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Ser 6229WR/L8154
10 Apr 1998

From: Commanding Officer, Engineering Field Activity, West, Naval Facilities Engineering Command
To: U. S. Environmental Protection Agency (Attn: Ms. Claire Trombadore)
California Department of Toxic Substances Control (Attn: Ms. Valerie Heusinkveld)
California Regional Water Quality Control Board (Attn: Mr. David Leland)
Subj: PARCEL D DRAFT RECORD OF DECISION, ENGINEERING FIELD
ACTIVITY, WEST, NAVAL FACILITIES ENGINEERING COMMAND, HUNTERS
POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Encl: (1) Navy's Response to Agency Comments on the Draft Parcel D Record of Decision,
Hunters Point Shipyard, San Francisco, California, dtd 10 April 1998 (55-pages)

1. Enclosure (1) is forwarded in accordance with the Hunters Point Annex Federal Facilities Agreement, and it contains the Navy's Response to Agency Comments on the Draft Parcel D Record of Decision (ROD). The Response to Agency Comments is being submitted at this time instead of the Draft-Final Parcel D Record of Decision as agreed to by the Hunters Point Shipyard BCT during a 20 March 1998 BCT conference phone call. Please review enclosure (1) and provide your written comments to the Commanding Officer, Engineering Field Activity, West, Naval Facilities Engineering Command, (Attn: Mr. Richard Powell, Code 6221), 900 Commodore Drive, San Bruno, CA 94066-5006, with a copy to Mr. William Radzevich, Code 6229. The receipt of your response by 24 April 1998 will allow the Navy to keep this Record of Decision on schedule.
2. The Hunters Point Shipyard BCT has agreed to revise the estimated date for submission of the Draft Final Parcel D ROD to 11 May 1998 from 23 March 1998. This revision is needed for the resolution of issues on both the Final Parcel B ROD and the Draft Final Parcel D ROD. This revised schedule will allow the Navy to provide an improved product to the regulatory agencies, to the Restoration Advisory Board, and to the public. The other dates shown on the Hunters Point Annex FFA Parcel D Schedule, that was revised on 07 January 1998, will be changed accordingly.
3. If you have any questions regarding these changes, please contact Mr. William Radzevich, Code 6229, at (650) 244-2555.

Original by:

RICHARD E. POWELL
Senior RPM/EIC for HPS/TI
By direction

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Copies to:

City and County of San Francisco Dept. of Public Health, Bureau of Toxics.

(Attn: Ms. Amy Brownell)

Tetra Tech EMI. (Attn: Mr. James Sickles)

Roy F. Weston, Inc. (Attn: Ms. Karla Brasaemle)

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**NAVY'S RESPONSE TO AGENCY COMMENTS ON THE
DRAFT PARCEL D RECORD OF DECISION
HUNTERS POINT SHIPYARD
SAN FRANCISCO**

This document presents the U.S. Department of the Navy's (Navy) responses to comments from the regulatory agencies and the San Francisco Redevelopment Agency (SFRA) on the Parcel D draft Record of Decision (ROD), Hunters Point Shipyard (HPS), San Francisco, California, dated November 3, 1997. The comments were received from the following agencies: Regional Water Quality Control Board (RWQCB) on December 16, 1997; California Department of Toxic Substances Control (DTSC) on December 17, 1997; SFRA on December 18, 1997; and U.S. Environmental Protection Agency (EPA) on January 5 and February 17, 1998.

Based on discussions with the regulatory agencies and responses to comments, several major revisions have been incorporated into the draft final ROD:

- Language throughout the draft final Parcel D ROD has been revised to be consistent with the final Parcel B ROD, specifically deed restriction and deed notification language.
- The groundwater monitoring approach has been modified based on discussions with the regulatory agencies held on January 29 and February 24, 1998.
- Sections that refer to the selected remedy (Sections 1.4 and 2.10) have been revised to clearly state the selected cleanup goal scenario, specifically that one contiguous area designated for mixed use in the northern portion of Parcel D, consisting of a portion of installation restoration (IR)-37 and a portion of an area without IR designation, will meet an excess lifetime cancer risk (ELCR) of 1×10^{-6} for residential use and the remainder of Parcel D will meet an ELCR level of 1×10^{-5} for industrial use.
- Section 2.6, Summary of Site Risks, and Section 2.8, Description of Alternatives, have been revised to more thoroughly summarize information presented in the Parcel D human health risk assessment (HHRA) and the draft final Parcel D feasibility study (FS), respectively, instead of limiting or focusing the respective discussions on the selected remedy.
- Tables 7 and 8 have been added to the ROD. These tables present the current soil remediation volumes and costs for each of the remedial alternatives and cleanup goal scenarios.

RESPONSES TO EPA COMMENTS, DATED JANUARY 5, 1998, ON DRAFT ROD

General Comments

1. **Comment:** EPA was disappointed to see the Navy did not include appropriate wording changes agreed upon for the 10-9-97 Draft Final Parcel B ROD in the 11-3-97 Draft Parcel D ROD despite the Navy requesting additional time prior to submittal of the draft D ROD in order to ensure final Parcel B language was included, as appropriate, in the D ROD. The Navy needs to review the B ROD and ensure appropriate language, for example on institutional controls, is included in the D ROD.

Response: The draft final Parcel D ROD will be compared to the final Parcel B ROD to ensure that appropriate language, specifically language on institutional controls, similar to that in the Parcel B ROD, is added to the draft final Parcel D ROD, notably in Section 2.10 of the ROD. In addition to the institutional control language in the Parcel B ROD, the draft final Parcel D ROD has been revised to include a deed restriction for industrial use that prohibits development of the parcel, except for the northwest corner, for residential purposes. Figures 5 and 6 identify that area of Parcel D that may be developed for mixed use, which can include residential use.

2. **Comment:** Although the Navy has selected a cleanup level for soil of industrial, 1×10^{-5} , the Navy has failed to restrict future land use in the draft ROD. Land use must be restricted to industrial if cleanup is not going to be to an unrestricted level.

Response: In Section 1.4 of the Declaration and in Section 2.10, Description of Selected Remedy, the Navy has added two bullets describing the cleanup goal for Parcel D: one lists the cleanup goal for the northwest corner of Parcel D designated for mixed use, and the other bullet lists the cleanup goal for the remainder of Parcel D.

3. **Comment:** In the ROD and response to community comments, the Navy fails to provide adequate justification for the 10^{-5} cleanup level. The Navy needs to explain that the goal of cleanup at Hunters Point IR sites is 10^{-6} but other factors such as high cost can prevent the Navy from reaching this goal. The Navy should consider cleanup goals for Parcel D on an IR site by IR site basis. If at an individual IR site, it does not cost that much more to reach 10^{-6} , the Navy should strongly consider cleaning up to this level at the site. This would be more in keeping with the goals of the NCP and would be more acceptable to both EPA and the community. At present, the Navy has not adequately justified not going to 10^{-6} . EPA management is very concerned about this issue and wants to see some thoughtful revisions to the draft final ROD addressing these concerns. Further, in its comments, the community made clear that it believes 10^{-6} industrial, at a minimum, is

the appropriate cleanup level for Parcel D sites. However, the Navy states that the community accepts the selected alternative of 10^{-5} in the 9 criteria analysis. This is simply not true. If the Navy were to address D IR sites individually as outlined above, the Navy could more effectively argue that the community would likely support the Navy's decision and reasoning for it.

Response: The Navy acknowledges EPA's concern regarding the proposed 1×10^{-5} industrial cleanup level and the comments received from the community (specifically four sources: one individual, one contractor's representative, a local community environmental group, and one regional environmental group). The Navy has evaluated the goal of cleanup at Parcel D to allow the future proposed industrial reuse; with a small area of proposed mixed use in the northwest corner of the parcel. To better clarify the decision to clean the parcel to industrial 1×10^{-5} versus industrial 1×10^{-6} , EPA suggests that the Navy evaluate cleanup goals for Parcel D on an IR site by IR site basis rather than a parcel-wide basis using 1×10^{-6} as a point of departure for the cleanup goal. Such an analysis is presented in the table below. Also presented in conjunction with the site by site analysis is a summary of EPA's nine criteria for evaluating cleanup remedies to illustrate the comparison of scenarios 1 and 2 at Parcel D

The table presents a cost comparison of remediating each site for both cleanup goal scenarios 1 and 2 for Alternative 2, which is excavation and off-site disposal. Included at the bottom of the table are the costs for the groundwater monitoring and mitigative measures, which are in addition to the site specific comparison. The table does not include IR-36, which was transferred to Parcel E. As shown in the table, the cost for remediating to 1×10^{-5} industrial is \$9,321,957. In addition, these costs do reflect the change in depth of remediation. Please note that until the groundwater monitoring approach is finalized in the Parcel D Remedial Action Monitoring Plan (RAMP), the \$54,757 cost for groundwater monitoring will be subject to modification.

IR Site	Scenario 1: 1×10^{-5} Industrial		Scenario 2: 1×10^{-6} Industrial	
	Soil Remediation Area (yd ³)	Cost (\$)	Soil Remediation Area (yd ³)	Cost (\$)
8	7	4,271	1,910	1,021,086
9	6,037	3,683,415	6,226	3,328,420
22	24	14,643	78	41,699
32	No cleanup proposed	0	9	4,811
33N	5	3,051	685	366,201
33S	1,348	822,469	1,684	900,266
34	No cleanup proposed	0	7	3,742
35	278	169,619	285	152,361
37	No cleanup proposed	0	559	298,841

IR Site	Scenario 1: 1×10^{-6} Industrial		Scenario 2: 1×10^{-6} Industrial	
	Soil Remediation Area (yd ³)	Cost (\$)	Soil Remediation Area (yd ³)	Cost (\$)
38	No cleanup proposed	0	17	9,088
39	311	189,754	1,689	902,939
44	No cleanup proposed	0	33	17,642
53	536	327,035	1,078	576,299
55	21	12,813	1,582	845,737
65	No cleanup proposed	0	14	7,484
68	No cleanup proposed	0	1,884	1,007,186
69	No cleanup proposed	0	711	380,101
70	1,926	1,175,130	5,281	2,823,223
Subtotal		\$6,402,200		\$12,687,126
Groundwater Monitoring		54,757		54,757
Steam Lines		500,000		500,000
Storm Drain Rehabilitation		2,365,000		2,365,000
Total		\$9,321,957		\$15,606,883

Notes:

yd³ Cubic yards

IR Installation restoration

Soil remediation estimated using \$610.14 per yd³ for scenario 1 and \$534.60 per yd³ for scenario 2.

The goal of the cleanup was evaluated using 1×10^{-6} as a point of departure and considering EPA's nine criteria. The first two threshold criteria that all remedies must meet are overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARAR). The primary balancing criteria are long-term effectiveness and permanence; reduction of mobility, toxicity, or volume through treatment; short-term effectiveness; implementability; and cost. The final two criteria, regulatory acceptance and community acceptance, are modifying criteria that are considered in the final selection.

The Navy's primary goal is to remediate HPS to the industrial cleanup goal of 1×10^{-6} (soil cleanup goal scenario 2), which is the point of departure identified in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Based on the following criteria, however, the Navy has determined that it will be more appropriate to remediate Parcel D to the 1×10^{-5} industrial cleanup goal (soil cleanup goal scenario 1).

Overall Protection of Human Health and the Environment: Both cleanup goal scenarios are protective of human health and the environment.

Compliance With ARARs: Both cleanup goals will comply with ARARs.

Long Term Effectiveness and Permanence: Remediation under both soil cleanup goal scenarios will reduce the residual risks remaining after implementing the remedial action. Under soil cleanup goal scenario 2, all areas will be remediated so that no residual risk to future workers exceeds 1×10^{-6} . Under soil cleanup goal scenario 1, a small level of residual risk to future workers exceeding 1×10^{-6} will be left at Parcel D. It is also important to note that the ambient metal concentrations result in an ELCR exceeding 1×10^{-5} . Therefore, remediation of certain areas to levels such as 1×10^{-6} while adjacent areas contain background ambient levels of metals above this level would be non-productive. However, the long-term adequacy and reliability of controls depend on the controls at the off-site licensed landfills in which the excavated soil is disposed. Since under soil cleanup goal scenario 1 less than 40 percent of the volume of soil for cleanup goal scenario 2 will be sent to a landfill, the concern of the reliability of controls and the long-term adequacy is significantly less. There is also a concern regarding the availability of space in landfills across the country. By disposing of a smaller volume of contaminated soil at an off-site landfill, more room is available in the landfill for contaminants from other sites.

Reduction of Mobility, Toxicity, or Volume through Treatment: The selected remedy does not include treatment; therefore, the reduction of mobility, toxicity, or volume of contaminated soil through treatment will not change regardless of the soil cleanup goal scenario selected.

Short-Term Effectiveness: The four factors considered when evaluating the short-term effectiveness of an alternative are (1) protection of the community during the remedial action, (2) protection of workers during the remedial action, (3) environmental impacts resulting from construction and implementation of the alternative, and (4) time to complete the remedial action.

Implementing soil cleanup goal scenario 1 would be more effective in the short term than cleanup goal scenario 2. For example, there would be a minimum of 75 percent less truck traffic affecting the local community, and the tenants on HPS would also experience less traffic. The protection of workers would also be greater with cleanup goal scenario 1 since less soil would be excavated and less heavy equipment would be used. The time required for the remedial action would be at least 1 month shorter, possibly more depending on the number of crews, which would allow faster reuse potential.

Implementability: Implementability is the same under both cleanup goals.

Cost: The costs associated with the two soil cleanup goal scenarios vary greatly \$6,402,200 and \$12,687,126, a difference of \$6.2 million, which could be used for other more contaminated sites. If the costs to remediate Parcel D are less, there is a better chance that full funding will be provided to complete the remedial action in 1 year, and transfer the property significantly earlier.

Community Acceptance: The Navy believes that the community would be supportive of the 1×10^{-5} cleanup goal scenario since it would be less disruptive to the community, have less impacts on local traffic and tenants at HPS, and provide for faster reuse of the property.

Regulatory Agency Acceptance: It is believed that the regulatory agencies would prefer the Navy to clean up to a higher standard. However, both cleanup goal scenarios are within the acceptable risk range.

In summary, the site-by-site cleanup analysis indicates that eight out of 18 sites would have substantial cost differentials in cleanup, and eight additional sites would require no cleanup under scenario 1 but would under scenario 2, with the remaining two sites having smaller incremental costs. These differences in conjunction with the difficulties in administering such a "checkerboard" approach to cleanup support the parcel-wide cleanup approach.

