Arc Ecology

Environment, Economy, Society, & Peace

November 30, 2004

Keith Forman
BRAC Environmental Coordinator for
Hunters Point Shipyard
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

RE: Draft Final Hunters Point Shipyard Parcel F Validation Study Report, San Francisco Bay, California

Dear Mr. Forman,

Thank you for providing Arc Ecology with the opportunity to review the *Draft Final Hunters Point Shipyard Parcel F Validation Study Report, San Francisco Bay, California*, dated August 17, 2004. Our comments follow.

General Comments

1. According to the report, the primary objective of the Validation Study is to identify the areas of offshore sediment requiring evaluation in a Feasibility Study (FS) (Section 1.3, page 1-10). Having read the history of previous studies at Parcel F (Section 1.1.3), it is not clear why a Validation Study (VS) was required after the draft FS was submitted in 1998. How does the footprint that is being proposed in the VS differ from the low and high volume footprints that were presented in the draft FS? Please provide a more thorough explanation of how the analyses and conclusions in this report differ from those in previous ecological risk assessments.

2. In the identification of the Parcel F Feasibility Study (FS) study area (Section 10), the report explains that dose assessments based on field-collected invertebrate tissue data were given less weight in the risk evaluation because there is no data from reference stations to which these results can be compared. Arc Ecology does not believe this is a valid reason for discounting the risks associated with the field data. By discounting these risks, the proposed Feasibility Study (FS) footprint may be inadequate. Arc Ecology proposes taking a more conservative approach and including all identified risks in the footprint, from both field-collected tissues and laboratory bioaccumulation tests. Beginning with a footprint that includes all available data and the associated uncertainties, the community and regulatory agencies can then work with the Navy to determine an appropriate FS footprint.

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3. The report makes the argument that "Given the weak tidal circulation in South Basin, upstream transport of contaminated sediments from South Basin into Yosemite Creek is unlikely" (Section 1.2.5, page 1-10). While the data from the sediment transport indicated that currents are weak in South Basin, we do not believe there is sufficient evidence yet to determine whether or not the Navy is responsible for contamination in and around Yosemite Slough.
    a. The evaluation to date of sediment transport in extreme tidal events and heavy storm periods is insufficient. While large storm events with heavy winds do not occur often, it is likely that this type of event has occurred numerous times since the PCB source material was deposited on the Shipyard. Until the transport of sediments in an extreme storm event is adequately assessed, statements about the potential for upstream transport are not adequately supported.
    b. Section 4.3.3, page 4-27, acknowledges that additional data is necessary to more clearly differentiate between differences due to multiple PCB sources and those due to weathering and dechlorination of Aroclor 1260. A more complete analysis of the PCB congeners found in South Basin is required before conclusions can be drawn about the relationship between sediments in the South Basin and Yosemite Slough. Plans for this type of study were included in the Parcel F FS Data Gaps Investigation Work Plan, however results of such a study are not presented in this report. The Data Gaps Investigation Work Plan also called for a comparison of onshore and offshore congeners. When will these studies be conducted and when and where will the results be documented?

4. The Historical Radiological Assessment that was completed earlier this year by the Radiological Affairs Support Office indicated a potential for many areas of Parcel F to be radiologically impacted. An explanation of when sediments will be sampled for radionuclides should be provided in this report. Please include the program under which the sampling will be conducted, an explanation of how the data will be incorporated with chemical contamination data, and when an evaluation of the human health and ecological risks from radioisotopes in Parcel F will be conducted.

5. The results from several studies conducted under the Parcel F FS Data Gaps Investigation are not included in the draft final Validation Study report or its addendum. For example, the data gaps investigation planned for more detailed radioisotope profile data to confirm the sediment accumulation rate as well as a PCB congener analysis to help determine the relationship between PCBs found in offshore sediments and along the Parcel E shoreline. When and where will the results of these investigations be presented? How will the results of these studies be incorporated into the evaluation of human health and ecological risk assessments?

6. Not all data collected to date is used to determine the FS footprint. Please explain the rationale the Navy used in determining what data collected to date would be included in the determination of the FS footprint. If detected concentrations are similar or elevated compared to reference stations and a source area from the Shipyard is identified, the Navy should be held responsible for both stopping any ongoing contamination from the source and for reducing the resultant levels of contamination that originated with that source.

7. Ongoing community concern has raised the issue of the synergistic effects of low-level exposure to multiple compounds. At the same time, scientific research is increasingly demonstrating that simultaneous exposure to multiple chemicals has a different or greater impact than exposure to a single substance (and that in many cases exposure to a single substance does not accurately reflect the real-world situation). How does the Navy's approach to risk assessment and development of remediation goals address both these community concerns and the growing body of scientific evidence that supports those concerns?

Specific Comments

8. Source Characterization: Section 1.2.4 – Area IX (Oil Reclamation): "The historical oil reclamation ponds (Site IR-03) are located approximately 1,000 ft east-southeast of Area IX. The ponds have been closed, sheet piling has been placed adjacent to the shoreline, and the shoreline has been stabilized in this area as part of onshore remediation activities." This statement suggests that the oil ponds are not a potential source for offshore contamination. While these activities may prevent this former oil reclamation area from acting as a current source for offshore contamination, this area may have contributed to offshore contamination in the past. Has Area IX been sampled for contaminants that would be associated with oil ponds in order to evaluate potential past migration of contaminants into the Bay and to assess whether the area is an ongoing source for offshore contamination?

9. Section 4.3.3 – Composition of PCBs in South Basin: As mentioned in Comment #5, this section concludes with a paragraph stating that additional data are required to more clearly differentiate between differences due to multiple PCB sources and those due to weathering and dechlorination of Aroclor 1260. When does the Navy propose to do this sampling and where will the results be presented?

10. The shoreline sampling that was recently conducted on Parcel E is mentioned several times in the report, particularly in reference to probable source areas. A figure showing the Parcel E Shoreline sampling locations and station numbers would be a useful addition to the report as a point of reference.

11. Section 10.2 – Development of Preliminary Remediation Goals: In calculating the preliminary remediation goals for PCBs, mercury, and copper, the Navy has chosen to use the chemical concentration detected in the depurated, laboratory *M. nasuta* tissue. Would it not be more accurate to use the non-depurated field results, since this is more exemplary of what the birds will actually be eating? Please provide a better explanation of the rationale for using the depurated, laboratory concentrations versus the non-depurated field results.

12. Section 10.2.3 – Qualitative Evaluation of Lead: Due to the uncertainties with assessing risk from lead, a qualitative evaluation of lead was conducted at Area X. By comparing the distribution of lead in Area X with the distribution of PCBs in the same area, it was determined that the highest concentrations of lead and PCBs generally co-occur and therefore, remediation based on PCB concentrations will also reduce lead concentrations. While this may be true of Area X, it does not seem as though the same is true for Area III

(Point Avisadero), where lead was also detected at elevated concentrations in sediment samples. As stated in Section 4.3.1, "However, the horizontal and vertical distribution of chemicals in Area III sediments is patchy and discontinuous, […] and many COPECs do not co-occur." How does the Navy propose to evaluate lead in Area III to determine areas that require remediation?

Arc Ecology appreciates the opportunity to review and comment on this document. If you have any questions, please contact me at (415) 495-1786 or by email at lealoizos@mindspring.com.

Sincerely,

Lea Loizos
Staff Scientist

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