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HUNTERS POINT
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NAVY RESPONSES TO AGENCY COMMENTS
DRAFT OPERABLE UNIT II FEASIBILITY STUDY
NAVAL STATION, TREASURE ISLAND
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA

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DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066-0727

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NAVY RESPONSES TO DTSC AND EPA COMMENTS

The following are the Navy's responses to the comments of the U.S. Environmental Protection Agency, Region IX (EPA) and the Department of Toxic Substances Control (DTSC) on the *Draft Operable Unit II Feasibility Study, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California*, transmitted with the EPA letter dated November 25, 1992 and the DTSC letter dated November 30, 1992. The EPA's and DTSC's comments are reproduced here exactly as in the original documents.

I. DTSC COMMENTS AND NAVY RESPONSES

A. General Comments

Comment 1: **Future feasibility studies should include a wider range of future land use alternatives and corresponding cleanup goals and remedial unit selection. If no information exists regarding land use, an industrial use alternative should be provided in addition to the "no further action" and "residential use" scenarios.**

Response: The Navy agrees that, when future land use alternatives are uncertain, a wider range of scenarios and cleanup goals should be considered. The OU II FS Report presented remedial units and alternatives on the basis of a hypothetical residential scenario presented in the OU II PHEE Report. The subsequent Alternative Selection Report (ASR) that considers interim-action remedial units and alternatives will include target remedial goals (TRGs) and remedial units based on commercial use, which is the likely future use of the OU II sites. Future FS reports will consider an industrial or commercial use in addition to residential use if land use is uncertain.

Comment 2: **Guidance for Alternative Selection Reports (ASR):**

The Department concurs with the Navy's proposal to concentrate on applicable proven technologies and process options. We are available for technical meetings to discuss treatment units and options prior to the submittal of the ASR.

If the Navy is defining soil remedial units and there are no appropriate literature values, cleanup goals should be proposed in the ASR. Again, the purpose of the ASR is to define interim actions which remove contamination that poses an exposure risk and/or initiate treatment of soil/groundwater expeditiously. Target cleanup goals are established and then fully assessed in the comprehensive Public Health and Environment Evaluation (PHEE).

Response: Comment noted. Preliminary remedial goals were developed on the basis of risk to human health in the PHEE Report. These levels were later refined in the FS Report based on cost and the availability of technologies that could achieve these levels.

Comment 3: **The Department still considers the one in a million cancer risk as the point of departure at which risk management decisions will be considered at the site.**

Response: Comment noted.

Comment 4: **Groundwater treatment options should not be dismissed. It is possible that the Navy will be unable to discharge groundwater with these levels to sewer system.**

Response: The Navy will consider groundwater treatment options in future FS reports. However, at present the estimated effluent concentrations and groundwater flow rates from the OU II sites meet the acceptance criteria for the San Francisco Publicly Owned Treatment Works (POTW).

Personal communication with Mr. Tommie Lee and Mr. Gary Ong of the POTW and a review of chemical-specific discharge limits indicate that the concentrations of chemicals in the groundwater are much lower than the POTW acceptance limits. In addition, the past permitting experience of Mr. Lee and Mr. Ong indicates that contaminated groundwater is routinely accepted by the POTW. The following table compares the maximum concentrations of several chemicals detected in groundwater at Site IR-6 with the acceptance limits for discharge to the POTW.

Chemical	Site IR-6 Maximum Concentration (mg/l)	POTW Acceptance Limit (mg/l)
Hydrocarbon oil and grease	6.8	100.0
Trichloroethene	0.005	204.0
Phenols (total)	0.0122	23.0
Total chromium	0.101	5.0
Arsenic	0.0125	4.0

Comment 5: **The comparison of alternatives section should be expanded for each of the remedial units (e.g. pages 70, 100, 155).**

Response: Comment noted. More detail will be provided in future reports.

B. Specific Comments

Comment 1: **Page ii; The Department does not agree that all manganese present at the site is due to the naturally occurring serpentinite.**

Response: Comment noted. It appears that most of the manganese present at the site is due to the naturally occurring serpentinite. Concentrations significantly above background were detected only at Site IR-10 beneath Building 123.

