

**APPENDIX H
RESPONSES TO REGULATORY AGENCY COMMENTS ON THE
DRAFT CONSTRUCTION SUMMARY REPORT ADDENDUM**

RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT PARCEL B CONSTRUCTION SUMMARY REPORT ADDENDUM HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

This document presents responses to comments from the regulatory agencies on the “Draft Parcel B Construction Summary Report (CSR) Addendum for Hunters Point Shipyard, San Francisco, California,” dated September 8, 2004. The Navy received the comments addressed below from Michael Work of the U.S. Environmental Protection Agency (EPA) on November 9, 2004, from Thomas Lanphar of the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) on November 22, 2004, and from James Ponton of the San Francisco Bay Regional Water Quality Control Board (Water Board) on December 16, 2004. DTSC also provided additional specific comments in tabular form. Responses to these comments are presented in the table included as Attachment A to this document. Many of the agency comments have been addressed by evaluations presented in the “Final Parcel B Technical Memorandum in Support of a Record of Decision Amendment” dated December 12, 2007 (ChaduxTt 2007). Changes to the CSR or CSR addendum are noted in the responses; otherwise, no changes were made to the CSR or CSR addendum.

RESPONSES TO COMMENTS FROM EPA RECEIVED ON NOVEMBER 9, 2004

General Comments

E1. Comment: The Navy agreed to post the depth of excavations when the depths varied, but this agreement was not reflected in this document. For example, the southern portions of excavation 7-4 was only excavated to 5 feet below ground surface (bgs), but this is not shown on the figures, which only state the maximum depth. It is difficult to interpret these figures without knowing the exact areas that were excavated to depths less than 10 feet. Please post the excavation depths and reissue all figures for excavations that were excavated to different depths in some areas.

Response: The figures for Excavation 7-4 were revised to show the portion of the excavation that extended only to 5 feet below ground surface (bgs). Excavation 7-4 is the only case where any significant areas of an excavation were extended to different depths. The sidewalls sloped on some excavations conducted in 1998 to 1999, and elevation contours for these sloping sidewalls are shown on the applicable figures. However, minor portions of sloping sidewalls were not shown on figures for Excavations 7-1, 7-3, 7-5, and 18-2 to allow the large amount of data to be presented on those figures

E2. Comment: Sampling in the vicinity of the Industrial Drain Line in the excavation 7-4 area was focused on three polynuclear aromatic hydrocarbons (PAHs), cadmium, copper, and lead, but other chemicals could have been

discharged through this line, so analyses should not have been limited to these constituents. This should be identified as a data gap for consideration in the Technical Memorandum to Support a ROD Amendment (TMSRA).

Response: All the primary characterization samples (one five-point bottom composite per 100 linear feet of excavation) for the Industrial Drain Line (IDL) were analyzed for the full suite of metals, as well as volatile organic compounds (VOC), polychlorinated biphenyls (PCB), semivolatile organic compounds (SVOC), and polynuclear aromatic hydrocarbons (PAH). These data are included in the data table that follows the figures for the IDL. Samples IDLBC11 and IDLBC12 are near Excavation 7-4 and were tested for these full suites of analytes. Additional characterization samples were collected for analysis of cadmium, copper, and lead based on concentrations in samples IDLBC11 and -12 that exceeded soil cleanup goals. No PAHs exceeded cleanup goals in samples from the IDL in the area near Excavation 7-4. The only location where PAH compounds exceeded cleanup goals in the IDL is the area near the beginning of the line southeast of Building 123, more than 1,000 feet from Excavation 7-4.

E3. Comment: It is difficult to review figures that present analytical data that is organized alphabetically rather than by analyte group. For example, it appears that chemicals presented on Figures B1036A and B1036B were divided alphabetically rather than by analyte group. Analytical data should be presented by analytical group (e.g., all PAHs on one figure, all metals on another, etc.). In the future, please divide chemicals by analyte group rather than alphabetically whenever possible.

Response: Figures were prepared to present similar chemicals on the same figure to the extent possible. There were more PAHs than could be presented on a single figure in the case of Excavation B1036.

Specific Comments

E1. Comment: Section 3.1.2, Excavation 7-2, Page 3-111 and Figure 7-2, Excavation 7-2 (IR-07): It is unclear why rejection of antimony results in 3 of 4 sidewall samples and the omission of this analysis is not discussed in the text and depicted on Figure 7-2. Since antimony results were rejected in the 3 sidewall samples analyzed for antimony and was not included in the analysis of the fourth sidewall sample (0072SEB), the extent of antimony contamination is not known. This should be acknowledged in the text and on the figure. Please revise the text and figure to include the fact that antimony results were rejected for samples 0072SSA, 0072SWA, and 0072SNA and reissue these pages.

Response: Notes were added to the section on Excavation 7-2 to indicate that four results for antimony were rejected and excluded. These results (three samples and one duplicate) were non-detections and were rejected based on low matrix recoveries. Because matrix interference was the cause, resampling would not be expected to improve the results and, consequently, no additional replacement samples were collected. Concentrations of antimony in the remaining samples (0072SSA, 0072B0B, and IR07B032 below 6 feet) were evaluated in the human health risk assessment (HHRA) contained in the TMSRA.

E2. Comment: **Section 3.1.3, Excavation 7-3, Page 3-115:** The detection limits for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1, 2, 3 - cd)pyrene in many samples are greater than the ESD clean-up goals, particularly in the shoreline area. The Navy's response to Agency comments on the Construction Summary Report submitted in 2003, indicated that only analytical results with detection limits greater than 3 mg/kg would lead to further excavation, but this criteria may not be appropriate for shoreline samples. Please explain why this criterion is appropriate for shoreline samples.

Response: Shoreline data were posted on the figures for Excavation 7-3 only as an aid to understanding chemical concentrations in the excavation. Detection limits for PAHs in shoreline samples were addressed in the screening-level ecological risk assessment (SLERA) presented as part of the TMSRA.

E3. Comment: **Figure B0632, Excavation B0632 (IR-07):** The sampling strategy employed at this excavation is not clear. The southern portion of the excavation was sampled for beryllium, arsenic, and total petroleum hydrocarbons (TPH); but the northern part was sampled only for TPH. Please explain why it was not necessary to sample the northern section of this excavation for arsenic or beryllium and submit revised text that includes this explanation.

Response: Samples 0632SSA, -SWA, -SNA, and -SEA in the southern portion of Excavation B0632 all contained concentrations of arsenic and beryllium that were lower than the cleanup goals. The concentration of total petroleum hydrocarbons (TPH) extractable as diesel of 120 milligrams per kilogram (mg/kg) in sample 0632SWA exceeded the 100 mg/kg cleanup goal in place at the time, and the excavation was advanced to address the elevated level. Arsenic and beryllium were not included for analysis in the subsequent samples collected to delineate TPH, in accordance with the sampling convention contained in the remedial design (RD) (Tetra Tech EM Inc. [Tetra Tech] and Morrison Knudsen Corporation 1999; Tetra Tech 2001).

E4. Comment: Figure 7-5A, Excavation 7-5 (IR-07), Aroclor-1254 and Figure 7-5B, Excavation 7-5 (IR-07), Aroclor-1260: Compared to the number of samples analyzed for Aroclor-1260, very few samples were analyzed for Aroclor-1254. It is unclear why the decision was made to minimize the number of analyses Aroclor-1254 contamination at this excavation. As a result, most of this excavation was not investigated for Aroclor-1254. Please explain why very few samples were collected and analyzed for Aroclor-1254, include this explanation in the text, and reissue the text for this excavation.

Response: Aroclor-1254 was not detected in samples collected during the remedial investigation (RI), and Aroclor-1254 was not a chemical of potential concern (COPC) for the original excavation. In addition, Aroclor-1254 was not a COPC based on waste profile sample results. However, another PCB, Aroclor-1260, was added as a COPC based on detections observed in waste profile samples, and significant additional sampling and excavation resulted to address observed concentrations of Aroclor-1260. Aroclors-1254 and -1242 were added to the analyte list for samples collected along the northern side of the excavation in the area investigated for Aroclor-1260. Some of these samples resulted in detections of Aroclor-1254 that exceeded the cleanup goal for soil. For this reason, Aroclor-1254 was added to the COPC list, and a figure showing its extent was prepared. The text of the section for Excavation 7-5 was revised to more clearly describe why Aroclor-1254 was added as a COPC.

E5. Comment: Excavation 7-5: It is unclear why bottom composite samples were not collected in the east, in the section extended beyond the original excavation boundaries or in the northwestern portion of this extended area. Please explain why bottom composite samples were not collected in these areas and include this explanation in the text describing this excavation.

Response: Samples 0705BC2, -BC3, and -BC4 are bottom composite samples that characterize the eastern extension of Excavation 7-5. Samples 0705BC8 and -BC9 are bottom composite samples located in the northwestern portion of the extended excavation.

E6. Comment: Excavation 7-5: It is unclear why samples were not analyzed for lead or why few samples analyzed for copper in the northwestern half of this excavation. Please explain why samples were not analyzed for lead and copper in this area and include this explanation in the text describing this excavation.

Response: Lead was not sampled in the northwestern portion of Excavation 7-5 (northwest of sample 0075SWA) because the extent of lead contamination in that direction was delineated at samples 0075SWA and 0075SWB, where concentrations of lead were below the soil cleanup goal. Lead was no longer included in the analyte list in accordance with the RD and RD amendment. Similar conditions exist for copper. Step-out samples were collected northeast from location 0075SNC where concentrations of copper exceeded the cleanup goal. However, additional samples were not necessary in the area farther northwest because results for existing samples (for example, 0075SNE and 0075 SWH) did not exceed the soil cleanup goal for copper.

E7. Comment: **Section 3.2.3, Excavation B2725, Page 3-764: Metals were identified as chemicals of concern at nearby Excavations 10-1 and 10-2, but not at Excavation B2725; this excavation is located inside Building 123, the Battery and Electroplating Shop. This appears to be a data gap. Please clarify if any samples collected from Excavation 2725 were analyzed for metals and if available, please present the analytical results for these samples. If samples collected from this area were never analyzed for metals, please explain why this was not necessary.**

Response: Soil samples were collected at depths of 0.75, 2.75, 5.25, 7.75, and 10.25 feet bgs from boring IR10B016 within Excavation B2725 and were analyzed for a full suite of metals. No metals were identified as COPCs. The data for these samples were presented in the RI report (PRC Environmental Management, Inc. 1996) and were not repeated in the CSR addendum.

E8. Comment: **Section 3.5.1, Industrial Drain Line, Pages 3-962 and 3-963: It is unclear why samples collected in the eastern part of this excavation (e.g., IDLW13B1, IDLB13C, IDLW13A1, IDLE13A, IDLB13B, IDLE13B1, IDLB13D) were not analyzed for metals other than lead; it appears that only the bottom composite samples in the eastern portion of the excavation were analyzed for a complete suite of metals. Given the presence of PAHs and lead above the ESD clean-up goals, it is possible that there were leaking joints and/or cracks in this part of the industrial drain line (IDL). This appears to represent a data gap. Please explain why samples collected in the eastern portion of this excavation were not analyzed for a full suite of metals, add this explanation to the text of Section 3.5.1, and reissue the text for this excavation.**

Response: All the primary characterization samples (one 5-point bottom composite per 100 linear feet of excavation) for the IDL were analyzed for a full suite of metals as well as for numerous organic compounds. (Please refer to the response to EPA general comment E2 above.) These bottom composite samples provided the comprehensive screening for all potential contaminants. Discrete bottom characterization samples (IDLB13A through -D) and stepout

characterization samples (IDLE13A1, IDLE13B1, IDLW13A1, and IDLW13B1) focused only on the chemicals that exceeded cleanup goals for soil.

E9. Comment: The word “lead” is misspelled in the title of Figure 7-3. Please reissue this figure with the correct title.

Response: This typographical error was corrected.

E10. Comment: Figure B0638, Excavation B0638 (IR-18): A location exceeding the 2000 ESD clean-up goal for 4,4'-DDD was not shaded red. This compound was detected at 2.1 mg/kg in a sample from 0638SSC. Please revise the figure to indicate this and reissue it.

Response: The cleanup goal for 4,4'-dichlorodiphenyldichloroethane (DDD) in soil is 2.1 mg/kg. The concentration detected at location 0638SSC equals, but does not exceed, the cleanup goal; therefore, this location is correctly portrayed with a green symbol.

RESPONSES TO COMMENTS FROM DTSC RECEIVED ON NOVEMBER 22, 2004

General Comments

D1. Comment: A spill-type model was assumed and an investigation-by-excavation approach to cleanup was adopted in the ROD. In a spill-type model, concentrations decrease with distance from the release in a “bulls-eye” pattern. Moreover, a single source area is assumed. However, Parcel B was constructed of artificial fill and included historic waste oil releases and unregulated dumps (e.g., IR07 and IR18). Concentrations in CSRA sites do not usually follow a “bulls-eye” pattern. A “fill-and-spill” model with multiple source areas would have been a more appropriate model for CSRA sites. And so, at some sites, despite multiple stepouts, the Navy did not determine the full extent of contamination and excavation was stopped.

Response: The Navy acknowledges that site conditions, especially debris fill, at Installation Restoration (IR) site 07 did not allow complete delineation of COPCs at Excavation 7-4. Risks from chemicals that remain in soil at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D2. Comment: At IR10, where volatile organic compounds (VOCs) were the primary COPCs, excavation (the remedial action required by the ROD) never

commenced. Instead, a treatability study (TS) using soil vapor extraction (SVE) was conducted. Information on the effectiveness of the treatability study will be needed prior to the TMSRA.

Response: Information on the effectiveness of soil vapor extraction (SVE) in treating VOCs was presented in reports that summarize the treatability study (Innovative Technical Solutions, Inc. [ITSI] 2006; International Technology Corporation [IT] 2002; Tetra Tech 2003). SVE was evaluated as a remediation alternative in the TMSRA.

D3. Comment: **DTSC is concerned about what we see are significant flaws in the way Contaminants of Potential Concern (COPCs) have been identified at Parcel B. The identification of COPCs is very important because if COPCs have not all been identified, then the extent of contamination can not be understood, nor can it be determined if excavations are complete. Agreement on COPCs and a process for adding and removing COPCs is needed prior to a ROD Amendment.**

Response: Evaluations of risk and the chemicals responsible were a central part of the TMSRA (see the HHRA in Appendix A of the TMSRA). The selection of COPCs followed the HHRA methodology agreed to between the Navy and the regulatory agencies.

Comment: **Several issues with identifying COPCs are noted below. Additional COPCs are noted in the second column of Attachment B.**

a) Exceedences of ROD or 2000 ESD criteria in Remedial Investigation (RI) samples were not all identified. For example, Mn criteria decreased in the 2000 ESD but Mn was not added as a COPC at sites where the lower 2000 ESD criterion was exceeded. Another example: the 2000 ESD criterion for nickel (Ni) was the point-by-point Hunters Point ambient level (HPAL). Ni exceedences were noted (by bolding on RI and CSRA tables), but Ni was not identified as a COPC for several sites.

Response: Consideration of additional COPCs based on data from the RI is beyond the scope of the CSR addendum. The goal of the CSR and CSR addendum is to present the results of the remedial actions (RA) undertaken, and not to reconsider the remedial strategy. The TMSRA presented new remedial alternatives that will be effective based on the known site conditions at Parcel B. Manganese, specifically, has been discussed since summer 2000, and numerous approaches to identifying concentrations of manganese that should be considered for additional characterization or remediation have been evaluated. The HHRA evaluated the risk from manganese, and the TMSRA

proposed remedial alternatives (such as covers) to address the risk. Nickel did not exceed the soil cleanup goal (point-by-point based on a regression against magnesium or cobalt). The entries shown in bold text for nickel on the data tables were incorrect (should not have been bold) and a correction note was added to the tables in the final version of the report. This correction affected data tables for the following excavations: 7-4, 18-2, and IDL. Attachment A in this response to comments document contains responses to the specific comments provided in DTSC's Attachment B.

b) Compounds which exceeded criteria in shoreline locations (samples identified IR071T) were not identified as COPCs in adjacent sites (e.g., Aroclor-1260 for site 7-1).

Response: The shoreline characterization investigation was conducted in 2003 after the RA ended at Parcel B. The results from the shoreline investigation were not intended to be used to propose additional areas for excavation. The shoreline data were included on CSR addendum figures only to aid in understanding the near-shore excavations (7-1, 7-3, 7-5, and B4818). The shoreline data were the basis for the SLERA, and remedial alternatives to address risk identified in the SLERA (such as a revetment) were proposed in the TMSRA.

c) Many sites were identified based on a single (or a few) remedial investigation (RI) locations which resulted in early selection/elimination of COPCs without adequate site investigation.

Response: COPCs were selected during the RD based on chemicals identified during the RI and feasibility study to cause unacceptable risk. Recharacterization of Parcel B was not the goal of the RD and RA; rather, the RD focused on the specific chemicals at each area that created risk. The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original RI data. Consideration of additional COPCs based on RI data is beyond the scope of the CSR addendum.

d) COPCs dropped out as investigations proceeded; however, this process was based on the previous site conceptual model and if the site did not exhibit a "bulls-eye" pattern, COPCs should not have been removed.

Response: The process of eliminating COPCs during successive stepouts was in accordance with the RD and RD amendment.

e) When sites merged, merged sites were not fully characterized for the total set of COPCs for both sites.

Response: The RD and RD amendment address the merger of excavations and call for the merger of the COPC sets for bottom composite samples for the joined

excavation. The Navy followed this protocol in sampling merged excavations.

f) Samples were analyzed for a subset (instead of a full set) of method analytes. For example, analysis of a single polynuclear aromatic hydrocarbon (PAH), e.g., benzo(a)pyrene was requested from the laboratory.

Response: Samples collected after November 2000 were analyzed for all PAHs if any PAH was specified. Only individual PAHs were reported for samples collected before November 2000. This same procedure was followed for SVOCs as well.

g) COPCs were not identified when DLs exceeded criteria.

Response: The majority of the data collected during the RA met the criteria established for detection limits. The HHRA in the TMSRA accounted for detection limits and non-detected results.

h) Additional COPCs were identified in some waste analyses (Ws) and screening samples (SSs). However, results were not provided for all sites; small sets of analytes were used; and detection limits (DLs) were elevated.

Response: Neither waste profile nor screening sample data were available for 23 of the 106 excavations, for a variety of reasons. Ten of the excavations without these data were never opened and waste profile information was not needed as a result. Some excavations were completed before the RA (the 1996 exploratory excavations) and these samples were not collected. Other excavations used characterization data for waste profiling. Screening soil and waste profile soil samples were collected to provide rough initial information and to guide waste disposal, but not to obtain any information on site delineation. Waste profile samples were analyzed for full suites of chemicals. Screening soil samples, on the other hand, focused on the COPCs for each individual excavation.

i) New COPCs may be identified due to recent interpretations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). For example, USEPA has identified asbestos as a CERCLA hazardous substance (including “naturally occurring asbestos”). Asbestos is a known site contaminant; however, asbestos was not investigated.

Response: Asbestos was not identified in the ROD as a substance that required cleanup, and the RA did not address asbestos. Remediation alternatives proposed in the TMSRA addressed the potential for asbestos in surface soil.

j) Lead-based paint (LPB) was not investigated.

Response: Issues related to lead-based paint will be addressed when the property is transferred.

k) If different criteria are proposed in the TMSRA (e.g., ecological criteria along the shoreline, human health criteria for “open space”, updated indoor air criteria), all site data will need to be reviewed with respect to new criteria. This exercise may result in both addition (e.g., organotin, naphthalene) and deletion of COPCs.

Response: Comment acknowledged. Risks from exposure to COPCs in soil and groundwater for each redevelopment block were evaluated for both the specific exposure scenario associated with the planned reuse and for the other potential exposure scenarios identified for Parcel B, regardless of the planned reuse of the redevelopment block. Appendix A of the TMSRA presents the results of the HHRA.

l) HPALs were used as cleanup criteria for five metals (arsenic, chromium, cobalt, manganese, and nickel). However, the use of HPALs as criteria is not appropriate for disposal areas (e.g., IR07, IR18). Other assumptions regarding point-by-point HPALs do not apply to IR07 and IR08: for example, our understanding is that IR07 and IR18 were not constructed with local serpentinite fill.

Response: Evaluation of the appropriateness of Hunters Point ambient levels (HPAL) as cleanup goals for soil is beyond the scope of the CSR addendum. Although areas at IR-07 and IR-18 contain debris fill, the majority of the fill in these areas is native material removed from the local hillside. Ambient concentrations of metals and cleanup criteria were discussed further in the TMSRA.

D4. Comment: **The extent of the contamination left-in-place has not been determined at many locations. Some examples are provided below: site specific comments are provided in the second column of Attachment B.**

a) Stepouts or stepdowns were not conducted at locations where 2000 ESD criteria were exceeded. Some examples are given below.

i. Along the shoreline, no stepouts were conducted at exceedences. It is acknowledged that the Navy intended the shoreline work as a preliminary characterization study; nonetheless, stepouts have not been conducted, the extent of contamination has not been determined.

Response: The results from the shoreline investigation were not intended to be used to propose additional areas for excavation. Instead, the shoreline data were included on CSR addendum figures only to aid in understanding the near-

shore excavations (7-1, 7-3, 7-5, and B4818). The shoreline data were the basis for the SLERA, and remedial alternatives to address risk identified in the SLERA (such as a revetment) were proposed in the TMSRA. Please refer to Attachment A of this document for responses to specific comments contained in DTSC's Attachment B.

ii. Along the western site boundary with occupied private property, stepouts have not been conducted and the extent of offsite contamination has not been determined.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties.

iii. At IR10, the extent of volatile organic compounds (VOCs) in soil has not been determined.

