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Mr. Keith Forman
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Comments on Draft Proposed Plan for Parcels E and UC-3, Hunters Point Shipyard, dated October 2012

Dear Keith:

This letter contains comments from the Health Department.

General Comments:

1. We would like to point out for the record that once the engineering controls and institutional controls are properly installed and maintained, the current design of the proposed remedies will cut off pathways for a) contact with soil contaminants and b) inhalation of indoor VOC vapors, and this means that the entire property will be health-protective for all types of uses.
2. Soil gas RAOs should be included in the Proposed Plan and the ROD. If the establishment of chemical-specific soil gas remediation goals is delayed until after the ROD, then the description and the cost for this evaluation and regulatory process needs to be added to the Proposed Plan and ROD. We did not find any wording on this subject in the Proposed Plan.



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It is important to limit the restrictions related to soil gas issues (indoor air inhalation risk) to the areas where these issues might exist. Land use restrictions are meant to be used when there is no practical and cost effective way to reduce a hazard not as a way to pass on the uncertainty and cost of protecting against a potential hazard that may or may not exist. The post-transfer cost of restricting all construction due to the possibility of an indoor air inhalation risk is significant. Please limit the restrictions related to this issue to the areas where it is needed by collecting the necessary soil gas data and establishing the soil gas RAOs and identifying the impacted areas.

Specific Comments:

3. **Navy Announces Proposed Plan/Introduction, Page 2, Fifth Bullet:** The durable covers are being installed to minimize contact with chemicals in soil because the soil will generally remain covered except during maintenance, repair or replacement activities and the activity restrictions will require reinstallation of durable covers after these types of activities. During these types of maintenance activities there are no special soil handling requirements other than normal construction practices (e.g. minimize, monitor and control dust). Please revise this bullet to read “Install durable covers to minimize contact with chemicals in soil.”
4. **Navy Announces Proposed Plan/Introduction, Page 2, Bullets:** Please consider inserting a new bullet after the 5th bullet to specify that the cover remedy includes covering areas in the future Parcel E shoreline recreational area, that have the potential to contain radiological contamination, with a demarcation layer and a soil cover. This will help to make the distinction that the open space area cover is different than the durable covers in other areas. For example: “In areas designated as shoreline open space, install a demarcation layer and a soil cover to prevent contact with soil that contains chemicals and potential radiological contamination.”
5. **Page 3, Bullets that start after “Navy proposes a subset of the above listed cleanup actions at Parcel UC-3”, second bullet:** As described in comment #3, please change prevent to minimize. In addition, since the majority of UC-3 does not require a durable cover, please revise the second bullet to state “Install asphalt on a portion of Crisp Road to minimize contact with chemicals in soil”
6. **Page 3, Bullets that start after “Navy proposes a subset of the above listed cleanup actions at Parcel UC-3”, fourth bullet:** Please consider revising to – “Inspect and maintain the remedy”
7. **Human Health Risk Assessment (HHRA), Page 7, second paragraph:** Please revise the second sentence as follows: In preparing the HHRA, the Navy divided Parcels E and UC-3 into reuse areas based on the redevelopment plan and, in the case of the railroad right-of-way for which a use was not designated in the redevelopment plan, to reflect the surrounding neighborhood uses (see Figure 6).

Please revise the fourth and fifth sentences as follows: The expected long-term uses for Parcel UC-3 include mixed use and, in the railroad right-of-way, commercial/industrial. The Navy evaluated these reuses using residential (mixed use), industrial (commercial/industrial), and recreational (open space) exposure scenarios.

8. **Summary of Site Risks, Page 7, 7th Paragraph:** While there is a fair description of the approach for evaluating potential cancer risk, a similar description is not included for the non-cancer hazard index (HI). Please consider including an explanation for why an HI of 1 or less is acceptable.
9. **Remedial Action Objectives, Page 8 to 9:** You may be able to simplify the RAOs and still ensure consistency with the Feasibility Study (FS) Report. We acknowledge that this is a wordsmithing exercise and that your wording might be sufficient – we offer this wording for your consideration. For example, consider revising RAOs for Soil and Shoreline Sediment, Bullets 1 and 2, as follows:

