concentrations is not discussed. Please revise this section to identify whether Public Notice 93-2 is an ARAR or TBC and explain the significance of the Ra-226 concentrations.

16. Section 3.3.2.1.1, Marine Mammal Protection Act, Page 39:

The text in this section states that the prohibitions in Section 1372(a)(2) of the Marine Mammal Protection Act “are potentially pertinent to CERCLA actions.” This section does not identify what the specific prohibitions are and why they are applicable to the response actions proposed for IR Site 17. In addition, this section does not state whether the Marine Mammal

Protection Act is an ARAR for actions at IR Site 17. Please revise this section to identify the specific prohibitions applicable to the response actions planned for IR Site 17 and identify whether this Act as an ARAR.

- 17. Section 3.4.3, Monitoring, Page 44:** The text in this section states that short-term monitoring of sediments and the water column will be conducted during remediation activities, but does not identify whether ARARs apply to this activity or specify the type of remediation. Please revise the text to address whether there are any ARARs that apply to this action.
- 18. 20. Section 3.4.3, Monitoring, Page 44:** The text of the second paragraph cites various Title 22 CCR detection monitoring requirements as ARARs but does not discuss what the specific requirements are and how the requirements will affect monitoring actions planned at IR Site 17. Please revise this paragraph to discuss the specific requirements of 22 CCR that are ARARs. Also, it appears that this paragraph belongs under section 3.4.4 because it deals with natural recovery processes and because there are no requirements in this section for monitoring other types of remediation like dredging or placement of cap materials. If it does belong in this section, then it is unclear whether there are monitoring requirements for dredging or for placement of cap materials. Please evaluate whether the second paragraph belongs in this section and if so, also provide ARARs that address monitoring requirements for dredging and for placement of cap materials.
- 19. Section 3.4.5.2, State, Page 45:** The text in this section is confusing. It states that, "The staging pile requirements at 40 CFR Section 264.554 are not as stringent as some of the requirements in CHSC Section 25123.3" and then states that, "CHSC sections that are more stringent include Sections 25123.3(ii), (iii), and (v) ... Because these requirements are more stringent, if sediments at IR Site 17 are characterized as non-RCRA hazardous waste, they would be potential ARARs in addition to the federal staging pile requirements." It is unclear which Federal and State staging pile requirements are ARARs. Please revise this section to identify the specific Federal and State standards that are ARARs.
- 20. 22. Section 3.4.5.2, State, Page 45:** The text does not state why temporary staging of dredged soil is exempt from Title 23 CCR waste pile requirements. In addition, the specific requirements of 23 CCR that would be ARARs if dredged soil is removed from the Site are not identified. Please revise this section to include a discussion of why temporary staging of dredged material is exempt from 23 CCR and to identify the specific requirements of 23 CCR that are ARARs if dredged soil is removed from the Site.
- 21. Section 3.4.6, Corrective Action Management Unit, Page 45:** The text states that, "If the sediments do not meet the definition of hazardous waste, then the requirements described below are potentially relevant and appropriate". Should the word 'not' be

removed from the subject sentence? It seems like CAMU regs are ARARs if the material is hazardous waste.

- 22. Section 3.4.6.1, Federal, Page 46:** The requirements of Title 22 CCR Section 66264.552(d) are not discussed in this section. Please include a discussion of Title 22 CCR Section 66264.552(d).
- 23. Section 3.4.7.1, Federal, Page 47:** This section discusses Federal ARARs for the design of the CAMU, but the inclusion of these requirements at this place in the FS is confusing because in the Section 3.4.7 Disposal to Land introduction section, the FS states that the requirements in Section 3.4.7 address “potential ARARs for off-site disposal when a CAMU or temporary unit is not used.” Please consider revising this section to clarify why the CAMU design requirements are included here or moving the discussion of these requirements to the CAMU discussion in section 3.4.6.
- 24. Section 3.4.7.2, State, Page 47:** The text does not identify whether the requirements at Titles 22, 23, and 27 CCR are “applicable” and, thus ARARs. Please clarify whether these requirements are ARARs for off-site landfill disposal actions.
- 25. Section 3.4.8.1, Federal, Clean Water Act, Section 404(b)(1).** The text states that Section 404(b)(1) provides guidelines for evaluating whether to allow fill into waters of the U.S. The text further states that the requirement “is potentially relevant and appropriate for alternatives that would include in situ capping of sediment,” but later in the section the text states that the “CWA Section 404(b)(1) guidelines” are “codified as potentially applicable ARAR criteria at 40 CFR Part 230.” Please revise this section to clarify whether these guidelines are “applicable” or “relevant and appropriate.”
- 26. Section 3.4.8.1, Clean Water Act, Page 49:** The text states that “The substantive requirements of 33 CFR Parts 320 and 323 potentially would apply to water discharges,” but does not state which specific requirements would apply to the water discharges. Please revise this section to identify the specific requirements that may be ARARs.
- 27. Section 3.4.8.1, Rivers and Harbors Act, Page 50:** This text identifies Section 10 of the Rivers and Harbors Act as an ARAR but does not discuss the specific requirements of this Act that are ARARs. Please revise this section to identify the specific requirements of Section 10 of the Rivers and Harbors Act that are ARARs.