The analysis using the nine criteria further supports a cleanup to 1×10^{-5} industrial based on the following: (1) reduction in soil volume to be disposed in a landfill by 40 percent; (2) a minimal reduction in risk in light of an ambient background risk due to metals in the soil that is already in the 1×10^{-5} range; (3) a reduction in soil transport traffic of 75 percent, as well as less exposure to workers during the cleanup process; (4) faster cleanup and early reuse; (5) an overall cost differential of \$6.2 million, which could allow project funding more easily in one fiscal year; and (6) use of the funds not spent on Parcel D would then be available for more extensive cleanups for other parcels at HPS.

Tables summarizing the revised soil volumes and cost associated with each cleanup goal scenario are referred to in the Table section of the draft final Parcel D ROD. They are based on the removal of IR-36, changes in excavation depths, and revised groundwater monitoring approach.

4. **Comment:** EPA is concerned with the City's intention to use a small portion of the Parcel as "mixed use" which can include residential use in the form of live/work units. This portion of the Parcel was never investigated because at the PA stage there was no indication that hazardous substances or wastes were ever present on this portion of the Parcel. Thus, this portion of the Parcel is classified, by default, as meeting residential standards. Since AAA leased the shipyard for 10 years during the 1970's, EPA is reluctant to agree that we can assume this portion of Parcel D is in fact clean and appropriate for unrestricted land use. The Navy needs to discuss with the City their true intentions for redevelopment of this portion of the parcel and perhaps consider limited sampling to support unrestricted reuse if this is what the City intends for this portion.

Response: In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, a preliminary assessment (PA) was conducted in 1989 and 1990 that identified areas where chemicals may have been released to the environment. Utilities and building sites where possible releases of hazardous substances to the environment may have occurred were identified through record searches, interviews, and site visits. These areas were designated PA sites, and work plans to investigate them as part of the site inspections (SI) were prepared by the Navy.

The SIs at the PA sites were conducted in 1993 and the draft final SI report is dated May 30, 1994. Sites requiring further investigations were advanced to the remedial investigation (RI) phase. Remedial investigations for Parcel D were conducted from 1994 through 1996. The draft final RI report is dated October 25, 1996, and summarizes the findings of the PA, SI, and RI investigations.

Throughout this process, the area of mixed use, consisting of the northern portion of IR-37 and an area without IR designation, was never identified as requiring investigation. To be consistent with the appropriate sections of CERCLA, the Navy feels that this site does not require investigation at this time.

Following the intent of Section 2.10 of the Parcel B ROD, the Declaration has been restructured and an additional restriction has been added concerning the prohibition against residential use in areas other than the mixed-use area.

5. **Comment:** **Groundwater alternatives are proposed as contingency alternatives only and the ROD includes no 9 criteria analysis as to what groundwater alternative is best whether it be no action, monitoring and mitigative measures or active remediation. The EPA realizes now that this was not the way to go. It makes more sense, especially since the alternative selected includes some monitoring, lining of storm drains and other mitigative measures to ensure no contaminated groundwater will come into contact with the Bay, to actually briefly layout a few alternatives in the ROD and select the one appropriate. For example three alternatives could be compared in the ROD: 1) no action, 2) the selected GW remedy of monitoring and mitigative measures, and 3) one additional alternative perhaps with active treatment. In the FS, the Navy stated that since groundwater modeling indicates that there is no risk to the bay and since there are no pathways to pose risks to human receptors, groundwater does not need to be cleaned up. However, EPA continues to disagree with the Navy's conclusions based upon modeling and believes selection of monitoring and mitigative measures is appropriate as the groundwater selected remedy. In order to comply with the NCP, the ROD must include language demonstrating this including a brief 9 criteria analysis. EPA's Office of Regional Counsel feels very strongly about this and will not recommend signature without it. EPA is available to assist with drafting this wording at the Navy's request.**

Response: The draft final Parcel D FS does present the nine criteria analysis for the contingency groundwater remedial alternatives. As a result, the nine criteria analysis will not be presented in the ROD. The following is a brief description of where this analysis can be found in the draft final Parcel D FS.

The draft final Parcel D FS states that the Parcel D groundwater currently meets remedial action objectives (RAO) with no further action. As a result, groundwater does not require remediation at this time. However, contingency remedial alternatives have been developed and evaluated for the A-aquifer groundwater in the event that continued groundwater monitoring indicates the

need for implementing remedial groundwater measures. In this event, the regulatory agencies will be notified, and the Navy will evaluate if contingency groundwater remedial actions are necessary. Each contingency groundwater alternative is described in Section 4.0 of the draft final Parcel D FS and are summarized in Table 4-2.

Each contingency groundwater remedial alternative is evaluated in Section 5.0 of the draft final Parcel D FS. The evaluation criteria for the alternatives are based on statutory requirements of CERCLA. The nine criteria used for evaluating the alternatives are also presented in Section 5.0 of the draft final Parcel D FS.

6. **Comment:** **IR-36 is not in Parcel E and therefore no portion of the Parcel D soil or groundwater remedy should address IR-36 issues. Further, was the number of IR sites and the costs of the Parcel D remedy adjusted to account for the transfer of IR-36 to Parcel E?**

Response: The ROD does not discuss the soil and groundwater remedies for IR-36. These remedies will be included in the Parcel E FS. The number of sites and costs have been adjusted to account for the transfer of IR-36 from Parcel D into Parcel E.

7. **Comment:** **The draft ROD has only IR-22 groundwater being monitored. EPA is not certain that this is sufficient. Perhaps all of the Parcel D bayfront should be monitored to ensure that the groundwater monitoring predictions hold true and the bay is not impacted by Parcel D groundwater contamination.**

Response: The draft ROD does not propose monitoring of the IR-22 groundwater since it is located in the tidally influenced zone. Two sentinel wells are located upgradient of IR-22. These sentinel wells are placed to monitor the effectiveness of the soil removals and the resulting leachate to the groundwater at IR-33 North and South.

Based on discussions with the regulatory agencies on January 29 and on February 24, 1998, however, it was agreed to add additional monitoring of the groundwater migrating from IR-08, IR-22, IR-69, and IR-71. The groundwater migrating from IR-08 will use a sentinel well approach to monitor any contamination migrating from IR-08. The groundwater migrating from IR-22, IR-69, and IR-71 will use point of compliance (POC) wells located at the Bay margin. Figure 6 in the Parcel D ROD shows the locations of these wells and additional sentinel and POC wells for Parcel D.

8. **Comment:** **What are the Parcel D data gaps, how and when are they to be addressed and is the ROD impacted?**

Response: In addition to the Parcel D data gaps identified in the draft final Parcel D RI report, the Navy proposes to conduct a storm drain infiltration study on the storm drain lines located below the water table and advance additional B-aquifer monitoring wells. These data gaps should not impact this ROD. The data gap work plan will be finalized and submitted to the regulatory agencies for review after the ROD for Parcel D has been signed. This process will ensure that any additional work identified in the ROD will be incorporated into the data gap work plan.

9. **Comment:** Has Navy investigated impact of EPA offsite rule on the Parcel D cleanup?

Response: The Navy's remedial action contractor will propose disposal sites, Class I and II landfills, for hazardous waste in its remedial action implementation work plan. The regulatory agencies will have a chance to review this document prior to initiating the remedial action. The Navy will also ensure that the disposal sites chosen will have been approved by the EPA.

Specific Comments

1. **Comment:** Page 2, second sentence. Insert "remedy" between the words "final" and "for".

Response: This change has been incorporated into the text.

2. **Comment:** Page 2, first bullet. What is the cleanup level for non cancer endpoints? Please state if appropriate.

Response: This bullet has been modified and an additional bullet has been added to incorporate the information presented in the following sentences. The selected cleanup goal scenario requires that one contiguous area designated for mixed use in the northern portion of Parcel D, meet an ELCR level of 1×10^{-6} for residential use. It also specifies that the remainder of Parcel D will meet an ELCR level of 1×10^{-5} for industrial use.

Future Industrial Worker (industrial cleanup goal scenario):

- ELCR $< 1 \times 10^{-5}$
- Hazard index (HI) (Adult) < 1.0
- Lead $< 1,000$ milligrams per kilogram (mg/kg)

Future Resident (residential cleanup goal scenario):

- ELCR $< 1 \times 10^{-6}$
- HI (future child resident) < 1.0
- Lead < 221 mg/kg

3. **Comment:** Page 2, seventh bullet. Does the shallow water bearing zone actually reach to 200 feet on Parcel D? Was this depth range specific to Parcel B?

Response: The shallow water-bearing zone consists of the A- and B-aquifers and terminates at the top of the bedrock water-bearing zone. The depth to the bedrock water-bearing zone ranges from 1.5 feet below ground surface (bgs) at IR-09 to about 240 bgs at the regunning pier, IR-68. The depth has been changed from 200 feet to 240 feet in the text.

4. **Comment:** Page 2. A tenth bullet should be added. Deed restrictions on the reuse of Parcel D. Parcel D will be restricted to industrial reuse. (Note: if appropriate, subsequent to discussions with the BCT and the City, add information about the subparcels that are at an unrestricted level and what they will be reused for).

Response: Following the intent of Section 2.10 of the Parcel B ROD, the Declaration has been restructured and an additional restriction has been added concerning the prohibition against residential use in areas other than the mixed-use area.

The SFRA's subparcel numbers for the mixed-use area in IR-37 are the northwestern portion of block S29 and the northern portion of blocks S30 and S31.

5. **Comment:** Page 3, second paragraph, third sentence. Add a "d" to the word "influence"

Response: This change has been incorporated into the text.

6. **Comment:** Page 3, second paragraph. Still showing default multiplier of 10 times. DTSC has requested 1 until modeling is approved and multiplier agreed upon during RD. Further, explain the FS dilution attenuation factor (DAF) modeling and where the point of compliance is for Parcel D groundwater.

Response: Based on discussions with the regulatory agencies subsequent to receiving this comment, the text has been revised to state that the trigger values are the more stringent value of the two water quality objectives (National Ambient Water Quality Criteria [NAWQC] or the RWQCB's Basin Plan water quality objectives) for protection of saltwater aquatic life. The trigger values for inorganics are then adjusted to account for Hunters Point groundwater ambient levels (HGAL). The HGAL is the trigger value when the HGAL exceeds the selected water quality objective.

The POC for the Parcel D groundwater is at the inland edge of the tidally influenced zone. Certain portions of Parcel D are not influenced by the tides due to the presence of seawalls, sheetpiles, and piers restricting tidal influence. At these locations, the POC is at the inland side of these structures.

Due to the heterogeneity of the fill in Parcel D, the dilution-attenuation factor (DAF) modeling will not be proposed in the Parcel D RAMP, slated for mid-1998. As a result, NAWQC, Basin Plan water quality objectives, and HGALs will be used as trigger values for groundwater exceedances.

7. **Comment:** Page 4, first paragraph. Delete language on FFA becoming IAG.
- Response:** This change has been incorporated into the text.
8. **Comment:** Page 4, second paragraph, last sentence. See comment 6 above on multiplier.
- Response:** See response to EPA's specific comment number 6.
9. **Comment:** Page 4, fourth paragraph. Add "soil and" in front of "groundwater".
- Response:** This change has been incorporated into the text.
10. **Comment:** Page 6, second paragraph. Is parcel D "100 acres" without IR-36?
- Response:** Parcel D is 100 acres excluding IR-36.
11. **Comment:** Page 6, second paragraph, last sentence. This portion of the parcel should be identified by subparcel should land use restrictions not apply to this portion.
- Response:** The following text has been added to this paragraph: "Under the local reuse authority's current land-use plan, this small complex will be zoned primarily for mixed use." This corresponds to the SFRA's subparcel numbers S29, northwest portion, and the northern portion of S30 and S31.
12. **Comment:** Page 12, last paragraph. May want to mention that SF Police also a tenant.
- Response:** This change has been incorporated into the text.
13. **Comment:** Page 13, section 2.2.2. Mention radiation (Cesium "peanut") spill and its cleanup.
- Response:** The following text has been added to the discussion regarding the cesium-137 (Cs-137) spill:

"In 1996, the Navy remediated an area contaminated with Cs-137, located in IR-33 between Buildings 364 and 351A. A peanut-shaped area of asphalt approximately 20 feet by 8 feet was chipped and placed in four 55-gallon containers. Asphalt in the peanut-shaped area was removed to approximately four-inches below the surface and a total of 30 cubic feet of asphalt was removed from the site. Twenty confirmatory samples were obtained in the remediated area and its adjacent surroundings. Sample results ranged between 0 to 1.2 picoCuries per gram (pCi/g) with an average sample detection of 0.341 pCi/g. These results satisfy the NUREG-1500 limits for Cs-137 of 2.14 pCi/g at 3 millirems per year level for the most restrictive scenario (residential) and that at these levels, human health is protected (Allied Technology Group, Inc. [ATG] 1996)."

14. **Comment:** Page 13, Section 2.2.3. Was there an action memo or summary report for IR-8? Please elaborate.

Response: Polychlorinated biphenyls (PCB) were discovered outside of former Building 503 during the repair of an underground steam line in 1986. This area was investigated in 1986 and soil removal activities were conducted in 1988. A summary report was prepared by Environmental Resources Management-West and submitted on March 3, 1989. This summary report documents the cleanup actions and the analytical results of the confirmation samples. There was no action memorandum prepared for this cleanup action.

15. **Comment:** Page 15, removals. Please confirm that the bottoms and sides of the EEs on D are clean and require no further action. Note date of draft EE summary report. Also see comment 13 above - should it be discussed under removals?

Response: The draft Project Completion Report, which summarizes the field activities for the exploratory excavation (EE) removal action, was prepared by International Technologies, Inc. (IT) and dated February 1997. One of the objectives of the removal action was to "excavate soil containing hazardous substances at concentrations above screening levels (EPA Region IX preliminary remediation goals [PRG] and Hunters Point ambient levels [HPAL])." Because PRGs are based on an ELCR of 1×10^{-6} , the removal action objectives are more conservative than the RAOs and the EEs require no further action. The following information will be summarized in Section 2.2.3, which summarizes cleanup actions conducted at HPS.

Four EEs are located in Parcel D. These EEs (EE-12, EE-14, EE-15/16, and EE-17) were completed as part of the HPS EE removal action conducted from August 1996 through January 1997. These activities included excavating soil at each EE site, collecting and analyzing confirmation samples, disposing of affected soils at an off-site landfill, backfilling the excavations, and regrading the sites.

At EE-12, about 160 cubic yards (yd³) were excavated, at EE-14 about 36 yd³ were excavated, at EE-15/16 about 65 yd³ were excavated, and at EE-17 about 94 yd³ were excavated. The construction summary report recommended no further action for these sites.