- *Protect people from eating, breathing, or touching soil and shoreline sediment with chemical concentrations greater than PRGs.*
- *Prevent people from breathing indoor or outdoor chemical vapors at concentrations greater than those considered safe for humans.*

Please consider adding the following additional bullets to be consistent with the RAOs listed in Section 3 of the FS:

- *Protect people from eating homegrown produce grown in native soil with chemical concentrations greater than PRGs.*
- *Protect people from eating shellfish grown in native shoreline sediment with chemical concentrations greater than PRGs.*

10. Summary of Remedial Alternatives, Remedial Alternatives for Groundwater, Pages 9 to 10:

Please clarify that long-term groundwater monitoring will be included in each remedial alternative for groundwater (except Alternative GW-1). Monitored natural attenuation requirements are in addition to long-term groundwater monitoring efforts.

11. Summary of Remedial Alternatives, Remedial Alternatives for Former Oil Ponds, Page 10:

Please clarify that long-term groundwater monitoring will be included in remedial alternative O-6 for former oil ponds. Monitored natural attenuation requirements are in addition to long-term groundwater monitoring efforts.

12. Summary of Remedial Alternatives, Remedial Alternatives for Former Oil Ponds, Page 10:

With the exception of no action and full removal alternatives, do the rest of the alternatives include capping some residual contamination in place with a liner, demarcation layer and/or soil cover on top? If so, then a brief phrase or sentence should be added to the corresponding alternatives. It is important that the concept of capping in place and preventing inadvertent construction are described to demonstrate that the remedy will be protective. I realize the capping is described later in the full descriptions but a simple short phrase could be added to this section.

13. Summary of Remedial Alternatives, Remedial Alternatives for Residual Radiological Contamination, Page 10:

Please clarify that implementation of institutional controls is included in remedial alternative R-2 (not just remedial R-2 as applied to IR-02 and IR-03).

14. Summary of Remedial Alternatives, Remedial Alternatives for Residual Radiological Contamination, Pages 10 and 11:

Is a demarcation layer included in the R-2 and R-3 remedies? If so, it needs to be mentioned because it is a very important piece of the remedy. It assures everyone that there will be a clear indicator for areas where no digging will be allowed. We recommend adding it to item #3 as follows: Installing a demarcation layer and then constructing a 2-foot-thick soil cover to eliminate exposure pathways.

15. Evaluation of Remedial Alternatives, Criterion 4, Page 12:

In the last sentence, suggest rephrasing “would perform equally” as “would perform equally poorly”, since both alternatives being discussed do not involve a significant amount of treatment, as noted in the preceding sentence.

16. **Soil and Shoreline Sediment (Alternative S-4), Page 13, Second paragraph, second sentence:** Based on our review of Figure 8, we think you could simplify this sentence as follows “As shown in Figure 8 (page xx), durable covers at Parcel E would consist of asphalt and concrete surfaces (in the northern half portion of Parcel E), and a 2-foot thick soil cover (in the southern half and small areas on the southeastern, southwestern, and western edge portions of Parcel E).”
17. **Third bullet under the heading “Why is this the preferred alternative for soil and shoreline sediment contamination?”, Page 14** Please rephrase to “Minimize exposure to contaminants remaining in soil (by durable covers) and shoreline sediment (by shoreline protection features). Durable covers and shoreline protection features provide the best option to make sure exposure to contaminants remaining in soil and shoreline sediment is minimized.”
18. **Residual Radiological Contamination (R-2), Page 15, item #3 in second list in main paragraph:** Is a demarcation layer included in the R-2 and R-3 remedies? If so, it needs to be mentioned because it is a very important piece of the remedy. It assures everyone that there will be a clear indicator for areas where no digging will be allowed. Suggest rephrasing this item as “constructing a demarcation layer and a 2-foot-thick soil cover to eliminate exposure pathways”
19. **Residual Radiological Contamination (R-2), Page 15, first two bullets:** Please rephrase the end of the first bullet to “where demarcation layers, covers and ICs are needed to prevent exposure to remaining radiological contaminants”. Please rephrase second bullet to “Prevents exposure to remaining contaminants at IR-02 and IR-03 by demarcation layers, durable covers and shoreline protection features.”
20. **Glossary, Soil Vapor Extraction (SVE):** The second sentence begins with, “Vapors are the gases”. This is incorrect; by definition, vapors are *not* gases. Please rephrase this sentence in a way that is technically correct.
21. **(Insert 1), Overview of Institutional Controls for Parcel E and UC-3, Proposed Activity Restrictions, Page 25, Last Bullet:** While we acknowledge that enclosed structures to be built during the redevelopment that overly areas with VOCs in soil gas above Remedial Goals must be approved by the FFA Signatories, the statement here is overly broad in that it appears to cover ALL proposed enclosed structures within Parcel E, regardless of location. We recommend adding clarifying language here that makes the distinction between areas affected with VOCs in soil gas above Remedial Goals and areas that are not and therefore relatedly, areas where FFA Signatory approval is required and where it is not.

