UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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SFD 8-3

November 7, 2005

Mr. Thomas Macchiarella, Code 06CA.TM
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

RE: Draft Work Plan for Remedial Investigation, IR Site 35, Areas of Concern in Transfer Parcel EDC-5, Alameda Point

Dear Mr. Macchiarella:

EPA has reviewed the above referenced document, prepared by Bechtel Environmental, Inc. and submitted by the Navy on October 3, 2005. To accommodate a request from the Navy, the agencies performed an expedited review of the workplan. Many meetings between the regulators, the Navy and the City of Alameda were held during the preparation of this workplan to focus and quantify the number and types of samples needed to answer lingering questions concerning potential sources of contamination at EDC-5. Please find enclosed a few remaining concerns we have with the workplan.

If you have any questions, please call me at (415) 972-3029.

Sincerely,

Anna-Marie Cook

Anna-Marie Cook
Remedial Project Manager

cc: Greg Lorton, SWDiv
Marcia Liao, DTSC
Judy Huang, RWQCB
Jean Sweeney, RAB Co-Chair
Peter Russell, Russell Resources
Karla Brasaemle, TechLaw Inc
John Chesnutt, EPA

EPA Review of the Draft Work Plan for Remedial Investigation,
IR Site 35, Areas of Concern in Transfer Parcel EDC-5, Alameda Point

General Comments:

1. There appears to be some confusion between EPA and the Navy as to what constitutes IR 35. EPA believes that IR 35 should not be limited to areas needing further investigation, but should also include those areas that need to be taken through an RI/FS process ultimately resulting in a Record of Decision containing selected remedies for areas that require remediation.

2. The Data Quality Objectives (DQO) process in the Draft Work Plan for Remedial Investigation, IR Site 35, Areas of Concern in Transfer Parcel EDC-5, Alameda Point, Alameda California (the Work Plan) does not begin with evaluating whether the nature and extent of contamination has been defined. The nature and extent of contamination should be determined and a site conceptual model should be developed to explain the presence and extent of contamination before performing the human health risk assessment. Otherwise, it is likely that the risk will be underestimated (e.g., if the maximum level of contamination is not found or if some contaminants are not identified) or even overestimated (e.g., if low level contamination is found over a wide area). The first key decision rule should be whether the nature and extent of contamination has been defined; once the extent of contamination has been delineated, then decision rules about the results of the risk assessment can be considered. Please include a question like: "Has the nature and extent of contamination been defined?" as the first decision and develop the associated decision rules in Table 1-2.

3. Some data gaps will not be addressed by the sampling that is proposed in the Sampling and Analysis Plan (SAP) Appendix A1: Study Areas in IR Site 35:

   - AOC 10: The proposed sampling may not be sufficient to evaluate the extent of lead contamination south of S-36B-W50 since there is no proposed sampling point in this area. When looking at the proposed sampling on the figures and the extent of lead contamination, it appears that lead is not bounded to the north as well as to the south. Please consider adding additional sampling locations south of S-36B-W50 as well as to the north.

   - AOC 12: It is unclear why sampling is proposed east of previous location 107-0001/107-002, since the data in Table A2-14 indicates that the concentration of lead did not exceed the remedial action objective (RAO) of 199 milligrams per kilogram (mg/kg). Please consider moving the proposed sampling location east of previous location 107-0001/107-002 to the north.

In addition, no sampling points have been proposed to evaluate the extent of lead in soil west and south of SS-105-A1 (397 mg/kg) and west of SS-105-C1 (211 mg/kg). Since this area is within the boundary of AOC 12, please propose additional sampling locations to define the extent of lead contamination in the vicinity of these two locations.

- AOC 13: Additional sampling is needed to delineate the extent of contamination in AOC 13. The extent of polynuclear aromatic hydrocarbons (PAHs) in the vicinity of QQ25 is not bounded by a previous or proposed sample to the west and the extent of pesticides in the vicinity of 103-0020 is not bounded to the west or southwest. Please include an additional sampling point for PAH analysis west of previous sample QQ25 and one west-southwest of 103-0020 for pesticide analysis.

- AOC 23: This AOC is extremely large with many potential release sources to soil and groundwater such as PCB transformer storage areas and areas of visibly heavy staining. Without a grid type sampling plan, or plans to perform step-out samples, it is difficult to be reasonably sure that nature and extent of potential contamination will be adequately assessed with the current workplan. This area is one where follow-on work may be necessary at a later stage.

- AOC 24: The SI stated that there was a former dry cleaning plant in Building 197, but this is not discussed in Appendix A1 and no samples are proposed to evaluate this potential source of groundwater contamination. Since all of the previous samples focused on the south side of the building and groundwater flows to the north-northeast, it is possible that there is undetected contamination. Please include a discussion of the dry cleaning plant and clarify whether samples to evaluate the potential for VOCs in groundwater should be taken.