Comment 2: **Page 3; Target Remedial Goals (TRG) should be developed for interim treatment for groundwater contaminated by "non-point sources" if a) preliminary risk evaluations indicate that treatment will be necessary or if b) other "point sources" are present which will require treatment.**

Response: Remediation of groundwater contamination from non-point sources will be considered in the parcel-wide FS because sufficient data to assess the need for remediation or to develop alternatives do not exist at present. The FS and the subsequent ASR were intended to address releases from point sources related to site activities. For groundwater proposed for interim action, the chemical composition of the water, regardless of sources, is considered in developing and assessing alternatives.

Comment 3: **Page 37; Groundwater pumping and treatment alternatives must be included.**

Response: See the response to General Comment 4.

Comment 4: **Page 40; TRGs for groundwater contaminants should be set at the Maximum Contaminant Level, if applicable.**

Response: Where available, TRGs for groundwater were set at MCLs or MCLGs in the OU II FS Report.

Comment 5: **Page 44; Expand discussion regarding definitions for effectiveness, implementability, and relative cost (these definitions are covered on page 52, however, should be covered earlier).**

Response: Comment noted.

Comment 6: **Table ES-1; Clarify depth of soil remedial units in the table, as defined on page 23.**

Response: The depth of the soil remedial unit at Site IR-8 was defined as 3 feet below ground surface (bgs) in Table ES-1 and on page 23.

Comment 7: **Page 55; In the "Long-term Effectiveness" section, expand on existing land uses and briefly summarize scenarios used in the OU II PHEE.**

Response: Comment noted. This section will be expanded in future documents.

Comment 8: **Page 55, 56; Expand on discussion regarding the contaminated areas and include short term measures such as limited access, etc.**

Response: Comment noted. Additional details will be provided in future documents.

Comment 9: **Page 56; Provide greater detail on degradability of PCBs and PAHs.**

Response: Natural degradation of these compounds would not be significant in the short term.

Comment 10: **Page 56, Section 5.6.6; Explain the term "administrative feasibility obstacles" (do these include deed restrictions and fences?).**

Response: "Administrative feasibility obstacles" implied the lack of acceptability by the regulatory agencies; however, this issue could be more fully addressed in the Regulatory Acceptance Section of the report.

Comment 11: **Page 57; The existing building which could provide protection as a cap should also be mentioned in the Alternative I discussion.**

Response: Comment noted.

Comment 12: **Page 70; Clarify discussion that the treatment will "not meet chemical-specific ARARs for soil".**

Response: The no action/institutional action alternative is not a treatment alternative and therefore would not address cleanup of regulated chemicals such as PCBs.

Comment 13: **Page 58; Section 5.7.1; Expand on future land use discussion (see discussion in 5.7.3).**

Response: For the purpose of this feasibility study, future land use was assumed to be residential. This scenario will produce a TRG which is also protective of industrial or commercial receptors.

Comment 14: **Page 60, Section 5.7.6; Revise this discussion as cap installation may involve specialized equipment or knowledge.**

Response: Comment noted. Installation of a cap would involve specialized equipment and knowledge; however, they are readily available.

Comment 15: **Page 65; Alternatives with treatability studies required should include greater detail on 1) type of study, 2) length of time required, 3) types of permits.**

Response: Comment noted. Future documents will provide additional details.

Comment 16: **Page 70; Expand comparison of alternatives, especially short-term effectiveness, long-term effectiveness. Are all alternatives equally effective? Also, include greater detail on institutional controls, e.g. necessity for deed restrictions, the necessity to determine the success of Alternative 4 with treatability studies.**

Response: Future documents will provide additional details, and in the future, treatability studies will be incorporated earlier in the RI/FS process.

Comment 17: **Page 79; It is inappropriate to assume, at this stage, that a NPDES permit would not be issued.**

Response: The FS did not assume that an NPDES permit would not be issued. The FS proposed, based on technical and financial considerations, that discharge to the POTW was a prudent and cost effective alternative.

Comment 18: **Page 80, Section 6.3.4; Groundwater treatment options should not be ruled out at this stage. For example, the electrochemical metal removal, reverse osmosis and ion exchange alternatives should be considered further.**

Response: See the response to General Comment 4.

Comment 19: **Page 90; Clarify whether 600 or 400 cubic yards is proposed to be excavated (Table ES-1 lists 400).**

Response: Table ES-1 is correct; 400 cy is the estimated amount of soil in the remedial unit at Site IR-9.

Comment 20: **Page 90; Provide greater detail regarding treatability studies (see comment #15).**

Response: Additional details will be provided in future documents.

Comment 21: **Page 100; Provide greater detail for comparison of alternatives.**

Response: Additional details will be provided in future documents.