The four EEs corresponded to either a *de minimus* area or a remediation area as proposed in the draft final FS for Parcel D. EE-12 remediated the contaminant, lead, in *de minimus* area AU19 (7453), located in IR-33 North. EE-14 remediated thallium at IR-37. Based on the confirmation sampling results at two sampling locations, however, thallium is present at a maximum concentration of 1.3 mg/kg at 4 feet bgs. This detection of thallium exceeds the HPAL of 0.81 mg/kg. PRGs do not exist for thallium. Thallium exceeds the HPAL at two locations at this depth, adjacent to the building foundation and underneath existing railroad tracks. Samples obtained at 8 feet bgs from the same excavation did not detect thallium above the method detection limit (DL). The EE summary report indicated that there will be no further action at this site since the detection of thallium was adjacent to the building foundation and also located beneath existing railroad tracks. The Navy recommends that no further remedial actions be conducted to remove thallium at 4 feet bgs, since its occurrence is limited, is approximately 1.6 times the HPAL value, and does not exceed the remedial action target cleanup level of 140 mg/kg. EE-15/16 remediated the contaminants in *de minimus* area BG30 (11186), located in IR-53/16. EE-17 remediated the contaminants in remediation area 70-1 (BC26), located in IR-70.

As a result of the EE, the *de minimus* and remediation areas will require no further investigation and have been removed from further discussion in this ROD and will not be indicated as requiring remediation in subsequent remedial design and remedial action reports.

16. **Comment:** Page 16, last sentence. Add an "e" to include.
- Response:** This change has been incorporated into the text.
17. **Comment:** Page 17. Dates correct? Also is IR-36 deleted from the discussions under Section 2.5?
- Response:** At the time the draft ROD was prepared, the final ROD approval dates presented in Section 2.4 were correct. As of April 7, 1998, however, the Parcel D ROD approval date has been changed to June 10, 1998.
- IR-36 is not discussed in Section 2.5 of the draft final Parcel D ROD.
18. **Comment:** Page 18. Note the IR sites where petroleum only, if any, that will be addressed by CAP.

Response: Text has been added to Section 2.5 to state that the petroleum corrective action plan (CAP) will be prepared for the Navy by Tetra Tech EM Inc. (TtEMI), after the award of the contract in May. This CAP will identify the sites where only petroleum contamination exists. This CAP will be completed by the end of 1998.

Using the RI screening criteria of concentrations of gasoline greater than 100 mg/kg or concentrations of diesel and motor oil greater than 1,000 mg/kg, the following is a preliminary listing of the IR sites where only petroleum contamination is present, the associated borings, the depth of the occurrences, and the analyte concentrations.

<u>Location</u>	<u>Depth (ft bgs)</u>	<u>Analyte</u>	<u>Concentration (mg/kg)</u>
IR-09			
IR09MW51F	1.88	TPH-mo	6,500
IR-22			
IR22B021A	1.25	TPH-mo	1,800
IR-33N			
IR33B082	3.25	TPH-mo	1,200
IR33B108	6.25	TPH-mo	2,000
IR-37			
IR37B020	0.75	TPH-d	1,300
IR37SS22	0	TPH-mo	4,100
IR37SS24	0	TPH-mo	1,100
PA37SS04	1.25	TPH-gas	130
IR-39			
IR39B008	1.75	TPH-mo	3,900
	6.25	TPH-mo	1,700
	11.25	TPH-mo	2,800
IR39MW33A	16.25	TPH-d	4,000
	16.25	TPH-mo	9,700
PA39B003	6.75	TPH-d	4,500
	6.75	TPH-gas	710
	9.25	TPH-gas	110
IR-44			
IR44B009	1.5	TPH-mo	6,500
IR44MW08A	0.5	TPH-mo	1,400
IR-53			
IR53B020	1.75	TPH-mo	1,300
PA53SS10	1.25	TPH-d	1,800
IR-71			
IR71B007	0.25	TPH-mo	2,100

Please note that there were no reviews of sampling locations at sites IR-45, IR-48, IR-50, and IR-51. It was assumed that the steam lines that make up IR-45 and IR-48 will be excavated, and all total petroleum hydrocarbons (TPH) associated with these lines will be addressed as part of this anticipated response action. It was also assumed that any TPH associated with the storm drains and sanitary sewer system (IR-50) and former transformer locations (IR-51) is commingled with hazardous substances and will be addressed as part of the CERCLA response action.

19. **Comment:** Page 18, third paragraph - for IR-9 are metals present before or after removal? Please clarify.

Response: Section 2.5 briefly summarizes the RI soil and groundwater sampling results. The contaminant concentrations listed in this section represent contaminant levels prior to conducting removal actions. However, the IR-09 removal action did not involve soil excavation. The purpose of this removal action was to remove any aboveground structures contaminated with a zinc chromate coating and to remove the three pickling tanks located in the northwest corner of the site. During the course of this removal action, soil and debris on the surface of the site contaminated with zinc chromate was also removed and disposed of off site; however, no extensive soil excavation was conducted during this removal action.

20. **Comment:** Page 19, first paragraph - reference tables from RI/FS and duplicated in appendix?

Response: The text has been revised to indicate that detailed information can be found in the RI and Appendix A of the ROD summarizes hazardous substances detected at Parcel D.

21. **Comment:** Page 55. Alternative 2 should be Deed Restriction not notification. Future land use must be restricted. Also in second sentence of third paragraph note that landfill is offsite not onsite. On page 56, note there will be O&M costs for monitoring groundwater.

Response: Section 2.8 has been modified to clearly describe each of the cleanup goal scenarios under which each of the alternatives were evaluated in the Parcel D FS report. A sentence has been added to indicate that cleanup to cleanup goal scenarios 1 and 2 requires deed restrictions prohibiting residential use of Parcel D, except at the area designated for mixed use.

"Off site" has been incorporated into the 3rd paragraph of the text.

Operation and maintenance (O&M) costs have been added to the text. These O&M costs are based on 30 years of groundwater monitoring for the proposed sentinel and POC wells.

22. **Comment:** Page 62, Section 2.9.9. Per my general comment, the community does not accept this selected remedy.

Response: The text has been revised to indicate the relative community preference for each alternative. As stated in the response to EPA general comment number 3, a few community members do not agree with the selected cleanup goal scenario. Section 2.9, including Section 2.9.9, evaluates the relative performance of the five remedial alternatives without consideration of cleanup goal scenarios.

23. **Comment:** Page 62, need dates. Also in first sentence of Section 2.10, should be deed restrictions for alt. 2. Selected remedy must address institutional controls. Also mention IR-22 and EPA's concerns about groundwater.

Response: The Parcel D proposed remedial design and remedial action schedule, presented in Section 2.10, has been revised to include tentative dates.

Section 2.8 has been modified to include text regarding which cleanup goal scenarios require deed restrictions.

As explained in response to EPA's general comment number 1, the draft final Parcel D ROD will be revised to include institutional controls using language similar to the language in the final Parcel B ROD. In addition to the institutional controls in the Parcel B ROD, a statement will be added that, with the exception of the northwest corner of the parcel as shown on Figure 5, residential use of the property will be prohibited.

Please see response to EPA's general comment number 7 for discussion of the IR-22 groundwater and the associated monitoring.

24. **Comment:** References. Reference Parcel B ROD.

Response: The final Parcel B ROD has been incorporated into the references.

RESPONSES TO EPA COMMENTS, DATED FEBRUARY 17, 1998, ON THE DRAFT PARCEL D ROD RESPONSIVENESS SUMMARY

General Comments

1. **Comment:** It is important to answer questions as concisely and clearly as possible. It is recommended that, if possible, the Navy respond to questions with a simple yes or no and then provide an explanation.

Response: The Navy has reviewed all responses included in the responsiveness summary. Those comments that lend themselves to a "yes/no" response have been revised to state "yes" or "no" at the start of the response. Section 3.1, response numbers 1, 2, 3, and 5; and under Section 3.4, response numbers 3 and 5 have been revised accordingly.

Specific Comments – Section 3.1

1. **Comment:** **Comment 1: The response should be something like: "Yes. Deed restrictions will be required since the Navy's selected remedy only requires cleanup to industrial reuse levels." Deed restrictions will not be "considered" as the response now reads, they will be required because cleanup is not to unrestricted as it was on Parcel B.**

Response: The Navy has revised the response. The first sentence in the response to comment number 1 now states, "Yes, deed restrictions will be placed on Parcel D, such as (1) prohibiting residential use of Parcel D, except in the northwest corner designated for mixed use; (2) requiring that all future soils excavated must be managed in accordance with federal, state, and local laws and requirements, including local ordinance such as Articles 4.1 and 20 of the San Francisco Department of Public Works (SFPDW) Code; (3) for excavated soils that exceed cleanup goals presented in Table 11 of this ROD, prohibiting their placement on the ground surface or mixing them with soils present in the surface to groundwater zone; (4) prohibiting all uses of Parcel D groundwater within shallow water-bearing zones to 240 feet bgs; (5) prohibiting surface discharge of contaminated groundwater, and (6) requiring that seawalls, sheetpiles, and piers be maintained to prevent tidal influence in those areas where no tidal influence currently exists."

2. **Comment:** **Comment 2: The response should begin with, "Yes" and then continue with the more detailed response. In the second paragraph of the response, insert "RI" prior to the word "evaluation." Also add a closing sentence to the effect: "Therefore, while contaminants on Parcel D were evaluated for potential threats due to volatilization, the only IR-site to pose a potential volatilization threat was IR-36 which has been transferred to Parcel E for evaluation and cleanup."**

Response: The Navy has revised the response according to EPA's suggested language. The first sentence in the response to comment number 2 now states, "Yes, other contaminants were evaluated for potential volatilization."

In the second paragraph, the suggested information has been added to the text.

The following language has been added at the end of the second paragraph: "Therefore, since IR-36 was the only site posing a volatilization risk at Parcel D and has since been moved to Parcel E, no sites pose a volatilization risk at Parcel D."

Finally, a fourth paragraph has been added stating, "Additionally, two A-aquifer sentinel wells, located downgradient of IR-36, will be used to monitor the groundwater to ensure that the National Ambient Water Quality Criteria¹, state water quality objectives², and the HGALs adjusted criteria for metals are not exceeded at the high tide line within the Parcel D tidally influenced zone; that is, at the point of compliance. These sentinel wells will be installed upgradient from the point of compliance at a distance equivalent to a groundwater travel time of 5 years."

1) As established by the Central Valley California Regional Water Quality Control Board 1995 Compilation of Water Quality Goals.

2) As established by the 1995 Water Quality Control Plan for the San Francisco Bay region (the "Basin Plan").

3. **Comment:** **Comment 3: It is unclear if the Navy is meaning PCE which is tetrachloroethylene or TCE which is the acronym used in the response.**

Response: The response should state that trichloroethene (TCE) was found at IR-09; the response was revised accordingly.

Additional language has been incorporated into the response. The response now reads, "This comment refers to IR-09, where small amounts of trichloroethene (TCE) were detected in the groundwater, raising issues associated with volatilization of the TCE. This site is currently paved; therefore, there are no current exposure pathways. Additionally, the HHRA for Parcel D determined that TCE concentrations in the groundwater would not exceed EPA Region IX PRGs for ambient air under current or future land-use scenarios, including future residential and light industrial land use. The HHRA also determined that groundwater TCE concentrations at Parcel D would not result in indoor air emissions of vinyl chloride exceeding a lifetime risk of 1×10^{-6} . Furthermore, regardless of the current or future use for this site, the TCE concentrations detected in the groundwater are well below concentrations that would require action. Although only a fraction of TCE actually breaks down to form vinyl chloride, as a conservative step, the Navy assumed that TCE would completely break down to form vinyl chloride. TCE concentrations in groundwater at Parcel D under both residential and industrial reuse scenarios, when completely broken down to vinyl chloride, do not pose a risk greater than 1×10^{-6} . Therefore, the TCE would not pose a risk to human health or the environment in the event the parking lot is excavated (or pavement is removed). Institutional controls will not be necessary to maintain the integrity of the pavement or buildings."

4. **Comment:** **Comment 4: Not sure if this response is entirely correct. In the draft ROD and in a subsequent meeting with the BCT, the Navy has stated that it does plan to monitor the groundwater downgradient of IR-36 as part of the Parcel D selected remedy. However, the actual cleanup of the IR-36 site will occur as part of the Parcel E remedy.**

Response: The response to comment number 4 has been revised to state, "As noted under comment number 2, IR-36 has been transferred to Parcel E. Monitoring issues associated with possible vinyl chloride in the groundwater at IR-36 will be addressed when the Navy proposes a cleanup plan for Parcel E. Additionally, sentinel wells will be installed at the 5-year buffer zone locations in Parcel D, downgradient of IR-36, to monitor possible groundwater contamination migration associated with IR-36."

5. **Comment:** **Comment 5: Can the Navy elaborate on this response. Has any of the Navy's RI and/or radiation investigation sampling confirmed this? If yes, please include in the response.**

Response: The response to comment number 5 has been revised to state, "Radon problems do not exist in Parcel D. Sampling for radiation in Parcel E was conducted in 1992 as part of the Phase I radiation investigation. During that investigation, radon was only detected in soils located above areas where radium dials were identified. Sampling of soils in areas where no radium dials were found did not detect any radon. Therefore, the Navy concluded that radon existed only in those areas where radium dials existed. As no radium dials were found in Parcel D, the Navy concluded that no radon contamination exists in Parcel D. Furthermore, possible naturally occurring radon sources, such as granitic soils, are not present within the shipyard."

6. **Comment:** **Comment 6: Remove space at beginning of each bullet sentence. Further, the Navy may want to add that a number of possible groundwater contingency alternatives were evaluated in the draft final FS for Parcel D. Thus if deemed necessary, the Navy will be able to quickly implement one of these contingency alternatives.**

Response: The response has been revised accordingly. A sentence has been added at the end of the response stating, "Several groundwater contingency alternatives were evaluated in the draft final FS for Parcel D that can be implemented quickly if the Navy determines it is necessary to implement a contingency plan."

7. **Comment:** **Comment 7: Does the Navy need to include the scenario of 10^{-6} industrial in its response? Also, has the Navy completed its evaluation regarding the possibility of taking cleanup to 10^{-6} industrial at some of the parcel D IR sites? EPA is still awaiting the results of this evaluation.**

Response: The commenter focused on risks associated with cleanup levels of 1×10^{-5} in an industrial scenario. Therefore, the response to that comment focuses on risks associated with cleanup to 1×10^{-5} in an industrial scenario. The Navy performed an evaluation of the feasibility, benefits, and costs associated with cleaning up selected Parcel D sites to 1×10^{-6} for industrial use. That evaluation was based on the NCP's nine cleanup evaluation criteria. Based on this evaluation, the Navy concluded that cleanup to 1×10^{-5} results in a much

more efficient use of limited resources while achieving protection of human health according to requirements established by the NCP, EPA, and the state. For details of the evaluation, see response to EPA's general comment number 3. Tables presenting the soil volumes and costs associated with each alternative for each cleanup goal scenario are referred to in the Table section of the draft final Parcel D ROD.