4. The text in several sections (e.g., A.1.10.2.2) states that analytical results are shown on the associated figures (e.g., Figure A1-11), but the figures do not include analytical results. Please include the missing analytical results on the figures.

5. The text indicates that every groundwater sample will be filtered in the laboratory for all analytes except VOCs, but filtration is not appropriate for analytes other than metals, and metals samples must be filtered and preserved in the field in order to avoid oxidation of metals. Filtration of a sample requires a clear statement of objectives regarding the representativeness of the resulting analysis data and how the data will be used, but this information is not provided in the Work Plan. In particular, filtration of a turbid water sample will change the composition (particle size and associated chemical concentrations) of the sample in unknown ways because the filter is designed to not pass particles of a certain size (such as 0.45 microns), *but it can also trap smaller particles* when a filtercake builds up. Additionally, chilling a water sample and storing can

promote further sorption of constituents (SVOCs, PAHs, PCBs, etc.), and filtering the sample in the laboratory allows time for aggregation of particulates that will further decrease and therefore under represent the chemical concentrations in solution. As a historical note, the avoidance of filtration in the late 1980s was recommended because filtration was recognized as removing mobile particulates (such as colloidal materials) and therefore the transport of chemical contaminants was underestimated. Please specify that metals samples will be filtered in the field to avoid oxidation of metals and delete references to filtration in the laboratory or discuss the impact of filtration and storage on the representativeness of the samples in the context of site specific conditions and the DQOs.

6. The analytical laboratory(ies) and geotechnical laboratory are not specified in the SAP. Please specify the laboratories that will do the analyses and geotechnical work in the next version of the Work Plan.

Specific Comments:

1. **Work Plan Page 1-1, second paragraph**: Please include an explanation concerning the status of Parcel 98 in this section. Parcel 98 is part of EDC-5 and, because of existing PAH contamination, will need to go through the RI/FS process for remedy selection. Even though further investigation of PAH contamination at this parcel is not necessary as part of this workplan, a remedy that is consistent with one that will be selected for Site 25 needs to be incorporated in the Record of Decision for Site 35.

2. **Work Plan Section 1.2, Scope of Effort, Page 1-2; Work Plan Section 2.9.4, Ecological Summary, Page 2-8; and SAP Section 1.3, Project/Task Description, Page A1-3:** It is unclear whether groundwater results from study areas other than AOCs 2 and 4 and EBS Parcel 205 will be compared to criteria for aquatic receptors; the relevant sentence, "Groundwater results for study areas adjacent to or near surface water (e.g., AOCs 2 and 4, and EBS Parcel 205) will be compared to criteria for aquatic receptors," is found in these three sections. The use of "e.g." indicates that the following phrase is not a complete list of such sites, and it appears that there are other sites in close proximity to aquatic receptors. Please discuss whether groundwater samples from sites like AOCs 3, 20, 21 and 23 will also be screened against criteria for aquatic receptors.

3. **Work Plan Page 2-2, Site Description, second paragraph**: Since IR 35 should include most, if not all, of Parcel 98, it is incorrect to state that there are no buildings present. In fact there are many residences. Parcel 78 also has a number of buildings.

4. **Work Plan Section 2.10, Historical Features, Page 2-8:** This section discusses the presence of historic buildings in AOCs 1, 2, 7, and 10, but the document is unclear about how the historic nature of the buildings affects this Work Plan and SAP. Please expand

this section with the addition of an explanation of how the NAS Alameda Historic District affects the Work Plan, SAP, and the eventual Remedial Investigation/Feasibility Study (RI/FS).

5. **Work Plan Figure 2-7, Habitat Areas:** The location of the monarch butterfly roosting area ("a potentially sensitive habitat located in a park-like area between Barber's Point Road and Pearl Harbor Road... approximately 250 feet southwest of AOC 5", Section 2.9.2, page 2-7) is not shown on the habitat figure . Please include the monarch butterfly roosting area on Figure 2-7.

6. **Work Plan Page 3-1, Previous Investigations**: Please include the background PAH study performed in 2002. It is a key document that will help to decide how to select a remedy for soil PAH contamination in Parcel 98.

7. **Work Plan Page 3-4, Section 3.7**: Include the PAH background study which formed the basis for a large soil removal action in this section.

8. **Work Plan Page 3-5, Section 3.7.2.1**: Note that groundwater contamination may be migrating from Site 6 and Site 28 and impacting EDC-5 property.

9. **Work Plan Page 3-5, Section 3.8, Storm Sewer Investigations, second bullet**: Closed-circuit television was only used on portions of lines that were accessible to TV. Please verify which portions of the lines in EDC-5 were accessible and which portions were not and provide the results on a figure. This step can be done in the RI/FS report and is important as part of the conceptual site model.