Comment 22: **Page 112; Groundwater treatment alternatives should not be eliminated at this stage (see comment #18).**

Response: See the response to General Comment 4.

Comment 23: **Page 123, 133; Deed restrictions are generally required for capped areas.**

Response: Comment noted.

Comment 24: **Page 137; Provide greater detail regarding treatability studies (see comment #15).**

Response: Additional details will be provided in future documents.

Comment 25: **Page 141; When referencing other sections, provide the section number (i.e. sections which contain lists of EPA test methods).**

Response: Comment noted.

Comment 26: **Page 150; Provide greater detail on how the contaminated soil can be segregated prior to treatment/disposal.**

Response: The initial excavation and segregation of soil will be based on site characterization data collected during the remedial investigation (RI). Based on field observation and laboratory screening data done at the time of excavation, the excavated soil will be further characterized and segregated prior to treatment and/or disposal.

Comment 27: **Page 155-156; Provide greater detail for comparison of alternatives.**

Response: Additional details will be provided in future documents.

Comment 28: **Appendix B, Page B-1; Provide greater detail of limitations of modeling for the Hunters Point site due to heterogeneous conditions.**

Response: The uppermost aquifer at OU II sites, like most geologic systems, is heterogeneous. A flow and transport model that accounts for all heterogeneity identified in the RI would be a complex, three-dimensional numerical model that would be time-consuming and difficult to construct and run. The results generated from such a complex model may not be significantly different than the results of the model described in Appendix B.

Comment 29: **Appendix C, Page C-3; Add more information regarding soil excavation, i.e. safety plans required.**

Response: A health and safety plan would be implemented to protect workers exposed to chemical-bearing soil or groundwater encountered during remediation.

Comment 30: **Appendix C, C-3; Provide greater detail regarding the success and problems of the listed treatment methods based on soil types, hydrogeology, chemical concentrations (the chemical oxidation discussion is acceptable), etc. These discussions should be more specific with comparisons to known Hunters Point conditions.**

Response: Comment noted. Additional details will be provided in future documents.

Comment 31: **Appendix C, C-12; Clarify the following sentence, "most treatment applications involve use of contractors (sic) that contain packed beds of granular activated carbon..." This section should include a description of carbon types.**

Response: The word "contactors" as it appears in the FS Report means the parts of treatment units that contact the groundwater. Additional details on carbon types will be provided in design documents.

II. EPA COMMENTS AND NAVY RESPONSES

Comment 1: **The Applicable or Relevant and Appropriate Requirements (ARARs) analysis in the FS indicates that the Navy and the agencies need to engage in more discussion on the appropriate level of detail and proper presentation of ARARs for forthcoming ASRs or FSs. In general, the ARARs analysis lacks sufficient detail to verify statements made or ensure that the analysis of alternatives is correct. Also, because the alternatives are described in very general terms and some elements of them are not yet determined, some ARARs have not been considered. Table 4 contains some inaccuracies which we can go over with you in a meeting.**

Response: Comment noted. Although ARARs were listed for each alternative in the "Compliance with ARARs" section of the detailed analysis, future documents will provide greater detail on applicability versus relevance or appropriateness.

Comment 2: **Implementation of the Federal Resources Conservation and Recovery Act (RCRA) has been delegated to the State of California. Therefore, citations of RCRA ARARs should be citations of State statutory and regulatory requirements rather than Federal.**

Response: Comment noted.

Comment 3: **What is the basis for the repeated statements that discharge of extracted and untreated groundwater will meet the pretreatment standards for discharge to the POTW? Statements that ARARs will be met required substantiation. Also, further rationale should be presented to explain the merits of extracting contaminated groundwater and discharging it untreated to another receiving water. Further consideration should be given to carrying groundwater treatment through the screening process.**

Response: The POTW is a treatment facility and, as such, treats groundwater, stormwater runoff, and industrial and sanitary discharges received at the facility before discharging to any other receiving water. POTW discharges to receiving waters are regulated under the NPDES program administered by the California Regional Water Quality Control Board (RWQCB) and are subject to effluent standards established and enforced by the RWQCB.

The Navy will consider groundwater treatment options in future FS reports. However, at present the estimated effluent concentrations and groundwater flow rates from the OU II sites meet the acceptance criteria for the San Francisco POTW.