8. **Comment:** **Comment 10: While the navy has decided not to perform additional sampling in this portion of the Parcel, EPA would like the Navy to include wording in the ROD and the comment 10 response that notification will be made to the LRA that no sampling was performed in this portion of the Parcel. EPA would like the Navy to do this because while AAA leased the site, they often used portions of the base in unanticipated ways and it is prudent to keep this in mind during redevelopment. Also instead of stating in the response that residential reuse is possible, state that "the LRA has proposed mixed use which can include live/work, for this portion of Parcel D."**

Response: The Navy conducted all steps required by the NCP to identify potential hazardous waste sites within Parcel D. Results of the PA and SI indicated no handling, storage, or release of hazardous materials in areas other than the IR sites within Parcel D. Therefore, the Navy does not believe it is necessary to include notification language in the ROD or the responsiveness summary that no sampling was conducted in areas deemed to be unimpacted by past industrial operations. Consistent with the NCP, as well as the ROD for Parcel B and the Navy's approach at other Bay area installations, the ROD only addresses the IR sites within Parcel D.

With respect to the second part of the comment, the statement, "One small portion in the upper northwest corner of Parcel D is targeted for possible residential use;..." has been revised to state, "One small portion in the upper northwest corner of Parcel D has been proposed by the local reuse authority for mixed use, that can include live/work space;...."

9. **Comment:** **Comment 11: Add "At present," to the beginning of the response. The first sentence of the second paragraph should be revised: "As the groundwater in Parcel D will be restricted from use for any purpose (including drinking, agricultural, or industrial), the only possible groundwater exposure pathways...air." The Navy should also ensure that the ROD and the response to comment 11 include wording indicating that the selected remedy shall also require that the seawalls, sheetpiles and rip rap be maintained as they are inhibiting groundwater infiltration with the bay water.**

Response: The text has been revised as requested. A sentence has been inserted before, "In addition, the groundwater..." to state, "The selected remedy will also require that the seawalls, sheetpiling, and rip rap (stabilization materials) will be maintained to inhibit groundwater infiltration into the Bay."

10. **Comment:** **Comment 13: The response does not answer the question. The Navy must try to answer the question posed in the comment in its response.**

Response: The Navy believes that the response adequately answers the question. It would be difficult to explain the exact locations of soils to be excavated; therefore, the reviewer is referred to the maps and tables in the FS report to identify the locations and volumes to excavated at each of those locations.

However, the volume of soils to be excavated has since changed from the 13,160 yd³ reflected in the proposed plan. Therefore, the text has been changed to state, "The total amount of soil to be excavated has changed due to several factors. For example, since the FS was issued, IR-36 has been transferred to Parcel E (as discussed in the response to comment number 2) and therefore the soil remedy has been modified. Rather than excavating soils down to a depth of 10 feet, the Navy will excavate soils down to the water table. As a result of these changes, under the selected remedy, 10,500 yd³ of soil will be removed from various locations within Parcel D. These locations are presented in Table 12 of the ROD."

11. **Comment:** **Comment 14: The response does not answer the question. The Navy must try to answer the question posed in the comment in its response. Can the Table referred to by the Navy be easily duplicated in the response?**

Response: Additional text has been added to the response to state, "Cleaning up Parcel D to meet residential use requirements would likely remove deed restrictions. However, it is important to note that the City of San Francisco is not liable for contamination caused by Navy operations as long as future use complies with the agreed-upon reuse plan. The Navy will continue to comply with the terms of the ROD and CERCLA following transfer of the property to the city."

Specific Comment – Section 3.2

1. **Comment:** **Comment 1: Is the Navy's response correct? It is EPA's understanding that the Navy asks each year for the funding that they need and that it is not accurate to say that funds expended on one parcel "could take funds away from the cleanup activities at other portions of the base."**

Also the Navy discusses cleanup in its response but what about reuse? The Navy needs to explain how workers could be affected and how they should be protected. Also, how deed restrictions and notifications will help to accomplish worker protection.

Response: With respect to the first part of this comment, although the Navy may request a specified amount of funds each year to execute planned actions, Congress does not always appropriate funds accordingly. It is a true statement that given the limited amount of funds available each year, if more funds are used at one site than planned, funds will need to be diverted from other sites. When requesting funds, the Navy must balance priority needs against available funds.

Requesting additional millions of dollars to clean up to residential use when the city's reuse plan calls for industrial use of the site is inconsistent with U.S. Department of Defense (DoD) policy and could be counterproductive.

With respect to protection of future workers, text has been added at the end of the response stating, "Measures to protect future workers on site will be outlined in a base management plan or other similar document. The details of these measures are currently subject to discussion between the Navy and the City of San Francisco. Such measures may be presented in the lease of furtherance of conveyance. Deed restrictions and notification requirements included in the leasing and transfer documents will provide for additional worker safety."

Specific Comment - Section 3.3

1. **Comment:** **Comments 1 and 2: Might also include in the response that the reason its so much cheaper out of state is that California hazardous waste is not a landfill disposal issue outside of California. ECDC is suggesting that the Navy dispose of the hazardous soils in Utah. Also, per FS guidance, estimates need only be as accurate as +50% and -30%.**

Response: The following text has been added at the end of the response: "It is important to note that much of the waste that will be transported to an out-of-state disposal facility is considered hazardous only according to California regulatory standards; that is, much of the waste is 'California hazardous waste.' Therefore, out-of-state waste disposal facilities are not subject to more stringent California standards and accordingly are less expensive than California disposal facilities."

Specific Comments - Section 3.4

1. **Comment:** **Comment 1: Please note that the issues raised in the comment were addressed during a 1/29/98 meeting of the BCT. The draft final ROD will now include monitoring at IR-22.**

Response: The first sentence of the response has been revised to state, "The Navy will conduct groundwater monitoring within IR-22; details on how the monitoring will be conducted will be presented in the draft remedial action monitoring plan for Parcel D."

2. **Comment:** **Comments 3 and 4: The responses do not fully address the comments. Also, reference where discussions of the cesium spill can be found in the ROD, I could not readily find it. If it is not in the ROD text, it should be. The Navy could include a reference to the cesium spill cleanup under the removal actions section of the ROD.**

Response: The response to comment number 3 has been reworded to provide greater clarification. It now states, "The Navy did not compare the soil contamination left in place within the tidally influenced zone to the ecological screening criteria. Such a comparison could not be performed because there are no ecological screening criteria available for soils in tidally influenced zones that could be used for quantitative comparisons. Before selecting a final remedy for Parcel D, however, the Navy will provide EPA Region IX results from a leachate evaluation conducted at Parcel D. The evaluation assesses whether leachate generated from soil containing contaminants that correspond to either a 1×10^{-5} industrial ELCR or an 1×10^{-6} industrial ELCR in the tidally influenced zone will exceed groundwater screening criteria (NAWQC, Basin Plans, and HGALs)."

With respect to comment number 4, a more detailed explanation of the cesium spill is presented in the response to EPA's specific comment number 13 on the ROD. This language has been incorporated into the ROD.

Specific Comments – Section 3.5

1. **Comment:** **Comment 1 response: use same wording recommended above in my comment on comment 11, Section 3.1.**

Response: The response has been revised to state, "At present, Parcel D groundwater does not pose a threat to human health and the environment, and therefore does not require remediation. As the groundwater in Parcel D will be restricted from use for any purpose (including drinking, agricultural, or industrial), the only possible groundwater exposure pathways...Parcel E ROD."

Additionally, a sentence has been inserted before, "In addition, the groundwater..." to state, "The selected remedy will also require that the seawalls, sheetpiling, and rip rap (stabilization materials) will be maintained to inhibit groundwater infiltration into the Bay."

2. **Comment:** **Comment 2: Note that FS included contingency alternatives.**

Response: A sentence has been added at the beginning of the response stating, "The FS report presents possible contingency measures that may be implemented if soil or groundwater contamination is found to be migrating to the Bay."

Specific Comments – Section 3.7

1. **Comment:** **Comment 1 response: Last sentence. Include copy of this matrix in the responsiveness summary. EPA has not seen this matrix.**

- Response:** A table comparing costs associated with achieving a risk level of 1×10^{-5} versus 1×10^{-6} is referred to in the Table section of the draft final Parcel D ROD.
2. **Comment:** **Comment 3 response:** Note that workers will be not be living on the site and therefore should only be exposed to contaminants 8 hours a day.
- Response:** A sentence has been inserted at the end of the first paragraph stating, "It is important to note that, unlike residents, workers will not be living at the site and therefore will only be potentially exposed to contaminants 8 hours per day."
3. **Comment:** **Comment 4 response:** Again, as noted in a comment above, the Navy will provide notice to the LRA that no sampling was performed in this portion of Parcel D.
- Response:** As noted in the response to comment number 8 under Section 3.1, the Navy conducted all steps required by the NCP to identify potential hazardous waste sites within Parcel D. Results of the PA and SI indicated no handling, storage, or release of hazardous materials in areas other than the IR sites within Parcel D. Therefore, the Navy does not believe it is necessary to include notification language in the ROD or the responsiveness summary that no sampling was conducted in areas deemed to be unimpacted by past industrial operations. Consistent with the NCP, as well as the ROD for Parcel B and the Navy's approach at other Bay area installations, the ROD only addresses the IR sites within Parcel D.
4. **Comment:** **Comment 5 response:** Also, note that the selected remedy requires the Navy to monitor Parcel D groundwater for up to 30 years.
- Response:** A sentence has been added to the end of the response stating, "Even so, the selected remedy requires that the Navy monitor the groundwater for up to 30 years."
5. **Comment:** **Comment 6 response:** Is the Navy truly "currently discussing" with the City? May want to revise this wording slightly.
- Response:** The Navy and the City of San Francisco are holding ongoing discussions regarding responsibilities associated with the city's infrastructure plans. Therefore, the language has not been changed.
6. **Comment:** **Comment 9 response:** As we discussed in the 1/29/98 meeting on Parcel D, the industrial 10^{-5} cleanup goal has not been accepted by the regulatory agencies for all of Parcel D.

Response: Based on discussions held among the Navy, EPA, DTSC, and RWQCB before the January 29, 1998 meeting, it was the Navy's understanding that the regulatory agencies had indicated an acceptance of the 1×10^{-5} industrial cleanup goal. Therefore, such acceptance was reflected in this response. However, as Navy's position on this issue has not been accepted by the regulatory agencies, the first sentence of the response has been revised to state, "An industrial 1×10^{-5} cleanup goal for Parcel D is protective of the health of future workers on Parcel D according to federal and state requirements."

7. **Comment:** **Comment 11 response: Should insert at the beginning of the response: "The Navy realizes the community is concerned about this issue."**

Response: The response has been revised as suggested.

8. **Comment:** **Comment 12 response. Note that groundwater contingencies were included in the draft final FS.**

Response: A sentence has been added to the third paragraph after "...appropriate contingency measures." The sentence states, "Such contingency measures are presented in the draft final FS."

9. **Comment:** **Comment 13 response: Also note that these cost issues are not part of the ROD.**

Response: A second sentence has been added stating, "Such cost issues are outside the scope of the ROD and therefore are not discussed in the ROD."

Responses to EPA Comments, dated January 5, 1998, on the Draft ROD, by EPA Toxicologist, Dr. Daniel Stralka

1. **Comment:** **There still needs to be resolution of the mixed use area in parcel D. The fastest way to resolve the questions would be to do some limited sampling in this area.**

Response: Please see response to EPA's general comment number 4.

2. **Comment:** **The justification of a clean-up level of 10^{-5} is weak. The Navy should state that the goal is 10^{-6} and show where that is technically or economically infeasible. This would use the risk range to allow the management team to reach the best level of clean-up possible. This would require that each site be evaluated on its data, i.e volume, accessibility, mobility, not against a bright line as the Navy proposes.**

Response: Please see response to EPA's general comment number 3.

3. **Comment:** Finally the cost issues is under question. As stated in the comments, the FS evaluates parcel D without IR-36 which has been moved to parcel E. The volume of soil to be removed to reach the 10⁻⁶ residential is 66,040 cy, down from the 120,147 cy. ECDC Environmental has specific questions on the cost estimates per ton which were not sufficiently addressed. These two points drastically effect the bottom line that the Navy is using to justify clean-up levels and need to be rectified before the ROD goes final.

Response: Please see response to EPA General Comment number 3.

The basis of ECDC Environmental's (ECDC) estimate of excavation costs per ton for implementing Alternative 2 is incorrect. ECDC's calculations divide the total cost of Alternative 2 by the amount of soil to be excavated (that is, roughly \$12 million divided by 13,000 yd³, the amount originally proposed for excavation under the draft final Parcel D FS). This is an incorrect calculation because \$12 million covers more than just soil excavation and disposal. ECDC's costs for excavation at Parcel A do not account for many related costs that are incorporated into the estimates presented in the FS (for example, mobilization and preparatory work, groundwater monitoring). As presented in Appendix E of the draft final Parcel D FS report, excavation of Class II soils costs about \$10/yd³, transportation costs about \$15/yd³, and disposal costs about \$40/yd³. In summary, the total cost per yd³ for excavating, transporting, and disposing of Class II soils costs about \$65/yd³; this translates to about \$91/ton.

The draft final Parcel D ROD now includes two tables: Table 7 presents the current soil remediation volumes for each alternative by cleanup goal scenario, and Table 8 presents the costs for each alternative by cleanup goal scenario. These tables reflect changes made since publication of the draft final FS, such as the removal of IR-36, excavation to the groundwater table, and reduction of monitoring wells.

Responses to EPA Comments, dated January 5, 1998, on the Draft ROD, by EPA Regional Counsel, Ms. Vicky Lang

1. **Comment:** Page 2. Bullets three, six and seven need to be revised to reflect the revised institutional control language discussed in further detail in paragraph 14 below.

Response: The bullets on page 2 of the Declaration and in Section 2.10 have been revised to include language from institutional controls on page 71 of the final Parcel B ROD. An additional restriction has been added noting that with the exception of the areas designated for mixed use, residential use of Parcel D is prohibited.

2. **Comment:** Page 4. The statement in the first paragraph stating that the FFA will become the IAG should be taken out. Similar language was proposed in the Parcel B ROD but was deleted.

Response: That sentence has been deleted from the text and the sentence has been modified to eliminate a reference to the inter-agency agreement (IAG).

3. **Comment:** **Page 6. Second Paragraph. I am concerned about the educational complex that is going to be established on Parcel D. Is this for children? Does this qualify as an industrial use?**

Response: It is the Navy's understanding that the educational complex will be used to train adult workers. The HHRA exposure parameters used for industrial exposure are appropriate for determining potential exposure incurred by working at the educational complex.

