

**RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013**

The table below contains the responses to comments received from the regulatory agencies on the “Draft Parcel E Pothole Area Characterization Technical Memorandum, Hunters Point Naval Shipyard, San Francisco, California,” dated December 2013. The comments addressed below were received from the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), the San Francisco Bay Regional Water Quality Control Board (Water Board), and the City and County of San Francisco Department of Public Health. Throughout this table, *italicized* text represents additions to the document and ~~strikeout~~ text indicates deletions. Also throughout this table, references to page, section, table, and figure numbers pertain to the new document unless otherwise indicated.

Comment Number	Section/Page	Comment	Response to Comment
<b>Responses to Comments from U.S. Environmental Protection Agency (Craig Cooper, dated January 13, 2014)</b>			
<b>Specific Comments</b>			
1.	Section 1.1, page 1 and Section 6.0, page 16	Section 1.1, Investigation Objective, Page 1; and Section 6.0, Conclusions, Page 16: Section 1.1 of the Draft Parcel E Pothole Area Characterization Technical Memorandum, Hunters Point Naval Shipyard, San Francisco, California, December 2013 indicates that the project action levels were based on remediation goals established in the Record of Decision (ROD) and are based on Tier 1 (ten times the remediation goals) and Tier 2 (five times the remediation goals) criteria; however, the figures and text do not differentiate the results using these criteria. In addition, since the Record of Decision (ROD) for Parcel E ultimately selected Tier 2 RGs as the applicable soil remediation goals for Parcel E, should this document and subsequent documents simply eliminate discussion of Tier 1 goals since they no longer have any relevance in Parcel E?	The text has not been revised to remove discussion of Tier 1 goals in order to maintain consistency with the project work plan and sampling and analysis plan (SAP). The selection of project action levels and the discussion of data quality objectives in the SAP (see Worksheet #11) both consider Tier 1 and Tier 2 goals. Furthermore, discussion of both Tier 1 and Tier 2 criteria is included at several locations in the ROD, although remediation goals based on Tier 2 criteria were ultimately selected in the ROD. The report was not changed as a result of this comment.
2.	Section 2.0, page 2	Section 2.0, Site Conditions and Background. The Final ROD for Parcel E has been published. Please replace the reference and citation to the Draft ROD for the Final ROD.	The text has been revised as requested.

**RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013 (CONTINUED)**

Comment Number	Section/Page	Comment	Response to Comment
3.	Section 4.4.1, page 13	Section 4.4.1, Deviations Related to Site Conditions. The report states that the area around location F02 registered above-normal radioactivity and consequently the area was avoided. What were the readings? How and when does the Navy intend to follow-up on this issue?	The surface gamma radiation scan reading near location F02 was 20,446 thousand counts per minute (kcpm). All of other surface gamma scan readings at the investigation area ranged from 4 to 28 kcpm. A map showing the surface gamma scan readings has been added to the report as a new appendix (Appendix D). The Navy will address surface radiological anomalies during remediation of Parcel E. The ROD for Parcel E includes the following components for remediation of radionuclides found at Installation Restoration Site 02 (IR-02), which includes the pothole investigation area: (1) scan the entire area for radioactivity to a depth of at least 1 foot, (2) separate and dispose of materials and soil with radiological contamination found during the surveys, (3) construct a 2-foot-thick soil cover to eliminate exposure pathways (including a demarcation layer to mark the boundary between the existing soil and the soil cover), and (4) use institutional controls specific to radionuclides to restrict certain land uses and activities.

**RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013 (CONTINUED)**

Comment Number	Section/Page	Comment	Response to Comment
4.	Section 6.0, page 16	<p>Section 6.0, Conclusions, Page 16: The conclusions do not address whether or not the investigation achieved its objectives. Based on the tables and Figure 11, it would appear that neither the lateral nor the vertical extent of contamination was completely delineated on all sides of the study area. For example, the horizontal extent of contamination was not delineated to the east and southeast of the investigation area. It is understood that there was a limited scope of work for this investigation and there was no contingency for step out samples. However, it appears that the volumes for remedial alternatives that include excavation remain unknown. Also, it is unclear if further delineation will be done during the remedial design or will final delineation occur during confirmation sampling? A discussion of the remaining uncertainty and this data gap should be included in the conclusions. Please revise the Tech Memo to directly discuss if and how the objectives of the project were met and to discuss remaining uncertainties about the extent of contamination, as well as how and when the final extent of contamination will be delineated.</p>	<p>Section 6.0 has been expanded to further discuss how the investigation achieved its objective of estimating the extent of chemicals of concern in soil and sediment. In accordance with the SAP (TriEco-Tt 2013), the investigation area did not extend farther east or southeast because that area had been previously studied during another investigation (Arcadis 2013). Similarly, samples were not collected deeper than 10 feet below ground surface in accordance with the approved SAP (refer also to the response to Water Board comment 1 on the draft SAP). Step-out samples <u>were</u> collected during this investigation, but only within the overall boundaries of the investigation area. The data collected during this investigation are adequate to support the remedial design. As indicated in Section 4.0, the investigation approach attempted to balance the cost of the investigation with the comprehensiveness of the characterization. The estimation of excavation volumes for all of Parcel E, including the investigation area, will be completed during the remedial design. The data collected during this investigation will support that effort. No additional delineation will be conducted during the remedial design. The remedial action will include confirmation sampling, which will address any gaps in data collected during this investigation (for example, missed samples caused by refusal during drilling).</p>

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Comment Number	Section/Page	Comment	Response to Comment
4. (con't)	Section 6.0, page 16	Continuation of response	<p>The text has been expanded as follows.</p> <p>“The objective of this investigation was to estimate the extent... total TPH of 3,500 mg/kg. <i>The investigation met this objective, in accordance with the approved SAP (TriEco-Tt 2013).</i> Figure 11 presents...the remedial design for Parcel E. <i>No additional delineation will be conducted during the remedial design. The remedial action will include confirmation sampling, which will address any gaps in data collected during this investigation. Data gaps include (1) missed samples caused by surface debris obstructions, (2) missed samples caused by refusal during drilling, and (3) missed samples caused by surface radiation safety concerns. Figure 12 includes the results from previously collected samples (Figure 4) added to the results on Figure 11 to summarize the overall distribution of COCs in the area.</i>”</p> <p>“Further plans for excavations, <i>including the estimation of excavation volumes,</i> within the portion of Parcel E studied by this investigation will be presented in the upcoming remedial design for Parcel E.”</p>

**RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013**

Comment Number	Section/Page	Comment	Response to Comment
<b>Responses to Comments from California Department of Toxic Substances Control (Ryan Miya, dated January 13, 2014)</b>			
<b>Specific Comments</b>			
1.	Section 4.1, page 10	Section 4.1 – Pre-Sampling Activities. Please add a sentence to the text that generally describes the results from the geophysical survey conducted over the entire investigation area prior to sampling (i.e. no potential obstructions or subsurface utilities were detected / identified during the pre-sampling geophysical survey at the proposed borehole locations).	Section 4.1 has been expanded as follows.  <i>“The survey did not reveal the presence of detectable active utility lines or through-going pipes in the survey area. The survey revealed the presence of abundant buried metal objects but was not able to specifically locate obstructions to drilling. For example, a subsurface anomaly was indicated at location C02, but no obstruction was encountered; conversely, no anomaly was detected at location B05, but drilling was obstructed below about 6 feet bgs.”</i>
2a.	Section 4.4.1, page 13	Section 4.4.1 – Deviations Related to Sample Collection. (a) Surface obstructions subsection. Any radiological data collected during the course of the pothole area characterization activities must be included as an appendix to the Draft TM and also referenced in the text accordingly.	Section 4.4.1 has been expanded as follows.  <i>“The surface gamma radiation scan reading near location F02 was 20,446 thousand counts per minute (kcpm). All of other surface gamma scan readings at the investigation area ranged from 4 to 28 kcpm. Appendix D includes a map showing the surface gamma scan readings.”</i>

**RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT FACT SHEET FOR THE THIRD FIVE-YEAR REVIEW, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED SEPTEMBER 13, 2013 (CONTINUED)**