10. **Work Plan Page 3-6, Section 3.8, third paragraph**: Please include an explanation of why the data summary report concluded that storm sewer lines were not acting as preferred conduits.

11. **Work Plan Page 3-7, Section 3.11**: Since EPA considers Parcel 98 and its PAH issues to be part of IR 35, the statement that no soil samples in IR 35 had PAHs above the soil screening criterion is incorrect. The other alternative for the Navy to deal with the PAH issues at Parcel 98 would be to separate out the PAH issues into a new IR site (IR 36), but this approach would seem to delay the clean up and transfer process.

12. **Work Plan Page 3-7, Section 3.12, first paragraph**: For completeness, it should be noted that the third "water tower" did not exist at the time of the 2001 investigation and instead the area beneath and surrounding the former water tower was investigated for lead. Similarly, the radio tower adjacent to the residential area had been removed at an earlier date and it was the concrete footings and surrounding soil that were investigated and remediated for lead contamination.

13. **Work Plan Page 3-7, Section 3.12, last paragraph**: Please elaborate on how elevated lead concentrations were found beneath the hardscape cover. Were these samples taken as part of the removal action delineation? If elevated lead concentrations are present beneath hardscape, then the potential exposure to future receptors after removal of the hardscape must be considered in remedy selection.

14. **Work Plan Page 3-8, Section 3.13, first paragraph**: Please state that the PCB clean up levels for the removal action were 1 ppm.

15. **Work Plan Figure 3-1**: This figure should include the PAH soil sampling locations.

16. **Appendix A Foreword**: There appears to be some confusion between EPA and the Navy as to what constitutes IR 35. EPA believes that IR 35 should not be limited to areas needing further investigation, but should also include those areas that need to be taken through an RI/FS process ultimately resulting in a Record of Decision containing selected remedies for areas that require remediation.

17. **Appendix A Page A1-iii, bullets**: Where is the PAH background study report from 2002 and the TCRA for PAH in West Housing performed in 2003?

18. **Appendix A Page A1-iii, last bullet**: Please clarify specifically what is meant by "threshold background concentrations".

19. **Appendix A, SAP Section 1.3, Project/Task Description, Page A1-3:** This section states that the proposed sampling locations for each area in IR Site 35 are shown on Figure 1-5, while they are actually shown on Figure 1-6. Figure 1-5 is the conceptual site model. Please correct the reference to Figure 1-5 and change it to refer to Figure 1-6.

20. **Appendix A, SAP Section 1.4, Quality Objectives and Criteria, Page A1-5:** The bullet "DQOs for AOCs and data gap areas" does not list AOCs 1, 20, and 25, though these are included in the list on the previous page of AOCs that require additional sampling and analysis. Please add AOCs 1, 20, and 25 to this bullet, or provide an explanation as to why they have been excluded.

21. **Appendix A, SAP Section 2.2.2, Page A2-6:** The third bullet appears to indicate that all equipment, including large equipment that is decontaminated with a pressure washer or steam-cleaner, will be rinsed twice with deionized or distilled water. Please confirm that this is the case or revise this section to indicate that only smaller equipment will be rinsed twice with deionized or distilled water.

22. **Appendix A, SAP Table 2-2, Analytical Methods, Containers, Preservatives, and Holding Times for Proposed Groundwater Samples:** This table indicates that target analyte list (TAL) metals samples will be submitted without an acid preservative, which is presumably to allow the laboratory to filter these samples, but this will allow metals to

oxidize so the results will not be representative of conditions in the aquifer. Since a peristaltic pump will be present on site to use if the bladder pump screen is clogged, to ensure that there is a representative sample, this pump should be used to field filter samples for metals analysis within 30 minutes or less of sample collection. Please revise the SAP to specify that TAL metals samples will be field filtered.

23. **SAP Appendix A1, Section A1.14, Area of Concern 14, Page A1-24:** The text states that AOC 14 is "along Orion Street between Stardust Place and West Tower Avenue", but Figure A1-15 shows AOC 14 along Norfolk Road between Stardust Place and West Tower Avenue. Please correct either Section A1.14 or Figure A1-15.

24. **SAP Appendix A1, Section A1.23.1.3, Proposed Sampling Rationale and Design, Page A1-37:** The first sentence in the fourth paragraph states, "Both soil and discrete groundwater samples will be collected at EBS Parcel 72," but the text in this section discusses EBS Parcel 71. Please resolve this discrepancy.