Response: The extent of VOC contamination in soil at IR-10 was investigated as part of the treatability studies at that location (IT 2002; ITSI 2006; Tetra Tech 2003). The TMSRA included remediation alternatives (such as SVE) to address VOCs in soil. The additional information from the treatability studies will be incorporated into the design of the remedial actions for IR-10.

b) Stepouts or stepdowns were not conducted when detection limits (DLs) or reporting limits (RLs) exceeded ESD criteria. For example, at locations where high total petroleum hydrocarbons (TPH) resulted in elevated DLs for PAHs, the extent of PAHs has not been determined.

Response: Detection limits for PAHs that were greater than the cleanup level for soil were not investigated unless the detection limit exceeded 3 mg/kg. This practice was in accordance with Appendix 6 of the RD amendment and adopted because the gas chromatography/mass spectrometry method used in the Contract Laboratory Program semivolatile organic analysis can typically report qualitatively reliable (though quantitatively estimated) results about 10 times lower than the contract-required quantitation limit (about 0.33 mg/kg). Additional samples were collected whenever detection limits for PAHs exceeded 3 mg/kg.

c) The rules of the Remedial Design work plans were not fully complied with. For example, if two sidewall samples were required but only one shallow sidewall sample was collected, then the extent of contamination has not been determined in deeper soil.

Response: The Navy followed the sampling protocols in the RD and RD amendment at all excavations.

d) Areas without data cannot be presumed to be clean. For example, the shoreline at IR26 and areas between RI locations on IR18.

Response: The CSR and CSR addendum are a summary of the RA and are not intended to re-evaluate areas that were not identified during the RD as posing risk that would require remediation. Potential risk related to exposure to soil and groundwater throughout Parcel B, including areas without data, was addressed in the TMSRA.

e) COPCs were not all identified (as discussed in previous comment).

Response: Refer to the response to DTSC general comment D3, parts (a) through (l).

f) If different criteria are proposed in the TMSRA (e.g., ecological criteria along the shoreline, human health criteria for “open space”, new indoor air criteria), all site data will need to be evaluated against the new criteria and additional data gaps may be identified.

Response: Comment acknowledged. Refer to the response to DTSC general comment D3(k).

D5. Comment: Large areas were backfilled. But no information on the chemical characteristics of backfill has been provided. So it cannot be determined if backfilled areas meet the ESD criteria.

Response: Analytical results for backfill material were added to Appendix C of the CSR when available. However, backfill materials were not incorporated into the risk assessment in the TMSRA.

D6. Comment: Some sites have not been included in either the CSR or the CSRA. All sites that have been historically associated with Parcel B are included on Attachment B. In some cases (e.g. IR06), sites have been or will be moved to other parcels. Other sites may have been incorporated into another site or another program. In order that the site record will be complete, please identify the current status of all sites on Attachment B which are not included in either the CSR or the CSRA (e.g., EE01, EE03, IR46, IR50, IR51, Steam Lines, SI31, SI45, B1127 and EE0208). Please provide additional information (including figures and tables) to demonstrate that each site is compliant with the ROD/ESD.

Response: Refer to the responses in the table in Attachment A of this document. All these areas were also addressed in the RTC on the CSR dated January 15, 2004.

D7. Comment: Detection limits (DLs). DLs orders-of-magnitude higher than risk-based criteria were identified as cleanup criteria for five compounds in the ROD (e.g., benzo(a)pyrene, cyanide, dibenzo(a,h)anthracene, heptachlor epoxide, and n-nitroso-di-n-propylamine): in the ESD, for these five compounds, the DLs in the ROD were mistakenly identified as reporting limits (RLs). RLs (not DLs) were also cited for all other COPCs in the ESD. Other instances of confused terminology exist.

DLs (not RLs) are the appropriate limits to use in all site documents (and especially risk assessments), since they provide the best (most complete) information for each analysis. DTSC requests that DLs (not RLs) be used in all documents, including the ROD Amendment and laboratory reports. Please submit tables in the CSRA (including tables in the appendices) with values provided for DLs and with all values between DLs and RLs shown as J-qualified estimated values

Response: All tables in the CSR addendum contain the information on detection limits requested. The Navy will strive to be more consistent in the use of the terms “detection limit” and “reporting limit” in future documents.

D8. Comment: Quality assurance/quality control (QA/QC). Please provide a QA/QC report for all data.

Response: Appendix F of the CSR contains the quality control summary report for all data collected during the RA, including data presented in the CSR addendum.

D9. Comment: As-built topographic maps should be provided for all excavations.

Response: The sidewalls were vertical in all excavations conducted in 2000 to 2001, so no contours are available. Sidewalls were sloping in some excavations conducted in 1998 to 1999, and elevation contours for these sloping sidewalls are shown on the applicable figures. However, minor portions of sloping sidewalls were not shown on figures for Excavations 7-1, 7-3, 7-5, and 18-2 to allow presentation of the large amount of data.

Specific Comments for IR-07

(Chemical-specific comments for IR-07 provided in Attachment A table)

D1. Comment: The City is proposing residential and industrial development adjacent to IR07 to the south and east and private property to the west is already occupied. IR07 (and IR18) contamination extends beyond the western

site boundary to adjacent occupied private property. The extent of contamination has not been determined.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties.

D2. Comment: **Because the area was formerly an unregulated dump (i.e., landfill), an investigation for soil gas is strongly recommended. Completing this work prior to the TMSRA will help determine if gas control and monitoring systems are needed. Compounds for inhalation pathway were in general not fully investigated, including VOCs, naphthalene, 2-methylnaphthalene. Because IR07 was used as a disposal area (including waste oil disposal), typical landfill gases (e.g., methane) should be investigated as well as radon.**

Response: The Navy conducted a soil gas survey at IR-07 and IR-18 in 2005 (SES-TECH 2005). The TMSRA included remediation alternatives to address concentrations of methane found in soil gas at IR-07.

D3. Comment: **High concentrations of compounds which are toxic to ecological receptors have been measured along the shoreline, including PCBs, PAHs, and metals (Cu, Pb, and Zn). The investigation to the north in the direction of Parcel F and the San Francisco Bay has not been completed. For example, the depth of contamination along the shoreline has not been determined, but extends at least to 4'. Also, shoreline COPCs were not all fully investigated to the south in adjacent upland sites.**

Response: The shoreline characterization investigation was conducted in 2003 after the RA ended at Parcel B. The results from the shoreline investigation were not intended to be used to propose additional areas for excavation. The shoreline data were included on CSR addendum figures only to aid in understanding the near-shore excavations (including 7-1). The shoreline data were the basis for the SLERA and remedial alternatives (such as a revetment) to address risk identified in the SLERA were proposed in the TMSRA. Copper, lead, zinc, and four PAHs were investigated at upland Excavation 7-1 and copper, lead, zinc, PCBs, and six PAHs were investigated at upland Excavation 7-5, both of which adjoin the shoreline. Information related to Parcel F is available in the Parcel F feasibility study report (Barajas and Associates 2007).

D4. Comment: **To facilitate review, Parcel F results should be posted on IR07 figures. The relationship between onshore (Parcel B) and offshore (Parcel F) contamination should be evaluated.**

Response: The CSR and CSR addendum summarize the RA; posting data from offshore areas is beyond the scope of these documents. Information related to Parcel F is available in the Parcel F feasibility study report (Barajas and Associates 2007).

D5. Comment: **Additional COPCs were not identified and were not fully investigated: so exceedences of health-based goals have not been delineated. For example, the extent of organotin along the shoreline has not been determined. Arsenic (As) commonly exceeds the new 2004 California Modified PRG (CAMod) of .062 mg/kg. Ni often exceeds 2000 ESD with produce (320 mg/kg) and the ESD goal (i.e., which is a point-by-point HPAL). Similarly, Mn often exceeds 2000 ESD with produce (420). No information was provided on asbestos and cyanide. DLs for PAHs (i.e., benzo(a)pyrene) and other SVOCs (e.g., n-nitroso-di-n-propylamine) are often exceeded. Iron (Fe: in RI samples) commonly exceeds PRG of 23,000 mg/kg. Cyanide has been measured close to ESD criterion at CSR site IR18 but has not been evaluated elsewhere. The ESD criterion for cyanide (2) is based on a DL: the human health risk-based criterion is .17. Ecological criteria have not been developed. Cyanide should be considered for investigation at CSRA sites and along the shoreline. Asbestos has not been investigated at CSRA sites. This comment applies in general to CSRA sites but is not repeated in general comments for other sites.**

Response: Comparison to cleanup goals other than were presented in the May 2000 explanation of significant differences (ESD) is beyond the scope of the CSR. Evaluations of potential risk to human health and ecological receptors were included in the TMSRA. Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs. Also refer to the chemical-specific discussions in Attachment A to this document.

D6. Comment: **No data on chemical characterization of backfill material was included. Therefore, it cannot be determined if backfilled areas meet ROD/ESD goals. Similarly, it cannot be determined whether 2004 PRGs are exceeded. Areas backfilled cannot be evaluated for risk. This deficiency increases as the volume of backfill increases—i.e., at larger sites (e.g., 7-1, 7-3, 7-4, 7-5). This comment applies to other sites but is not repeated for other sites.**

Response: Analytical results for backfill material were added to Appendix C of the CSR when available. However, backfill materials were not incorporated into the risk assessment in of the TMSRA.

Specific Comments for Excavation 7-1

(Chemical-specific comments for Excavation 7-1 provided in Attachment A table)

D1. Comment: The extent of contamination on the western boundary (occupied private property) has not been determined. Because of site history (unregulated dump/landfill, waste oil disposal) and because of high concentrations noted (in IR7-1 and in IR18) more investigation is indicated. Surface soil, deeper soil, soil gas, and groundwater contamination have not been fully investigated.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties.

D2. Comment: The extent of contamination at the shoreline has not been determined. Contamination at the shoreline may extent south into 7-1 but COPCs on the shoreline have not been fully investigated to the south (e.g., Aroclor-1260).

Response: Excavation 7-1 was excavated to 10 feet bgs and, consequently, no soil of interest remains to be investigated near the shoreline except areas within riprap that are inaccessible. None of the 11 soil samples collected between 0 and 10 feet bgs from four RI borings within Excavation 7-1 indicated any detection of Aroclor-1260.

D3. Comment: The extent of contamination to the west (private property) and north (shoreline) should be determined prior to evaluation of remedial options in the TMSRA.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties. The extent of contamination in shoreline sediment was adequately delineated to develop remedial alternatives presented in the TMSRA.

D4. Comment: Additional compounds should have been identified as COPCs (e.g., Aroclor-1260 in shoreline samples, chrysene, indeno(c,d)pyrene, Mn, Ni) should have been identified.

Response: Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs.

D5. Comment: The presence of high concentrations of Pb along the western property line is a cause for concern, especially since shallow as well as deep

exceedences have been measured. It may be prudent to conduct a surface soil investigation for Pb on adjoining property to ascertain whether a complete exposure pathway exists on the adjacent occupied private property. Other COPCs may also be surface contaminants.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties.

D6. Comment: Only specific COPCs (i.e., a subset of method analytes) were analyzed for at all locations (with a few exceptions). Hence, the entire area (in particular, areas near the site boundary and along the shoreline) has not been characterized. So, it can not be determined whether excavations are adequate. For example, the northwest area has high concentrations of lead (Pb) and total petroleum hydrocarbons (TPH) but has not been sampled for polychlorinated biphenyls (PCBs), pesticides, other polynuclear aromatic hydrocarbons (PAHs), and other metals and inorganics (e.g., iron, CrVI, organotin, cyanide). These compounds, which are often associated at Hunters Point (e.g., at IR18), need to be analyzed for, since results are needed for risk assessment and may impact shoreline and upland remedial options. A broader suite should have been sampled for, based on site history and on associations of contaminants. The extent of such compounds (especially in the northwest) has not been determined.

Response: Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs. The process of eliminating COPCs during successive step-out sampling was in accordance with the RD and RD amendment.

D7. Comment: New COPCs have been identified (e.g., Aroclor-1260, organotin along the shoreline) for which the extent has not been determined along the shoreline and upland.

Response: Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs.

D8. Comment: Some 2000-01 bottom samples were analyzed for 17 or 26 PAHs (not just the 4 PAHs identified as COPCs), but DLs were higher than cleanup goals.

Response: Bottom composite samples collected at 10 feet bgs were collected only to obtain information that could be useful in the event of future, deep excavations. The RD and RD amendment did not require any action in the

case where the analytical result for a bottom sample collected at 10 feet bgs exceeded soil cleanup goals.

D9. Comment: Extent was not determined for COPCs that dropped as excavation proceeded (e.g., As, DDE, DDT in the northwest) or for compounds that were not identified as COPCs (e.g., Mn, Ni).

Response: The process of eliminating COPCs during successive step-out sampling was in accordance with the RD and RD amendment.

D10. Comment: The TPH cleanup goal of was based on the total TPH = TPH-g + TPH-d + TPH-mo. In general, all three components (TPH-g, TPH-d, and TPH-mo) were not analyzed for in the CSRA. Without all three components, total TPH cannot be calculated appropriately. Also, DLs for TPH-d were higher than cleanup goals (6200 at 9.25' at N3J). TPH criteria should be added to Table 2-1. TPH criteria used in the CSRA apply to groundwater protection. TPH criteria for human health risk assessment (HHRA) and for ecological RA were not used. This comment applies to all sites but is not repeated for all sites.

Response: Fuel-related compounds were addressed during the RA where they were commingled with chemicals identified as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act to enhance the efficiency of the cleanup at Parcel B. Fuel-related compounds did not drive the RA. The TPH fractions selected for analysis at Excavation 7-1 (or any excavation) were based on detections observed in data collected during the RI. Cleanup criteria for TPH were added to Table 2-1. Comparison to cleanup goals other than were presented in the May 2000 ESD is beyond the scope of the CSR.

Specific Comments for Excavation 7-3

(Chemical-specific comments for Excavation 7-3 provided in Attachment A table)

D1. Comment: Mega-excavation. Multiple sites (7-3, 7-4, 7-5, B1128, B1227) have coalesced into a mega-excavation. Ideally, the bottom and final sidewalls (i.e., perimeter) of the mega-excavation would have confirmation samples for all COPCs in the individual excavations. And boundaries between excavations would be characterized for COPCs in both excavations. But, when the rules for the 1998-99 excavations were devised, the potential for excavations to merge was not considered, therefore, final confirmation samples of the mega-excavation are not sampled for all COPCs within the mega-excavation. And, boundaries

between excavations are not characterized with respect to all COPCs in both excavations. Examples are provided below.

Response: The RD and RD amendment address the merger of excavations and call for the combination of the COPC sets for bottom composite samples for the joined excavation. The Navy followed this protocol in sampling merged excavations.

D2. Comment: **The extent of contamination to the north (towards the shoreline) has not been determined. The extent of contamination should be determined prior to evaluation of remedial options in the TMSRA.**

Response: Riprap prevented further sampling toward the shoreline. Samples collected for the shoreline characterization provided adequate additional information to evaluate remedial alternatives in the TMSRA.

D3. Comment: **Additional COPCs (Aroclor-1254, Cd, CrVI, gamma-chlordane, heptachlor epoxide, Sb) should have been identified from shoreline sampling results. Additional COPCs elsewhere include Aroclor-1254, CrVI, Mn.**

Response: The results from the shoreline investigation were not intended to be used to propose additional areas for excavation. Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs.

D4. Comment: **PCB contamination is widespread in the shoreline area (an area of at least 200' by 280'). The horizontal and vertical extent of Aroclor-1260 (5.9 at 4' at T020) has not been determined: but depths exceed 4' (T020). High concentrations of other compounds were measured along the shoreline. For example, Cu (5400 at T020), Pb (1200 at T020), Zn (1300) and PAHs (1.0 at T020) are associated with the PCB contamination: the full extent of these compounds has also not been determined.**

Response: Samples collected for the shoreline characterization provided adequate additional information to evaluate remedial alternatives in the TMSRA.

D5. Comment: **Organotins have been measured in shoreline samples. For example, dibutyltin (at .366) and tributyltin (at .99) do not exceed the PRG (18 for tributyltin oxide, TBTO). With respect to ecological criteria, USEPA recommended .0251 (for bulk organotins in sediment) in SLERA**

comments. However, DTSC recommended pore water concentrations be used. The RWQCB recommended collection of pore water samples.

Response: Risk posed by organotin compounds were estimated in the SLERA and were addressed by remedial alternatives proposed in the TMSRA.

Specific Comments for Excavation 7-4

(Chemical-specific comments for Excavation 7-4 provided in Attachment A table)

D1. Comment: Mega-excavation. Multiple sites (7-3, 7-4, 7-5, B1128, B1227) have coalesced into a mega-excavation. Ideally, the bottom and final sidewalls of the mega-excavation would have confirmation samples for all COPCs in the individual excavations. And boundaries between excavations would be characterized for COPCs in both excavations. But, when the rules for the 1998-99 excavations were devised, the potential for excavations to merge was not considered, therefore, final confirmation samples of the mega-excavation are not sampled for all COPCs within the mega-excavation. And, boundaries between excavations are not characterized with respect to all COPCs in both excavations. Examples are provided below.

Response: The RD and RD amendment address the merger of excavations and call for the combination of the COPC sets for bottom composite samples for the joined excavation. The Navy followed this protocol in sampling merged excavations.

D2. Comment: Additional compounds exceeding ESD goals should have been identified as COPCs, including: Aroclor-1248, carbazole, heptachlor epoxide, Ni. For RA, other COPCs might be identified, including compounds > 2004 PRGs: BHC, naphthalene, 2-methylnaphthalene, dieldrin, endrin, V.

Response: Refer to the response to DTSC general comment D3 for more information about the selection process for COPCs. Comparison to cleanup goals other than were presented in the May 2000 ESD is beyond the scope of the CSR addendum.

D3. Comment: With the information provided, it is difficult to follow the excavation logic for 7-4. For example, few COPCs were sampled for in what appears to be the earlier northwestern excavation. As the excavation proceeded to the south (engulfing B1128 and B1227) and to the west and east (abutting 7-3 and 7-5), COPCs were added and sidewalls and bottom samples were analyzed for more COPCs. But, the floor of the

earlier northwestern excavation and the engulfed excavations (B1128 and B1227) and the shared boundaries with 7-3 and 7-5 are not as well characterized as the rest of the 7-4 excavation. For example, the bottom and sidewalls of the earlier northwestern excavation was analyzed only for two metals: Cu and Pb. Also, contaminants in adjacent excavations (7-3, 7-5, B1128, B1227) are not all sampled for at the boundary of the large mega-excavation.

Response: No soil above 10 feet bgs remains at the shared boundaries with other excavations. The excavation sequence for 7-4 was complex because of the presence of debris fill. The pattern of excavation was not presented for any excavation in the CSR or CSR addendum because the high degree of detail needed to portray the pattern would obscure the presentation of sample analytical data.

D4. Comment: **On the figures, boundaries between merging excavations are incorrectly shown. For example, on Figure 7-4A, it looks like 7-3 surrounds 7-4. Further, it looks like all the data presented are 7-3 data, not 7-4 data. Please revise figures.**

Response: The joined Excavations 7-3, 7-4, and 7-5 presented unique challenges for data presentation on figures. The Navy clarified the boundaries of the excavations on figures that were revised for other reasons, but did not revise figures only to clarify boundaries.

D5. Comment: **Also, figures are difficult to evaluate since topological contours are not shown and figures are not consistent. For example, with respect to B1227, Figure 1227A shows that the excavation has sloping sidewall and a maximum depth of 10'. But Figure 7-4A shows that bottom samples at 10' were collected in the area where sidewalls are indicated on Figure B1227A. Please provide final contour maps for all excavations.**

Response: The figures for Excavation 7-4 were revised to show the portion of the excavation that extended only to 5 feet bgs. Excavation 7-4 is the only case where any significant areas of an excavation were extended to different depths. The sidewalls were sloping on some excavations conducted in 1998 to 1999, and elevation contours for these sloping sidewalls are shown on the applicable figures. However, minor portions of sloping sidewalls were not shown on figures for Excavations 7-1, 7-3, 7-5, and 18-2 to allow presentation of the large amount of data. A note was added to the figures for Excavations B1128 and B1227 to indicate that these excavations were partly removed by Excavation 7-4.

Specific Comments for Excavation 7-5

(Chemical-specific comments for Excavation 7-5 provided in Attachment A table)

D1. Comment: Mega-excavation. Multiple sites (7-3, 7-4, 7-5, B1128, B1227) have coalesced into a mega-excavation. Ideally, the bottom and final sidewalls of the mega-excavation would have confirmation samples for all COPCs in the individual excavations. And boundaries between excavations would be characterized for COPCs in both excavations. But, when the rules for the 1998-99 excavations were devised, the potential for excavations to merge was not considered, therefore, final confirmation samples of the mega-excavation are not sampled for all COPCs within the mega-excavation. And, boundaries between excavations are not characterized with respect to all COPCs in both excavations. Examples are provided below.

Response: The RD and RD amendment address the merger of excavations and call for the combination of the COPC sets for bottom composite samples for the joined excavation. The Navy followed this protocol in sampling merged excavations.

D2. Comment: This site is a clear example of the flawed process of the incomplete RI and subsequent exploration by excavation of the ROD/ESD. The site was identified based on a single RI location (B014) in the eastern portion of 7-5. Excavation proceeded to the west to a maximum depth of 19'. Multiple COPCs were identified from Ws and SSs at very high concentrations (e.g., Aroclor-1260 at 71, compared to .18 DL at the RI location). And, COPCs identified were measured at concentrations far above the concentrations of the RI sample on which the HHRA was based (e.g., Cu at 22,000 in SSs, compared to 209 at the RI location).