APPENDIX B, ARARs SUMMARY TABLES

General comments regarding ARARs tables

- (a) EPA has not carefully reviewed the ARARs tables for overinclusiveness, based on our

expectation that at the ROD stage, the Navy will only include the requirements actually determined to be ARARs, or actually adopted as performance standards based on TBCs. The ROD should also eliminate from the ARARs table those requirements that were considered potential ARARs only for alternatives that were not included in the final screening. Some of the ARARs in the table, such as regarding land treatment unit and thermal treatment, appear to fall into that category. Given the apparent overinclusiveness of the ARARs tables in this draft, EPA may have additional comments regarding ARARs at either the draft final FS stage or the ROD stage.

(b) The ARARs tables are confusing because they appear to include requirements that have already been determined by the Navy not to be ARARs. EPA's preference would be to include in the ARARs table only those requirements determined to be ARARs. At the very least, the Table should indicate the result of the Navy's ARARs determination and indicate which potential ARARs have been determined not to be ARARs.

(c) It would be helpful if under "Comments" the Navy would indicate the alternatives to which each ARAR applies.

(d) Many of our comments regarding the Chapter 3 ARARs analysis also apply to the ARARs tables and are not repeated here.

Specific Comments on the ARARs Tables

1. Table B-1. The tables for the chemical-specific ARARs are less useful than the other tables, especially the notations in the "Requirement" column. The specific standards should be listed. Especially since there are not many standards that pertain to this remediation, this would not be a burden, and it would be quite useful. For example, merely indicating "California Toxics Rule" does not give any guidance as to what the requirement is. EPA appreciates the specificity and detail in indicating the specific requirements in the action-specific ARARs table and requests that the Navy do the same in the table for the chemical-specific ARARs.
2. Table B-1. The CTR, 40 CFR 131.38, should be included.
3. Table B-1, Page B-1, 40 CFR 131.37, Bay-Delta salinity standards. This is not discussed in the text, and we wonder if the Navy instead meant to include be the CTR standards at 131.38.
4. Table B-1, Page. B-1, National Toxics Rule and NAWQS. The citations for these entries appear to be reversed. Also, it appears that the NAWQS (p. B-1) and the water quality criteria (p. B-2) refer to the same thing.
5. Table B-1, Page B-2, Air ARARs. Citations are different in table and in text. They should be made consistent, and the table should cite the specific regulations, as was done in the text.

6. Table B-1, Federal Chemical-Specific ARARs by Medium, 33 USC Chapter 26, Section 1311(b)(2): This requirement is listed as a relevant and appropriate ARAR in the table but is not discussed in Section 3.2.2.1.1 discussing the Federal Chemical-Specific ARARs for Surface Water. Please discuss the specific requirements of this potential ARAR in Section 3.2.2.1.1.
7. Table B-1, Federal Chemical-Specific ARARs by Medium, Sediment: Table B-1 includes references to specific sections of 22 CCR that may be chemical-specific ARARs for sediment. The text in Section 3.2.2.2.2 discussing the Federal Chemical-Specific ARARs for sediment do not include a discussion of these requirements. Please revise Section 3.2.2.2.2 to discuss the specific requirements of 22 CCR that are ARARs.
8. Table B-2, Page B-4, Basin Plan. The text concludes this is not an ARAR because the CTR is more stringent, but the table includes it as applicable. This should be explained, or made consistent. The table should specify which specific Basin Plan requirements are considered to be ARARs.
9. Table B-2, Page B-4, Resolution 68-16. Text says reasonable and appropriate; table says applicable.
10. Table B-2, Page B-5, Resolution 92-49. Text says it is not an ARAR; table says it is applicable.
11. Table B-2, Page B-5, California Ocean Plan. How is this potentially applicable for remedies involving a Bay covered by the Basin Plan, not the Ocean?
12. Table B-2 does not include the TBCs discussed in the text.
13. Table B-5: Determination of action-specific ARARs is complicated because it is not currently known what kind of waste will be generated, and thus what requirements will be ARARs. In the "Prerequisite" column, many (but not all) of the entries indicate that the requirement applies to RCRA hazardous waste. This is very helpful, and EPA would appreciate the Navy indicating for each requirement what type of waste triggers the requirement.
14. Table B-5 includes numerous regulations dealing with landfill closure, waste accumulation, and land disposal. It is not clear which of these regulations the Navy considers to be the controlling ARARs for this site. It very well may be that the new (2004) CAMU regulations (22 CCR 66264.552 and 552.5) are the controlling ARARs; however, it is not clear whether these requirements have been considered. (The table and discussion in Section 3 cite to 66264.552, but it appears to be to the old version of that regulation.) EPA requests that the Navy more clearly specify what are the controlling