25. **SAP Appendix A1, Section 1.23.8.1, EBS Parcel 126, Page A1-51:** The text states that non-PCB transformer fluid was stored in drums on a concrete pad at the electrical substation (Building 411), but this structure was constructed prior to 1947 when PCBs were ubiquitous in transformers. It is likely that the observation of non-PCB transformer fluid was made during the EBS in the 1990s, so it cannot be concluded that PCBs were not used historically in the transformers in this substation or that PCBs were not spilled. Please revise the text to state that drums of non-PCB transformer were observed during the 1990s, but that prior to the Toxic Substances Control Act (TSCA), all oil-containing transformers contained PCBs.

26. **SAP Appendix A1, Section A1.23.8.2, Operable Units 1 and 2 Data Gaps Investigation, Page A1-52:** The text refers to data gap samples collected at EBS Parcel 125, but this discussion is for EBS Parcel 126. Please resolve this discrepancy.

27. **SAP Appendix A1, Section 1.25.2.2, Remedial Investigation/Feasibility Study Data Transmittal Memorandum for Sites 4, 5, 8, 10A, 12, and 14, Page A1-56 and Table A2-34 AOC25 Water:** The text states that cadmium and thallium were reported in the groundwater sample from DHP-S03-03, but analytical data from this sample are not included in Table A2-34. Please provide the missing data.

28. **Figure A1-9, Area of Concern 8:** SAP Section A1.8, Area of Concern 8, mentions that AOC 8 is near Pensacola Lane and Corpus Christi Road, but neither of these streets is labeled on Figure A1-9. Please label Pensacola Lane and Corpus Christi Road on Figure A1-9.

29. **Figure A1-13, Area of Concern 12:** It is unclear why the symbol used to designate detections for some locations (e.g., Grid 6 Tower 61, 107-0001/0002, Parcel 106 Grid 28, parcel 106 Grid 30, and Parcel 106 Grid 31) indicates that the lead concentration in these

locations exceed the RAO of 199 mg/kg when the lead concentrations for these locations in Table A2-14 is considerably lower than the RAO. Please resolve this discrepancy.

30. **Figure A1-15, Area of Concern 14 and Table A2-16:** The sampling location identifiers in Table A2-16 do not match the sampling location names on Figure A1-15. Please resolve this discrepancy and check to ensure that there are no such discrepancies between the data tables and other figures.

31. **Figure A1-22, Area of Concern 23:** SAP Section A1.23.1, EBS Parcel 71, states that Building 544 is present on EBS Parcel 71 (page A1-34). However, Figure A1-22 shows only the text label ("544") of the building, with no indication of the building's current or past footprint. Please revise Figure A1-22 to include the footprint of Building 544.

32. **Appendix E, Section 2.1, Data Evaluation, Page E2-1:** It is stated that "all chemicals reported at concentrations above detection limits in at least one sample in data considered suitable for use in the HHRA [human health risk assessment] will be included as chemicals of potential concern (COPCs) in the HHRA," but additional discussion regarding the selection of detection limits with respect to risk-based goals is not provided. An attempt should be made to select analytical methods with detection limits that are less than risk-based screening levels so that COPCs that might contribute to risk and hazard at the site are not removed from consideration due to an elevated detection limit. Please revise the Work Plan to discuss how chemicals with detection limits greater than risk-based screening levels will be addressed in the risk assessment.

33. **Appendix E, Section 2.2.3, Estimation of Exposure Point Concentrations, Page E2-2:** It is stated that exposure point concentrations (EPCs) for inhalation of indoor and outdoor air will be modeled based on soil and groundwater data associated with each AOC. However, specific models are not proposed for use in estimating EPCs. Please revise the Work Plan to include additional information about the models that will be used to estimate EPCs for indoor and outdoor air.

34. **Appendix E, Section 2.3, Toxicity Assessment, Page E2-3:** This section presents information regarding the source of toxicity criteria proposed for use in the risk assessment and specifically mentions U.S. EPA's Integrated Risk Information System (IRIS) and Health Effects Assessment Summary Tables (HEAST), but please note that OSWER Directive 9285.7-53, issued by U.S. EPA's Office of Solid Waste and Emergency Response on December 5, 2003, updates the hierarchy of human health toxicity values and provides guidance for the sources of toxicity information that should be used in performing a human health risk assessment. Specifically, the Directive indicates that, if toxicity criteria are not provided in IRIS, U.S. EPA's Office of Research and Development/National Center for Environmental Assessment/Superfund Health Risk

Technical Support Center should be consulted to obtain a Provisional Peer Reviewed Toxicity Value (PPRTV). HEAST is identified in the Directive as a third tier source of toxicity criteria. Please revise the text to reflect the most recent guidance for obtaining toxicity values.

35. **Appendix E, Section 3, References, Page E3-1:** U.S. EPA's Risk Assessment Guidance for Superfund (RAGS), Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) - Final, dated July 2004 does not appear on the list of References. RAGS Part E should be consulted for guidance on evaluating risk to human receptors via the dermal pathway. Please include RAGS Part E in the references and incorporate it into the HHRA methodology.