Response: Re-evaluation of RI data is beyond the scope of the CSR addendum. The goal of the RD and RA was not to recharacterize Parcel B; however, much new information is now available as a result of the RA. Risk assessments in the TMSRA considered all the data for soil that remains in place at Parcel B.

D3. Comment: Figures do not show the severity of the contamination at this site (formerly the "sandblast pit"). The deepest part of the excavation provides the best example of the problems encountered when evaluating this remediation. Aroclor-1260 was apparently chased to 16' (1.4 at B15) but was not removed to ESD goals (.22). The data provided on this large excavation is scant indeed. In general, other COPCs are not represented by sidewall and bottom samples for this excavation. Moreover, the

contamination extends to the north in the direction of the San Francisco Bay and Parcel F.

Response: Elevation contours for the sloping sidewalls of Excavation 7-5 were not shown to allow presentation of the large amount of data on the excavation figures. The text that describes Excavation 7-5 explains why the excavation extended to 19 feet bgs. Data from samples collected deeper than 10 feet bgs were not shown on the excavation figures; however, these data were contained in the data tables.

D4. Comment: **The extent of contamination to the north in the direction of the San Francisco Bay and Parcel F has not been determined for multiple COPCs, including Sb, Aroclor-1254, Aroclor-1260, CrVI, Cu, organotins, Pb, Zn and PAHs.**

Response: Riprap prevented further sampling toward the shoreline. Samples collected for the shoreline characterization provided adequate additional information to evaluate remedial alternatives in the TMSRA.

D5. Comment: **Without a topographic map, it is difficult to follow the logic of the excavation. Final excavation contours should be provided (for all sites).**

Response: The pattern of excavation is not presented for any excavation in the CSR or CSR addendum because the high degree of detail needed to portray the pattern would obscure the presentation of analytical data.

Specific Comments for IR-10

(Chemical-specific comments for IR-10 provided in Attachment A table)

D1. Comment: **VOC soil contamination is extensive at high concentrations, extending beyond site boundaries of 10-1, 10-2, and B 2725. With respect to VOCs, these three sites coalesce to a single site. The horizontal and vertical extent of contamination for the large site has not been determined.**

Response: The extent of VOC contamination in soil at IR-10 was investigated as part of the treatability studies completed at that location (IT 2002; ITSI 2006; Tetra Tech 2003). The TMSRA included remediation alternatives (such as SVE) to address VOCs in soil. The additional information from the treatability studies will be incorporated into the design of the remedial actions for IR-10. The extent of the primary VOC (trichloroethene [TCE]) is shown on Figure 10-1C.

Specific Comments for Excavation 10-1

(Chemical-specific comments for Excavation 10-1 provided in Attachment A table)

D1. Comment: No excavation was conducted at 10-1. Therefore, 10-1 is not in compliance with the ROD/ESDs which require excavation.

Response: This area was not excavated to allow treatability studies to be completed. The HHRA evaluated the risk from COPCs in soil, and the TMSRA proposed remedial alternatives (such as covers) to address the risk.

D2. Comment: The information presented in the CSRA is partial, since treatability studies (TSs: e.g., SVE, zero-valent ion (ZVI)) are not discussed and TS results (e.g., soil, soil gas, groundwater) are not presented. Therefore, it is not possible to evaluate the current condition of the site.

Response: The TMSRA included information about treatability studies and considered both SVE and ZVI in the potential remedial alternatives. The additional information from the treatability studies will be incorporated into the design of the remedial actions.

D3. Comment: A soil vapor extraction (SVE) (TS) is ongoing. SVE TS results have not been reviewed. Moreover, SVE work has continued past the dates of sample collection for this CSRA. Results for VOCs likely do not represent current conditions. Therefore, this review is cursory and preliminary.

Response: Comment acknowledged.

D4. Comment: In the ROD amendment which is under development, revised remedial options (e.g., SVE, ZVI) in lieu of excavation may be proposed. If so, revised remedial action objectives (RAOs) will need to be developed for soil and groundwater. And, RAOs for VOCs in soil gas may be required.

Response: The TMSRA contained revised remedial action objectives (RAO) for soil, groundwater, and soil gas.

D5. Comment: TCE was measured over a large area > ESD (1.7). Outlying samples shown on Figure 10-1C are less than the ESD (1.7) but exceed the 2004 PRG (.053) at some locations.

Response: Comparison to cleanup goals other than were presented in the May 2000 ESD is beyond the scope of the CSR addendum.

D6. Comment: COPCs are not adequate. TCE was identified as a COPC because of high concentrations in RI samples (980: B036). In the RI samples, DLs were highly elevated for other VOCs (e.g., 75 for PCE, VC and 1,1-DCE at B036) > ESD criteria (.94, .054, .022). But because the RI results were “ND”, other VOCs were not identified as COPCs. This is an example of flawed process. COPCs should have included all breakdown products of TCE and all VOCs with elevated DLs in the RI. The extent of contamination of VOCs has not been determined.

Response: Detection limits for other VOCs are elevated only in samples where high levels were measured for TCE. Detection limits are not elevated in other samples from the same boring (for example, the sample collected at 2.25 feet bgs in boring IR10B036) or adjacent borings (such as IR10B035A). Detection limits were adequate for other samples to select COPCs.

D7. Comment: High concentrations in soil (980: B036 at 11.25’) suggest that dense non-aqueous phase liquids (DNAPLs) may exist: the extent of contamination at depth has not been determined. The issue of a separate phase or of residual DNAPL was not discussed in the CSRA. If DNAPLs were investigated and evaluated in other documents, that information should be presented in the CSRA. Also, the highest RIO concentration (980: B036 at 11.25’) was not shown on Figure 10-1C. Censoring of data can lead to misinterpretation and inappropriate site decisions: please include all results for TCE on figures.

Response: Data collected from depths below 10 feet bgs are not shown on figures or in data tables (except at Excavation 7-5 and the IDL, where the excavation depth exceeded 10 feet bgs). Data from samples collected deeper than 10 feet bgs were not evaluated to delineate the excavation. This procedure is consistent with the CSR and the RD. Further information about this area was discussed in the characterization portions of the TMSRA (see Section 2.3). Concentrations of TCE in groundwater in this area do not suggest the presence of dense nonaqueous phase liquid (DNAPL).

D8. Comment: Sampling density is not prescribed for other remedial actions (i.e., SVE) since excavation is the only remedial action included in the ROD. The density of sampling at 10-1 is significant. However, the density of sampling is less than required in the RD. At some locations, shallow and deep samples have not been collected. At other locations, stepouts have not been provided for deeper samples in all directions. For example, no stepdown and no stepout were conducted to the south for 18:N1B at 6’.

Other examples: no stepouts to the southwest for 20.3: VW03A at 9' and 10: B002 at 10'; no stepout to the north for 5.8 at E3A, for 4.3 at W1A and for 1.6 at E2A; no stepouts for 1.3 DL at E7A. Additional location-specific comments regarding compliance with RD rules are not provided below--since concentrations may have changed since samples were collected during SVE TSs. Additional comments may be provided at a later date, if appropriate.

Response: Complete and comprehensive delineation of this area of VOC contamination was not completed because of the ongoing work for the treatability studies. The TMSRA included remediation alternatives (such as SVE) to address VOCs in soil.

D9. Comment: **Sampling at depths > 10' was not required by the RD. Accordingly, no results are presented for TCE at depths greater than 10'. The extent of contamination at depths > 10' has not been determined, but clearly exceeds ESD goals in several locations. Examples of exceedences at 10' (or in deepest samples) include: 125: VW05A at 9', 41: S2B at 8', 30: SG043 at 10', 2.2: B006 at 10'.**

Response: The RD and RD amendment did not require any action in the case where a bottom sample collected at 10 feet bgs exceeded cleanup goals for soil. The TMSRA included remediation alternatives (such as SVE) to address VOCs in soil.

D10. Comment: **The revised (October 2004) PRG for TCE is .053. Outlying samples exceed the 2004 PRG which may suggest that the area of concern for the vapor intrusion pathway (soil-to-indoor air) may extend beyond current limit of soil characterization. Examples of exceedences of 2004 PRGs in outlying samples are: 1.1: 5B1, 1.2: N1B, .92: 06A, .13: N1A.**

Response: Comparison to cleanup goals other than were presented in the May 2000 ESD is beyond the scope of the CSR addendum.

D11. Comment: **Recent groundwater results were not included in the CSRA. However, preliminary TS results presented at meetings indicate that the VOC groundwater plume is larger than expected which suggests that the area of concern for the vapor intrusion pathway (groundwater-to-indoor air) extends beyond the current limit of groundwater characterization.**

Response: Investigation of groundwater was not part of the RD or RA and, therefore, is beyond the scope of the CSR addendum. Potential human health risks posed by exposure to VOC vapors from groundwater were addressed in the TMSRA.

D12. Comment: Similarly, soil gas results were not included in the CSRA. In order to evaluate remedial options in the TMSRA, soil gas data will need to be presented.

Response: Investigation of soil gas was not part of the RD or RA and, therefore, is beyond the scope of the CSR addendum. The Navy proposes to address potential issues related to vapor intrusion by collecting site-specific soil gas samples after remediation is complete to demonstrate that the remedy is operating properly and successfully. Institutional controls to address vapor intrusion will likely be a necessary component of the remedy, but specific areas requiring institutional controls (ARIC) will be selected after remediation is complete. The results of the site-specific soil gas survey will be the basis for defining ARICs.

D13. Comment: Site features (sumps, tanks, interior drain lines) should be shown on figures (for all sites).

Response: Additional features of the interior of Building 123 were added to figures for Excavations 10-1, 10-2, and B2725. Figures for all sites present site features to the extent that they exist within the mapped area.

D14. Comment: General comments apply to 10-2 and B2725 but are not repeated for those sites

Response: Comment acknowledged.

Specific Comments for IR-18

(Chemical-specific comments for IR-18 provided in Attachment A table)

D1. Comment: The City is proposing residential and industrial development adjacent to IR18 to the south and east and private property to the west is already occupied. IR18 (and IR07) contamination extends beyond the western site boundary to adjacent occupied private property: the extent of contamination to the west has not been determined for PAHs, Pb, and Zn.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties.

D2. Comment: The presence of high concentrations of Pb along the western property line is a cause for concern, especially since shallow as well as deep exceedences have been measured. It may be prudent to conduct a

surface soil investigation for Pb on adjoining property to ascertain whether a complete exposure pathway exists on the adjacent occupied private property. Other COPCs may also be surface contaminants. Cu is usually associated with Pb and Zn (compounds in sandblast grit waste) should have been identified as a COPC for 18-2.

Response: The Navy has no plans to characterize chemical concentrations on off-site properties. Copper was not identified as a COPC based on samples collected during the RI.

D3. Comment: Because the area was formerly an unregulated dump (i.e., landfill), an investigation for soil gas is strongly recommended. Completing this work prior to the TMSRA will help determine if gas control and monitoring systems are needed. Compounds for inhalation pathway were in general not fully investigated, including VOCs, naphthalene, 2-methylnaphthalene. Because IR18 was used as a disposal area (including waste oil disposal), typical landfill gases (e.g., methane) should be investigated as well as radon.

Response: The Navy conducted a soil gas survey at IR-07 and IR-18 in 2005 (SES-TECH 2005). The soil gas survey did not detect anomalous concentrations of methane or other gases in soil gas samples collected at IR-18.

D4. Comment: Other comments on adjacency issues with 18-1 were provided in CSR Comments and are not repeated here

Response: Please refer to the responses to comments on Excavation 18-1 in the CSR.

Specific Comments for B0638

(Chemical-specific comments for Excavation B0638 provided in Attachment A table)

D1. Comment: Extended Comments are provided here on the excavation at B0638 in order to illustrate several problems with the RI/ROD/ESD approach at Parcel B. Examples are provided in the following comments.

Response: Please see the following responses.

D2. Comment: DDD was identified as a COPC at RI location because the concentration measured (.28: B019) exceeded the former ROD goal of .166. The original RI location does not exceed the current ESD goal (2.1), so if

remediation had started after the 2000 ESD was approved, B0638 would not have had to be excavated for DDD.

Response: The Navy agrees that DDD would not have been selected as a COPC based on the cleanup goals in the May 2000 ESD.

D3. Comment: **DDD was measured at increasing values in 3-point confirmation samples during stepouts to the south: (.19: SSA), (.28: SSB), (2.1: SSC). The last stepout is equal to the ESD goal (2.1). The confirmation samples indicate that the main area of contamination is south of the RI location (B019): and, this area has not been investigated. That the main area of contamination was not discovered in the RI indicates that the RI was not adequate.**

Response: The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original data from the RI. The Navy acknowledges that site conditions, especially debris fill, at this location complicate delineation of COPCs. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D4. Comment: **The investigation is not complete. Nonetheless, according to the RD rules, no additional work is now required because SSC (2.1: B019) does not exceed the ESD goal (2.1). This represents a deficiency of the ROD/ESD approach.**

Response: The excavation rules in the RD and RD amendment were based on risk. A DDD concentration of 2.1 mg/kg does not result in an unacceptable excess lifetime cancer risk; consequently, additional action to address this concentration was not recommended.

D5. Comment: **COPCs were identified based on a single RI location: that is, COPCs were chosen or eliminated based on scant information. Moreover, a unique site history was not presented for B0638. In particular, a known source or a known activity is not explicitly associated with the single RI location that defined B0638 as a site. The history of the Navy's activities at the site is incomplete, and further complicated by Triple A activities in the IR18 area.**

Response: The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original RI data or evaluate the completeness of the RI.

D6. Comment: COPCs dropped out as the excavation proceeded, so no information on other COPCs is available at SSC, even though other COPCs (e.g., DDE, DDT) would be likely to increase along with DDD toward the south.

Response: The process of eliminating COPCs during successive step-out samples was in accordance with the RD and RD amendment. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D7. Comment: Another example: Pb was measured at an elevated concentration (108: B019) that does not exceed the ESD (220) or the PRG (150). Pb is a common contaminant in IR18 and IR07. But there is no reason to expect that the single RI location (B019) is representative of Pb concentrations in the area of B0638. Pb may increase with DDD to the south--or, in another direction. The elevated Pb concentration may warrant additional investigation, even though none is required by RD rules.

Response: The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original data from the RI or evaluate the completeness of the RI. Comparison to cleanup goals other than were presented in the May 2000 ESD is beyond the scope of the CSR addendum. Additional investigation is not justified based on the observed concentration of lead.

D8. Comment: The earlier RD required 3-point confirmation samples: the later RD required discrete confirmation samples. The value of 2.1 for DDD in the 3-point composite at SSC means that the ESD goal of 2.1 must be exceeded at least at one location somewhere along the south wall. Stepouts would be prudent along the entire length (35') of the south sidewall, to a depth of 7'--analyzed for a full suite of analytes.

Response: The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original data from the RI, nor do they reassess the cleanup strategies of the RD and RD amendment. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D9. Comment: The bottom sample (BOA) represents only a portion of the entire excavation—i.e., the portion enclosed by SSA, SWA, SNA, and SEA. The area of increasing contamination near the third stepout to the south (SSC) is not represented by the bottom sample (BOA). According to the 1998-99 rules, no additional sampling of the bottom of the excavation is required. Nonetheless, it is obvious that the bottom of excavation towards the hotspot in the south has not been characterized and that compliance with ESD goals has not been fully demonstrated. This

dilemma arises from the conceptual model of the ROD/ESD which assumes a spill-type scenario from known source areas. This assumption may not be sufficient (or valid) at B0638 (and at other locations on Parcel B) which exhibit both spill and fill (or just fill) histories.

Response: Sample 0638B0A was a five-point bottom composite sample that represented the entire excavation floor. Sample collection at Excavation B0638 followed the sampling rules established in the RD. The CSR and CSR addendum are not intended to re-evaluate the cleanup strategies of the RD and RD amendment.

D10. Comment: Nickel (Ni) (439: B019 at 6.75') exceeded the point-by-point HPAL and the risk-based ESD goal which included produce uptake (320) and so, Ni should have been identified as a COPC for B0638. At 11.75', at a higher concentration (1910), Ni did not exceed the point by point HPAL. So according to the RD rules, even though Ni exceeded the risk-based ESD goals (320), Ni would not be considered a COPC. The rules result in a absurd field situation in that lower concentrations require remediation and a higher concentrations do not require remediation. This dilemma proceeds from the ROD/ESD approach of using point-by-point HPAL as cleanup criteria. Given DTSC's current position on the Navy's CERCLA liability for ambient metals, cleanup goals based on point-by-point HPALs should be reevaluated in the TMSRA.

Response: Nickel did not exceed the cleanup goal for soil (point-by-point based on a regression against magnesium or cobalt) for either of the samples cited. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D11. Comment: Another point regarding the Ni results. At this location and at others in the CSRA, results below 10' were not compared to criteria This is not appropriate if the sample collected below 10' also represents the interval above 10'. For example, Ni was analyzed in B019 at 6.75 and at 11.75'. If linear interpolation is used on the interval between the two sampling depths, then the result at 6.75' represents the interval from 6.75' to 9.25': the result at 11.75' represents the interval from 9.25' to 11.75'. That is, since the depths relevant for HHRA are from 0' to 10', results at 11.75' are relevant. This situation was also discussed with regard to Parcel E where multiple shoreline locations have results below (but not above) depths relevant to ecological RA (i.e., 0' to 3').

Response: This interpretation varies from the process used throughout the RD and RA. Data from samples collected deeper than 10 feet bgs were not evaluated to delineate the excavation.

Specific Comments for IR-26

(Chemical-specific comments for IR-26 provided in Attachment A table)

D1. Comment: High concentrations of total PAHs, metals associated with sandblast grit (Cu, Pb, Zn), and Hg are widespread and likely extend to the shoreline. Some COPCs were not identified (Sb, Aroclor-1254, Aroclor-1260, organotins). Other compounds which were not fully investigated may be COPCs (i.e., pesticides).

Response: Sand blast grit was not observed during excavation at B4818 near the IR-26 shoreline nor was it observed during field activities for shoreline sampling. The CSR and CSR addendum only summarize the RA; they are not intended to re-evaluate the original data from the RI. Consideration of additional COPCs based on RI data is beyond the scope of the CSR addendum.

D2. Comment: High concentrations of compounds which are toxic to ecological receptors have been measured along the shoreline, including PCBs, PAHs, and metals (Cu, Pb, Hg, and Zn). The extent of contamination to the north in the direction of Parcel F and the San Francisco Bay has not been determined. For example, only two shoreline locations were sampled and the depth of contamination along the shoreline has not been determined (i.e., the deepest shoreline sample was at 2’).

Response: The shoreline data are the basis for the SLERA, and remedial alternatives to address risk identified in the SLERA (such as a revetment) were proposed in the TMSRA.

D3. Comment: To facilitate review, Parcel F results should be posted on IR26 figures.

Response: The CSR and CSR addendum summarize the RA; posting data from offshore areas is beyond the scope of these documents. Information related to Parcel F is available in the Parcel F feasibility study report (Barajas and Associates 2007).

D4. Comment: High elevations of cobalt (Co) at IR26 (171: B020 > point-by-point HPAL) may warrant additional review, given the use of radioactive cobalt (⁶⁰Co) for non-destructive testing of metals at IR26. No information on Co is available for B4818, except at RI location (31.7:

MW42A) and shoreline locations (15: T001). Also, in a possible source area for Co, it is not appropriate to use the point by point HPAL (which is based on weathering of Co in a serpentinite matrix). IR26 illustrates the dilemma of using a point-by-point HPAL for Co in that higher concentrations do not exceed the HPAL (85.5: B018, 79.5: B019, adjacent to 171: B020) while lower concentrations do exceed the HPAL (19.5: B027, 20.6: B031). Similar comments would apply to Co at 18-2 (75.7: B012), 18-3 (77.4: TA01A) and IR10 (e.g., 84.6: B035 in 10-1).

Response: Cleanup for cobalt was based on analytical results that exceeded the HPAL or the May 2000 ESD goal (3,200 mg/kg), whichever is greater. Although some of the concentrations cited at IR-26 are greater than the point-by-point HPALs, none of the cobalt concentrations exceeds the risk-based cleanup goal of 3,200 mg/kg. Consequently, no action is required. Furthermore, none of the cobalt concentrations cited at borings IR18B012, IR18TA01A or IR10B035A exceeds the point-by-point HPAL for cobalt.

Specific Comments for Excavation B4818

(Chemical-specific comments for Excavation B4818 provided in Attachment A table)

D1. Comment: The extent of contamination to the north along the shoreline has not been determined: only two shoreline locations were sampled. Stepouts and stepdowns were not conducted at exceedences. Also, some stepouts were not conducted and some samples were not collected at the upland excavation.

Response: The investigation for the shoreline characterization was conducted in 2003 after the RA ended at Parcel B. The results from the shoreline investigation were not intended to be used to propose additional areas for excavation. Riprap prevented further sampling or step-out samples toward the shoreline. Samples collected for the shoreline characterization provided adequate additional information to evaluate remedial alternatives in the TMSRA. Excavation B4818 extended to 10 feet bgs, the maximum depth of excavation, so continuing the excavation was not required.

D2. Comment: Compounds exceeding ESD goals in shoreline samples were not identified as COPCs (e.g., Sb, Aroclor-1254, Aroclor-1260, Cd). Other compounds may be identified as COPCs when goals are revised for the TMSRA (e.g., naphthalene, 2-methylnaphthalene, organotins).

Response: The shoreline characterization investigation was conducted in 2003 after the RA ended at Parcel B. The results from the shoreline investigation were not

intended to be used to propose additional areas for excavation. The shoreline data were included on CSR addendum figures only to aid in understanding the near-shore excavations (including B4818). The shoreline data were the basis for the SLERA, and remedial alternatives (such as a revetment) to address risk identified in the SLERA were proposed in the TMSRA. Copper, lead, mercury, zinc, and seven PAHs were investigated at Excavation B4818. Consideration of additional COPCs was not addressed in the CSR addendum.