Personal communication with Mr. Tommie Lee and Mr. Gary Ong of the San Francisco POTW and a review of chemical-specific discharge limits indicate that the concentrations of chemicals in the groundwater are much lower than the POTW acceptance limits. In addition, the past permitting experience of Mr. Lee and Mr. Ong indicates that contaminated groundwater is routinely accepted by the POTW. The following table compares the maximum concentrations of several chemicals detected in groundwater at Site IR-6 with the acceptance limits for discharge to the POTW.

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Phenols (total)	0.0122	23.0
Total chromium	0.101	5.0
Arsenic	0.0125	4.0

Comment 4: **Local rules and regulations are not ARARs unless derived from Federal statute or regulation or from Federal requirements that have been delegated to the State.**

Response: Comment noted.

Comment 5: **Does an IRM or removal action need to be considered for Building 123?**

Response: No. The risk posed by contaminants underneath the building are not significant enough to consider demolition of the building at present. Any actions necessary to mitigate risks associated with the building will be considered in the parcel-wide FS.

Comment 6: **EPA does not support the elimination of stabilization technologies for nonvolatile or semivolatile organic constituents in soil. The EPA position is that these processes are not applicable to VOCs due to releases during mixing and curing processes.**

Response: The stabilization option was eliminated from consideration because of the presence of VOCs in soil that also contains nonvolatile or semivolatile organic constituents.

Comment 7: **When capping is proposed, it is unclear what ARARs are being applied (e.g., is a RCRA cap required?). The FS states for Alternative 2 that it is not anticipated that the waste is a hazardous waste; what is this assumption based on?**

Response: The soil is not considered a hazardous waste because the total chemical concentrations do not exceed hazardous levels, and the waste extract levels are not expected to be above the characteristic levels specified under RCRA. If the waste is not a RCRA waste, a RCRA cap is not necessary. Land disposal with a cap should not have to comply with either RCRA or 23 CCR, Chapter 15 for hazardous waste. Potentially, the cap may have to comply with the latter for designated waste (Class II) or Class III landfills.

Comment 8: **The FS repeatedly states that the need for surface water controls will be evaluated in the future. Why isn't this component of the alternatives committed to in the FS, but rather deferred to another phase?**

Response: Surface water control such as post-treatment grading to prevent ponding would be appropriate and implemented after backfilling the excavation.

Comment 9: **In a number of cases the feasibility of implementing an alternative is based on the results of conducting TCLP analyses in the future. Can these analyses be done now for any of the alternatives to better evaluate the cost and feasibility of disposal options? It should be noted that land ban disposal requirements apply onsite as well as offsite, although offsite may be more stringent. Again, when discussing disposal options, please substantiate statements made that a waste is not a hazardous waste or is not expected to be a hazardous waste.**

Response: The feasibility of implementing an alternative does not depend on the results of conducting TCLP analyses. TCLP or other leaching tests would provide data necessary to determine whether hotspots would need pretreatment prior to disposal. In addition, the cost differential between disposing untreated soil and disposing soil with pretreatment at the landfill is insignificant compared to the total remediation cost. Soil containing lead would be a RCRA-hazardous waste and thus subject to the land disposal restrictions if its concentration in the waste extract is above the characteristic level of 5.0 mg/l. On the basis of past experience with similar soil conditions, the levels of lead in soil at Sites IR-9 and IR-6/IR-10 (2,580 mg/kg maximum) would probably not yield an extract from the Extraction Procedure (EP) Toxicity test with lead above the characteristic level (5 mg/l).

Comment 10: **A number of alternatives discuss segregation of soils into stockpiles based on sampling. It is not clear how this is to be accomplished.**

Response: The initial excavation and segregation of soil will be based on site characterization data collected during the remedial investigation (RI). Based on field observation and laboratory screening data performed at the time of excavation, the excavated soil will be further characterized and segregated prior to treatment and/or disposal.

Comment 11: **The reduction of toxicity, mobility or volume (TMV) is possible only by treatment of wastes. Containment (e.g., capping and groundwater extraction) and no action alternatives cannot be claimed to reduce TMV.**

Response: One of the purposes of capping is to prevent further movement of chemicals in soil to the groundwater by preventing rainwater infiltration; therefore, capping can be credited with reducing the mobility of the chemicals. Extraction of groundwater, likewise, prevents the chemicals in the groundwater from spreading further, reduces the volume over time, and in the case of discharge and treatment at the POTW, reduces the toxicity.