ARARs for the CAMU alternative.

15. Table B-5, Page B-11, site closure and clean closure. These discussions are inconsistent. The site closure regulations are indicated to be applicable but apply to hazardous waste management facilities, and the discussion of clean closure indicates that this is not a hazardous waste management facility.
16. Table B-5, Page B-11, LDRs. It is not clear why these would be ARARs if there is a CAMU.
17. Table B-5, Page B-13, Waste Piles. 40 CFR 264.554. EPA recommends that the table also cite to 22 CCR 66264.552(f) (new California CAMU regulations), which references 40 CFR 264.554.
18. Table B-5, Page B-14, Closure of Waste Pile, Comments. First "is" should be "if."
19. Table B-5, Page B-14, CAMU. It is not clear whether this reference is to the new (2004) CAMU regulations at 22 CCR 66264.552 and 552.5. It is also not apparent that there has been a comparison of these requirements with others related to, for example, closure, to determine which requirements should be ARARs.
20. Table B-5, Pages B-17 and B-32, Corrective action requirements, 22 CCR 66264.100 and 101. Why are these requirements not discussed together? EPA also questions why they would be relevant and appropriate for a CERCLA cleanup.
21. Table B-5 and Table B-6, Federal and State Action-Specific ARARs. It is unclear why ARAR determination fields of Table B-5 and B-6 are different than the ARAR determination fields for tables B-1 through B-4. Please change the ARAR determination field format to be consistent with the field formatting for tables B-1 through B-4. Also a "*" is used in Tables B-5 and B-6 as a footnote symbol. In tables B-1 through B-4, letters are used to denote footnotes. Please change the "*" to "a" to denote the table footnote.
22. Table B-5, Federal Action-Specific ARARs, Clean Water Act, 40 CFR Section 230 requirements. In Table B-5 the requirements of 40 CFR 230 relating to the discharge of dredged material are characterized as "applicable" to response actions involving the discharge of dredged material into waters of the United States. In Section 3.4.8.1 certain requirements of 40 CFR 230 are characterized as "applicable" and others as "relevant and appropriate." Please review and, as necessary, revise these sections to clarify which requirements of 40 CFR 230 are "applicable" and which are "relevant and appropriate" ARARs.
23. Table B-5, Federal Action-Specific ARARs, Toxic Substances Control Act. Table B-5 lists a PCB requirement that is not an ARAR. There is no discussion in Section 3.4

regarding whether requirements for PCBs are ARARs. The ARARs tables should provide a simple overview of the requirements that are considered ARARs. Please include a discussion of this PCB requirement and why it is not an ARAR in Section 3.4.5.

24. Table B-5, Federal Action-Specific ARARs, Clean Air Act, Provisions of the SIP. Table B-5 (page 13 of 13) lists the provisions of the State Implementation Plan (SIP) as “potentially applicable to actions involving dredging, handling of sediments during dewatering and transportation, and onsite treatment.” In Sections 3.4.5.1 and 3.4.8.1 of the FS, these requirements are characterized as “potentially relevant and appropriate” to proposed remedial alternatives involving dredging, handling of sediments during dewatering and transport, and on-site treatment. Please revise Table B-5 and Sections 3.4.5.1 and 3.4.8.1 to clarify whether the SIP requirements are “applicable” or “relevant and appropriate.”
25. Table B-6, Page B-24, Ocean Plan. Does not apply because this is an enclosed bay.
26. Table B-6, Page B-25, General Stormwater Permits. These permits do not apply only to waste management units. EPA recommends that the Navy consult with the Regional Board as to which provisions should be ARARs at Seaplane Lagoon.
27. Table B-6, Page B-26, Water Quality Control Plan for Temperature. Why is this included; is temperature a concern here?
28. Table B-6, Page B-27, Toxic Pits Cleanup Act. It is not clear which remedy could involve discharge of liquid hazardous waste to a surface impoundment.
29. Table B-6, Page B-31, Clean Closure. Which remedy would trigger these requirements?
30. Table B-6, Page B-32, “Corrective Action Management Unit (CAMU)”. The title is erroneous. This section of the CCR refers to Corrective Action for Waste Management Units, not to CAMUs. It is not clear whether this act has any relevance to CAMUs.
31. Table B-6, Page B-38, Waste Disposal. Why include requirements for lead, copper, nickel?
32. Table B-6, Page B-39. Why are the requirements from the California Fish and Game Code included in the action-specific rather than location-specific table? It would be more helpful to have them in the same place as the Federal Endangered Species Act requirements so they could be more easily compared.
33. Table B-6, State Action-Specific ARARs, SWRCB Orders No. 91-13-DWQ and No. 92-08-DWQ. Table B-6 lists the requirements of these SWRCB orders as TBC for response actions at IR Site 17. Section 3.4.8.2 does not include a discussion of the requirements of