Specific Comments for the Industrial Drain Line

(Chemical-specific comments for the Industrial Drain Line provided in Attachment A table)

D1. Comment: The conceptual site model upon which the RD was based (i.e., a spill type model with a single source) is not appropriate for a linear feature like the IDL. For the IDL, a multiple COPCs along the line should be assumed--as influx to the IDL from various operations varies along the line. And, multiple discharge points should be assumed along the line, due to breaks in the IDL. Influx to the IDL from other utilities (e.g., fuel lines) in the utilidor may also have occurred.

Response: All the bottom composite samples collected at the IDL were analyzed for full suites of chemicals, including VOCs, SVOCs, PAHs, PCBs, and metals. The chemicals listed as COPCs were the only chemicals detected at concentrations that exceeded cleanup goals for soil.

D2. Comment: The logic of COPC selection for the IDL is flawed. Obvious COPCs were not identified. For example, COPCs identified at the IDL discharge point in 7-3 and 7-4 should obviously have been identified as COPCs for the entire IDL investigation and excavation, including multiple PAHs, PCBs, DEHP, TPH and various metals. Also, given the site history (i.e., industrial drain line) and the variety of COPCs identified at various sites along the IDL, sampling for a full suite of analytes along the entire IDL was clearly indicated. However, a limited set of COPCs was selected (see column 1 below [in Attachment A table]). That is, COPCs from the HHRA were selected, and other data collected since the HHRA were not used for COPC identification.

COPCs at sites along the IDL included: 7-3 (Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, d(ah)a, i(cd)p, Pb, Zn); 7-4 (Sb, Aroclor-1254, Aroclor-1260, As, b(a)a, b(a)p, b(b)f, b(k)f, DEHP, Cd, Cu, i(cd)p, Pb, Mn, Hg, TPH, Zn); 10-4 (Ni); 10-5: As, Pb, Mn, Ni); B2127 (b(a)a, b(a)p, b(b)f, b(k)f); B2727 (Mn); B2926 (benzene, 1,1-DCE, b(a)p, b(b)f, DEHP,

chrysene, TPH-g). Radiological contamination should also be evaluated.

Response: All the bottom composite samples collected at the IDL were analyzed for full suites of chemicals, including VOCs, SVOCs, PAHs, PCBs, and metals. The chemicals listed as COPCs were the only chemicals detected at concentrations that exceeded cleanup goals for soil. Remedial alternatives to address risks from radionuclides were evaluated in the radiological addendum to the TMSRA (Tetra Tech EC Inc. 2007).

D3. Comment: **Results from current and historic investigations should be displayed on figures. Locations used in the RI for the HHRA are not even displayed. Without such data, it is not possible to determine whether the extent of contamination has been determined or whether excavation is sufficient.**

Response: The volume of existing data available along the IDL prevented it from being presented on the figures. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy presented alternative remedial strategies (such as covers) to address these risks.

D4. Comment: **Cu and Pb increase at the western terminus near 7-1 and near the former sandblasting operations and sand blast grit (SBG) disposal pits. Results (Pb at 1400: BC12) indicate that the IDL extends into SBG areas: the extent of SBG contaminants in western IDL has not been determined.**

Response: The depth of the IDL excavation was 10 feet bgs where it entered the area of Excavation 7-4, and the depth increased to 12 feet bgs at the end of the IDL excavation. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.

D5. Comment: **Sidewall samples were not collected along the entire IDL for most COPCs. Without sufficient sidewall samples, it is not possible to determine whether the horizontal extent of contamination has been determined or whether excavation is sufficient. For example, with respect to b(a)p, discrete pre-excavation sidewall samples were collected only at the shallow eastern terminus of the IDL—despite the fact that b(a)p is a likely contaminant elsewhere along the line as indicated in CSR and CSRA comments on adjoining sites. Also the depth of PAHs at the eastern terminus has not been determined, as shown by exceedences: b(a)p at .53 at 4' (BC13). Similar comments apply to other PAHs for which sidewall samples were only collected at the eastern terminus—e.g., b(b)f at .45 and .54 (BC13) and b(k)f at .43 and 2.1 DL (BC13). Similar**

comments also apply to Cd, Cu, and Pb (column 2 below [in Attachment A table]).

Response: The sampling plan for the IDL did not include sidewall sampling along the entire length of the excavation, but only along 100-foot sections where chemicals were found to exceed cleanup goals in a bottom composite sample. All samples were collected post-excavation; no pre-excavation samples were collected at the IDL. Remaining concentrations of PAHs, cadmium, copper, and lead were addressed by the HHRA in the TMSRA.

D6. Comment: **Stepouts and stepdowns were not completed as required by the RD (column 2 below [in Attachment A table]): so the extent of contamination has not been determined and excavation has not been completed according to 2000-01 rules.**

Response: Remaining concentrations of COPCs were addressed by the HHRA in the TMSRA.

D7. Comment: **Sidewall samples, when they were collected, were collected at the depth of the excavation: so information about other depths is not provided. In the RD, sampling at a random depth on sidewall is required. Two sidewall samples are required for excavations greater than 7' deep: but no samples were collected at shallow depths for excavations deeper than 6'.**

Response: Sidewall samples at the IDL excavation were collected at a random depth between the center of the pipe and 6 inches above the bottom of the trench. Contamination from the IDL would not be expected to exist at depths above the pipe.

D8. Comment: **At the IDL discharge point in sites 7-3 and 7-4, many COPCs were identified during review of waste analyses results. At IDL and at other sites, because the RI was incomplete, it was acknowledged that all COPCs for each site were not identified during the RI. Consequently, identification of additional COPCs by review of the waste results (Ws) was a critical component of the CSR and CSRA: this point was discussed at length in site meetings and the RD was revised accordingly. However, for the IDL, no waste samples (Ws) or screening samples (Ss) were provided: hence, no supplemental information on COPCs for the IDL is available.**

The lack of results for waste disposal purposes for the IDL excavation is noteworthy. How was waste disposed without waste disposal analyses? Was the soil excavated along the IDL separated from soil from other

excavations as required? If waste was analyzed at a later date, waste results should be included in the revised CSRA. Similar concerns apply to other sites with no waste (or soil screening) results in the CSR and CSRA.

Response: Waste profile samples were not collected for the IDL. Results for characterization samples (bottom composite and sidewall samples) were used for waste profiling and disposal. All the bottom composite samples collected at the IDL were analyzed for full suites of chemicals, including VOCs, SVOCs, PAHs, PCBs, and metals; these samples provided adequate data for waste disposal. Soil excavated from the IDL was maintained in stockpiles separate from other excavations.

D9. Comment: **Adjacent and nearby excavations (7-3, 7-4, 10-4, 10-5, B2127, B2727, B2926) should be shown on figures. Deficiencies identified at these sites also apply to the IDL site (e.g., COPCs not identified and high DLs for SVOCs): please review CSR and CSRA comments accordingly.**

Response: The volume of existing data available along the IDL prevented it from being presented on the figures. Risks from chemicals at Parcel B were evaluated in the TMSRA, and the Navy proposed alternative remedial strategies (such as covers) to address these risks.

D10. Comment: **Sumps and connections from the IDL to various building areas should be shown on the figures.**

Response: Detailed presentation of all connections and sumps was beyond the scope of work at the IDL.

D11. Comment: **The full length of the IDL in Parcel B should be shown on figures (extending into 7-3 and 7-4).**

Response: The full length of the IDL in Parcel B is indicated on the figures.

D12. Comment: **Please explain why duplicates (or quadruplicates) for PAHs were collected in 5-point bottom samples at IDL (and elsewhere). Were two different field sampling methods or two different laboratories or two different methods of analysis (or preparation) being compared? If so, please summarize and evaluate the results. Especially, please identify whether a particular approach was able to achieve lower DLs. For example, at the IDL, when two results at the same location are presented as non-detect, one sample is generally significantly lower (e.g., .39 DL**

and .017 DL at BC15). And, in many locations, one DL is above the ESD goal and the other DL is below the ESD goal

Response: No bottom composite samples collected during 2000 to 2001 were collected as quadruplicates. Two (or four for duplicates) results were posted for PAHs when two separate analyses (PAH and SVOC) were conducted for a sample. The PAH analysis using the silica gel sample preparation step routinely achieved lower detection limits than the SVOC analysis.

RESPONSES TO COMMENTS FROM THE WATER BOARD RECEIVED ON DECEMBER 16, 2004

General Comment

W1. Comment: **Although the focus of the subject soil remedial actions is primarily human health risk-based, Water Board staff believes that the Summary Report can be improved and benefit from providing information on:**

- a) Relation (i.e., depth, etc.) of groundwater to final excavation depths;**
- b) The effects (benefits gained) of the soil removal actions on the groundwater conditions/quality within the Parcel B site;**
- c) The effects of soil leaching (of the residual concentrations of the constituents of concern (COCs)) within the vadose zone/capillary fringe on groundwater quality at Parcel B; and,**
- d) The effects of the reported removal actions on surface water/storm water runoff from the Parcel B site to San Francisco Bay.**

Response: Groundwater was not encountered during excavation except in a few excavations located near San Francisco Bay (including 7-1 and 7-5), where groundwater was observed ranging from about 7 to 10 feet bgs. The Navy expects there to be a general, long-term benefit to the groundwater by removing potential sources that overlie groundwater. Modeling of leaching from soil to groundwater is beyond the scope of the CSR and CSR addendum. Risk posed by exposure to groundwater was evaluated in the TMSRA. The Navy expects there to be a general, long-term benefit to surface and storm water by removing potential sources in surface soils.

REFERENCES

- Barajas and Associates, Inc. 2007. "Draft Final Feasibility Study Report for Parcel F, Hunters Point Shipyard, San Francisco, California." November 15.
- ChaduxTt. 2007. "Final Parcel B Technical Memorandum in Support of a Record of Decision Amendment, Hunters Point Shipyard, San Francisco, California." December 12.
- Innovative Technical Solutions, Inc. 2006. "Final Phase III Soil Vapor Extraction Treatability Study Report, Building 123, IR-10, Parcel B, Hunters Point Shipyard, San Francisco, California." November 10.
- International Technology Corporation. 2002. "Draft Phase II Soil Vapor Extraction Treatability Study Report, Building 123, IR-10, Parcel B, Hunters Point Shipyard, San Francisco, California." February 14.
- PRC Environmental Management, Inc. 1996. "Draft Final Parcel B Remedial Investigation Report, Hunters Point Shipyard, San Francisco, California." June 3.
- SES-TECH. 2005. "Final Soil Gas Survey Technical Memorandum, Installation Restoration Sites 07/18, Parcel B, Hunters Point Shipyard, San Francisco, California." Revision 0. September 23.
- Tetra Tech EC Inc. 2007. "Draft Final Parcel B Technical Memorandum in Support of a Record of Decision Amendment Radiological Addendum, Hunters Point Shipyard, San Francisco, California." September 25.
- Tetra Tech EM Inc. (Tetra Tech). 2001. "Final Remedial Design Documents Amendment, Parcel B, Hunters Point Shipyard, San Francisco, California." February 20.
- Tetra Tech. 2003. "Final Soil Vapor Extraction Confirmation Study Summary, Building 123, Installation Restoration Site 10, Parcel B, Hunters Point Shipyard, San Francisco, California." August 19.
- Tetra Tech and Morrison Knudsen Corporation. 1999. "Final Remedial Design Documents, Parcel B, Hunters Point Shipyard, San Francisco, California." August 19.

ATTACHMENT A: RESPONSES TO DTSC COMMENTS ON DRAFT CONSTRUCTION SUMMARY REPORT ADDENDUM

Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
General notes about this table: The California Department of Toxic Substances Control (DTSC) provided the comments listed below as a table attached to other comments submitted on November 24, 2004. Bold text provided in DTSC comments was maintained. Navy responses are provided in bold text in the row following each comment.			
General Responses to DTSC Comments:	Comparison to cleanup goals other than those that were presented in the May 2000 explanation of significant differences (ESD) was not addressed in the construction summary report (CSR) addendum. Evaluation of potential risk was included in the Technical Memorandum in Support of a Record of Decision (ROD) Amendment (TMSRA)(ChaduxTt 2007). Consequently, no responses are provided for comments listed in this column.		Risk assessment comments are beyond the scope of the CSR. The chemicals of potential concern (COPC) noted in these comments were addressed as part of the risk evaluations presented in the TMSRA for Parcel B. Therefore, no responses are provided for comments related to risk assessment.
IR-06			Confirm that IR06 sites have been moved/will be moved to Parcel C.
Response: IR-06 is part of Parcel C.			
IR07			
History. Sub-base Area: sandblasting and painting of submarine superstructures, sandblast grit and waste oil disposal, spills onto ground from underground pipes associated with USTs and ASTs, Triple A activities on IR18 may have impacted IR07. There are no unique site histories for the multiple sites in IR07: sites were identified based on exceedences of ROD goals at RI locations.			
7-1 As, b(a)a, b(a)p Be, b(b)f, b(k)f Cu, DDE, DDT TPH, Pb, Zn	Extent and excavation sufficient for As, Be, DDE, DDT. Extent not determined for Aroclor-1260, chrysene, Cu, i(c,d)p, Mn, PAHs, Pb, TPH, Zn. Aroclor-1260 (3.1 at T004, 1.6 at T011) should have been identified as a COPC > ESD (.21). Mn (1770: B005 > ESD 1400) and Ni (2340: B025 > HPAL) should have been identified as COPCs. Chrysene (6.1 at N1J2), Indeno(1,2,3-cd) pyrene (.72 at BC22) should have been identified as COPCs. Stepouts insufficient along northwest boundary with occupied private property and in the direction of the shoreline for Cu, Pb (6160 at 9': NJ3), Zn, TPH, PAHs. Deeper samples not collected at western boundary for metals, PAHs, TPH (e.g., N2J, N4J, N6J). Stepouts insufficient at the shoreline for Cu (570 at 4': T004), Pb, Zn, TPH, PAHs (b(a)p: 2.8 at 4': T004, 1at 4': T009). No sidewalls for PAHs, Pb, Zn at north edge of excavation (b(a)p 1.4: BC22). No deeper sidewalls at SSB, SSD, SEL, SWC, SWK. No stepouts at SWK for PAHs. No deeper sample for Pb at B12 (8380 at 7'). DLs for PAHs >> ESD along western property boundary: b(a)a (35: N4J): other PAHs have similarly high DLs in northwest. Elsewhere DLs around .56 (SWK). DLs for other SVOCs: N-nitroso-di-n-propylamine (23: N4J); N-	Extent not determined to PRGs or PRGs adj for compounds below. Aroclor-1260 (3.1 at T004), As (9.3: SWC), Fe (53,800: B025, 64,000 on shoreline), naphthalene (4.4: BC12, 3: N4J, 2.7: N1J, 2.3: BC14), Ni (2340: B025, PAHs (DLs up to 44) > PRGs (.062; 23,000; 1.7; 1600; .062 for b(a)p). Mn (1770: B005), Ni (2340: B025) > PRGs adj (420, 320). Cd (3.4 at T011) is very close to the ESD (3.5) and the PRG (3.7) and appears widespread (T009, T010, T011). Dieldrin (.028 at T004) is very close to the PRG (.030): more investigation is indicated. Naphthalene was used as a surrogate for 2-methylnaphthalene in the ESD. If the new CAMod PRG for naphthalene (1.7) also applies to 2-methylnaphthalene, then 2-methylnaphthalene (10:N4J, 7.5: BC12, 4.9: BC14) > PRG. Also high DLs (21 DL: N2J) for naphthalene and 2-methylnaphthalene and other SVOCs. This comment applies for other sites but is not repeated for other sites.	RA concerns. All COPCs not identified (RI and CSRA and shoreline): especially, shoreline data were not screened against all ESD criteria. Vapor pathway may be important for current and future uses at IR18 and adjoining areas. Surface contamination may exist. No chemical analytical data for backfill. High DLs. RI and CSRA confirmation samples removed. Ws and SSs were not all that useful for identifying COPCs because DLs and positive results are not distinguishable—and, in some cases, values for DLs are not provided. TPH not compared to HHRA criteria. Elevated PAH DLs (up to 44) and other SVOC DLs (up to 120) are not shown as exceedences on figures and tables. This comment applies to all sites but is not repeated for each site. No data on asbestos and cyanide. Contamination above goals at 10' (especially in northwest): PAHs (b(a)a, b(a)p, b(b)f, Cu, Mn, Ni, Pb, TPH, Zn (1560: BC14). Pb (8380 at 7' at B12), Zn (1680 at 4': N4J)> EPSCs (440, 713). Organotin should be identified as a COPC for ecological risk assessment: data should be presented in the CSRA (dibutyltin at .28, tributyltin at .48 at T010). TPH: Extent of TPH not determined. A few samples were collected at the western site boundary. High concentrations

ATTACHMENT A: RESPONSES TO DTSC COMMENTS ON DRAFT CONSTRUCTION SUMMARY REPORT ADDENDUM

Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	<p>nitrosodiphenylamine (29: N4J); Pentachlorophenol (120: N4J) > ESD goals (.33, 1.1, 2.6).</p> <p>TPH: very few samples were collected: extent not determined (66,000 max at 8' at N1J).</p>		<p>(66,000) with no stepouts. No bottom samples. No TPH-g samples. At shoreline, deeper samples were not collected and sampling density was low.</p> <p>Error. 1,2,4,5-trichlorobenzene is often erroneously repeated as the first entry on SSs in CSRA Appendix A. Other first line entries also repeat (e.g., Aroclor-1260 in EE02, TCE in B2725). Please revise Appendix A. This comment applies to other sites but is not repeated for other sites.</p>
<p>Response:</p>	<p>Consideration of additional chemicals of potential concern (COPC) based on data from the remedial investigation (RI) was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA. The cited manganese concentration was collected at 11.25 feet below ground surface (bgs) (at boring IR07B004) and was not considered because its depth exceeds 10 feet. The cited nickel concentration does not exceed the Hunters Point ambient level (HPAL); furthermore, it was collected at 11.25 feet bgs. The Navy has no plans to characterize chemical concentrations that may exist on off-site properties. Deep biased samples were collected in accordance with the remedial design (RD) amendment along the western boundary. Deep samples were not intended to be collected at every location. The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. The samples on the northern sidewall of the excavation did not exceed the cleanup goals for polynuclear aromatic hydrocarbons (PAH), so no additional sidewall samples were required. The RD amendment does not require COPCs to be added to previously clean sidewalls based on concentrations detected in bottom composite samples. The Navy has no plans to characterize chemical concentrations that may exist on off-site properties, so no additional samples were collected for analysis of PAHs or total petroleum hydrocarbons (TPH).</p>		<p>Chemical analytical results for backfill material were added to Appendix C of the CSR when available. However, backfill materials were not incorporated into the risk assessment in the TMSRA. Screening soil and waste profile soil samples were collected to provide rough initial information and to guide waste disposal, and not to provide any site delineation information. Asbestos was not identified in the ROD as a substance that required cleanup, and the remedial action did not address asbestos. Remediation alternatives proposed in the TMSRA addressed the potential for asbestos in surface soil. Cyanide was not a COPC for this excavation. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action. The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. The Navy has no plans to characterize chemical concentrations that may exist on off-site properties, so no additional samples were collected for PAHs or TPH. Appendix A of the CSR was corrected as necessary.</p>
<p>7-2 DDD, DDE, DDT, Aldrin, Sb, b(a)a, Be, chrysene</p>	<p>Extent and excavation sufficient for DDD, DDE, DDT, aldrin, b(a)p, and chrysene by 1998-99 rules.</p> <p>Extent not determined for antimony (Sb) on three sides of the excavation, since Sb data was rejected and not resampled.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (7.3: B032), Fe (40,500: B032), PAHs (DLs to 1.3) > PRGs (.062; 23,000; .062 for b(a)p).</p> <p>Mn (590: B032), Ni (446: B032) > PRGs adj (420, 320).</p>	<p>RA concerns: no chemical analytical data for backfill, high DLs. Mn and Ni not investigated so produce uptake may be underestimated.</p> <p>Ws and SSs were not useful for identifying additional COPCs because only COPCs in column 1 were analyzed for—and, values for DLs are not provided. TPH not compared to HHRA criteria.</p> <p>No data on asbestos and cyanide.</p>
<p>Response:</p>	<p>The three results cited were non-detections and were rejected based on low matrix recoveries. Because matrix interference was the cause, resampling would not be expected to improve the results and, consequently, no additional replacement samples were collected. Concentrations of antimony in the remaining samples (0072SSA, 0072B0B, and IR07B032 below 6 feet) were evaluated in the TMSRA.</p>		<p>See above for responses on backfill, waste profile and screening soil samples, asbestos, and cyanide. Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA.</p>