By inserting a phrase similar to “in areas designated as requiring restrictions due to VOC vapors in soil gas above the remedial goals” at the appropriate location in this bullet, you might fix this problem.
22. **(Insert 1), Overview of Institutional Controls for Parcel E and UC-3, Proposed Land Use Restrictions (for areas designated for open space or industrial reuse only), Page 25:** Please delete the sixth bullet which currently states “Restrict Parcel UC-3 property areas in the railroad right-of-way to industrial uses, unless approval is received from the FFA signatories.” This restriction is unnecessary and would lead to significant unnecessary work on the part of everyone involved. What is an industrial use? Is a park an industrial use?

The required restrictions are already listed in this section. You have specifically listed that you are restricting the area from residential use by including the list of the four residential uses that you have listed in all your previous proposed plans and RODs (i.e. residences, hospitals, schools,

day cares). You do not want to get all of us in a bind of having to define what is or isn't industrial use. And there is no need for this restriction based on the data. You are restricting the area from residential uses and any other uses are allowed – we don't need to argue what those other uses are.

23. **Attachment 1, ARARs:** There are numerous instances where a cited regulation is preceded by the word "at", such as "San Francisco Bay Plan requirements *at* Title 14 CCR". While legally correct, this terminology is not likely to be familiar to the lay reader; suggest rephrasing in simpler language.
24. **Table 2, Maximum Cancer Risks and Noncancer Hazards from Soil and Shoreline Sediment Before Cleanup:** We recommend updating Table 2 to reflect the radiological cancer risk as "not applicable" (or similar note) for reuse areas where radiological cleanup is complete. For example, radiological cleanup is complete at Redevelopment Block MU-3, where the risk is attributed to radiological impacts at IR-04 and the Building 701 site. However, the Navy has recommended both IR-04 and the Building 701 site within MU-3 for unrestricted release in the Final Final Status Survey Reports issued for them in February 2012 and July 2011, respectively.
25. **Table 10, Remedial Alternatives for Contamination at Former Oil Ponds:** Needs clarification for options other than no action, long-term groundwater monitoring is always an element of the remedy and MNA is different than long-term groundwater monitoring. Long-term monitoring should be called out separately from MNA.

Minor Comments:

26. **Site Background, Page 5, Paragraph 1, 5th Sentence:** The following sentence is unclear: "Triple A allegedly disposed of hazardous wastes at various locations at HPNS, including possibly transporting waste oil within Parcel E using below ground fuel and steam lines." Consider revising to "Triple A allegedly disposed of hazardous wastes at various locations at HPNS. In addition, they allegedly transported waste oil within Parcel E using below ground fuel and steam lines which resulted in contamination in the lines and in other areas."
27. **Past Removal Actions and Current Conditions, Page 6:** The paragraph discussing treatability studies may appear misplaced under "removal actions". Please consider rephrasing this paragraph to explain that the treatability studies were highly successful in certain specific areas, which therefore require no further treatment.
28. **Past Removal Actions and Current Conditions, Page 6, Last Paragraph:** The following sentence is unclear: "The Navy is currently collecting additional data at soil hot spots throughout Parcels E and UC-3 *and* better understand the extent of contamination at these areas." Please revise the sentence to: "The Navy is currently collecting additional data at soil hot spots throughout Parcels E and UC-3 *in order to* better understand the extent of contamination at these areas."
29. **Summary of Site Risks, Page 7, 4th Paragraph:** Please consider bolding the reference to the 2010 Redevelopment Plan and adding a definition/complete reference to the 2010 Plan in the Glossary of Terms.
30. **Evaluation of Remedial Alternatives, Conclusion, Page 13, 1st Paragraph:** Please consider clarifying that these alternatives are the Navy's preferred alternatives.

