



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

N00236.002680  
ALAMEDA POINT  
SSIC NO. 5090.3

January 15, 2007

Frances Fadullon  
Navy BRAC Program Management Office - West  
1455 Frazee Road, Suite 900  
San Diego, CA 92108-4310

Re: USEPA Comments on the Draft Remedial Investigation Report for Site 32 at Alameda Point.

Dear Ms. Fadullon,

Enclosed please find comments written by the USEPA on the Draft Remedial Investigation Report for Site 32 at Alameda Point. We agree with the overall approach and conclusions, but have several comments on details within the report.

Please call me at (415) 972-3028 if you have any questions concerning our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Ripperda".

Mark Ripperda  
Remedial Project Manager

## **USEPA Comments on the Remedial Investigation Report for IR Site 32 at Alameda Point**

General Comment: EPA agrees that the site has been adequately characterized and is suitable for an evaluation of remedial alternatives in an FS. We agree with the conclusions that the potential risk for future residents is slightly above the acceptable risk range and that the potential risk for industrial or recreational users is acceptable.

Page ES-4, First Paragraph: Please delete the last sentence, as the use of residential PRGs does not overestimate the level of contamination. The level of contamination is what it is, what the Navy probably meant is that risk is overestimated. However, defining a land use such as recreational is a remedy that requires justification in the FS and ROD. Thus, comparison to residential PRGs is necessary to define whether a risk is present and requires a remedy.

Page ES-4, Groundwater: Similar to above, please delete the last two sentences. Comparison to surface water criteria is not overly conservative, it is just a necessary step in the process. Once COPCs are identified, then risk is evaluated by looking at levels and at pathways. If the Navy wishes to put the contamination in context, then discuss where the concentrations are highest and how they are migrating towards a completed pathway (like the Bay). While an ES should be brief, it should still contain useable information, not vague editorial statements.

Page ES-4 and ES-5, Groundwater: The first paragraph of this section states that radium was detected above comparison levels, while the last paragraph states that it wasn't detected in samples collected in 2004, 2005, and 2006. Please resolve this discrepancy. If the detections were from earlier sampling events, were the methods and detection limits appropriate for use in an RI? There have been problems with false positives for radium in groundwater at Site 1 in the past. If the radium results for Site 32 are suspect historical results, then please set them aside in a separate discussion on historical sampling results.

Page ES-6: Please add VOC vapor migration to the bulleted list under Fate and Transport.

Page ES-8, Ecological Risk Assessment: Please remove the last two sentences of the first paragraph. The paragraph already identifies the process as a *screening* for *potential* risk, and it is inappropriate to discuss uncertainties with the screening process.

Page ES-9, Conclusions: Please replace the second and third sentences of the first paragraph with something like: "The overall calculated risk for residential use is slightly above the acceptable risk range. The overall calculated risk for the expected recreational use was xxx for cancer risk and hazard index of yyy for non-cancer risk. These results are within the acceptable risk range".

Page ES-9: In the bullet for PCBs, please provide the range of detected concentrations for Aroclor 1260, along with the residential and industrial PRGs.

Page ES-10: The last two bullets provide a comparison of groundwater values to MCLs. Please also provide a comparison for CTRs for metals and radiological constituents.

Page ES-11: Please insert the word 'ecological' before the word 'risks' in the first sentence of the third paragraph.

Page ES-11, Third Paragraph: The calculated HI for ecological risk was above 1 for several constituents. While this may not require remediation, it is not by definition low or negligible. Please provide more complete rationale for why the ecological risk is acceptable.

Table ES-1: Where did the radionuclide data come from. The text stated that no radionuclides were found during the RI. If this is driven by data from the location adjacent to Site 1, then perhaps footnote it with a reference that the anomaly will be removed. See Section 4.1.2.7.

Section 1.3.4.3: Please check the results for radium in the historical results. Similar detections of radium from the groundwater monitoring network at other sites have had data quality problems and false positives. See Section 1.3.4.7.

Section 1.3.4.3 and 1.3.4.7: The first section says that groundwater was collected from Well M005-A in 1991 and 1992, while the second section says that that well was not found until 1994. Please resolve this discrepancy and rewrite the appropriate accompanying text.

Section 2.5.2.4: The first sentence has a statement about a vertical gradient toward the north. If this is discussing vertical gradients, then say that it is in the northern portion of the site, not a gradient toward the north, as a gradient in any direction would be a horizontal one.

Figure 2-9: Why aren't Wells M005-A and M032-A and their data included in Figure 2-9, and in the figures and discussion in Section 3.

Section 3.4.2: Detection limits for groundwater near the Bay should be set at the comparison criteria, which may be either MCLs or CTRs, whichever is lower. We had discussed this for the workplan, but if the workplan went final with MCLs as the only criteria, then provide a table in the RI comparing relevant detection limits where the CTR is lower than the detection limit and an assessment of whether transport of concentrations above CTR values to the Bay is possible or negligible. This is probably only applicable to the six discrete sampling points and one monitoring well closest to the Bay.

Section 4.1.2.1, Second Paragraph: I find the style of reporting results in this paragraph to be somewhat confusing in that it buries the important points behind more trivial data. It states that in general, VOCs were reported less than 10 percent of the time, then that seven VOCs were reported in 24 to 80 percent of the samples, then that only two were above residential PRGs and one was above industrial PRGs. Please rearrange the paragraph to start with the specific, i.e., those constituents that were above screening criteria. Then go onto those that were below screening criteria but above detection limits.

Section 4.1.3: The third paragraph mixes the use of residential PRGs to delineate extent of contamination with the use of industrial PRGs to assess risk for a likely industrial/recreational exposure. Defining a property as recreational is a remedy that is based on contamination being

present at levels precluding unrestricted access. Thus, delineation must be done in comparison with residential PRGs. Either remove this paragraph or rewrite it to better represent delineation versus risk.

Section 4.1.3.1: The first two paragraphs are written in a style that again detracts from the main point. It starts out appropriately discussing PCE and TCE as being above screening criteria, but then diverts to other contaminants before returning to PCE and TCE in the next paragraph. Please delete the last two sentences of the first paragraph, then merge the first and second paragraphs.

Section 4.2.2.x: Please compare results for each subsection to CTRs for potential transport to the Bay.

Section 4.2.2.5: Please discuss the radium results as mentioned in previous comments.

Sections 4.2.2 and 4.2.3 appear to be rather repetitive. Consider consolidating these into one section.

Section 5: This section provides an excellent and concise overview of biodegradation processes and groundwater transport. However, it doesn't then put any of the information into context or try to use it to refine the site conceptual model. Please add a sub-section that applies the data and calculations from this section to the problem at hand. For example, what is an expected timeline or endpoint to the biodegradation, or a more simple example, what is the range of groundwater flow velocities and what are some ranges of transport times for chemicals of interest to the Bay.

Section 6.1.7: The first paragraph states that the radium found at Site 32 is naturally occurring. While this is true for most of the site, previous sections have described the higher hit on the boundary of Site 1 as an anomaly. From looking at site-wide data, this spot does not appear to be naturally occurring or representative of background at Alameda. The background values for radium referenced in the Section 6.1.6 are a broad range and are not specifically for Alameda.

Section 7.2.1: Please include a conclusion about transport of constituents to the Bay.