4. **Comment:** **Page 19. Paragraph 2.61. In this paragraph there is a discussion that two areas of parcel D will be used for residential purposes. Both these areas should be designated on a map which should be attached to the ROD. Also sporadically in the ROD there is discussion of the northwest corner of IR-37 being used for residential purposes, but paragraph 2.61 is the only spot in the ROD where I can find any mention of a non-IR site also being used for residential purposes. Will this later portion be cleaned up to residential standards like the portion of IR-37 will be? Both of these parcels should be mentioned consistent throughout the ROD where it discusses cleanup levels and/or the proposed remedy.**

Response: The area of mixed use is one contiguous area that overlays the northwest portion of Parcel D. This area correlates to the SFRA's subparcel numbers for the mixed-use area: they are the northwestern portion of block S29, and the northern portion of blocks S30 and S31. The mixed-use area is now shown on Figures 5 and 6. The text will be clarified to describe the mixed-use area as one contiguous site.

5. **Comment:** **Page 42. Why are the first, second and third blocks included in the ARARs analysis if they are not applicable or relevant and appropriate?**

Response: Table 5, ARARs for Cleanup Alternatives, has been revised to remove those sections which are not applicable or relevant and appropriate, specifically in action-specific ARARs (soil) and action-specific ARARs (groundwater).

6. **Comment:** **Page 50. While the Parcel D FS evaluated three groundwater alternatives the ROD states that the groundwater alternatives are not presented in the ROD. Why not? The ROD is the place for an analysis of the various alternatives and a determination under the applicable criteria of which remedy is best. This analysis should be in the ROD. Also the statement that "[h]owever, the groundwater contingency developed in the RD phase, will identify the contingency groundwater alternatives evaluated in the FS for possible consideration if applicable." What does this mean? Page 50 goes onto describe the remedy for groundwater including the sentinel wells**

and the monitoring. Once again, why isn't this one of many alternatives described in the ROD with an analysis of why this is the best remedy instead of a statement being made without analysis that this is the groundwater remedy? The same comment goes to the first full paragraph on page 56 of the ROD. This isn't a discussion of alternatives for groundwater, but instead it is designated as the sole choice for the entire ROD without any discussion of various alternatives.

Response: In the draft Parcel D FS, the evaluation of the human health risk and risk to ecological receptors posed by Parcel D groundwater indicated no risk to either, so no active groundwater remediation was considered necessary. In the comments received from the regulatory agencies and EPA, however, it was noted that groundwater should be monitored to track migration of contaminants towards ecological receptors in San Francisco Bay and to monitor the effectiveness of soil remediation activities. At that same time, EPA suggested that contingency groundwater alternatives be evaluated and included in the draft final FS, which the Navy agreed to do. These contingency alternatives were evaluated to present the range of technical alternatives available should the monitoring detect any problems that need immediate action. The decision as to the actual alternative to be used, should one be necessary, would be made based on the actual contaminants detected, current best technologies applicable, and consultation between the Navy and the regulatory agencies. The text has been revised to clarify the reasoning behind the presentation of this process and rationale as described above.

7. Comment: Page 55, Alternative 2.

- a. In the second line of this alternative a statement should be made that two portions of Parcel D will be 10-6 as they will be used for residential purposes.
- b. In line 4 of this alternative there is a statement that excavated soils may be managed either near the excavation area or in a central location. If the soils are taken out of a specific area of contamination and placed in a central location as is suggested here, then the Navy will need to do a CAMU and that should be stated here as well as discussed in the ARARs section. The same comment goes to the third paragraph of this alternative in which "excavated soil management areas may be established". Are these to be in the specific area of contamination, or in some other location? If later, the Navy will have to meet the CAMU requirements.
- c. The second paragraph of this Alternative should be revised to accurately describe the institutional controls which will be used at the Site. See discussion in paragraph 14, below.

- Response:**
- a. Section 2.8 has been revised to discuss each of the cleanup goal scenarios under which each of the alternatives was evaluated. The revised text clarifies that the mixed-use area will be remediated to an ELCR of 1×10^{-6} for residential use.
 - b. Following the approach used in the final Parcel B ROD, the Navy intends to manage excavated soils within the area of contamination and does not plan to designate a corrective action management unit (CAMU) for this remedial action. Appropriate controls will be instituted around the stockpiles to prevent runoff and runoff. Soil that must be managed as a hazardous waste will be placed in containers for shipment off site; soil that does not require management as a hazardous waste may be moved to a central stockpile location prior to off-site shipment. The text has been revised to reflect that under the current approach as called out in the remedial design for the remedial action in Parcel B, excavated soil will be managed near each excavation.
 - c. The text has been revised to include the institutional controls that will be used at the site.

8. **Comment:** Page 56. Last paragraph of Alternative 2 discusses that cost of the Alternative and states that there is no O&M costs associated

Response: The text has been revised and O&M costs have been added to the alternatives.

9. **Comment:** Page 57 and Page 58. Both Alternative 3 and Alternative 4 have the same problem as Alternative 2. Both of these Alternatives discuss perhaps managing excavating soil in a "central location". If this is actually going to happen, this central location" will most likely need to be designated as a CAMU as you will be removing the soils from their "areas of contamination" and placing the soils in this central location. Second, each alternative fails to discuss the time associated with the ground water portion of the remedy. Alternative 5, on page 59 also fails to do this.

Response: The Navy intends to manage excavated soils within the area of contamination and does not plan to designate a CAMU for this remedial action. Appropriate controls will be instituted around the stockpiles to prevent runoff and runoff. Soil that must be managed as a hazardous waste will be placed in containers for shipment off site; soil that does not require management as a hazardous waste may be moved to a central stockpile locations prior to off-site shipment. The text has been revised to reflect that under the current approach as called out in the remedial design for the remedial action in Parcel B, excavated soil will be managed near each excavation.

The groundwater will be monitored for up to 30 years. This statement will be added to the discussion of alternatives in Section 2.8 of the draft final Parcel D ROD.

10. **Comment:** Page 62. Selected Remedy paragraph. Regional counsel is not certain that EPA does concur with the remedy as presented in the draft ROD as the Navy states.

Response: The Navy acknowledges this comment. Based on subsequent meetings with EPA, however, the Navy feels that the draft final ROD should be accepted by EPA. There has been no modification to the text.

11. **Comment:** Page 62 chart. The proposed remedial design/remedial action schedule should set out target dates at a minimum. It is inadequate to state "to be determined" in each block.

Response: The tentative dates have been included in the draft final Parcel D ROD.

12. **Comment:** Page 63. The first paragraph should state that two portions of the Parcel will be cleaned up to 10^{-6} and may be used for residential purposes.

Response: Text has been revised to clearly indicate that contaminated soil in the northwest corner of Parcel D designated for mixed use will be remediated to meet residential use. In addition, please see response to EPA Regional Counsel comment number 4.

13. **Comment:** Page 63. Second paragraph, second to the last sentence. How will the soil be managed prior to it being shipped offsite. Is it going to be managed in each applicable AOC? Is it going to be containerized? Is it going to be placed in a central location thus invoking the need for a CAMU?

Response: Please see the response to EPA Regional Counsel comment numbers 7 and 9.

14. **Comment:** Page 63. Third paragraph. The institutional controls language needs to be modified. Perhaps the easiest way to modify the language would be to model the institutional controls language found on page 71 of the Parcel B ROD. One significant addition to the institutional controls language must be that the deed restriction will prohibit Parcel D from being used for anything other than industrial purposes (except of course for the two limited areas anticipated to be used for residential purposes).

Response: As explained in the response to EPA's general comment number 1, the institutional controls language has been revised to be consistent with the language in the final Parcel B ROD.

15. **Comment:** Page 63. Last paragraph. The second sentence discusses the storm drains. It should discuss what measures will be taken to address the storm drains, not just state that measures "would be taken" to address the storm drains. The second to the last sentence says that future groundwater use would be restricted through use of institutional controls. The type and extent of the controls should be addressed here.

Response: The mitigative measures for preventing contaminated groundwater from entering the Bay include lining or repairing the storm drain lines below the groundwater table, and isolating the bedding material through grouting or another equivalent "collaring" method. Text in Sections 2.8 and 2.10 has been revised to clarify the measures to be taken.

The type of institutional control will be a restriction from using the groundwater at the site. Deed restrictions will be placed on Parcel D, such as prohibiting all uses of Parcel D groundwater within the shallow water-bearing zones to 240 feet bgs and prohibiting surface discharge of contaminated groundwater.

RESPONSES TO DTSC COMMENTS

Specific Comments

1. **Comment:** Page 1, Item 1.4, First Sentence: Strike out "at the 26 IR sites." It should read: "This ROD addresses both soil and groundwater contamination for CERCLA hazardous substances at Parcel D."

Response: This change has been incorporated into the text.

2. **Comment:** Page 2, Second Paragraph, First Sentence, should read: "The Navy has selected excavation and off-site disposal as the final remedy for Parcel D."

Response: This change has been incorporated into the text.

3. **Comment:** Page 2: The issue of acceptable cancer risk should be reevaluated in light of the community concerns. It appears neither the FS nor this ROD had made a clear comparison of cost for cleanup criteria between 10E-5 and 10E-6 cancer risks specially since the boundary of the parcel changed. It is important for the Navy to demonstrate the significance of cost factors in remedy selection.

The major components of the selected remedy should add the following:

Deed restriction on Parcel D prohibiting any land use that is inconsistent with the risk assessment assumptions used in the industrial scenario.

(Include all assumptions used in the risk assessments. A sample table from Presidio of San Francisco is attached.)

Response: The Navy acknowledges DTSC's concern regarding the soil remediation volumes and costs associated with each alternative and cleanup goal scenario. The draft final FS report provided a clear comparison of the soil volumes (Tables ES-4 and 4-4) and costs (Tables ES-11 and 5-6) associated with each alternative by cleanup goal scenario that were applicable at that time. Since publication of the draft final FS, several factors have arisen that affect soil volumes and costs: (1) IR-36 was removed from Parcel D; (2) at EPA's direction, the Navy revised the soil remediation depth from 10 feet bgs to the groundwater table; and (3) the number of proposed groundwater monitoring wells has been revised. In response, Tables 7 and 8 have been added to the draft final Parcel D ROD to include soil remediation volumes and costs that reflect the changes listed above.

A deed restriction will be added to the ROD to restrict residential use at all of Parcel D except for the area of IR-37 that is designated for mixed use. However, it is not necessary to include all the assumptions from the risk assessment in the restriction. The information is presented in the draft final Parcel D RI report. References for risk assessment exposure parameters are as follows:

- Reference Doses for Chemicals of Potential Concern: Table N.4-1
- Slope Factors for Chemicals of Potential Concern: Table N.4-2
- Exposure Dose Equation and Parameter Values for Ingestion of Soil, Average Exposure and RME Cases: Table N.3-3
- Exposure Dose Equation and Parameter Values for Dermal Contact with Soil, Average Exposure and RME Cases: Table N.3-4
- Exposure Dose Equation and Parameter Values for Inhalation of Volatiles and Dust from Soil, Average Exposure and RME Cases: Table N.3-6
- Exposure Dose Equation and Parameter Values for Ingestion of Groundwater (B-Aquifer and Bedrock Water-Bearing Zone), Average Exposure and RME Cases: Table N.3-7
- Exposure Dose Equation and Parameter Values for Dermal Contact with Groundwater (B-Aquifer and Bedrock Water-Bearing Zone), Average Exposure and RME Cases: Table N.3-8
- Exposure Dose Equation and Parameter Values for Inhalation of Volatiles from Groundwater Used for Household Purposes (B-Aquifer and Bedrock Water-Bearing Zone), Average Exposure and RME Cases: Table N.3-9

4. **Comment:** Page 2, fourth bullets, should be written as follows: "Deed notification indicating that soil below ground surfaces may be contaminated. All future soils excavated must be managed in accordance with federal, State, and local laws and requirements including..."

Response: The text has been revised to list deed restrictions under one bullet and deed notifications under another bullet. The deed notification bullet indicates that soil below ground surfaces may contain contaminants. The deed restriction bullet includes a requirement that "all future soils excavated must be managed in accordance with federal, state, and local laws and requirements including...."

5. **Comment:** Page 3, Second Paragraph, second to last sentence should read: "The groundwater monitoring data from these sentinel wells will be compared to NAWQC, as default trigger levels, for organics and inorganics and the ambient concentrations of metals.

Response: Please see the response to EPA specific comment number 6.

6. **Comment:** Page 4, Second Paragraph: The department prefers the modeling efforts to calculate a site-specific multiplier to be done before the ROD is finalized. But we are willing to accept NAWQC as default trigger levels for contingency plan, as suggested in above comment, until the modeling effort is completed in RD phase. The last sentence of this paragraph should be changed to read: "Once these site-specific criteria are developed and approved by the signatory agencies, they will replace the NAWQC as the trigger for taking action."

Response: Based on discussions with the regulatory agencies subsequent to receiving this comment, the text has been revised to delete references to default trigger levels and site-specific trigger levels. Instead, the trigger values are the more conservative value of the NAWQC or the RWQCB's Basin Plan water quality objectives, adjusted for HGALs. Site-specific trigger levels will not be calculated.

7. **Comment:** Page 6, Second Paragraph, last Sentence: While it is stated here, "A small residential/retail complex is planned for the northwest corner of the parcel (figure 4).", this ROD made no attempt to distinguish this area from the rest of the parcel in HHRA or selected remedy. Without further justification this area should be treated the same as the rest of the parcel and restricted to industrial use only.

Response: In Sections 1.4 and 2.10, which discuss the selected remedy, the text has been revised to clearly indicate that the cleanup goal for the northwest corner of Parcel D designated for mixed use is to meet an ELCR level of 1×10^{-6} for residential use. In addition, Figures 5 and 6 have been modified to show the mixed-use area in the northern portion of Parcel D by shading the proposed mixed-use area.

8. **Comment:** Page 15, Last Paragraph before Item 2.3, Second Sentence: Should be changed to read, "once the above-mentioned removal actions at Parcel D are complete, appropriate documentation will be included as part of Parcel D remedial action completion report."

Response: The text has been modified to reflect the following, "as part of the Parcel D remedial action closure report." Two documents will be produced once remediation is complete. IT, the Navy's remedial action contractor, will produce the Parcel D construction summary report and TtEMI, the Navy's Comprehensive Long-Term Environmental Action (CLEAN) contractor, will produce the Parcel D remedial action closure report. The construction summary report will document field activities. The remedial action closure report will document that the remedial action meets the cleanup objectives.

9. **Comment:** Page 19: Somewhere in this section that evaluates site risk should mention that sampling location where chemical concentration exceeds cleanup criteria in only one sample or in more than one samples but was less than twice of the criteria and not indicative of environmental release are excluded from further evaluation. It should also be clearly stated that the cleanup goal is 10E-05 risk level under industrial scenario or risk associated with ambient concentration whichever is higher.