ATTACHMENT A: RESPONSES TO DTSC COMMENTS ON DRAFT CONSTRUCTION SUMMARY REPORT ADDENDUM

Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>7-3 Aroclor-1260, b(a)a, b(a)p, b(b)f, Be, b(k)f, chrysene, Cu, d(a,h)a, i(c,d)p, Pb, Zn</p>	<p>Extent and excavation sufficient for Be, chrysene.</p> <p>Extent not determined for Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, Be, b(k)f, Cd, CrVI, Cu, d(a,h)a, i(c,d)p, Mn, Pb, Sb, Zn.</p> <p>Aroclor-1254 (.29 at BC28, .45 in shoreline sample) have been identified as a COPC > ESD goal (.21).</p> <p>Cadmium (Cd) (5.9 at T013) should have been identified as a COPC > ESD (3.5).</p> <p>CrVI (1.4 at T006, 1.0 at T020, .41 at B006) should have been identified as a COPC > ESD (.96).</p> <p>Gamma-chlordane (.0021 in shoreline sample) should have been identified as a COPC > ESD (.0017 DL).</p> <p>Heptachlor epoxide (.0053 in shoreline sample) should have been identified as a COPC > ESD (.0017 DL).</p> <p>Mn (1910: B036, 1700: T006, 1510: B037) should have been identified as a COPC > ESD (1400).</p> <p>Antimony (Sb) (12 at T017) should have been identified as a COPC > ESD (10.2).</p> <p>Stepouts not completed for Aroclor-1260 (T012, T014, T020 (5.9), N2E, N2F, W1J, W1V, W5V).</p> <p>No sidewall samples for PAHs on eastern edge of excavation: all adjacent bottom samples meet goals. No stepouts for b(a)a (.68 at T020). No stepouts for b(b)f (1.0 at T020; .48 at N2F). No stepouts for b(k)f (.75 at T020; .39 at N2F). PAH DLs are slightly elevated along shoreline (b(k)f at .44) (b(a)a at .45 at T012). Similar DLs for d(a,h)a and i(c,d) p.</p> <p>No stepouts for Cu along the shoreline (5400 at T020, 4000 at T014; also T012, T013, T019) and along the break in slope (W1V, W2V, W3V, W5V, W1J). No stepouts to the south for Cu at E1E, E2E, E3E. Similarly, E2C, E3C, and N2F are not bounded to the north. No stepouts to southwest boundary with 7-4. Also, along the southwest boundary, there should be two depths of sidewall samples for an excavation of 10': but only one depth (5') is noted. This same is true on the northern edge of excavation (W1E, W1V,</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (6.2: B037), Aroclor 1254 (.45 shoreline), Aroclor-1260 (5.9: T009), Cd (5.9 at T013), Cu (5400), dieldrin (.045 in shoreline sample), Fe (45,700: B011), Mn (1910: B036), Ni (1850: B037), PAHs (b(a)p .68), Pb (1200) > PRGs (.062; .22; .22; 3.7; 3100; .030; 23,000; 1800; 1600; .062 for b(a)p; 150).</p> <p>CrVI (1.4 at T006, 1.0 at T020), Hg (1.9 at BC12), Mn (1910: B036), Ni (1850: B037) > PRGs adj (.96, 1.6, 420, 320).</p>	<p>Figure 7-2 was revised to correct the ESD 2000 goal for beryllium.</p> <p>7-3 merges with 7-4 and 7-5.</p> <p>RA concerns: All COPCs not identified (RI and CSRA and shoreline) criteria. No chemical analytical data for backfill. High DLs. RI and CSRA confirmation samples removed.</p> <p>Mn and Ni etc. not investigated so produce uptake may be underestimated. Ws and SSs were not that useful for identifying additional COPCs because only COPCs in column 1 were analyzed for (and other SVOCs). Also, values for DLs are not provided—and, in some tables, DLs and positive results are not distinguishable. TPH not compared to HHRA criteria.</p> <p>Elevated PAH DLs are not shown as exceedences on figures and tables.</p> <p>DEHP may continue from 7-4 to 7-3. See 7-4 comments.</p> <p>Contaminants at 10': Aroclor-1260 (.75 at BC15), Cu is widespread (1730 at BC12), Pb (367 at BC5), Zn (934 at BC12)</p> <p>Cd (5.9 at T013), Cu (5400), Pb (1200), Se (DL 4.1), Zn (1300) > EPSCs (4.19, 1084, 440, 1.95, 713).</p> <p>Organotin should be identified as a COPC for ecological risk assessment: data should be presented in the CSRA (dibutyltin at .37, tributyltin at .99 at T008).</p> <p>Radiological meter reading of 1.53 at T021 indicates additional work might be required.</p> <p>No data on asbestos and cyanide.</p> <p>TPH was not analyzed for except in (shallow) shoreline samples. Extent of TPH has not been determined.</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
W3V).	<p>Comments for Pb parallel those for Cu. No stepouts for Pb along the shoreline (1200 at T020, 800 at T014, 360 at T013) and along the break in slope (W1E, W1V, W3V, W4V, W5V). No stepouts to southwest boundary with 7-4 (W3A, W4A, W5A). Also, along the southwest boundary, there should be two depths of sidewall samples for an excavation of 10': but only one depth (5') is noted. This same is true elsewhere on the edge of excavation (N2C, W1E, W1V, W3V, W12B, W1U, W3M).</p>		
	<p>Comments for Zn parallel those for Cu and Pb. No stepouts for Zn along the shoreline (1300 at T020, 570 at T014, 520 at T013) and along the break in slope (W1E, W1V, W4V). No stepouts to southwest boundary with 7-4 (W3A, W4A, W5A, W7A, W8A, W9A). Also, along the southwest boundary, there should be two depths of sidewall samples for an excavation of 10': but only one depth (5') is noted. This same is true elsewhere on the edge of excavation (W1E, W1V, W3V, W12B, W1U, W3M.)</p>		
	<p>DLs for other SVOCs: n-nitroso-di-n-propylamine (2.0: B036, generally about .43 in bottom samples); pentachlorophenol (9.8: B036 > ESD goals (.33, 2.6). Bottom samples were < ESD goal.</p>		
	<p>TPH-g, TPH-d, and TPH-mo were measured at 450, 1400, and 1850 in shoreline samples: extent of TPH was not determined.</p>		
Response:	<p>Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA. The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. Riprap prevented further sampling toward the shoreline. The text that describes this excavation was expanded to note that riprap prevented further sampling. No soil above 10 feet bgs remains south of E1E, E2E, E3E, E2C, or E3C. Riprap prevented sampling north of N2F. Shoreline samples provide further characterization. No soil above 10 feet bgs remains southwest toward 7-4. Riprap prevented sampling north of W1E, W1V, and W3V. Semivolatile organic compounds (SVOC) were not COPCs at this excavation.</p>		<p>See above for responses on additional COPCs, backfill, waste profile and screening soil samples, asbestos and cyanide, and shoreline sampling results. Non-detections are not considered to exceed cleanup goals unless the detection limit exceeded 3 milligrams per kilogram (mg/kg). This practice was in accordance with Appendix 6 of the RD amendment and was adopted because the gas chromatography/mass spectrometry method used in the Contract Laboratory Program (CLP) semivolatile organic analysis can typically report qualitatively reliable (although quantitatively estimated) results about 10 times lower than the contract-required quantitation limit (about 0.33 mg/kg). Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action. Organotin compounds were addressed in the screening-level ecological risk assessment (SLERA) in the TMSRA. Radiation readings were recorded only for health and safety purposes and not for characterization. Remedial alternatives to address risks from radionuclides were evaluated in the radiological addendum to the TMSRA.</p>

ATTACHMENT A: RESPONSES TO DTSC COMMENTS ON DRAFT CONSTRUCTION SUMMARY REPORT ADDENDUM

Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>7-4 Sb, Aroclor-1254, Aroclor-1260, As, b(a)a, b(a)p, b(b)f, b(k)f, DEHP, Cd, Cu, i(c,d)p, Pb, Mn, Hg, TPH, Zn.</p>	<p>Extent and excavation sufficient for DEHP. But the extent of DEHP in adjacent excavations was not determined.</p> <p>Extent not determined for Sb, Aroclor-1248, Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, Cd, carbazole, Cu, heptachlor epoxide, i(cd)p, Pb, Mn, Ni, Hg, TPH, Zn.</p> <p>No stepouts for Antimony (Sb) at P37 (78.1), P38, P50, BC92, BC88, BC89.</p> <p>Aroclor-1248 (.34: BS03) > ESD (.21) should have been identified as a COPC.</p> <p>No stepouts for Aroclor-1254 at BS03 (.78), 4P61 (.49).</p> <p>No stepouts for Aroclor-1260 at P41 (14), P37 (2.5), BC92 (.27), P26 (.23), BC87, BC88, BC89.</p> <p>A hotspot for As in the southern corner has not been fully investigated and excavated. No stepouts for As at BC93 (240), BC94 (50), P60 (16.5), S03 (14), P59 (14.1) P58 (15.1), BC61 (12).</p> <p>PAHs exceed goals in the southern corner and no stepouts at some locations with slightly elevated DLs.</p> <p>No stepouts for b(a)a at BC 93 (.94), P33 (.76), P32, P56, P51. No stepouts for b(a)p at P33 (.57), P32, P51, P56, and at B048 (.37 DL), E6G (.38 DL). Similarly for b(b)f: P33 (.68), P32, P51, BC93 (.36), B048 and E5F (.37 DL), For b(k)f: P33 (.52), E5F (.37 DL), E6G (.38 DL), B048 (.37DL). For i(cd)p: E5F (.37 DL), E6G (.38 DL), B048 (.37DL).</p> <p>No stepout for b(b)f at P17 (.49). P17 underlies B1128, which suggests that the B1128 excavation (to 6') wasn't deep enough.</p> <p>No stepouts for Cd at P33 (3.8), P51 (3.9), P38 (3.7).</p> <p>Carbazole (.82: D1N) should have been identified as a COPC > ESD (.64).</p> <p>Copper was widespread at high concentrations extending west into 7-3 and onto the shoreline (and north into 7-5). No stepouts at multiple locations. To the west: P32, P33 (1120), P35, P36, P51. To the south: BS03 (1100), P60, P61, BC94. To the east: P18, P19 (266), P22, P23.</p> <p>Multiple pesticides were widespread in southern 7-4. Extent and excavation not sufficient. For example: heptachlor epoxide (.015:</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>Sb (78.1: P37, 44.3: BC89), Aroclor-1248, Aroclor-1254 (.78: BS03), Aroclor 1260 (14: P41), As (240: BC93), PAHs (b(a)p at .57: P33), Cd (3.9: P51), Fe (60,300: BC50), Mn (3980), naphthalene (5.6: BC93, 4:D1H), Ni (3630:P08, 3520 PO7), Pb (707: BC76), Vanadium (122: BS7, 82.9:P19; also BS1, BS2) > PRGs (31; .21; .21; .21; .39; .062 for b(a)p; 3.7; 22,000; 1800; 1.7, 1600, 150, 78).</p> <p>Cu (826: P51), heptachlor epoxide (.015), Mn (3980), Ni (3630:P08, 3520:PO7), Zn (958) > PRGs adj (160, .00038, 420, 320, 370).</p> <p>Naphthalene was used as a surrogate for 2-methylnaphthalene in the ESD. If the new CAMod PRG for naphthalene (1.7) also applies to 2-methylnaphthalene, then 2-methylnaphthalene (21: D1H, 5.1: BC93, 3: D1G) > PRG.</p> <p>An association of elevated Ca (113,000), Fe (107,000) and V (114) exists in northeastern 7-4 (BS01, 2, 3, BS1, BS7), adjacent to F-5. No ESD criteria for these compounds.</p>	<p>TPH was not a COPC for this excavation.</p> <p>7-4 merges with 7-3 and 7-5 and engulfs B1128 and B1227.</p> <p>RA concerns. All COPCs not identified: investigation and excavation may not be complete. No chemical analytical data for backfill. High DLs. RI and CSRA confirmation samples were removed.</p> <p>For example, naphthalene (5.6 at 5': BC93, 3.5 in B033) and 2-methylnaphthalene (21: D1H) exceed new CA PRG of 1.7 (for naphthalene), (but not ESDs of 56 for both compounds). VOCs were not sampled for (except at one location): inhalation risks are unknown (also applies to naphthalene, 2-methylnaphthalene).</p> <p>Criteria for BHC (alpha, beta, delta, gamma), dieldrin (.18: P41, .051: P37, .028: BC88) and endrin (.058: P41, .014: P37, .004: BC89) should be established. Similarly, criteria for "Nutrients" (e.g., Fe at 107,000: BS01) should be established.</p> <p>A large number of COPCs were identified in screening samples (SSs) and waste samples (Ws), including Sb, Aroclor-1254, Aroclor-1260, As, b(a)a, Cd, Cu, Mn, Hg, TPH, Zn. This fact clearly indicates that the site was not fully characterized in the RI. In the RI, 7 locations were sampled in the area of 7-4. 2 were sampled for CrVI only. Only one location included the full suite (except for TPH-mo). Other locations were not sampled for VOCs, PCBs, pesticides, and metals (except for Pb).</p> <p>DEHP is often dismissed as a lab contaminant but at HP, it is a COPC. At 7-4, DEHP was measured at concentrations higher than the upwardly-revised ESD 2000 goal (27), including up to 870 in SSs and 68: in 3-point composite SE5. Concentrations above 1 were not uncommon. DEHP was measured at the boundary to 7-3 (4.4 in SN1, a 3-point composite), which suggests that DEHP might be a COPC for 7-3. Bottom samples in western 7-3 were ND for DEHP: other areas were not sampled.</p> <p>Contaminants at 10' (or bottom of excavation): Sb (44.3: BC89), Aroclor-1254, Aroclor-1260, As (240:BC93), PAHs: b(a)p (.73: BC49), Cu (1720: B05), Fe (60,300: BC50), Mn (1960), Ni (3630:P08, 3520 PO7, 2250: BC50), Pb (8540: BC1), Zn (776).</p> <p>Pb (1200: T020), Se (3.3:P07, 3-2:P08: also P10, BC50, BC51, BC52) Zn (958) > EPSCs (440, 1.95, 713).</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	<p>P35, .008: P37, .007: D1H, .005: P34, .004: BC88/P38/P61, BC89, BC92, P33, P40 et al) should have been identified as a COPC > ESD (.0017 DL). Excavation (5') in southern 7-4 should have been deeper: stepouts and deeper sidewalls are also needed. No criteria are provided for other pesticides measured: BHC, dieldrin, endrin.</p> <p>No stepouts for Mn on the eastern boundary and F-5 boundary: P21 (3980), P58, P22, P07.</p> <p>No stepouts for mercury (Hg): 2.6 (BC76). Excavation not sufficient: 2.6 at 5' (BC76), 2.6 3' (P51), and 6 at 9.75' (P20).</p> <p>Multiple exceedences of Ni point-by-point HPALs (also > ESD risk-based criteria of 320): P08 (3630), PO7 (3520), BC50 (2250), P01 (1730), et al. Ni should have been identified as a COPC.</p> <p>Pb was widespread at high concentrations (44, 200: in 3-point composite S1E) extending west into 7-3 and onto the shoreline (and north into 7-5). No stepouts at multiple locations. Pb (707: BC76) in bottom samples at 5' in southern 7-4 indicates that the excavation was not deep enough. Consequently, sidewall sampling is also not adequate over the entire southern boundary (because no deeper sidewalls were collected). No stepouts for Pb: BC76 (707), BC74, BC75, P15 (575), P16, P17, P11.</p> <p>Zn contamination probably is associated with Cu and Pb contamination (i.e., sandblast grit waste), extending through northwestern 7-4 into 7-3. But there are no samples for Zn in northwestern 7-4 (Figure 7-4Q). No stepouts for Zn: BC88 (427), P15 (378), P37 (958), P50.</p> <p>Sampling at two depths (one sample deeper than 7') and at 17' intervals are required for 10' excavations: these rules are not met on the eastern sidewall (e.g., where the industrial drain line (IDL) enters 7-4). Sampling, for example, for Cd, Mn, Pb, Zn doesn't meet these requirements (Figures 7-4J, N, M, P) at the boundaries mentioned. Also, the boundary between merging sites and between northwestern 7-4 and the rest of 7-4 should be sampled in a similar manner.</p> <p>No bottom samples (10') in the northwestern 7-4 excavation were collected for Aroclor-1254, As, Cd, Mn, Hg, TPH, and Zn.</p> <p>DL for n-nitroso-di-n-propylamine (.48) > ESD (.33 DL). Other DLs for PAHs to 2 (S1G) but none in critical locations.</p> <p>TPH: extent not determined at (4600: D1B). No stepouts to the south and at depth at P21 (8300). TPH-g not analyzed for.</p>		<p>TPH: areas where total TPH is elevated in 5-point composite samples are suspect (even though less than the ESD goal of 3500), especially since TPH-g not analyzed for.</p> <p>No data on cyanide and asbestos.</p> <p>Error: Figure 7-4M Lead. Pb at 346 at SS3 should be shown as an exceedence (in red).</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
All values: (mg/kg)			
Response:	<p>Step-outs from the perimeter samples (P-series) were not conducted because excavation was halted for re-evaluation of the conceptual model for contamination in this area. Extension of the southern portion of the excavation downward from 5 feet was not conducted for the same reason.</p> <p>Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA.</p> <p>Benzene hexachloride (BHC), dieldrin, and endrin were not identified as compounds requiring cleanup in the 1997 ROD, and no cleanup goals for soil are available.</p> <p>None of the cited concentrations of nickel exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression.</p> <p>Sufficient sidewall perimeter samples were collected to characterize the edge of the excavation; detailed additional sampling was not conducted because the excavation was halted for re-evaluation of the conceptual model for contamination in this area. No soil exists above 10 feet bgs at the boundary with other excavations.</p>		<p>See above for responses on additional COPCs, backfill, waste profile and screening soil samples, asbestos and cyanide.</p> <p>Establishing new cleanup goals is beyond the scope of the CSR addendum.</p> <p>Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.</p> <p>Figure 7-4M was corrected as necessary.</p>
7-5 Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, Be, chrysene, Cu, i(cd)p, Hg, Pb, TPH, Zn	<p>Extent and excavation sufficient for sufficient for Be.</p> <p>Extent not determined for Sb, Cd, DDT, Mn, Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, i(cd)p, Hg, Pb, TPH, Zn.</p> <p>Sb (12: T017) should have been identified as a COPC > ESD (10).</p> <p>No stepouts for Aroclor-1254 (6.5: N2C, .37: T017, .45: T016, .27: N2D0) and depth not determined.</p> <p>The extent of Aroclor-1260 has not been determined to the north along the shoreline and at depth (3: N2H, 1.5: N2C and N2F, 1: N2E, N2D, N1I, N1M, T017, T021).</p> <p>No stepouts for b(b)f along the shoreline (.44: T017, .36: T016) > ESD (.34).</p> <p>No stepouts for b(k)f along the shoreline (.38: T017, T016) > ESD (.34).</p> <p>Cd (3.7: T018, T019) should have been identified as a COPC > ESD (3.5).</p> <p>Cu was widespread over a large area, extending west into 7-3, south into 7-4 and north to the shoreline at high concentrations (22,000 in Ws at 7-5). No stepouts for Cu to the north and along the shoreline (2520: N2G, 1180: N2H, 780: N2C, 560: T021, 337: N2E, 300: T017, 299: N2F, 255: N1I, 250: T016) > ESD (160).</p> <p>DDT (1.3 in Ws) should have been identified as a COPC > ESD (1.2).</p> <p>Mn (8490: B014) should have been identified as a COPC > ESD (1400).</p> <p>No stepouts for Pb to the north and along the shoreline (710:</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (9.2: B014, 4.9 in Ws), Fe (55,300: B014), Mn (8490: B014), Ni (1600: T019), Pb (710: N2G, 367: N1H, 280: T017, 269: N2H, 200: T021, 186: N2D, 159: N1M, 155: B13), V (113: B014) > PRGs (.062; 22,000; 1800; 1600; 150; 78).</p> <p>Cd (3.7: T018, T019) equal to PRG (3.7).</p> <p>b(a)p, Cu (2520: N2G, 1180: N2H, 780: N2C, etc.), Ni (1450: B014, 497 in W), Zn (931: N2G) > PRGs adj (.037; 160; 320; 370).</p>	<p>Multiple COPCs were identified in screening samples (SSs) and waste samples (Ws), including: Aroclor-1254, Aroclor-1260 (71), Hg (9.2), TPH (1100), Zn (1600). Also, concentrations of Cu and Hg in SSs (22,000 and 9.2) were much higher than RI (209 and .39: B014) and CSRA concentrations. Additional COPCs in shoreline samples were not identified (Sb, Cd, organotins). Other COPCs that exceeded ESD goals were not identified (DDT, Mn). In the RI, only 1 location (B014) in the far eastern portion of 7-5 was sampled for the full suite of analytes (metals, VOCs, SVOCs, PCBs, and pesticides).</p> <p>The maximum depth of excavation in 1998-99 was 19', which is greater than the required excavation depth of 10'. Apparently, the excavation was chasing Aroclor-1260 (1.4: B15 at 16'). However, confirmation samples for other COPCs were not collected on sidewalls and bottom of the 19' excavation—or on the northern sidewalls of the 10' excavation.</p> <p>Contaminants at 10' or bottom of excavation: Aroclor 1260 (1.4: B015 at 16'), Cu (449: B05, 174: B04), Pb (155: B13).</p> <p>Only one shoreline sample (T019) and the RI location (B014) were analyzed for CrVI. CrVI is a concern because other shoreline samples (outside 7-5 area) were equal to or exceeded ESD (1.4: T006, 1: T020). The extent of CrVI has not been determined.</p> <p>RA concerns. COPCs not all identified. No chemical analytical data for backfill. Insufficient confirmation samples collected. RI and CSRA confirmation samples were removed.</p> <p>Organotin should be identified as a COPC for ecological risk assessment: data should be presented in the CSRA (dibutyltin at .32, tributyltin at .62 at T021).</p> <p>Cu (2520: N2G), Zn (931: N2G) > EPSCs (1084; 713).</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	<p>N2G, 367: N1H, 280: T017, 269: N2H).</p> <p>No stepouts for Zn to the north and along the shoreline (931: N2G, 452: N2H).</p> <p>No samples or insufficient shallow and deep samples on northern sidewall for multiple COPCs (Aroclor-1254, Aroclor 1260, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, Hg, Pb, TPH, Zn) at multiple locations.</p> <p>No samples or insufficient samples collected at bottom of excavation for multiple COPCs (Aroclor-1254, Aroclor 1260, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, Hg, Pb, TPH, Zn) at multiple locations.</p> <p>DLs: b(a)p (.42 DL: T015), i(cd)p (.41: T015) > ESD (.33, .35).</p> <p>TPH: no sidewall or bottom samples in western half of 7-5. High concentrations of PCBs (to 71 in SSs) and TPH on the western shoreline (1850: T015 at 2') suggests that the extent of TPH has not been determined.</p>		<p>Cd (3.7: T018, T019), Ni (1600: T019), Zn (680: T019) close to EPSCs (4.19; 1941; 713).</p> <p>No data on asbestos and cyanide.</p>
Response:	<p>The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. Riprap prevented further sampling toward the shoreline. The text that describes this excavation was expanded to note that riprap prevented further sampling. Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA.</p>		<p>See above for responses on additional COPCs, backfill, waste profile and screening soil samples, asbestos and cyanide. Sidewall and bottom composite confirmation samples were collected in the deep portion of this excavation. Data from samples collected deeper than 10 feet bgs are not shown on the excavation figures; however, these data are contained in the data tables. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action. The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. Organotin compounds were addressed in the SLERA.</p>
B0536 Aroclor-1260, Be, TPH	<p>Extent and excavation sufficient for Aroclor-1260, Be, TPH by 1998-99 rules.</p> <p>Extent and excavation not sufficient for Ni by 2000-01 rules.</p> <p>Ni (2630: B030) > point by point HPAL and ESD risk-based criteria (320) should have been identified as a COPC.</p> <p>DLs: PAHs (.4 for b(a)p, etc., 2.0 for PCP: B030) > ESD goals.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (5.7: B030), Fe (60,300: B030), Ni (2630: B030) > PRGs (.062; 22,000; 1600).</p> <p>Mn (1140: B030) > PRGs adj (420).</p>	<p>B0536 is located about 100' south of the southern corner of 7-1. Excavated to 7'.</p> <p>A single RI location (B030) was analyzed for a full suite of analytes. SSs analyzed for SVOCs (DLs not provided), Be and Aroclor-1260 (not TPH) only.</p> <p>RA concerns. COPCs not all identified.</p> <p>Ni (2630: B030) > EPSC (1941).</p>
Response:	<p>The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression. Furthermore, this sample was collected at 11.25 feet bgs. SVOCs were not COPCs at this excavation.</p>		<p>See above for responses on additional COPCs and waste profile and screening soil samples.</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
B0628 Aroclor-1260, Be	<p>Extent and excavation sufficient for Be by 1998-99 rules.</p> <p>Extent and excavation not sufficient for Aroclor-1260 by 2000-01 rules.</p> <p>COPCs may not all have been identified (see last column).</p> <p>A 3-point composite sidewall sample (SSA) had Aroclor 1260 at .22 > ESD of .21.</p> <p>In 200-01, discrete pre-excavation confirmation samples were collected as stepouts from SSA. All confirmation samples were < ESD. But four deep sidewall samples (> 7') should have been collected on the southern sidewall for the 10' excavation: only 2 deep samples were collected (B1 and S1B0).</p> <p>Heptachlor epoxide (.0015: T010) is close to ESD (.0017 DL).</p> <p>DLs: PAHs were > ESD at RI location (B025). and in shoreline samples</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (6.7: B025), Fe (53, 800: B025), Pb (210: T012, 199: B025), Ni (2300: B025, 1700: T012) > PRGs (.062; 22,000; 150; 1600).</p> <p>Cu (400: T019), Mn (1010: B025, 650: T010), Zn (680: T019) > PRGs adj (160, 420, 370).</p> <p>b(a)p (.72 DL: B025) > PRG adj (.037).</p>	<p>B0628 is directly east of northern 7-1, adjacent to the shoreline.</p> <p>A unique site history was not presented for B0628 so it is not clear whether B0628 is a different site from adjacent 7-1 or from the shoreline.</p> <p>B0628 was not adequately characterized. A single RI location (B025) was analyzed for a full suite of analytes. Ss were analyzed for SVOCs (DLs not provided), Be and Aroclor 1260 only. CSRA samples were analyzed for Aroclor-1260 and Be only.</p> <p>COPCs from 7-1 likely extend into B0628. For example, Pb was a COPC for 7-1. In B068, Pb (199: B025) was slightly < ESD (220) in single RI location and so was not identified as a COPC for B0628.</p> <p>Also, shoreline samples closest to B028 are T010, T011, T012, and T019. COPCs at these shoreline locations likely extend into B0628, including Aroclor 1260 (1.6: T011, .61: T012), Cd (5.0: T012, 3.7: T019), Cu (400: T019), Pb (210: T012), Ni (1700: T012, 1600: T019), Zn (680: T019).</p> <p>RA concerns. COPCs not all identified. DLs elevated.</p> <p>Organotins (dibutyltin at .28: T010 and tributyltin at .48: T010) should be identified as COPCs for ecological risk assessment.</p> <p>Cd (5.0: T012), Ni (1700: T012, 1600: T019) > EPSCs (4.19; 1491).</p> <p>Zn (680: T019) close to EPSC (713).</p> <p>Shoreline results should have been included on Figure B0628 (as they were for 7-1 and 7-5, which about the shoreline).</p>
Response:	<p>A stepout excavation to address sample 0628SSA was not completed in accordance with the agreement made with the Base Realignment and Closure (BRAC) Cleanup Team (BCT) at a meeting on December 2, 1999 (documented in the minutes of the meeting). The south sidewall of this excavation was about 60 feet long. The RD amendment required collection of four random discrete and three deep biased discrete samples for this length of sidewall. The seven discrete samples collected on the stepout from the south sidewall met these requirements. In addition, sample 0628SSA was located in the shallow, and not the deep, portion of the original excavation. SVOCs were not COPCs at this excavation.</p>		<p>See above for responses on additional COPCs and waste profile and screening soil samples. The results from the shoreline investigation were intended only for information and were not to be used to propose additional areas for excavation. Organotin compounds were addressed in the SLERA. Shoreline sample location IR07IT011 was added to the figure for Excavation B0628.</p>
B0632 As, Be, TPH	<p>Extent and excavation sufficient for As, Be, TPH by 1998-99 rules.</p> <p>Extent and excavation not sufficient for Ni.</p> <p>Ni (2400: B013) > point by point HPAL and > ESD risk-based criteria</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (2.2: SSA), Fe (59,300: B013), Ni (2660 and 2400: B013) > PRGs (.062; 22,000; 1600).</p>	<p>B0632 is directly east of the southern corner of 7-1. Excavated to 4'.</p> <p>A single RI location (B013) was analyzed for a full suite of analytes. Ss were analyzed for As, Be, and TPH-d only.</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	(320) should have been identified as a COPC. Excavation should have extended to 10'. DLs: PAHs (.76 for b(a)p, etc., 3.7 for PCP: B013) > ESD goals. TPH-d (1400 in SSs) should have been identified as a COPC: extent not determined.	b(a)p (.72 DL), Mn (930: B013) > PRGs adj (.062; 420)	RA concerns. COPCs not all identified. High DLs. Ni (2660 and 2400: B013) > EPSC (1941).
	Response: The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression. Furthermore, this sample was collected at 11.25 feet bgs. SVOCs were not COPCs at this excavation. TPH was addressed as a COPC at this excavation.		See above for responses on waste profile and screening soil samples.
B0636 As, Pb	Extent and excavation sufficient for Pb based on 1998-99 rules. Excavation not sufficient for As, Ni based on 1998-99 rules. As (11.4: MW22A) was located at 6.75', and the excavation went only to 7'. Excavation should have gone to 8' or 10' according to rules (but bottom samples at 7' < ESD). Ni (2640: MW22A) > point by point HPAL and > ESD risk-based criteria (320) should have been identified as COPC. DLs: PAHs (2.4 for b(a)p, etc., 6.0 for PCP: B013) > ESD goals. TPH: one single location for TPH-d only: TPH not fully investigated. High DLs for PAHs may suggest TPH-mo is present.	Extent not determined to PRGs or PRGs adj for compounds below. As (6.8: SEA), Fe (60,600: MW22A), Ni (2640: MW22A), PAHs (2.4 DLs) > PRGs (.062; 22,000; 1600; .062 for b(a)p). V (73: MW22A) close to PRG (78). Mn (836: MW22A) > PRG adj (420).	B0636 is a small (54 sq ft) excavation located about 110' south of the southern corner of 7-1. Excavated to 7'. A single RI location (IR18MW22A) analyzed for full suite of analytes (no TPH -g, TPH-mo). SSs analyzed for As only. High DLs for SVOCs > ESD: COPCs may not all have been identified. RA concerns: COPCs not all identified. High DLs. The table (page 3-685) indicates that Pb was identified in Ws or SSs: but no analyses for Pb are included in CSR Appendix A. Please explain where the Pb results are located. No data on asbestos and cyanide.
	Response: Excavation depth of 7 feet was sufficient to remove the location that exceeded the soil cleanup goal for arsenic. The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression. Furthermore, this sample was collected at 11.25 feet bgs. SVOCs and TPH were not COPCs at this excavation.		See above for responses on waste profile and screening soil samples, asbestos, and cyanide. The result for the in situ soil screening sample cited (lead at 391 mg/kg) was listed on Plate 6 (Site Chemicals of Concern) of the RD. Data presented in other reports were not reproduced in the CSR addendum data tables.
B0933 Aroclor-1254	Extent and excavation sufficient for Aroclor-1254 based on 1998-99 rules. Excavation not sufficient for Mn, Ni. Mn (1940: B044) should have been identified as a COPC > ESD (1400). DLs: PAHs (.39 for b(a)p, etc.: B044) > ESD goals. TPH: one single location for TPH-g and TPH-d only: TPH not fully investigated.	Extent not determined to PRGs or PRGs adj for compounds below. As (2.9: B044), Fe (45,500: B044), Mn (1940: B044), V (118: B044) > PRGs (.062; 22,000; 1800; 78). b(a)p (.39 DL), Ni (1220: B044) > PRGs adj (.037; 320).	A single RI location (B044) was analyzed for a full suite of analytes (not TPH-mo). SSs for Aroclor-1254 and Aroclor-1260 only. RA concerns: All COPCs not identified.
	Response: Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA. The sample cited was removed during excavation. SVOCs and TPH were not COPCs at this excavation.		See above for responses on additional COPCs and waste profile and screening soil samples.