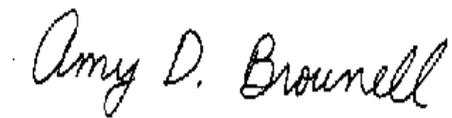
31. **Glossary, Below-ground barriers:** Second sentence states, in part, “that limits the speed in which groundwater passes through the barrier”. Consider replacing “in which” with “with which”.
32. **Glossary, Biological nutrients:** Although technically correct, the lay reader may find it odd that a “chemical” can act as a “source of food”, especially given that “chemicals” are often referred to in this document as harmful. Consider using another word or phrase with less negative connotations.
33. **Glossary, Chemical of concern:** Generally speaking, it is “elements” that are radioactive, not “chemicals”, for example lead, cobalt, and uranium. Consider using the word “element” instead of “chemical” when describing or discussing radiological COCs. The term “chemical” is better suited to describing VOCs, for example.
34. **Glossary, Preferred Alternative:** Please use the plural forms when referring to remedial action objectives and remediation goals, as there is typically more than one objective and more than one goal.
35. **Glossary, Preliminary Remediation Goal:** Please consider deleting “that provides a number” from the given definition.
36. **Glossary, Risk Management Review:** The given definition is unclear. Please consider further explaining what “all available data” refers to or consisted of.
37. **Glossary, Site Inspection:** Please consider revising the given definition to be consistent with the following (USEPA, 1992): an investigation that guides a “site decision regarding the need for further Superfund action...” and “evaluates the extent to which a site presents a threat to human health or the environment by, among other things, collecting and analyzing wastes and environmental media samples to determine whether hazardous substances are present at the site and are migrating to the surrounding environment.”
38. **Glossary, Treatability Study:** Suggest modifying the definition to state that information from the treatability study “indicates how well the technology *might* work” at the site.
39. **(Insert 1), Overview of Institutional Controls for Parcel E and UC-3, Proposed Activity Restrictions, Page 25:** The second bullet item appears to refer to a footnote #2, but there is only one footnote at the bottom of the page. Please insert the missing footnote or remove this reference.
40. **(Insert 1), Overview of Institutional Controls for Parcel E and UC-3, Proposed Activity Restrictions, Page 25, footnote #1:** The footnote refers to CDPH; suggest adding CDPH to the glossary and describing their role with regards to HPS.
41. **Figure 7, Proposed Soil Excavations, and Figure 8, Soil Remediation Areas for Parcel E:** It is not clear by looking at the figures why Building 406 is identified. Please consider identifying the type of remediation occurring at this location (e.g., SVE) on each figure.
42. **Table 8, Remedial Alternatives for Soil and Shoreline Sediment, S-2, Covers:** Consistent with changes requested for the text describing these alternatives, please change “eliminate” to “minimize” in the first sentence “construct physical barriers to minimize...” since the durable covers described in the alternative will only minimize contact with soils, since there is expected

to be redevelopment and maintenance of buildings, streets, sidewalks and utilities beneath them.

43. **Table 9, Remedial Alternatives for Groundwater:** Please replace reference to *GW-3A* with *GW-3*.

44. **Table 15, Comparative Analysis for Rad etc.: R-3:** Currently states - Survey, Removal, and Disposal (with 2-foot-thick soil cover and ICs at IR-02 and IR-03). It should state (with 3-foot-thick...)

Sincerely,

A handwritten signature in black ink that reads "Amy D. Brownell". The signature is written in a cursive, flowing style.

Amy D. Brownell, P.E.
Environmental Engineer

cc: Melanie Kito, Navy
Leslie Lundgren, CH2M Hill
Lara Urizar, Navy
Craig Cooper, USEPA
Karla Brasaemle, TechLaw
Ryan Miya, DTSC
Ross Steenson, RWQCB
Tina Low, RWQCB
Wells Lawson, CCSF
Jeff Austin, GeoSyntec
Dorinda Shipman, Treadwell & Rollo | Langan
Elaine Warren, OCA
Barry Steinberg, KutakRock
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