Response: Section 2.6 summarizes the methodology and results of the Parcel D HHRA and refers the reader to the draft final RI for detailed information. The Navy believes that, for the purposes of the ROD, the level of detail provided in Section 2.6 sufficiently summarizes the Parcel D HHRA and ecological risk assessment; therefore, the suggested information regarding HHRA assumptions has not been incorporated.

Text has been added to Sections 1.4 and 2.10 that discuss the selected remedy to clearly state the cleanup goal for Parcel D. However, in sections such as Sections 2.6, Summary of Site Risks, and 2.8, Description of Alternatives, where the selected cleanup goal is irrelevant to the discussion, text has been revised to discuss all cleanup goal scenarios with minor emphasis on the selected cleanup goal scenario.

10. **Comment:** Page 21: While the text indicated the HHRA evaluated exposure pathways for both industrial and residential scenarios, Table 2, 3, and Figure 5, showed only the range of soil ELCRs and segregated HIs for industrial scenarios and showed no results of HHRA under residential scenarios for portions of IR-37 area.

Response: A new table has been added to summarize risks posed under the residential scenario and Figures 5 and 6 have been revised to show the proposed mixed-use area of Parcel D, consisting of the northern portion of IR-37 and an area without IR designation. However, no environmental samples were collected within exposure areas associated with the northern portion of IR-37 or within the area without IR designation because no evidence of release exists.

Therefore, no carcinogenic risks or noncarcinogenic HIs were calculated for the mixed-use area.

11. **Comment:** **Page 43, Table 5: All alternatives with the exception of Alternative 1 should have deed restriction as long as the cleanup goal is based on industrial scenario.**

Response: This change has been incorporated into the table.

12. **Comment:** **Page 44: For the northern portion of IR-37 to be considered for residential use, a new section needs to be devoted to this area, the boundary for the area that is suitable for residential use should be clearly delineated, HHRA needs to be provided, and any remedy selected should be justified.**

Response: The HHRA evaluated Parcel D, including IR-37, to determine the potential level of risk posed by contaminants at Parcel D. The contaminants and contaminant locations were then grouped according to the potential level of risk posed under current industrial, future industrial, and future residential uses. Section 2.6 summarized the potential current industrial and potential future industrial risks in Tables 2 and 3, respectively. A new table has been referred in Section 2.6.1 to summarize the potential future residential risks.

Each of the remedial alternatives evaluated in the FS and summarized in Section 2.8 were evaluated based on remediating the mixed-use area to an ELCR level of 1×10^{-6} for residential use. Therefore, a new section devoted to the mixed-use area is not necessary. To clarify that the mixed-use area will be remediated to residential standards, Section 2.8 has been revised to clearly state and discuss all three cleanup goal scenarios. Sections 1.4 and 2.10, which discuss the selected remedy, have been revised to clearly state the selected cleanup goal.

13. **Comment:** **Page 48: Risk level associated with the detection limit should be specified when a detection limit is used as default cleanup goal. It should be made clear to the reader while the cleanup goal is to meet 10E-5 for cancer risk level or Hazard Index (HI) equal to 1 for non-cancer risks, not all areas will meet this goal; they are either due to the detection limits or ambient concentrations and associated risk levels should be indicated.**

Response: The Navy acknowledges these concerns; however, upon further investigation of Table 6, it was noted that in all cases the cleanup levels are higher than the listed DLs. Only the calculated cleanup level goals will be used as indicated in Table 6. Consequently, the DLs listed in Table 6 have been deleted from the ROD.

14. **Comment:** **Page 50, Last Paragraph above Alternative 1: It is unclear how the decision is reached as to how four (4) sentinel wells are proposed to be located at the 5-year buffer zone WITHIN the tidally influenced zone. It is our understanding that the number and the location of sentinel wells are to be determined in the RD phase and the buffer zone is to be located some distance upgradient to the tidally influenced zone.**

Same Paragraph, Last Sentence: It states, "Table 8 presents the groundwater monitoring trigger levels that will be used to evaluate the monitoring well data." Does this mean that Table 8 presents the trigger levels for sentinel wells?

Response: The text has been modified to indicate that proposed sentinel wells will be located at the 5-year buffer zone upgradient of the tidally influenced zone, and proposed POC wells will be located along the inland edge of the tidally influenced zone. When tidal influence is not present, the POC wells will be located along the structure that inhibits tidal influence, such as piers or seawalls. Figure 6 identifies the proposed locations for sentinel and POC wells. The final placement of these wells will be determined in the remedial design phase. However, it is not anticipated that these locations will change substantially.

Table 10 presents the groundwater monitoring trigger levels for the sentinel wells.

15. **Comment:** **Page 62, State Acceptance Section: This section should be moved to follow Selected Remedy section. The State does not actively advocate any proposed remedy. It is for the Navy to propose final selected remedy and the State asserts its acceptance.**

Response: Section 2.9 summarizes the comparative analysis of the five remedial alternatives with respect to the NCP's nine evaluation criteria. State Acceptance is the eighth criterion. Section 2.9.8, State Acceptance, will not be moved. The text of Section 2.9.8 will be revised to indicate the likelihood of state acceptance of each of the five alternatives based on past discussions with the state and on comments received from the state on the Parcel D FS report.

16. **Comment:** **Page 63, Third Paragraph: It should be modified to be consistent with the Declaration section.**

Response: The text has been modified to be consistent with the Declaration section. See the response to DTSC specific comment number 4 for the revised text.

17. **Comment:** **Page 64, Last Sentence: Once these site-specific criteria are developed, they will replace NAWQC as the trigger for taking any groundwater action.**

Response: Based on discussions with the regulatory agencies subsequent to receiving this comment, the text has been revised to delete references to default and site-specific trigger levels. The text has been revised to state that the trigger values are the more conservative value from the NAWQC or the RWQCB Basin Plan water quality criteria, as adjusted for HGALs. No site-specific values will be calculated due to the heterogeneity of the fill material.

18. **Comment:** **Page 66, First Paragraph: The situation in Parcel D is different from Parcel B. This paragraph needs to be rewritten.**

Response: The discussion on source removal has been deleted from the text.

19. **Comment:** **Page B-4, Response to Comment No. 3: The response uses a current pathway scenario to address future users' exposure; this is inappropriate. Future users' exposure should be assessed based on a potential future pathway. If current pathways are assumed to remain the same in the future (i.e., the integrity of pavements or buildings will be maintained regularly to serve as a barrier), it will mean an institutional control is necessary to require constant maintenance to be performed. This issue needs to be discussed with the City further to ensure the future users recognize the need in maintaining the pavements and buildings since the assessed risks is based on the assumption these barriers would protect the future users from being exposed to excessive risks.**

Response: This comment refers to IR-09, where small amounts of TCE were detected in the groundwater, raising issues associated with volatilization of the TCE. This site is currently paved; therefore, there are no current exposure pathways. New language has been added to the responsiveness summary stating, "Additionally, the HHRA for Parcel D determined that TCE concentrations in the groundwater would not exceed EPA Region IX PRGs for ambient air under current or future land-use scenarios, including future residential and light industrial land use. The HHRA also determined that groundwater TCE concentrations at Parcel D would not result in indoor air emissions of vinyl chloride exceeding a lifetime risk of 1×10^{-6} for residential use. Furthermore, regardless of the current or future use for this site, the TCE concentrations detected in the groundwater are well below concentrations that would require action. Although only a fraction of TCE actually breaks down to form vinyl chloride, as a conservative step, the Navy assumed that TCE would completely break down to form vinyl chloride. TCE concentrations in groundwater at Parcel D under both residential and industrial reuse scenarios, when completely broken down to vinyl chloride, do not pose a risk greater than 1×10^{-6} . Therefore, the TCE would not pose a risk to human health or the environment in the event the parking lot is excavated (or pavement is removed). Institutional controls will not be necessary to maintain the integrity of the pavement or buildings."

20. **Comment:** Page B-5, Response to Comment No. 7: the response based on the population working at the site (there should be no people allowed to live at this parcel) that's "far less than 100,000" to conclude "it is highly unlikely that an additional cancer case would occur." We disagree with this interpretation of incremental risk. When we clean up a site to a risk level of $10E-5$, we are basically saying that the contamination left in the ground is such that anyone exposed to it will increase the probability of getting cancer by $10E-5$. This applies to anyone exposed to the contamination within the exposure scenario. It doesn't matter how many people work at the site; everyone that lives or works at the site is subjected to an increased cancer risk, compared to general public. The issue here really is, "Does the amount of incremental costs or the lack of funding for it justify the increasing in incremental cancer risk for each individual at the site?" We feel this is a question that should be answered by the communities which also need to balance the incremental costs that would lower the risk with a potentially prolonged cleanup during this time of fiscal constraint.

Response: The Navy agrees that a key question is how to best balance the incremental costs against incremental risks. Cleaning up Parcel D to 1×10^{-6} , as compared to 1×10^{-5} , would cost an additional \$6.2 million (the costs would increase from \$6.4 million to \$12.6 million to cleanup from 1×10^{-5} to 1×10^{-6}). The Navy also recognizes that the number of people at the site does not change the risk posed to each individual at the site. Rather, the total number of people working at the site will only impact calculations estimating the number of possible additional cancers from exposure to contaminants at the site. However, the Navy's 1×10^{-5} risk target level for Parcel D is within the acceptable risk range established by the NCP. The text of the response has been revised to state, "When calculating possible risks posed to those working at a site, very conservative assumptions are used that overestimate the risk in order to provide extra protection in establishing target cleanup levels. For example, risk calculations assume that a person will be working at the site 8 hours per day, 5 days per week, over a 24-year period. A 1×10^{-5} risk level is consistent with the levels established by federal and state laws as providing adequate protection to human health and the environment. The comment seems to imply that a 1×10^{-5} cleanup level will result in an additional 10 cancers at Parcel D. That calculation is based on an assumption that a population of 1 million people would be exposed while working at Parcel D. The model used to calculate risk estimates of possible additional cancers based on the type and amount of contaminants at a site, ways which people could be exposed to those contaminants, and the total number of people at a site. The model starts with a population of 1 million people and works downward. As the population decreases, so does the expected number of possible cancer risks. For example, if the population is 100,000 people, a 1×10^{-5} risk would estimate only one additional cancer case in that community."

21. **Comment:** Page B-13, Response to Comment No. 4: Confirmation sample results should be provided or referenced to demonstrate the remediation is completed.

Response: A reference has been provided at the end of the last sentence: "(ATG 1996)." This cites the document prepared by the ATG, entitled "Hunters Point Cesium Remediation, San Francisco, California, May 1996."

22. **Comment:** Page B-15, Response to Comment No. 2: If the costs and volume of soil to be excavated were changed after FS was finalized, a revision of the document or an addendum should be issued to make necessary adjustments and demonstrate the preferred alternative would remain the same.

Response: This comment refers to the changes made to Alternative 2 (the preferred alternative), subsequent to issuance of the draft final FS. New language has been added to the text stating, "The new cost and volume figures reflect a decision to extend the cleanup down to the water table throughout Parcel D (versus cleanup only down to 10 feet bgs as reflected in the draft final Parcel D FS report). The excavations will be terminated at the depth where cleanup goals are achieved or the depth of the groundwater table, whichever is encountered first. Under this alternative, soil presenting a potential human health risk above cleanup goals would be excavated to the groundwater table. Additionally, a decision was made (subsequent to the issuance of the draft final Parcel D FS report) to move IR-36 to Parcel E. Issues related to VOCs in the groundwater at IR-36 will be addressed separately.

Under the selected remedy, 10,500 yd³ will be removed from various locations within Parcel D. Updated tables presenting the volumes and costs associated with each alternative are included in the Table section of the draft final Parcel D ROD."

RESPONSE TO RWQCB COMMENTS

General Comments

1. **Comment:** There is a lack of consistency among Section 1.4, Section 2.8, and Section 2.10 with respect to the deed restrictions and deed notifications that are part of the remedial alternatives and the selected remedy. A specific instance with respect to the storm drain system is noted in the Specific Comments below. These sections require review to assure that the restrictions and notifications in Section 1.4 are reflected in Section 2.8 and 2.10.

Response: These sections have been reviewed and modified as appropriate. Sections 1.4 and 2.10, which discuss the selected remedy, have been revised to be consistent and include the deed restrictions and notifications applicable for the selected remedial alternative and cleanup goal scenario. Section 2.8 has been revised to indicate that remediation to cleanup goal scenarios 1 and 2 requires deed restrictions.

2. **Comment:** The retention of the active treatment technologies (SVE and thermal desorption) in the descriptive title of Alternatives 3, 4, and 5 is confusing and misleading, given that these technologies would treat no soil in the alternatives as described. Additional explanatory text should be added to Section 2.8 to clarify this apparent contradiction.

Response: Section 2.8 summarizes the alternatives evaluated in the draft final Parcel D FS report. Each alternative was evaluated under each of the three cleanup goal scenarios. Alternatives 3, 4, and 5 each include technologies (either in-situ soil vapor extraction [SVE] or thermal desorption) for the treatment of VOC-affected soil volumes. However, under cleanup goal scenarios 1 and 2, the volume of VOC-affected soils exceeding established risk or HI criteria, and therefore requiring treatment, is zero. Under the established risk criteria for cleanup goal scenario 3, the volume of VOC-affected soils requiring treatment is estimated at 740 yd³.

Specific Comments

1. **Comment:** Section 1.4, Page 3, Second Paragraph: In Section 2.7.1, the Basin Plan is acknowledged as an ARAR. The wording of the first sentence of this paragraph is not consistent with Section 2.7.1, in that it limits the applicability of the Basin Plan as the basis for groundwater monitoring to NAWQC only. Please revise to be consistent with Section 2.7.1. Also, in the second sentence, after NAWQC, the word "ambient" should be added before metals to clarify the meaning.

Response: The Navy does not agree that the two sections, 1.4 and 2.7.1, are not consistent with each other. In Section 1.4, Description of the Selected Remedy does not discuss ARARs but presents a discussion of the screening criteria for the groundwater. Section 2.7.1, Chemical-Specific ARARs, presents the laws and regulations that have been identified as potential ARARs. The Navy does not believe that the current discussions in Section 1.4 limit how the Basin Plan applies as an ARAR.

The word "ambient" has been added to the text.

2. **Comment:** Section 2.5, Page 17: The third and fourth bullets in this section contain redundant or conflicting information regarding B-aquifer monitoring wells. The number of wells and number of samples collected from B-aquifer wells should be clarified.