these resolutions. Please revise section 3.4.8.2 to include a discussion of the specific requirements that are TBC for the planned response actions at IR Site 17.

34. Table B-6, State Action-Specific ARARs, 27 CCR and 23 CCR. Table B-6 identifies several sections of 27 CCR and 23 CCR 2550.10 as either “applicable” or “relevant and appropriate” ARARs for discharges of hazardous or inert waste to land. Section 3.4.7.2 does not include a discussion of the specific requirements of 27 CCR or 23 CCR that could be ARARs. Please revise section 3.4.7.2 to include a discussion of the specific requirements of 27 CCR and 23 CCR that may be ARARs or refer to the other sections of the FS that discuss these requirements.

35. Table B-6, State Action-Specific ARARs, CHSC 25157.8. Table B-6 identifies requirements of CHSC 25157.8 as ARARs for disposal of wastes. Section 3.4.7.2 does not include a discussion of the specific requirements of CHSC 25157.8 that may be ARARs for waste disposal. Please revise this section of the text to include a discussion of the specific requirements of CHSC 25157.8 that are ARARs.

REFERENCES

EPA Memorandum from U.S. EPA Office of Solid Waste to Toxics and Waste Management Division, Region IX, California Authorization-Evaluation of the Waste Evaluation Test, May 2, 1988, 9442.1988(3).

Environmental Deskbook 2003, California Environmental Laws and Regulations, Morgan, Lewis and Bockius LLP.

40 CFR Part 263, Requirements for Hazardous Waste Transporters.

40 CFR 264.110, Closure Requirements for Hazardous Waste Management and Disposal Facilities.

40 CFR Part 268, Hazardous Waste Land Disposal Restrictions.

40 CFR 300.5, National Oil and Hazardous Substances National Contingency Plan Definitions.

California Health and Safety Code, Sections 25167.1 through 25169.3, Requirements Applying to Hazardous Waste Haulers.

Applicable or Relevant and Appropriate Requirements (ARARs), To-Be-Considered Requirements (TBCs), and Permit Requirements of CERCLA, July 14, 1992 Memorandum from the State Water Resources Control Board to Water Quality Attorneys.

Bonnevie, Nancy

From: Newton, Darren CIV (NFECSSW) [darren.newton@navy.mil]
Sent: Wednesday, February 23, 2005 3:34 PM
To: Bonnevie, Nancy
Cc: Manley, Melissa A
Subject: FW: EPA Comments on Seaplane Lagoon FS

Attachments: seaplanefs.epa.doc



seaplanefs.epa.doc
(127 KB)

Nancy,

I am in Jury Duty today. I have not opened these. also, EPA has requested an extension on the SPL FS. the new due date for comments, Feb 28, 2005.

d

Darren Newton
Remedial Project Manager
Navy BRAC Operations, Code BPMOW.DN
1230 Columbia Street, Suite 1100
San Diego, CA 92101
619-532-0963

-----Original Message-----

From: Ripperda.Mark@epamail.epa.gov
[mailto:Ripperda.Mark@epamail.epa.gov]
Sent: Thursday, February 17, 2005 16:07
To: Macchiarella, Thomas L CIV BRAC, (EFDSW); Newton, Darren CIV (NFECSSW)
Cc: cook.anna-marie@epamail.epa.gov; Elizabeth Johnson; Judy Huang; Marcia Liao; Peter Russell; Lea Loizos; Brasaemle, Karla
Subject: EPA Comments on Seaplane Lagoon FS

Hi Darren, here are our comments on the Seaplane Lagoon FS.

(See attached file: seaplanefs.epa.doc)