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
B1036 DDD, DDE, DDT, aldrin, b(a)a, b(a)p, b(b)f, b(k)f, Be, chrysene, d(ah)a, i(cd)p, TPH	Extent and excavation sufficient for DDD, DDE, DDT, aldrin, b(a)a, b(a)p, b(b)f, b(k)f, Be, chrysene, d(ah)a, i(cd)p, TPH by 1998-99 rules. Extent and excavation not sufficient for Ni. Ni (499: B008) > point by point HPAL and > ESD risk-based goal (320) should have been identified as a COPC. DLs: Aroclor-1260 (.94: B008) > ESD (.21).	Extent not determined to PRGs or PRGs adj for compounds below. As (5.0: B008), b(a)p (.19: SWA), Fe (35,500: B008) > PRGs (.062; 062; 22,000) DLs: d(ah)a (.18 DL:SEA) > PRG (.062) Mn (715: B008), Ni(499: B008) > PRGs adj (420, 320).	B1036 is located in the southeastern corner of IR07. Excavated to 8.25' in 1998-99. By 2000-01 rules, B1036 would probably not be identified as a site based on RI sample (B008), which did not exceed ESD goals (except for slightly elevated DLs). However, Ws indicated that exceedences of ESDs did in fact exist: DDT to 1.4 > 1.2; b(a)a to .99 > .37; b(a)p to .76 > .33 DL; d(ah)a to .43 > .33 DL. One RI location (B008), analyzed for full suite (not TPH-mo). Ws for COPCs only and TPH-mo (25). CSRA samples analyzed for COPCs only.
Response:	The cited concentration of nickel slightly exceeds the point-by-point HPAL based on the Ni-Co regression (499 observed versus 482 HPAL). However, this sample was collected at 11.25 feet bgs and was not considered because its depth exceeds 10 feet. PCBs were not COPCs for this excavation.		See above for responses on waste profile and screening soil samples.
B1128 b(a)a, b(a)p, b(b)f, b(k)f, chrysene, DEHP, n-nitroso-di-n-propylamine	Extent and excavation sufficient for b(a)a, b(a)p, b(b)f, b(k)f, chrysene, DEHP, n-nitroso-di-n-propylamine based on 1998-99 rules (but DLs are slightly elevated). However, B1128 should have been opened in 2000-01, when additional results were available. Extent not determined for b(b)f, Cd, Cu, Pb, Zn and maybe other compounds. Multiple COPCs for 7-4 that were > ESD goals in samples near and under B1128 should have been identified as COPCs for B1128. These include several metals which were not fully investigated in adjacent 7-4: Cd (3.7: P38), Cu (365: P38), Pb (418 at 9': P17, 300 at 8': P16), Zn (957: P37, 416: P38). Other compounds (e.g., PAHs, SVOCs) are also likely COPCs. Excavation not sufficient for b(b)f (.49: P17) and Pb (418: P17, 300: P16). Excavation should have been to 10'. Similarly, shallow exceedences of Cd, Cu, and Zn west of B1128 were not excavated and deeper samples were not collected. DLs for b(a)p, b(b)f, b(k)f, n-nitroso-di-n-propylamine (.36 at SWA) > ESD (.33, .34, .34, .33). TPH is elevated (but not > goal) in nearby samples (1700: P37): TPH-mo not included.	Extent not determined to PRGs or PRGs adj for compounds below. As (6.6: P16), N-nitroso-di-n-propylamine (.36 DL), Pb (418: P17) > PRGs (.062, .069, 150). Cu (365: P38), Mn (520: P17, 434: P16), PAHs (b(b)f, .49: P17), Zn (957) > PRGs adj (160, 420, 370, .34). N-nitroso-di-n-propylamine (DL .36) > PRG adj (.00017).	B1128 is completely enclosed by 7-4. A unique site history was not presented for B1128 so it is not clear that B1128 is really a different site from 7-4. COPCs from 7-4 extend into B1128 (as discussed in column 2). The depth of excavation changes where B1128 and 7-4 merge. B1128 and western and southern 7-4 were excavated to 5'. North of B1128, 7-4 was excavated to 10'. Odd fact: N-nitroso-di-n-propylamine (.035 at B045) was the <u>only</u> COPC identified in the RI HHRA, even though it was lower than the ROD and ESD goal of .33 DL. B1128 was defined by a single RI sample (B045: 2.75' and 6.25') which was analyzed for a limited suite of analytes: Pb, SVOCs and TPH-d only, with high DLs for some SVOCs (PCP at 1.7 DL). DEHP (8.8). PAHs were later identified as COPCs based on waste results (which were analyzed for SVOCs only). DLs were not provided for waste results. Clearly B1128 has not been adequately characterized. However, it is clear that the excavation (5') should have been deeper (to 10') and should have extended to the west (to P38 at least). RA concerns. COPCs not all identified. No chemical analytical data for backfill. RI and CSRA confirmation samples removed. Zn (957) > EPSC (713).

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
Response:	Step-outs from the perimeter samples (P-series) at Excavation 7-4 were not conducted because excavation was halted for re-evaluation of the conceptual model for contamination in this area. Extension of the southern portion of Excavation 7-4 (including part of Excavation B1128) downward from 5 feet was not conducted for the same reason. Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA.		7-4 samples collected within the boundaries of B1128 or nearby should be shown on figures for B1128. See above for responses on additional COPCs and waste profile and screening soil samples and backfill are not repeated. A note was added to the figures for Excavation B1128 to indicate that the excavation was partly removed by Excavation 7-4.
B1132 Cu, TPH	Extent and excavation sufficient for Cu, TPH based on 1998-99 rules. Extent and excavation not sufficient for SVOCs etc. because high DLs in RI sample > ESD. DLs for b(a)p, b(b)f, b(k)f, n-nitroso-di-n-propylamine (7.4: B038), heptachlor epoxide (.047: B038), PCBs (Aroclor-1260 at .74: B038), and PCP (36: B038) > ESDs (.33, .34, .34, .33), (.0017 DL), (.21) and (2.6). TPH-d (7300 in SSs). TPH-mo not analyzed for: very high DLs may suggest TPH-mo is present.	Extent not determined to PRGs or PRGs adj for compounds below. As (4.3: B038), b(a)p etc. (7.4 DL), Fe (47,200: B038), PCP etc. (36 DL) > PRGs (.062; .062; 22,000; 3.0). Ni (1540: B038), V (76.7: B038) close to PRGs (1600; 78). Mn (644: B038) > PRG adj (420).	B1132 is located about 60' south of the southern corner of 7-4. Excavated to 8'. A single RI location (B038) was analyzed for full suite of analytes (no TPH-mo): sampled at only 2 depths 2.25' and 3.75'. SSs analyzed for SVOCs (DLS not provided), Cu and TPH-d (to 7300). Site characterization was not adequate. RA concerns. Small set of COPCs based on single RI with very high DLs for multiple compounds.
Response:	SVOCs were not COPCs for this excavation.		See above for responses on waste profile and screening soil samples.
B1227 b(a)a, b(a)p, b(b)f, b(k)f, Be, chrysene, d(ah)a, TPH	Extent and excavation sufficient for Be, chrysene. Extent and excavation not sufficient for Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, Cu, d(ah)a, DEHP, Pb, Mn, Hg, and TPH based on review of RI and 7-4 samples. Excavation for b(a)a, b(a)p, b(k)f, d(ah)a should have gone deeper than 6.75'. PAH DLs > ESD (.33) in the original RI sample (B033) were not fully excavated at 4.25' (b(a)a, b(a)p, and b(k)f : .76 DL) and at 6.75' (b(a)p and b(k)f (.37 DL). COPCs for 7-4 that were > ESD in samples near to B1227 should have been identified as COPCs for B1227, including: Aroclor-1260 (.23: P26), Cu, DEHP (13: E2G at 3'), Pb (425: S2A at 4', 286: BC59 at 10'), Mn (3980: P21 at 3', 1960: BC67 at 10'), and Hg. For example, with respect to Hg > ESD (6 at 10': P20): excavation should have gone to 10'. For Cu (266: P19 at 9', 210: BC80 at 5'), excavation should have extended to the east and to 10'. And, exceedences of PAHs at D1N (b(b)f at 2.2 at 5') indicate that the B1227 excavation should have extended to the north. If the area near B033 was excavated to 10', another bottom sample should have been collected.	Extent not determined to PRGs or PRGs adj for compounds below. Aroclor-1260 (.23: P26), As (9.4 P21, 9.3: P19, 6: P020), Pb (425: S2A at 4', 286: BC59 at 10'), Mn (3980: P21 at 3') > PRGs (.22, .062, 150, 1800). b(a)p (.062), Hg (6) > PRGs adj (.037, 1.6). PAH DLs (b(a)p: .76 DL) > PRGs.	B1227 is engulfed by 7-4. A unique site history was not presented for B1227 so it is not clear that B1227 is really a different site from 7-4. COPCs from 7-4 extend into B1227 (as discussed in column 2). The depth of excavation changes where the sites merge: the merged excavation is 10' deep to the north and 5' deep to the south. A single RI sample (B033) was collected at B1227. B033 is now located on the sidewall of B1227 excavation, and has only been partially excavated (Figure B1227A). The table (page 3-716) indicates that b(k)f and d(ah)a (which had DLs of .76 in B033) were identified as COPCs based on waste results. However no Ws or SSs are provided for B1227 in CSR Appendix A: please explain where the Ws and SSs are located. RA concerns: COPCs not all identified. No chemical analytical data for backfill. High DLs. RI and CSRA confirmation samples removed. Mn and Ni, etc. not investigated so produce uptake may be underestimated. No data on asbestos and cyanide.