- Response:** The text in these bullets has been modified to indicate the number of A-aquifer groundwater samples collected from A-aquifer and B-aquifer monitoring wells and the number of B-aquifer groundwater samples collected from B-aquifer monitoring wells.
3. **Comment:** **Section 2.6, Tables 2 and 3: These tables should be revised to present the Average and RME results in the same order.**
- Response:** These tables have been revised and now present the average and reasonable maximum exposure (RME) results in the same order.
4. **Comment:** **Section 2.6, Figure 5: The labels on the soil remediation and de minimus areas are not legible. This figure needs to be revised to improve the legibility of these labels.**
- Response:** The labels on this figure have been revised and are now legible.
5. **Comment:** **Section 2.8, Table 5: It appears that Alternative 5 includes soil excavation and disposal, although this is not reflected in this table. This needs to be clarified.**
- Response:** The table has been modified to indicate off-site disposal for Alternative 5.
6. **Comment:** **Section 2.8, Table 7: It appears that the Offsite Management Approach entries for soils with organics and soils with organics and inorganics are reversed. This needs to be clarified.**
- Response:** The Off-Site Management Approach entries have been corrected.
7. **Comment:** **Section 2.8, Alternatives discussions: In Section 1.4, bullet 7, deed notification of the lining of the storm drains is noted as a component of the selected remedy. The alternatives discussions do not discuss this deed notification. Discussion of deed notification with respect to storm drain lining and any ongoing monitoring should be added to the alternatives discussions and to the description of the selected remedy.**
- Response:** Sections 1.4 and 2.10, which discuss the selected remedial alternative and cleanup goal scenario, have been revised to contain consistent language with regard to cleanup goal scenarios and deed notifications and restrictions. Section 2.8, which summarized the remedial alternatives, has been revised to include deed notifications for the mitigative measures and deed restrictions for cleanup goal scenarios 1 and 2.

8. **Comment:** Section 2.8, Alternative 4, Page 58: A discussion of the volumes of soil requiring excavation, treatment, and disposal should be added to this description. It's not clear why under Alternative 4 soils containing VOCs would be treated using thermal desorption, while under Alternatives 3 and 5, no treatment of VOC-containing soils is required.
- Response:** Soil remediation volumes and contaminants vary based on the soil cleanup goal scenario. For example, under cleanup goal scenarios 1 and 2, Parcel D soil does not contain VOCs that pose a risk. Under cleanup goal scenario 3, VOCs do pose a risk. Section 2.8 of the draft ROD focused on the selected cleanup goal scenario, cleanup goal scenario 1; therefore, the text indicated that no soils would require treatment for VOC removal. Section 2.8 text has been revised to discuss all three cleanup goal scenarios and Table 7 presents the range of soil remediation volumes, based on cleanup goal scenarios, for each alternative. A table listing soil remediation volumes by alternative and cleanup goal scenario has been added to the Table section of the draft final Parcel D ROD.
9. **Comment:** Section 2.9.4, Page 61: How are the toxicity and volume of volatiles reduced for Alternatives 3, 4, and 5 when no treatment of volatiles is proposed for some or all of these alternatives? This discrepancy needs to be addressed.
- Response:** As stated in the response to RWQCB comment number 8, under cleanup goal scenarios 1 and 2, Parcel D soil does not contain VOCs, and therefore do not require remediation under any alternative for these cleanup goal scenarios. Under cleanup goal scenario 3, VOCs require remediation. Because Section 2.9 summarizes the comparative analysis of the alternatives, not withstanding the cleanup goals scenario, it is appropriate to indicate that the technologies proposed in Alternatives 3, 4, and 5 would reduce the volume of VOCs.
10. **Comment:** Section 2.10, Page 62: Estimated dates for the Remedial Design/Remedial Action Schedule need to be added to the table.
- Response:** Estimated dates have been added to this table.
11. **Comment:** Section 2.10, Page 63: Discussion of deed notification with respect to storm drain lining and any ongoing monitoring should be added to the description of the selected remedy.
- Response:** Please see response to RWQCB specific comment number 7.
12. **Comment:** Section 2.10, Page 64: In the last sentence before the bullets, after the words, "exceeded at," the words "the point of compliance or within" need to be added to clarify that exceedances of trigger values associated with sources within the tidally-influenced zone will require a response on the

part of the Navy. Response will not be restricted to exceedances associated with plumes migrating from upgradient of the tidally-influenced zone across the inland edge of the tidally-influenced zone.

Response: The text has been modified as follows: "If monitoring indicates that the groundwater criteria will be exceeded at the *point of compliance or within the* tidally influenced zone, the Navy will undertake the following actions:...."

13. **Comment:** Section 2.10, Page 64, Bullet List: The text of the fifth and sixth bullets from the Parcel B Final ROD should be added to this list.

Response: The following text has been added to the bullets and is consistent with the bullets in the Parcel B ROD:

- The change may require a ROD amendment depending on the significance of the change. Any changes to the remedy will be addressed and presented to the public in accordance with CERCLA.
- After the remedial design, the FFA shall continue to apply through operation and maintenance of the Parcel D response action.

RESPONSE TO SFRA COMMENTS

Specific Comments

1. **Comment:** Page 1, Item 1.4: The ROD addresses soil and groundwater contamination for CERCLA substances: Petroleum hydrocarbons are addressed in a separate CAP. The City is concerned that there may be areas where hydrocarbon plumes or contaminants have not yet been identified, and that there may be unidentified areas or co-mingled contaminants.

Response: As stated by the SFRA, CERCLA substances and petroleum hydrocarbons are investigated under separate programs. The Navy investigated HPS in a phased approach. The phases consisted of a PA, SI, RI/FS, and CAP. The PA activities included file searches, on-site surveys, a confirmation study ranking system, and site ranking. At the conclusion of the PA, each site was recommended for either a site investigation, remedial action, or no further action. The SI activities included collecting environmental samples and recommending a site for further investigation in the RI/FS, or no further action. The objectives of the RI/FS were to: (1) characterize sources as well as the nature and extent of contamination such that the level of the risk could be assessed and informed decisions could be made regarding remedial responses, and (2) provide sufficient engineering data for the development and screening of remedial action alternatives in accordance with guidance. The CAP evaluates the remedial alternatives to mitigate TPH-contaminated soil and groundwater within previously identified sites in Parcel D. The petroleum

CAP is on a separate track from this ROD, but the results from the Parcel D petroleum CAP will be incorporated into the remedial action for Parcel D.

As a result of the phased approach, areas at HPS were investigated if evidence of storage and/or releases of CERCLA substances or petroleum hydrocarbons exists at those sites. Although investigation of CERCLA substances and petroleum hydrocarbons has progressed separately, remediation efforts will be combined under the remedial action phase. Areas containing commingled CERCLA substances and petroleum hydrocarbons were investigated under the CERCLA process and will be included in the CERCLA remedial design if the CERCLA contaminants exceed the remediation criteria. Areas containing petroleum hydrocarbons that exceed the petroleum hydrocarbon remediation criteria will be included in the CAP remedial design.

After the property is remediated and transferred to the city, if potential sources or contamination are located that were previously unidentified, and it is attributable to Navy activities, the Navy is obligated to investigate and conduct any required remediation.

2. **Comment:** **Page 2, Item 1.4 (Components of the selected remedy): Excavation of contaminants only to groundwater may leave contaminants that could be costly during future infrastructure improvement or development. If groundwater remediation will not be done because there is no current health risk or present beneficial use of groundwater, this may only be true for the current base use situation. Any future development, repairs or improvements will require some groundwater treatment.**

While community residents express a wide variety of views on appropriate methods of transportation of wastes for off site treatment and/or disposal, many residents are concerned with movement of hazardous materials through residential areas. Do the Navy's remedial contractors have an effective contingency plan for offsite spills or incidents and has the Navy considered transportation via barges?

Deed notifications regarding contaminated groundwater may inhibit future development.

The proposed prohibition against placing excavated soils onto the ground surface is very broad. Is this statement intended to mean that excavated soils must be placed directly into some sort of containment vessel (or other engineering controls to capture run-off of contaminated groundwater) or is there another intended meaning?

Storm drain lining and grouting bedding material is an important activity. If contaminated groundwater is encountered during this process, how does the Navy propose to handle it?

Is it reasonable to preclude all uses of groundwater by deed restriction? Is the groundwater that contaminated? Would possible future use of groundwater for irrigation be a bad idea because of health risks?

Response: This comment raises several issues. First, SFRA raises the issue of leaving contaminants in soil below a certain depth and in groundwater. At the direction of EPA, the Navy modified the depth of soil remediation from 10 feet bgs to the depth of the water table. The groundwater exposure pathways evaluated in the Parcel D RI and FS reports showed that Parcel D groundwater does not pose a threat to human or ecological receptors. However, the RI and FS did not evaluate the potential risk associated with short-term exposure to groundwater, as might be expected for construction workers during utility upgrade activities. The Navy is currently conducting a risk assessment of short-term exposure to groundwater. The results of this risk assessment should help the SFRA determine the appropriate level of personal protective equipment (PPE) necessary for its workers, if any at all. During the city's redevelopment, if groundwater is encountered during repairs or improvements, the groundwater should be managed appropriately. This means that the groundwater should be sampled and properly disposed of as required by law based on the sampling results.

The second issue raised is in regard to transportation of remediation waste from HPS. The Navy through its remedial action contractor will evaluate the method for conducting remedial actions, including selection of the mode of off-site transportation of contaminated media, and ensuring that remedial actions are conducted properly.

The SFRA contends that deed restrictions on groundwater use may inhibit future development. The naturally low quality of Parcel D groundwater, including low yield, high salinity, and high levels of ambient metals, limit its potential use. Because of the low quality of Parcel D groundwater, future developments must obtain water from sources other than groundwater. Deed restrictions are included in the selected remedial alternative to ensure that groundwater is not used for future drinking, industrial, or irrigation purposes.

The fourth issue refers to placing excavated soils onto the ground surface. Excavated soils exceeding the cleanup goals set forth in the draft final Parcel D ROD must be managed so as not to contaminate existing ground surfaces through direct contact or through groundwater runoff.

The fifth issue concerns contaminated groundwater encountered during lining of storm drain lines and grouting of storm drain line bedding material. Groundwater encountered during storm drain lining and grouting of bedding material will be handled in a process that complies with all federal and state regulations. Groundwater meeting the publicly owned treatment works (POTW) influent criteria will be discharged to the POTW; groundwater exceeding the POTW influent criteria will be transported to an appropriate off-site disposal facility.

Finally, the SFRA again raises concerns over restricting future groundwater use. The beneficial uses of Parcel D groundwater have been evaluated in the Parcel D RI. Due to insufficient yield for groundwater development, low fresh water recharge rate, and high salinity, Parcel D groundwater has been determined to be unusable for domestic drinking water, industrial, or irrigation purposes. Therefore, groundwater flow characteristics and quality actually

restrict the future use of groundwater; deed restrictions simply ensure that groundwater will not be used.

3. **Comment:** **Page 3, Item 1.4 (Groundwater Monitoring Program): The ROD discusses an ambitious plan to monitor groundwater for an extensive period. The Navy includes a list of reviewers and regulators, but does not list the City. As the City will have significant responsibilities for HPS development and operations, shouldn't the City be officially listed as a reviewer and be consulted on groundwater monitoring and reporting issues?**

Response: The Navy understands the city's concern with regard to the monitoring of groundwater at HPS and its impact on the city's role in HPS development and operations. The documents describing any groundwater monitoring plan would be included either in the remedial design documentation, or remedial action closure report, both of which will be provided to the city for review and comment. However, any final decisions with regard to implementation or changes will have to include the concurrence of the signatories of the FFA, which are the Navy, EPA, DTSC, and RWQCB.

4. **Comment:** **Page 6, Item 2.1 (Site Description): Plans call for a small residential/retail complex in the northwest corner and open space but Parcel D cleanup standards are based on the industrial cancer risk scenario. Is this consistent and reasonable? (It is noted that Alternative 2 suggests Residential cleanup levels later in the document.)**

Response: As stated in Section 2.8, page 44, paragraph 2 of the draft ROD, the RAO or cleanup goal for the mixed-use portion of IR-37 will correspond to a carcinogenic risk of 1×10^{-6} for residential use, regardless of the cleanup goal scenario selected for the remainder of Parcel D. Sections 1.4 and 2.10 of the draft final ROD have been revised to clearly state the RAO for the mixed-use area. Section 2.8 has been revised to clearly state the three cleanup goal scenarios. As was noted in the responses to DTSC's specific comment numbers 7 and 10, the Navy considers the portion of Parcel D in the northwest corner acceptable for mixed use as designated in the redevelopment plan. The text will be clarified to describe the area as designated and suitable for mixed use, and the remainder of the parcel will be suitable for industrial use. The deed restriction regarding industrial use will be applied only to the remainder of the parcel with a mixed-use designation assigned to the area under discussion.

5. **Comment:** **Page 11, Item 2.1 (Site Description): Since cleanup will extend only down to groundwater and groundwater may be as shallow as 2 feet below ground surface (bgs), there may be many areas where development and infrastructure improvements and repairs will encounter contaminated materials. This places a fiscal burden on future development projects as well as future environmental liability issues.**

Response: The city's concern with regard to infrastructure improvements and developments is understood by the Navy and has been expressed in comments on other documents, such as the draft basewide finding of suitability to lease (FOSL). As was stated in discussions between the Navy and the city, those issues can be best answered in the negotiations for the lease in furtherance of conveyance (LIFO) or in a base management plan type of document which could be supplemental to the LIFO. The purpose of the base management plan will be to identify physical and fiscal responsibility for conditions not covered under the CERCLA remedial design/remedial action.

6. **Comment:** **Page 12, Item 2.1 (Site Description): While we agree that there are no current projected uses of either aquifer as a drinking water source; this does not mean that we might not ever wish to use these aquifers. Current Navy remedial planning apparently includes no provision for groundwater cleanup.**

Response: The beneficial uses of Parcel D groundwater and surface water have been evaluated in the Parcel D RI. Due to insufficient yield for groundwater development, low freshwater recharge rate, and high salinity, Parcel D groundwater has been determined to be unusable for domestic drinking water, industrial, or irrigation purposes. The regulatory agencies have concurred with this evaluation for the A-aquifer as well. The FS report evaluated the groundwater for human health risk and risk to ecological receptors and found no actions necessary beyond groundwater monitoring. The Navy is currently evaluating short-term exposure to groundwater, as might be expected for construction workers during utility upgrade activities.

7. **Comment:** **Page 13, Item 2.2.3 (Removal Actions): Are copies of reports documenting removal actions available for review?**

Response: Documents pertaining to the CERCLA process at HPS are maintained at the information repositories located at the main (Civic Center) branch of the San Francisco Public Library and the Anna E. Waden branch of the library. Reports documenting removal actions are included at the information repositories.