Comment Number	Section/Page	Comment	Response to Comment
2b.	Section 4.4.1, page 13	(b) Surface obstructions subsection. After surface obstructions were identified at the initially proposed boring locations E02 and F02, were there any offset locations identified and attempted? If so, please briefly describe these attempts in the text. If not, please provide the brief technical rationale for why replacement offset boring locations were not attempted.	<p>The work plan included up to two offset locations within a 5-foot radius of the proposed location in cases where an obstruction was present. Section 4.4.1 has been revised as follows.</p> <p>“Not all samples identified in the work plan...and explanatory notes. <i>The remedial action will include confirmation sampling, which will address any gaps in data collected during this investigation.</i>”</p> <p>“Location E02 was covered by a large mound of debris and was not accessible by the drill rig; surface debris prevented sampling using a hand auger. <i>No offset locations were attempted because no other locations within 540 feet of location E02 were accessible.</i>”</p> <p>“<i>Activities within a 5-foot radius of location F02 were not recommended by the site safety and health officer; therefore, no offset locations were attempted.</i>”</p>

**RESPONSES CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) COMMENTS ON THE DRAFT FACT SHEET FOR THE THIRD FIVE-YEAR REVIEW, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED SEPTEMBER 13, 2013 (CONTINUED)**

Comment Number	Section/Page	Comment	Response to Comment
2c.	Section 4.4.1, page 13	Subsurface obstructions subsection. Please generally describe, if possible, the type(s) of subsurface obstructions observed which prevented adequate sample recovery.	Section 4.4.1 has been expanded as follows.  <i>“The causes for the subsurface obstructions are unknown, but may be related to buried concrete based on the recovery of crushed concrete in samples from borings C01 and C07 and the observation of large concrete slabs and blocks in the berm immediately south of the investigation area.”</i>

**RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013**

Comment Number	Section/Page	Comment	Response to Comment
<b>Responses to Comments from San Francisco Bay Regional Water Quality Control Board (Tina Low, dated January 24, 2014)</b>			
<b>Specific Comment</b>			
1.	---	I have no comments on the subject document.	Comment noted.

**RESPONSES TO CITY AND COUNTY OF SAN FRANCISCO (CITY) COMMENTS ON THE PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013**

<b>Comment Number</b>	<b>Section/Page</b>	<b>Comment</b>	<b>Response to Comment</b>
<b>Responses to Comments from City and County of San Francisco (Amy Brownell, dated January 16, 2014)</b>			
<b>Specific Comments</b>			
1.	Section 5.4, Pesticides, page 15	Typo “Samples collected from the shallow zone at locations A01 through A06 A05 contained concentrations of total DDT exceeding the screening criterion (0.2305 mg/kg).”	The text has been corrected as requested.
2.	Figures 7 to 10, PCBs, PAHs, Pesticides, and Metals Summary Figures	Recommend illustrating the bottom half of the symbol for B03 and D01 as dashed to indicate that the deep samples were not analyzed for specified contaminants.	Figures 7 through 10 have been modified as requested.
3.	Figure 11, Summary of Combined Results	Recommend including previous sample data on Figure 11.	The results from previously collected samples have been added to the results from this investigation on new Figure 12.

**RESPONSES TO CITY AND COUNTY OF SAN FRANCISCO (CITY) COMMENTS ON THE DRAFT PARCEL E POTHOLE AREA CHARACTERIZATION TECHNICAL MEMORANDUM, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED DECEMBER 2013 (CONTINUED)**

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4.	Appendix B, Borehole Logs and Photographic Logs	The borehole logs refer to the borings collected using a slightly different nomenclature than they are reported on the figures and tables (A-1 through A-10, B-1 through B-11, etc.). Figures and tables refer to the boreholes using IR02 as a prefix and using two digits for the boring number (IR02-A01, IR02-B01, etc.). For consistency, please revise the boring logs to reflect the nomenclature used on figures and tables.	The borehole designations on the borehole logs have been corrected as requested.

**REFERENCES**

- Arcadis U.S., Inc. 2013. Final Technical Memorandum for Parcel E Soil Excavation Characterization, Hunters Point Naval Shipyard, San Francisco, California. June.
- TriEco-Tt. 2013. Final Parcel E Pothole Area Characterization Work Plan, Hunters Point Naval Shipyard, San Francisco, California. May.