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	Extent not determined for TPH (8300: P21 at 8'). Excavation should have extended to the east and to 10'.		7-4 samples collected within the boundaries of B1227 or nearby should be shown on figures for B1227. If Figure B1227A is not the final topographic map, a final map should be provided.
Response:	This excavation extended to 10 feet bgs, not to 6.75 feet bgs. Step-outs from the perimeter samples (P-series) at Excavation 7-4 were not conducted because excavation was halted for re-evaluation of the conceptual model for contamination in this area. Extension of the southern portion of the excavation (including part of Excavation B1227) downward from 5 feet was not conducted for the same reason. Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Risks from all chemicals were addressed in the TMSRA.		See above for responses on additional COPCs, waste profile and screening soil samples, backfill, asbestos, and cyanide. The portion of boring IR07B033 that contained the sample that exceeded cleanup goals (1.75 feet bgs) was removed. The rectangular area inset into the western sidewall of Excavation B1227 was excavated to 9 feet bgs with vertical sidewalls and was named B1127. This excavation was then backfilled before Excavation B1227 (with sloping sidewalls) was conducted. Soil screening samples are listed under the tab for B1127 in Appendix A of the CSR. Manganese and nickel were not COPCs for this excavation. A note was added to the figures for Excavation B1227 to describe the inset portion and indicate that B1227 was partly removed by Excavation 7-4.
B1324 Sb, b(a)a, b(b)f, chrysene, TPH	Extent and excavation sufficient for Sb, b(a)a, b(b)f, chrysene, TPH. TPH (3000 in Ws): no TPH-g or TPH-mo. TPH in nearby 7-4 5-point composite samples (710: BC66, 700: BC52) is elevated but < ESD.	Extent not determined to PRGs or PRGs adj for compounds below. Naphthalene (.94) close to PRG (1.7). Mn (1450: P07) > PRG adj (420).	B1324 is located less than 10' from the eastern boundary of 7-4. A unique site history was not presented for B1324 so it is not clear that B1324 is really a different site from adjacent 7-4. A single RI sample (B047) was collected at B1324. B047 was analyzed for a limited suite (Pb, SVOCs and TPH-d). Given the site history of IR07, the lack of information (e.g., metals) and the small set of COPCs are of concern. It is noted, though, that COPCs in nearby 7-4 samples are < ESDs except for Mn (1450: P07) > ESD (1400). DLs for SVOCs were elevated in B047 (PCP: 1.7 DL). SSs were analyzed only for COPCs in column 2 (but not Sb) (DLs not provided): so no information on additional COPCs was provided by SSs. DLs were not provided on SSs. The table (page 3-725) indicates that Sb was detected in Ws or SSs. However, no Sb results are provided for B1324 in Appendix A: please explain where the results are located. RA concerns: Small set of COPCs based on single sample. No chemical analytical data for backfill. High DLs. RI and CSRA confirmation samples removed.
Response:	Comment noted.		No data on asbestos and cyanide. See above for responses on additional COPCs, waste

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
B1422 b(a)a, b(a)p, b(f)f, b(k)f, Be, chrysene, i(cd)a	Extent and excavation sufficient for b(a)a, b(a)p, b(f)f, b(k)f, Be, chrysene, i(cd)a based on 1998-99 rules. Shallow Pb contamination (Pb at 92: B015) may extend into 7-5 (901 at 1.75': B014). The concentration of the nearest shallow 3-point confirmation sample for 7-5 (139 at SSNA) and 159: N1M further suggest that shallow Pb contamination may remain between the two sites. Multiple other shallow 7-5 samples further to the west are > ESD. TPH-g (1 DL) and TPH-d (11 DL): one RI location only (B015).	Extent not determined to PRGs or PRGs adj for compounds below. As (5.4: B015), Fe (51,100: B015) > PRGs (.062, 22,000). Mn (940: B015), Ni (731: B015) > PRGs adj (420, 320). DLs: d(ah)a (.39 DL: B018) > PRG (.062).	profile and screening soil samples, asbestos, and cyanide. The in situ soil screening sample result cited (Sb 11.2 mg/kg) was listed on Plate 6 (Site Chemicals of Concern) of the RD. Data presented in other reports were not reproduced in the CSR addendum data tables. B1422 is located about 30' north of 7-5. A unique site history was not presented for B1422 so it is not clear whether B1422 is really a different site from adjacent 7-5. A single RI sample (B015) was collected at B1422. B015 was analyzed for metals, SVOCs (not VOCs), PCBs, pesticides, TPH-g, TPH-d (not TPH-mo). The presence of other compounds (Pb at 92: B015, naphthalene at .081: B015) suggests that additional COPCs may exist. Ss analyzed only for COPCs (DLs not provided): no additional information provided. RA concerns: Small set of COPCs based on single sample. No chemical analytical data for backfill. RI and CSRA confirmation samples removed. No data on asbestos and cyanide.
Response:	Concentrations of lead at locations nearest Excavation B1422 including 0075SNA, 0075SEA, and 0705N1M are all less than the cleanup goal.		See above for responses on additional COPCs, waste profile and screening soil samples, asbestos, and cyanide. The cited concentrations of lead and naphthalene are lower than the cleanup goals and do not suggest contamination. The 0.081 mg/kg concentration of naphthalene is much lower than the 56 mg/kg cleanup goal.

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
10-1 Mn, TPH, TCE	<p>Extent sufficient for Mn by 2000-01 rules.</p> <p>Extent not determined for TCE and other VOCs.</p> <p>Excavation not completed for DCE, Mn, TPH, TCE.</p> <p>DCE (.062: N1G) should have ben identified as a COPC > ESD (.054)</p> <p>TCE: See General Comments above [main text of comments].</p> <p>DLs: DCE (15 DL: B2A), VC (15 DL: B2A) > ESDs (.054, .022)</p> <p>PAH DLs slightly elevated in RI (e.g., b(a)p at .41).</p> <p>TPH: not > 3500. TPH-g only analyzed for in CSRA.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (8.0: B037), Mn (3210: B037, 1860: B036), Ni (1730: B035), TCE (980: B036, 230: 01B2) > PRGs (.062; 1800; 1600; .053).</p> <p>V (76: B037) close to RPG (78).</p> <p>DLs: TCE (.96 DL: N1C, etc.) > PRG (.053).</p> <p>Mn > PRGs adj (420) is widespread.</p> <p>DLs: VC (15 DL: B2A) > PRG (.077)</p>	<p>No excavation: Treatability studies (TSs: SVE and ZVI) in progress.</p> <p>Results are not provided in tables for multiple sampling locations (e., "GBs", "SGs", "VWs") shown on Figure 10-1A: additional COPCs could not be identified for these locations. Samples > 10' are also not shown. Please provide all sampling results.</p> <p>3 RI locations (B035, B036, B037) analyzed for full suite. CSRA samples analyzed for COPCs in column 1. 1,1-DCE, 1,2-DCE and VC were analyzed for in some CSRA samples. No Ws or SSs (because no excavation).</p> <p>Contamination > 10': TCE (980: B036).</p> <p>RA concerns. All COPCs (including multiple VOCs) not identified. Vapor pathway will be critical. High DLs.</p> <p>No data on asbestos and cyanide.</p>
Response:	<p>Information on the extent of volatile organic compound (VOC) contamination and the effectiveness of soil vapor extraction (SVE) in treating VOCs was presented in reports that document the treatability study (Innovative Technical Solutions, Inc. [ITSI] 2006; International Technology Corporation [IT] 2002; Tetra Tech EM Inc. [Tetra Tech] 2003). This information was summarized and SVE was evaluated as a remedial alternative in the TMSRA. The extent of the primary VOC (trichloroethene [TCE]) is shown on Figure 10-1C.</p>		<p>See above for responses on additional COPCs, waste profile and screening soil samples, asbestos, and cyanide are not repeated. Data presented in other reports were not reproduced in the CSR addendum data tables; data from other reports were presented only on the excavation figures. Data collected from depths greater than 10 feet bgs were not shown on figures or in data tables (except at Excavation 7-5 and the IDL, where the excavation depth exceeded 10 feet bgs).</p>
10-2 As, Be, Mn, TCE	<p>Extent sufficient for Be. Excavation not required because < ESD in all samples.</p> <p>Extent sufficient for As. Excavation not completed.</p> <p>Extent sufficient for Mn. Excavation not completed.</p> <p>Extent not determined for TCE. High concentrations have not been bounded. No stepouts to the west of 90.3: VW14A. No stepouts to the north south and east of 26: B022, and 65: E3A. No stepouts to the north at multiple locations 20: N2A, 189.6: SG047, 18: GB008, etc.</p> <p>The depth of TCE has not been determined: 90.3: VW14A, 26: B022, 18: GB008, 15: B009. No stepdowns at the site boundary: 46: N1A, 26: S1A, 16: W1A, 2.3: E1A. No stepdowns at multiple other locations; 60: E2A, 20: N2A. 7.8: S1B, 7.1: S2A, 5.7: S3A.</p> <p>DLs: 1,1-DCE (1.5 DL) and VC (1.5 DL) > ESDs (.0054, .022). PAH</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below.</p> <p>As (11.7: B017), Fe (43,100: B017), Mn (41,400: B017), TCE (90.3: VW14A), V (82) > PRGs (.062; 23,000; 1800; .053; 78).</p> <p>Ni (1270: B017) > PRG adj (320).</p>	<p>Site has not been excavated. 10-2 is directly adjacent to 10-1 on the southeast. It is not clear that 10-2 is really a different site from 10-1.</p> <p>TCE does not exhibit a "bulls-eye" pattern at 10-2 around the RI sample (2.2: B017). In fact, higher concentrations were measured on the northern site boundary (46 at N1A) and outside the site boundary drawn on Figure 10-2D: to the south (90.5 at VW14A) and to the east (65 at E3A).</p> <p>One RI location (B017) analyzed for full suite (no TPH-mo). CSRA samples analyzed for COPCs in column 1 and TPH-g, 1,1-DCE, 1,2-DCE, and VC. No Ws or SSs (site not excavated).</p> <p>Mn was measured in the RI at very high concentrations (41,400: B017).</p> <p>Contaminants at 10' (or in deepest samples): TCE (90.3:</p>

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
	DLs slightly elevated in RI (e.g., b(a)p at .37).		VW14A and multiple examples in column 2). RA concerns. All COPCs (including multiple VOCs) not identified. Vapor pathway will be critical. High DLs. No data on asbestos and cyanide.
Response:	Information on the extent of VOC contamination and the effectiveness of SVE in treating VOCs was presented in reports that document the treatability study (ITSI 2006; IT 2002; Tetra Tech 2003). This information was summarized and SVE was evaluated as a remedial alternative in the TMSRA. The extent of TCE is shown on Figures 10-1C and 10-2D.		See above for responses on additional COPCs, waste profile and screening soil samples, asbestos, and cyanide. Two replicate samples (1002B3 and 1002B4) collected from the same depth and immediately adjacent to boring IR10B017 did not contain manganese at concentrations that exceed the cleanup goal. The anomalous high concentration was likely removed by sampling and no longer exists.
B2725 TCE	Extent not determined for TCE. Excavation is not complete for TCE. No stepouts for TCE. To the north: 4.9: N4B, 2.2: N4A, 1.9: N4C. To the east: 1.3: N1D, 1.2: N3B. No stepdowns at multiple locations: 100: N2A, 7.5: N3C, 6.3: SNA, 4.9: N4B. There is a general deficit of deeper samples. DLs: 1,1-DCE (6.4 DL: N2A) and VC (6.4 DL: N2A) > ESDs (.054, .022). PAH DLs slightly elevated in RI (e.g., b(a)p at .38).	Extent not determined to PRGs or PRGs adj for compounds below. As (7.3: B016), Fe (44, 200) TCE (100: N2A) > PRGs (.062; 23,000; .053). V (77.5: B016) is equal to the PRG (78). Mn (1170: B016), Ni (1360: B016) > PRGs adj (420, 320).	B2725 was excavated to 7' in 1998-99. Confirmation samples on the north sidewall exceeded criteria, so stepout samples were collected to the north. However, the extent of contamination to the north has not been determined. To the northeast, TCE extends to 10-1. That is, it is clear that B2725 is really not a different site from 10-1. One RI location (B016) analyzed for a full suite. CSRA samples analyzed for COPCs in column 1 and 1,1-DCE, 1,2-DCE, and VC. Ws analyzed for VOCs, SVOCs, Pesticides, PCBs but DLS not provide so no new information on COPCs. Ss analyzed for TCE and SVOCs, but DLS not provide so no new information on COPCs. Contaminants at 10' (or in deepest samples): TCE (100:N2A) RA concerns. All COPCs (including multiple VOCs) not identified. Vapor pathway will be critical. High DLs. No data on asbestos and cyanide.
Response:	Information on the extent of VOC contamination and the effectiveness of SVE in treating VOCs was presented in reports documenting the treatability study (ITSI 2006; IT 2002; Tetra Tech 2003). This information was summarized and SVE was evaluated as a remedial alternative in the TMSRA. The extent of TCE is shown on Figures B2725 and 10-1C.		See above for responses on additional COPCs, waste profile and screening soil samples, asbestos, and cyanide.
18-2 Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, DEHP, chrysene, d(a,h)a, i(c,d)p, Pb, TPH, Zn	Extent and excavation sufficient for DEHP. Extent not determined for Aroclor-1260, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, d(a,h)a, i(c,d)p, Pb, Ni, TPH, Zn. Extent not determined for Aroclor-1260 on western property boundary. No stepouts for (2.8: S2R, .51: W1E, .5: W1D, .3: S1R). On the western property boundary, no deeper samples (> 7') for Aroclor-1260 at S3R, W1D, and W1B. Cu (178: BC21) should have been identified as a COPC > ESD	Extent not determined to PRGs or PRGs adj for compounds below. Aroclor-1260 (2.8: S2R; .51: W1E; .5: W1D; .3: S1R), As (5.1: B012), Fe (30,500: B012), Pb (2210: W1D; 248: W1E; 278: W1F; 250: S1R), Vanadium (81.2: MW21A) > PRGs (.22; .062; 22,000; 150; 78). Mn (826: MW21A), Ni (848: B021) > PRGs adj (420, 320).	Excavated to 10'. 2 RI locations (B012, MW21AD) analyzed for full suite (not TPH-g, TPH-mo). Ss analyzed for COPCs in column 1 with some additional metals and SVOCs (no DLs provided). RA concerns. All COPCs not identified. Vapor pathway may be important for current and future uses at IR18 and adjoining areas. Surface contamination may exist. No chemical analytical data for backfill. High DLs.

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>(160).</p> <p>PAHs: Missing shallow and/or deep samples on west, south, and southeast sidewalls.</p> <p>No stepouts for b(a) p, b(f)f, Cu (.72; .67; 333) at SHE > ESDs (.33; .34; 160).</p> <p>No stepouts for b(a)p, b(b)f, b(k)f, chrysene, d(ah)a, i(c,d)p on west and northwest walls for (7.8), (5), (5.6), (8.8), (7.8 DL and 11 DL), (4 and 11 DL) at MW21A..</p> <p>No stepouts for d(a,h)a (.76 DL: S5A) and high DLs for other PAHs at S5A.</p> <p>No samples on sidewall south of B0241 for b(a)a, b(a)p, b(b)f, b(k)f, chrysene, d(ah)a, i(c,d)p, Pb.</p> <p>Ni (360: BC21) > point by point HPAL and risk-based ESD (320) should have been identified as a COPC.</p> <p>Pb is widespread at high concentrations along the western property boundary. Extent of Pb has not been determined, including surface contamination. No stepouts for Pb at 2210: W1D, 248: W1E, 278: W1F, 250: S1R) > ESD (220). This is consistent with Pb exceedences further south along the western property line at 18-1.</p> <p>Zn: no stepout (402: W1E) > ESD (370).</p> <p>DLs: Aroclor-1254 (.35 DL: S2R), b(a)a (1.1: S5A; .37 DL: BC5), b(k)f (1.1 S5A; .43: BC10, d(ah)a (7.8 DL: MW21AD), i(c,d)p (11 DL: MW21AD), n-nitroso-di-n-propylamine (1.7 DL: BC3), n-nitrosodiphenylamine (2.2 DL: BC3), PCP (9: BC3) > ESDs (.21, .33, .34, .33, .33, .33 DL, 1.1, 2.6).</p> <p>DLs in RI samples: PAHs had high DLS in both RI samples up to 11 for PAHs and 28 for PCP in B012, with similar DLs in MW21A.</p> <p>TPH: complied with RD rules but elevated concentrations in 3-point composite samples (1100: SSD, 1100: SWB). TPH-d (1100: MW21A; 100 in SSs). TPH-mo (1800 in SSs). TOG (57,000 at both RI locations B012 and MW21A). No TPH analyses in southern portion where high DLs for PAHs were reported.</p>			<p>Contaminants at 10': Aroclor-1260 (.23: BC13), b(a)a (.58: BC9), b(a)p (1.1: BC9), b(b)f (1.4: BC9), b(k)f (.89: BC9), d(ah)a (.38: BC14), i(c,d)p (.49: BC9), Pb (325: BC14, 307: BC13).</p> <p>Pb (2210:W1D) > EPSC (441).</p> <p>No information on asbestos and cyanide.</p> <p>Explain why all 18-2 bottom samples collected in 2000-01 were duplicates or quadruplicates.</p>
Response:	<p>The Navy has no plans to characterize chemical concentrations that may exist on off-site properties. Copper was not identified as a COPC based on samples collected during the RI. The RD and RD amendment did not require any action in the case where the results for a bottom sample collected at 10 feet bgs exceeded soil cleanup goals. Deep biased samples were collected in accordance with the RD amendment along the western boundary. Deep samples were not</p>		<p>See above for responses on waste profile and screening soil samples, backfill, asbestos, and cyanide. All bottom composite samples collected during 2000 to 2001 were not collected as duplicates; none were collected</p>

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	<p>intended to be collected at every location. Step-out samples at locations 1802E1A, -E1B, and -E1C bound the elevated concentrations at location 0182SEH. PAH detection limits that were greater than the cleanup level for soil were not investigated unless the detection limit exceeded 3 mg/kg. The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression. Total TPH was delineated during the 1998-1999 phase of excavation and step-out samples to the south were not necessary for TPH.</p>		<p>as quadruplicates. Two (or four for duplicates) results were posted for PAHs because two separate analyses (PAH and SVOC) were conducted for each sample. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.</p>
<p>18-3 b(a)a, b(a)p, b(b)f, b(k)f, chrysene, d(a,h)a, i(c,d)p, Pb</p>	<p>Extent and excavation sufficient for b(a)a, b(a)p, b(b)f, b(k)f, chrysene, d(a,h)a, i(c,d)p, Pb by 1998-99 rules.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (10.0: TA01A), Fe (45, 100: TA10A) > PRGs (.062; 22,000). Mn (1090: TA01A), Ni (1200: TA01A) > PRGs adj (420, 320).</p>	<p>18-3 is located directly east of 18-2. Excavated to 10' in 1998-99. One RI trench location (TA01A) analyzed for full suite (no TPH-g, TPH-mo). SSs analyzed for 7 PAHs and Pb only (no DLS provided). RA concerns. No chemical analytical data for backfill. No information on asbestos and cyanide.</p>
<p>Response:</p>	<p>Comment noted.</p>		<p>See above for responses on waste profile and screening soil samples, backfill, asbestos, and cyanide.</p>
<p>B0136 DDD, DDE, DDT, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, d(ah)a, i(c,d)p</p>	<p>Extent and excavation sufficient for DDD, DDE, DDT, b(a)a, b(a)p, b(b)f, b(k)f, chrysene, d(ah)a, i(c,d)p based on 1998-99 rules but DLs slightly elevated for PAHs for shallow excavation. Extent not determined at depth for SVOCs. High DLs at depth in RI sample may indicate deeper uninvestigated contamination. DLs in confirmation shallow samples for b(a)p (.35 DL: SSA), b(b)f (.35: SSA), d(ah)a (.35 DL) > ESD (.33, .34, .33). High DLs at RI location: b(a)p etc. (11: B013) and PCP etc. (29: B013) > ESD so extent not determined at depth.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (4.7: B013), b(a)p (7.4 DL: B013, .35 DL: SSA), d(ah)a (7.4 DL: B013, .35 DL), Fe (22, 400: B013), PCP etc. (29 DL: B013) > PRG (.062; .062; .062; 22,000; 2.6). Mn (630: B013) > PRG adj (420).</p>	<p>Excavated to 7'. High DLs in deeper samples may indicate deeper uninvestigated contamination. A single RI location (B013) was analyzed for a full suite of analytes (not TPH-g, TPH-mo). SSs analyzed for COPCs in column 1 only: 5 PAHs identified in SSs (d(ah)a to 3.0) (DLs not provided). RA concerns. High DLs: COPCs may not all be identified.</p>
<p>Response:</p>	<p>PAH detection limits that were greater than the cleanup level for soil were not investigated unless the detection limit exceeded 3 mg/kg.</p>		<p>See above for responses on high PAH detection limits and waste profile and screening soil samples.</p>
<p>B0241 b(a)p, b(b)f, b(k)f, i(c,d)p</p>	<p>Extent and excavation sufficient for b(a)p, b(b)f, b(k)f, i(c,d)p based on 1998-99 rules. Extent and excavation not sufficient for Pb, Ni, Zn: which were not identified as COPCs. Pb (631: B025) should have been identified as a COPC > ESD (220). Ni (277: B025) > point by point HPAL should have been identified as a COPC. Zn (368: B025) should have been identified as a COPC equal to ESD (370).</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (9.8: B025), Pb (631: B025) > PRGs (.062; 150). Zn (368: B025) equal to PRG adj (370).</p>	<p>Excavated to 10'. A single RI location (B025) was analyzed for a full suite of analytes. SSs analyzed for COPCs in column 1 only, and DEHP and TPH-d (DLs not provided). RA concerns. COPCs all not identified. No data on asbestos and cyanide. Pb (631: B025) > EPSC (441).</p>

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Parcel B, Hunters Point Shipyard, San Francisco, California

Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>Response: Consideration of additional COPCs based on RI data was not addressed in the CSR addendum. Concentrations of COPCs that were equal to cleanup goals did not require action. Risks from all chemicals were addressed in the TMSRA. The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression.</p>			<p>See above for responses on additional COPCs, waste profile and screening soil samples, asbestos, and cyanide.</p>
<p>B0337 Aroclor-1260, Pb</p>	<p>Extent and excavation sufficient for Aroclor-1260, Pb based on 1998-99 rules. Extent and excavation not sufficient for Ni. Ni (2070: B015) > point by point HPAL and > ESD risk-based criteria (320) should have been identified as a COPC.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (9.5: B015), Fe (50,400: B015), Pb (478: B0A), Ni (2070: B015), PAH DLs in RI sample (.38) > PRGs (.062; .22, 000; 150; 1600; .062 for b(a)p). Mn (671: B015) > PRG adj (420).</p>	<p>Excavated to 10'. A single RI location (B015) was analyzed for a full suite of analytes (not TPH-g, TPH-mo). SSs analyzed for SVOCs, Aroclor-1260 and Pb (DLs not provided). RA concerns. COPCs not all identified. Contamination at 10': Pb (478: BOA) No data on asbestos and cyanide.</p>
<p>Response: The cited concentration of nickel does not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression.</p>			<p>See above for responses on waste profile and screening soil samples, asbestos, and cyanide. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.</p>
<p>B0638 DDD, DDT, b(a)p, b(b)f, i(cd)p</p>	<p>Extent and excavation sufficient for DDT, b(a)p, b(b)f, i(cd)p based on 1998-99 rules (but DLs slightly elevated). Extent and excavation not sufficient for DDD, Ni. DDD (2.1: SSC) is equal to the ESD (2.1): extent not determined to the south. Ni (439: B019 > point by point HPAL, 1910: B019) should have been identified as a COPC. DLs: PAHs (d(ah)a .38 DL), PCBs (Aroclor 1260 .38 DL) > ESDs: COPCs may not all have been identified.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (5.2: B019), Fe(49,300: B019), Ni (1910: B019) > PRGs (.062; 22,000; 1600) Pb (108: B019) close to PRG (150). Mn (912) > PRG adj (420).</p>	<p>Excavated to 17'. A single RI location (B019) was analyzed for a full suite of analytes (not TPH-g, TPH-mo). SSs analyzed for SVOCs, DDE, DDT, b(a)p, b(b)f, i(cd)p. DLs were not provided in SSs so no information on additional SVOCs (or other) COPCs was supplied by SSs. The extent of contamination (DDD and other contaminants) to the south has not been determined. RA concerns. COPCs not all identified. Contamination at 10': Ni (1910: B019) Ni (1910: B019) close to EPSC 1941. No data on asbestos and cyanide.</p>
<p>Response: Concentrations of COPCs that were equal to cleanup goals did not require action. The cited concentrations of nickel do not exceed the point-by-point HPAL based on the Ni-Mg or Ni-Co regression. PAH detection limits that were greater than the cleanup level for soil were not investigated unless the detection limit exceeded 3 mg/kg.</p>			<p>See above for responses on waste profile and screening soil samples, asbestos, and cyanide. Samples delineating contamination met the requirements of the RD.</p>
<p>B1138 Be, TPH</p>	<p>Extent and excavation sufficient for Be, TPH based on 1998-99 rules (but DLs exceed ESD). DLs: PAHs (b(a)p etc. .45 DL: B020) > ESDs (.33). TPH-d (310: B019, 290 in SSs): TPH-g and TPH-mo not analyzed for.</p>	<p>Extent not determined to PRGs or PRGs adj for compounds below. As (7.0: B020), Fe (34,100: B020), > PRGs (.062; 23,000). DLs: (b(a)p etc. .45 DL: B020) > PRG (.062). Mn (721: B020), Ni (447: B020, 440 in SSs) > PRGs adj (420, 320).</p>	<p>Excavated to 9.25'. A single RI location (B020) was analyzed for a full suite of analytes (not TPH-g, TPH-mo??). SSs analyzed for TPH-d, Mg, Ni (not Be) (DLs not provided). B1138 does not exceed any ESDs. B1138 would likely not be identified as a site by current rules. RA concerns. COPCs may not all be identified. Contamination at 10':</p>

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
Response: PAHs were not COPCs for this excavation.			No data on asbestos and cyanide. See above for responses on waste profile and screening soil samples, asbestos, and cyanide. No contamination exists at 10 feet bgs; however, concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.
EE-01			Not included. No Ws or SSs provided. Please discuss current status. Show location on a figure.
Response:			Information on EE-01 was added to the CSR.
EE-03			Not included. No Ws or SSs provided. Please discuss current status. Show location on a figure.
Response:			Information on EE-03 was added to the CSR.
IR26			
History			
No unique site history was presented for (the only IR26 site included in the CSRA). South of B4818: Building 157: welding, fabrication of metal parts, lab for non-destructive testing of metals, dirt floor in part of building. East of B4818: Area XIV: pumphouse, sandblasting, carpentry, dry dock activities, wood treatment cylinder.			
B4818	Extent and excavation not sufficient for Sb, Aroclor-1254, Aroclor-1260, b(a)a, b(a)p, b(b)f, Cd, Cu, Pb, Hg, Zn.	Extent not determined to PRGs or PRGs adj for compounds below.	B4818 is located: north of Building 157; adjacent to the shoreline; and, west of the outlet to the Bay of the drainage channel for Dry Dock 3. Excavated to 10' in 2000-01.
b(a)a, b(a)p, b(b)f, b(k)f, chrysene, Cu, d(ah)a, i(cd)p, Pb, Hg, Zn	COPCs not identified include Sb, Aroclor-1254, Aroclor-1260, Sb (24: T001) should have been identified as a COPC > ESD (10).	As (5.1: T001), Aroclor-1254 (1.1: T001), Aroclor-1260 (3.1: T001, .26: T001), b(a)p (1.1 and .88: T001), Cd (4.3: T001), Fe (30,800), Pb (760: T001, 184: N1R), naphthalene (2.2) > PRGs (.062; .21; .21; .33 DL; 3.7; 22,000; 150; 1.7).	Single RI location (IR26MW22A), analyzed for full suite of analytes. Two PA locations (PAH002, PAH002Z). Two shoreline locations (T001, T004) analyzed for metals, SVOCs.
	Aroclor-1254 (1.1: T001) should have been identified as a COPC > ESD (.21). No stepouts for Aroclor-1254.	V (73.3) close to PRG (78).	Naphthalene and 2-mthyl-naphthalene were > or close to PRG (but not identified as COPCs), which suggests that the vapor intrusion pathway may need to be considered at B4818 and at other IR26 locztions.
	Aroclor-1260 (3.1: T001, .26: T001) > ESD (.21) should have been identified as a COPC. No stepouts for Aroclor-1260.	Naphthalene was used as a surrogate for 2-methylnaphtahalene in the ESD. If the new CAMod PRG for naphathalene (1.7) also applies to 2-methylnaphthalene, then 2-methylnaphthalene was close to the PRG (1: N1D1) > PRG. Also DLs (1.8: N1D2) > PRG for naphthalene and 2-methylnaphthalene.	RA concerns. All COPCs not identified. Vapor intrusion may need to be reconsidered. No chemical analytical data for backfill.
	No stepouts for b(a)a (.51: T001) > ESD (.37).		
	No stepouts for b(a)p (1.1 and .88: T001) > ESD (.33 DL).	Sb (24: T001), b(k)f (.77: T001), Cu (1790: BC3, 720: T001), Mn (1310: MW42A, 580: T004), Ni (380: MW42A), Zn (1100: T001) > PRGs adj (10; .34; 160; 420; 320; 370).	Contaminants at 10': b(b)f (.37: BC2), Cu (1790: BC3), Pb (327: BC3), Hg (2.3: BC2), Zn (541: BC3).
	No stepouts for b(k)f (.77: T001) > ESD (.34).		
	Cd (4.3: T001) should have been identified as a COPC > ESD (3.5).		Organotin should be identified as a COPC for ecological risk assessment: data should be presented in the CSRA (dibutyltin at .13: T001, tributyltin at .75: T004).
	Cu (4800: B2) is widespread (to 10') and extends to the shoreline. No stepouts for Cu along the northern sidewall (570: N1W, 420: N1V, 198: N1R, 164: N1S, 161, N1T) and at the shoreline (720: T001) > ESD (160). Need more deeper samples on northern sidewalls.		Cd (4.3: T001), Pb (760: T001), Zn (1100) > EPSCs (4.19; 440; 713) along the shoreline.
	No stepouts for Pb (760: T001) > ESD (220). No deeper samples		The table indicates that Cu, Pb and Hg were identified as

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>for Pb (and other compounds) at N1S, N1W.</p> <p>No deeper samples for Hg at N1S, N1W.</p> <p>No stepouts for Zn along northern wall (432: N1H0 and along shoreline (1100: T001) > ESD (370). No deeper samples for Zn at N1S, N1W).</p> <p>DLs: PAHs (b(a)p, etc. to .36: MW42A76, .37: T004, .37: S1A) > ESD goals (.33).</p> <p>Extent (horizontal and vertical) of contamination along the shoreline was not determined.</p> <p>Deeper samples should have been collected at shallow exceedences (e.g., b(b)f at 7.7: N1D). Other PAHS were also high at this location. The presence of b(b)f at 10' (.37: BC2 at 2') indicates that the extent of contamination at depth was not fully investigated. A similar case can be made for b(k)f (4.8: N2A at 1'), with respect to the northern sidewall. Consequently, there may not be sufficient deeper sidewall samples (> 7') for PAHs in the western portion of the excavation.</p> <p>No stepout for b(a)p (.4: N1V) > ESD (.33).</p> <p>No stepout for b(b)f (.59: N1V) > ESD .34).</p> <p>Six bottom samples should have been collected for a 3000 sq ft area of excavation. (7 Bs were collected but two locations had duplicates, which do not count.)</p> <p>TPH not identified as a COPC but extent not determined. TPH-d (300: MW42A, 100: T001). TPH-mo (1200: MW42A, 530: T001). TPH in groundwater in RI (MW42A): TPH-d (320 ug/L) TPH-mo 98 ug/L).</p>	<p>Response: The results from the shoreline investigation were intended only for information and were not to be used to propose new COPCs or additional areas for excavation.</p> <p>Riprap prevented further sampling or step-out samples toward the shoreline. The text that describes this excavation was expanded to note that riprap prevented further sampling. Deep biased samples were collected in accordance with the RD amendment along the northern boundary. Deep samples were not intended to be collected at every location.</p> <p>PAH detection limits that were greater than the cleanup level for soil were not investigated unless the detection limit exceeded 3 mg/kg.</p> <p>The delineated area for this excavation was 2,260 square feet and, therefore, required only five bottom composite samples.</p> <p>Constructability concerns increased the area to about 3,000 square feet; additional samples were not collected when an excavation was increased because of constructability issues.</p>	<p>COPCs in Ws or SSs. However, no Ws or SSs for B4818 are included in CSR Appendix A. Please explain where results are located.</p> <p>Please explain why PAH002 and PAH002Z have different sample names.</p> <p>See above for responses on backfill and results from shoreline samples. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action.</p> <p>Organotin compounds were addressed in the SLERA. Waste profile results for this excavation were added to Appendix A of the CSR.</p> <p>Samples PAH002 and PAH002Z were collected in different locations and, therefore, were assigned different names. Both were initial characterization samples collected to investigate a high PAH non-detect value observed in a sample from location IR26MW42A.</p>	
Industrial	Extent and excavation sufficient for no COPCs (see General	Extent not determined to PRGs or PRGs adj for compounds below.	Excavation deepens along the IDL: from 4' on the east to a

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
<p>Drain Line (IDL) b(a)p, b(b)f, b(k)f, Cd, Cu, Pb</p>	<p>Comments above).</p> <p>Extent and excavation not sufficient for all identified COPCs (b(a)p, b(b)f, b(k)f, Cd, Cu, Pb) and for additional COPCs (see General Comments above and specific comments below).</p> <p>b(a)p: no stepdown/stepouts at depth > 4' (.53: BC13).</p> <p>b(b)f: no stepdown/stepouts at depth > 4' (.54 and .45: BC13).</p> <p>b(k)f: no stepdown/stepouts at depth > 4' (.43 and 2.1 DL at BC13).</p> <p>Cd: no stepdowns/stepouts at depth > 6' (7.9: BC04, 5.1: B4B). No stepdown/stepouts at depth > 9' (4.1: BC11): excavation to 10' at BC11 was required by RD rules.</p> <p>Cu: no stepouts (170: N11D1).</p> <p>Pb: no stepouts (1400: BC12, 230: B11E). No stepdowns/stepouts at depth > 4' (380: BC13).</p> <p>Ni (1500: BC02 and BC05, 1100: BC06, 640: BC03, 400: BC01, etc.) > point-by-point HPAL and ESD risk-based goal (320) should have been identified as a COPC.</p> <p>DLs: PAHs (b(a)p at.44: BC07), SVOC s (carbazole (2.1 DL: BC13); 1,4-DCB (2.1: BC13); n-nitroso-di-n-propylamine (2.1 DL: BC13) > ESDs (b(a)p at .33; .64; 1.9; .33 DL;</p> <p>TPH: No samples were collected.</p>	<p>As (6.8: BC13), b(a)p (.53: BC13), Cd (7.9: BC04, 5.1: B4B, 4.1: BC11), Fe (52,000: BC13), Pb (1400: BC12, 380: BC13, 230: B11E) , TCE (.082) > PRGs (.062; 3.7; 22,000; 150; .053).</p> <p>b(b)f (.54 and .45: BC13), V (62: BC13) close to PRGs (.62; 78).</p> <p>Cu (170: N11D1), Mn (1400: BC06, 750: BC02 and BC05, 560: BC03, 600: BC01, etc.), Ni (1500: BC02 and BC05, 1100: BC06, 640: BC03, 400: BC01, etc.) > PRGs adj (160, 420, 320).</p>	<p>maximum depth of 12' on the west at the termination of the line in 7-4. All work done in 2000-01.</p> <p>RI locations: none presented. Ws: none provided. CSRA: samples analyzed for COPCs at specific locations, and for SVOCs, VOCs and metals in bottom samples ("BCs").</p> <p>TCE (.082: BC06) > PRG (.053) was measured near IR10 (western Building 123). Low concentrations of TCE and PCE were measured elsewhere along the IDL.</p> <p>Shallow exceedences of Pb (380: BC13) at the eastern terminus of the IDL were measured > ESD but no data on shallower soil or surface soil is presented. More investigation may be prudent.</p> <p>RA concerns. COPCs not all identified. RA for linear feature: few results along the sidewalls, almost no data to input into RA.</p> <p>Cd is elevated (but < ESD) at multiple locations. Along the bottom of the IDL excavation, Cd increases to the west, and increases with depth (1.5: BC06, 1.7 and 2: BC07, 2.7: BC05. Other hits include 3.4 (BC09), 1.8 (BC12), 1.1 (N11D1). Widespread Cd contamination may be indicated.</p> <p>Elevated Co (77: BC03, 80: BC05) may warrant further investigation as ⁶⁰Co.</p> <p>Contaminants at 10': Cd (4.1: BC11), Cu (170: N11D1), (Pb (1400: BC12).</p> <p>Cd (7.9: BC04, 5.1: B4B, 4.1: BC11) > EPSC (4.14).</p> <p>Pb (380: BC13), Se (1.6: BC12, 1.3: BC06) close to EPSCs (440, 1.95).</p> <p>No data on asbestos and cyanide.</p> <p>Explain how 5-point composite bottom samples ("BCs") were sampled for VOCs. For example, were samples composited in the lab or in the field? If discrete samples were collected, this fact should be indicated on sample result tables and expressed as a different sample identification number.</p>
<p>Response:</p>	<p>Remaining concentrations of PAHs, cadmium, copper, and lead were addressed by the human health risk assessment (HHRA) in the TMSRA.</p> <p>None of the cited Ni concentrations exceeds the point-by-point HPAL based on the Ni-Mg or Ni-Co regression.</p>	<p>See above for responses on asbestos and cyanide. Waste profile samples were not collected for the IDL. Characterization samples were used for waste characterization. Concentrations did not exceed the cleanup goal for soil in</p>	

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
IR50 Storm Drain and Sanitary Sewer Lines (SDs/SSs)	Response:		<p>any IDL sample. Concentrations of COPCs that exceeded cleanup goals at 10 feet bgs did not require any action. Samples for analysis of VOCs were not composited, but were collected at discrete locations. This process was used throughout the remedial action. Unique sample names were not assigned to samples for analysis of VOCs. The CSR summarizes sample collection methods; the RD amendment contains more detailed discussion of sampling protocols.</p>
IR51 Transformer Sites	Response:		<p>Not included. Please discuss current status. Show location on site figure.</p> <p>The portions of the storm drain and sanitary sewer systems (IR-50) that are part of Parcel B were included as individual excavation sites in the CSR (for example, area B2727 is included with IR-10 based on its location but is also associated with IR-50).</p>
EE0208	Response:		<p>Not included. SSs provided in CSR: analysis for full suite. Aroclor-1260 at .55 > ESD (.21). TPH-d at 4300 > total TPH criteria (3500). V (72) close to PRG (78). Mn at 1300 > PRG adj. DLs not provided. Please discuss current status. Show location on a figure.</p> <p>The portions of the transformer sites (IR-51) that are part of Parcel B were included as individual excavation sites in the CSR (for example, area B2616 is included with IR-24 based on its location but is also associated with IR-51).</p>
Steam Lines	Response:		<p>Not included. SSs provided in CSR: analysis for select PAHs only: b(a)a at 1.1, b(a)p at .45, b(b)f at .44 > ESDs (.37, .33, .34). DLs not provided. Please discuss current status. Show location on a figure.</p> <p>Not included. Asbestos should be a COPC for steam line investigations. No asbestos data was provided. Please discuss current status. Show location on a figure.</p>
			<p>This sample is associated with Excavation EE-02; it is not a separate excavation. The soil screening sample data table in Appendix A of the CSR was corrected to include these data with the rest of EE-02.</p> <p>SI-45 is the steam line system. SI-45 was not carried forward into the RD because it was deemed clean in the ROD. The ROD did not require remedial action for soil at SI-45 (although removal of the steam lines was required as</p>

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Site/COPCs All values: (mg/kg)	Meets 2000 ESD Goals and RD requirements?	Meets 2004 residential PRGs and 2000 ESD PRGs with produce?	Comments
SI31			part of the groundwater remedy). All steam line data were incorporated into the excavation planning process that included the RD and RD amendment. In addition, all steam line data were included in the TMSRA for Parcel B. Asbestos was not identified in the ROD as a substance requiring cleanup and the remedial action did not address asbestos. Remediation alternatives proposed in the TMSRA addressed the potential for asbestos in surface soil.
Response:			Included in RI but not in CSR or CSRA. Please discuss current status.
SI45			SI-31 was not carried forward into the RD because it was deemed clean in the ROD. The ROD did not require remedial action for soil at SI-31.
Response:			Included in RI but not in CSR or CSRA. Please discuss current status.
B1127			SI-45 is the steam line system. See above.
Response:			Not included. SSs provided in CSR. Select PAHs and TPH-d (530). DLs not provided. Please discuss current status. The area originally called B1127 became Excavation B1227. Soil screening samples for B1127 apply to Excavation B1227. Refer to information provided in the CSR addendum for Excavation B1227.

Notes:

1. COPCs identified in the CSRA are indicated in Column 1.
2. In Column 2, the extent and excavation of contaminants of potential concern (COPCs) are reviewed with respect to the chemical-specific goals of the 2000 Explanation of Significant Differences (ESD) and the sampling approaches of the Remedial Design (RD) documents.
3. In Column 3, chemical analytical results from CSRA investigations, remedial investigations (RI), soil screening (SS), and waste characterization (W) were compared to EPA's 2004 residential preliminary remedial goals (PRGs) and to the PRGs adjusted for produce uptake ("PRGs adj") from the 2000 ESD: the 2000 PRGs adj have not been updated.

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As	Arsenic
AST	Aboveground storage tank
B	Bottom sample
b(a)a	Benzo(a)anthracene
b(a)p	Benzo(a)pyrene
b(b)f	Benzo(b)fluoranthene
BCT	BRAC Cleanup Team
Be	Beryllium
bgs	Below ground surface
BHC	Benzene hexachloride
b(k)f	Benzo(k)fluoranthene
BRAC	Base Realignment and Closure
Ca	Calcium
CAMod	California modified PRG
Cd	Cadmium
CLP	Contract Laboratory Program
Co	Cobalt
COPC	Chemical of potential concern
CrVI	Hexavalent chromium
CSR	Construction summary report
CSRA	Construction summary report addendum
Cu	Copper
d(ah)a	Dibenz(a,h)anthracene
DCE	Dichloroethene
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
DEHP	Bis(2-ethylhexyl)phthalate
DL	Detection limit (laboratory)
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
EPSC	Ecologically protective soil concentration for terrestrial habitat
ESD	Explanation of significant difference
Fe	Iron
Hg	Mercury
HHRA	Human health risk assessment
HPAL	Hunters Point ambient level
i(cd)p	Indeno(1,2,3-cd)pyrene
IDL	Industrial drain line
IR	Installation Restoration
Mg	Magnesium
mg/kg	Milligrams per kilogram
Mn	Manganese
ND	Not detected
Ni	Nickel
PAH	Polynuclear aromatic hydrocarbon
Pb	Lead
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PCP	Pentachlorophenol
PRG	Preliminary remediation goal for residential scenario

PRG adj	PRG adjusted for produce uptake
RA	Risk assessment
RD	Remedial design
RI	Remedial investigation
ROD	Record of decision
Sb	Antimony
Se	Selenium
SLERA	Screening-level ecological risk assessment
Sq ft	Square feet
SS	Soil screening result
SVE	Soil vapor extraction
SVOC	Semivolatile organic compound
TCE	Trichloroethene
TI	Thallium
TMSRA	Technical memorandum to support a ROD amendment
TOG	Total oil and grease
TPH	Total petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons quantified as diesel
TPH-g	Total petroleum hydrocarbons quantified as gasoline
TPH-mo	Total petroleum hydrocarbons quantified as motor oil
TS	Treatability study
UST	Underground storage tank
V	Vanadium
VC	Vinyl chloride
VOC	Volatile organic compound
W	Waste characterization result
Zn	Zinc
ZVI	Zero-valent iron

References:

ChaduxTt. 2007. "Final Parcel B Technical Memorandum in Support of a Record of Decision Amendment, Hunters Point Shipyard, San Francisco, California." December 12.

Innovative Technical Solutions, Inc. 2006. "Final Phase III Soil Vapor Extraction Treatability Study Report, Building 123, IR-10, Parcel B, Hunters Point Shipyard, San Francisco, California." November 10.

International Technology Corporation. 2002. "Draft Phase II Soil Vapor Extraction Treatability Study Report, Building 123, IR-10, Parcel B, Hunters Point Shipyard, San Francisco, California." February 14.

Tetra Tech EM Inc. 2003. "Final Soil Vapor Extraction Confirmation Study Summary, Building 123, Installation Restoration Site 10, Parcel B, Hunters Point Shipyard, San Francisco, California." August 19.