Comment 12: **With the soil washing alternative (and other treatment alternatives) the FS defers decisions about handling residuals, such as wash water, until after treatability studies. The Record of Decision (ROD) will need to specify means to handle residuals; therefore such decisions cannot be put off until after the selection of remedy. Such information is needed to do cost estimates and ARARs analysis. Treatability studies should be performed prior to the ROD whenever possible.**

Response: Comment noted. Additional information will be provided in future documents. If appropriate, treatability studies will be performed prior to the ROD to provide the necessary information on treatment residuals.

Comment 13: **Soil washing is considered by EPA to be an innovative, not a proven technology. We would be willing to work with you to further evaluate its possibilities and limitations with respect to the specific constituents involved and to assist in evaluating proposed treatability studies.**

Response: Comment noted. The Navy looks forward to continuing to work together in the future.

Comment 13: **Where are the asphalt batch plants being considered for Alternative 6 located?**

Response: R&G Environmental Services, Inc., located in San Jose, California, was the plant considered during the FS.

Comment 14: **What Class I and II landfills are specifically being considered? Do these proposed landfills comply with the EPA Offsite Policy, which mandates that CERCLA waste not be taken to a RCRA facility that is out of compliance?**

Response: Class I: Chemical Waste Management, Kettleman City, California, currently in full RCRA compliance. Class II: Forward, Inc., Stockton, California.

Comment 15: **For Alternative 7, there are really two alternatives proposed, an onsite and an offsite thermal desorption alternative. These should be separately evaluated. What offsite locations were specifically considered?**

Response: Comment noted. The offsite location considered was Allied Environmental Services West, San Rafael, California.

Comment 16: **For Alternative 8, what offsite permitted incinerator(s) are specifically being considered?**

Response: The incinerator considered was the cement kiln incinerator operated by Port Costa Materials, Port Costa, California.

Comment 17: **Please describe the specific ARARs that apply to the construction of the bioremediation Soil Treatment Unit (STU). Where would the excess rainwater water is pumped into the STU be disposed of and what ARARs apply?**

Response: These ARARs were listed in the "Compliance with ARARs" section of the detailed analysis of bioremediation. They specify the type of liner to be installed, the monitoring required, and administrative requirements such as siting of the unit, the unit's performance goal to protect groundwater at the site, and closure requirements.

Rainwater, when available, would be used to add moisture to the soil during the treatment process. Although it is unlikely that excess moisture would accumulate in the unit and require disposal, the accumulated rain water would be discharged to the POTW after sampling determined that the concentrations of chemicals in the water would not exceed discharge acceptance limits. If the rainwater contained chemical concentrations that exceeded discharge limits, the water could be returned to the STU for treatment.

Comment 18: **What is the basis for the sampling frequency proposed in Section 5.7 and other places in the FS? A sampling frequency of one sample per 50 cy does not seem adequate for categorization of soil prior to disposal.**

Response: On the basis of previous experience with similar chemicals at other sites, analysis of a composite soil sample every 50 cy should contribute adequate information to characterize and segregate the excavated soil prior to disposal.

Comment 19: **The cost information presented is not detailed enough to substantiate the costs presented.**

Response: Future documents will include more detailed information on the various components of the capital and annual operations and maintenance costs. The OU II ASR presents more detailed cost tables for the three interim action alternatives considered at Site IR-6.

Comment 20: **A critical assessment of the uncertainties associated with the remedial unit boundaries should be presented.**

Response: The remedial unit's lateral boundaries appear to be well defined; verification samples will be collected from the walls of any excavated areas to confirm that soil above TRGs has been removed. In several borings within the remedial unit at Site IR-6, petroleum hydrocarbons at levels above TRGs were detected below the water table which is approximately 8 to 10 feet bgs. The remedial unit in these areas will extend up to 6 feet below the water table, or to bedrock, if bedrock is encountered within 6 feet of the water table. Verification samples at the vertical limit of excavation will be collected as described above.

Comment 21: **Explain the basis for the assumption that 60 percent of the treated soil would be clean below the TRGs for the treatment alternatives.**

Response: This assumption only applies to soil washing and is described in *Biotrol Soil Washing System for Treatment of a Wood Preserving Site*, Applications Analysis Report. EPA, ORD, February 1992. EPA/540/A5-91/003.

Comment 22: **The report contains numerous cut and paste errors that result in information for an alternative being incorrectly located or missing altogether.**

Response: Comment noted.