8. **Comment:** **Page 14, Item 2.2.3 (Removal Actions): The Navy's "nontime-critical removal action" of removing storm drain sediments is of great interest to City staff. What is the nature of contaminated sediment, what percentage complete is the work and when will the "final removal action construction summary report" be available? City staff views the condition and future maintenance and repair of the storm drain system as a significant issue.**

Response: The storm drain sediment removal action and pertinent background information are documented in the engineering evaluation and cost analysis, action memorandum, and implementation work plan reports. Copies of these reports are included at the information repositories at the main and Anna E. Waden branches of the San Francisco Public Library. The storm drain sediment removal action consisted of the removal of the sediment that had accumulated within the catch basins and lines. Lines that were accessible were flushed out with hydrojets and then video logged. Approximately 1,200 tons of material was removed and properly disposed of off site. The "Draft Construction Summary of the Storm Drain Sediment Removal Action" was submitted to the regulatory agencies for review on December 19, 1997. A copy has been provided to the SFDPW.

9. **Comment:** **Page 18, Item 2.5 (Site Characteristics): Lead and chromium were detected at high levels in a number of Parcel D IRs. Parts of Parcel D may be used for mixed retail/residential and open space. Some lead levels exceed both residential and industrial PRGs. As remedial design documents are not yet completed, will high metal concentration hot spots in these areas be excavated and offhauled? Is there any plan to do further sampling and quantification of metal contaminated soils in these areas?**

Response: As noted in the response to SFRA specific comment number 4, the portion of Parcel D designated for mixed retail and residential use is considered to meet the residential criteria. In the remaining areas of Parcel D, remediation would address those areas where chemicals, such as chromium and lead, are present at concentrations that pose a human health risk under an industrial use scenario.

A detailed description of the proposed excavation areas and figures showing the excavation locations are presented in the draft final Parcel D FS report, dated January 24, 1997. The FS description and figures will be used for the basis of Parcel D RD documents. Figure 5 of the ROD also shows the excavation areas for the selected remedy for Parcel D. As shown on Figure 5 of the ROD, excavation locations are based on reducing the risk to meet the cleanup goals; therefore, lead and chromium will be removed to meet cleanup goals.

Further sampling is planned to fill in data gaps that were noted in the draft final Parcel D FS report. As part of the remedial action, confirmation sampling will be conducted once an excavation is complete to confirm that contaminants exceeding the cleanup goals have been removed. The remedial action will be documented in a closure report.

10. **Comment:** **Page 20, Item 2.6.1 (Human Health Risk Assessment [HHRA]): Does the HHRA examine the possibility of airborne contaminant exposure from ongoing remedial activities on Parcel D and the predominantly upwind Parcel E? In addition to ongoing and proposed Parcel E remedial activities, the draft Parcel D ROD suggests that landfills on Parcel E may require a cap. Until the cap is in place, could there be wind driven dust moving from E to D?**

- Response:** The HHRA evaluates potential risk posed by contaminants in Parcel D soil and groundwater under current and future exposure scenarios. The HHRA does not evaluate risk from airborne contaminants potentially generated during remedial action. Generation of airborne contaminants during remedial action will be minimized by implementing engineering controls. Air monitoring will also be conducted to ensure that airborne contaminants do not pose a risk to human health. The existing Parcel E landfill currently has a natural vegetative cover that minimizes wind-driven dust. During construction of the landfill cap, dust generation will be minimized by implementing engineering controls.
11. **Comment:** **Page 30, Item 2.6.2 (Ecological Risk Assessment): Has cleaning of storm drain sediment been completed for all Parcel D storm drains or only those in IRs below groundwater?**
- Response:** Storm drain sediment removal has been completed for all accessible Parcel D storm drains above and below the groundwater as documented in the "Draft Construction Summary Report of the Storm Drain Sediment Removal Action", dated December 19, 1997.
12. **Comment:** **Page 32, Item 2.7.1.2 (Groundwater): If the Navy agrees with the state on Section III.G (stating that dischargers must abate the effects of discharges), does the Navy's groundwater cleanup plan promote attainment of background water quality or the best water quality that is reasonable?**
- Response:** Considering the ambient quality of Parcel D groundwater and that the beneficial use of Parcel D groundwater is recharge to the San Francisco Bay, the groundwater cleanup plan in conjunction with groundwater monitoring does promote attainment of background water quality or the best water quality that is reasonable. The groundwater cleanup plan includes removing potential sources that could contribute to groundwater contamination such as underground storage tanks (UST), steam lines, and contaminated soil, and the removal of storm drain sediments.
13. **Comment:** **Page 33, Item 2.7.1.2 (Resolution 68-16): Why does the Navy assert that Resolution No. 68-16 is prospective in intent? Does the Navy assert that migration of contaminants in groundwater is not occurring?**
- Response:** The Navy asserts that Resolution 68-16 applies to active or future discharges to maintain existing high quality waters of the state. In light of the low quality of Parcel D groundwater, which is saline and has high ambient levels of metals due to the nature of Artificial Fill used to build the facility, and because discharge to Parcel D groundwater occurred in the past, the Navy maintains that Resolution 68-16 is not applicable to these past HPS discharges to Parcel D groundwater. However, the Navy does agree that discharge of contaminated groundwater to the Bay would require compliance with Resolution 68-16. Groundwater modeling indicates that Parcel D groundwater will meet

groundwater quality criteria at the designated POC and therefore will comply with Resolution 68-16.

14. Comment: **Page 35, Item 2.7.3 (Landfill Closure Regulations): Is it premature to assume that capping will be the selected remedy for Parcel E landfills?**

Response: Section 2.7.3 discusses potential action-specific ARARs for the remedial alternatives considered for Parcel D. Because on-site placement of Parcel D soils at the Parcel E landfill was considered, potential ARARs associated with this activity must be discussed. Capping of the Parcel E landfill is proposed in the draft Parcel E FS report; however, the actual final Parcel E remedy would be documented in the Parcel E ROD, which is expected in May 1999.

15. Comment: **Page 38, Table 4 (BAAQMD 6-301): Alternative 1 (the do nothing scenario) comments that no particulates are generated. Is it accurate to state that there is currently no problem at all with windborne dust blowing from Parcel E to other Parcels?**

Response: Table 5 lists potential ARARs for the remedial alternatives considered for Parcel D and briefly explains the ARARs' applicability. ARARs are germane to remedial actions. Under Alternative 1 and under existing conditions, no particulates are generated by a remedial action; thus, these circumstances do not trigger and are not regulated under Bay Area Air Quality Management District (BAAQMD) 6-301. Facility-wide air monitoring that was previously conducted at HPS indicate that windborne dust blowing from Parcel E to other parcels, if any, does not pose a risk to human health.

16. Comment: **Page 39, Table 4 (SVE Systems): Does this mean that there will be no SVE systems used on Parcel D? Note that we do not have a copy of the Parcel D CAP to review.**

Response: Alternative 2, the selected remedy for remediation of CERCLA substances at Parcel D, does not include the use of SVE. However, the remedy for treatment of petroleum contamination at Parcel D is still under evaluation by the Navy.

The proposed remedial action for petroleum sites would be described in the Parcel D CAP, which should be submitted in late 1998. The CAP may include the evaluation of such technologies as SVE.

17. Comment: **Page 41, Table 4 (Groundwater): Comments imply that purged groundwater will be shipped offsite only if it exhibits hazardous waste characteristics. What will happen to purged groundwater that does not meet hazardous waste characteristics? The proposed Basewide FOSL proposes that only domestic sewage is approved for discharge to the sanitary sewers.**

Response: If the purged groundwater does not meet hazardous waste characteristics, which require off-site disposal, the criteria allowing disposal in the sewer system connected to the POTW (the Southeast Community Sewage Treatment Plant) would be evaluated. If the purge water is acceptable under that criteria, it would be pumped into the sewer system after obtaining the appropriate permits from the city. Language in the draft basewide FOSL has been revised in the draft final version to reflect this change.

18. **Comment:** Page 44, Item 2.8 (Description of Alternatives): The Navy has apparently determined that lead concentrations in soil less than 1,000 mg/kg will be left in place. The City may then be faced with health and safety and disposal problems should areas with high metals concentrations be encountered during development, maintenance and repair activities. We have experience with lead total concentrations less than 1,000 mg/kg failing both/either the STLC and TCLP test for waste disposal purposes.

Response: For the future industrial-use scenarios, potential human health risks associated with lead were evaluated by comparing Parcel D soil data to EPA Region IX soil PRGs. The EPA industrial PRG for lead in soil is 1,000 mg/kg. The Navy will remediate areas where lead levels pose a potential risk, as defined by exceeding the EPA industrial PRG. Areas where lead levels do not exceed the PRG do not pose a potential risk from exposure to lead, and therefore do not require remediation by the Navy. Also, see response to SFRA comment number 5.

19. **Comment:** Page 50, Item 2.8 (Groundwater): Paragraph one states that Parcel D groundwater does not pose a threat to human health or the environment, so no active remediation is necessary. Many City staff and members of the public would consider this statement debatable. There is no doubt that contaminated groundwater could pose human and eco risks during development, maintenance and repair activity (if not carefully managed at unknown expense by those performing repair or construction work in areas requiring dewatering).

If the groundwater poses no eco risk, then why is such effort being applied to addressing storm and steam conduits and the preferential pathways associated with bedding and drain rock materials?

Response: Under the scenarios evaluated in the Parcel D RI and FS reports, Parcel D groundwater does not pose a threat to human health or the environment. Under the future industrial-use scenario for human health, which does not consider exposure to construction workers conducting utility upgrade activities, the drinking water and dermal exposure pathways were deemed incomplete and the inhalation exposure pathway did not pose a risk; therefore, groundwater does not pose a risk to human health and does not require remediation.

Because the beneficial use of Parcel D groundwater has been determined to be recharge to the San Francisco Bay, potential receptors are ecological receptors in the Bay and the appropriate groundwater quality criteria are the NAWQC and Basin Plan water quality objectives. As Parcel D groundwater moves toward the San Francisco Bay, natural attenuation processes reduce contaminant concentrations. Groundwater modeling predicts that by the time Parcel D groundwater reaches the POC, contaminants in Parcel D groundwater will have naturally attenuated to a level that does not pose an ecological risk; therefore, no remediation is required. Because preferential pathways, such as storm drain bedding material, would allow groundwater to travel to the Bay more quickly, reducing the time allowed for natural attenuation processes to occur, the Navy has already determined that it will include mitigative measures that eliminate preferential pathways as part of its remedial action for all parcels at HPS.

The Navy is currently conducting a risk assessment of potential short-term risks posed by groundwater to construction workers conducting utility upgrade activities. The results of this risk assessment should help the SFRA determine the appropriate level of PPE necessary for its workers, if any at all. The proposed base management plan would designate the party responsible for the additional fiscal burden, if any, due to conducting utility upgrade activities.

20. **Comment:** **Page 50, Item 2.8 (Groundwater): Sentinel wells are located on the inland edge of the 5-year buffer zone. Does that mean that there are no contaminants in the groundwater in IRs located in tidally influenced zones?**

Response: Sentinel wells are placed so that they will allow an appropriate warning time should contaminants moving from upgradient of the sentinel wells exceed the trigger levels listed in Table 10 of the ROD. At Parcel D, contaminants exceeding screening criteria were not detected within the tidally influenced zones.

21. **Comment:** **Page 55, Item 2.8 (Alternative 2 Deed Notification): How will soil with high moisture content be dewatered or dried? Who will determine whether excavated areas will be paved or seeded (or other covers)? Has the Navy contacted PUC's Pretreatment group to review POTW discharge limits? The intent of the statement about restricting placement of excavated soils onto the ground surface is unclear.**

Response: Excavated soil will be dewatered using standard dewatering practices selected by the Navy's remedial action contractor. In most cases, replacement surfaces will be similar to the removed surface. If the intended reuse of the area has been definitively determined, reuse considerations may modify the replacement surface.

The Navy has reviewed POTW discharge limits. The Navy obtained a copy of "Requirements for Batch Wastewater Discharges" prepared by the SFDPW in April 1994. In addition, phone conversations between the Navy's contractor, TtEMI, and Charles Seale and Steven Todd of SFDPW on January 12 and 17, 1996, respectively, provided information regarding POTW discharge requirements and costs to discharge to the POTW.

Regarding the excavated soils, see response to the SFRA's comment number 2.

22. **Comment:** **Page 56, Item 2.8 (Alternative 2 Deed Notification): The comment that all the alternatives for groundwater are identical is true: all alternatives are monitor and restrict use. This may be acceptable from a health risk perspective, but many not reflect realities associated with effective site development, maintenance and repair.**

The comment on storm drains here says "may be lined." Will this be done?

The final paragraph in this Section states costs and comments that there are no O&M costs associated with this Alternative. We feel this may be inaccurate since many health risk and eco risk assumptions involve barriers between contamination and receptors. If barriers such as pavement are not maintained, how can the exposures be prevented? If there is no O&M budget, how will maintenance and repair be accomplished?

Response: The selected remedial alternative is protective of human health and the environment as evaluated in the Parcel D RI and FS reports. As stated previously, the RI and FS did not evaluate the potential risk associated with short-term exposure to groundwater, as might be expected for construction workers during utility upgrade activities. The Navy is currently conducting a risk assessment of short-term exposure to groundwater. The results of this risk assessment should help the SFRA determine the appropriate level of PPE necessary for its workers, if any at all. If during the city's redevelopment, repairs, or improvements groundwater is encountered, the groundwater should be managed appropriately. Groundwater should be sampled and properly disposed of as required by law based on the sampling results.

Storm drain lines located below the water table that may potentially act as a preferential pathway for contaminated groundwater to migrate directly to the Bay will be lined or repaired by some other means to prevent migration of contaminated groundwater directly to the Bay. If the city has determined that the lines will not be used in the future, the lines may be removed or permanently abandoned in such a way to prevent migration of contaminated groundwater directly to the Bay.

O&M costs are post-remedial action construction costs necessary to ensure the continued effectiveness of a remedial action. Alternative 2 involves excavation of soil that poses a risk under the selected industrial scenario. Risk assumptions do not involve barriers. Excavation and off-site disposal is a finite activity, and once completed, no O&M is necessary. Alternative 2 also

includes groundwater monitoring. The estimated annual cost for groundwater monitoring was converted to a net present value cost and added to the total capital cost. The continued effectiveness of Alternative 2 does not require continued O&M; therefore, no O&M budget is necessary.

23. **Comment:** **Page 60, Item 2.9.2 (ARAR Compliance): This Section states that the Navy agrees that soil removal to "a lead level less than 1,000 mg/kg" will meet the Basin Plan. This may be true, but will it meet other regulatory criteria? How will it meet criteria if barriers or other exposure pathways are compromised?**

Response: Remediation of soil lead levels to 1,000 mg/kg will meet both human health and ecological risk criteria. The HHRA conducted for Parcel D does not consider whether barriers are present. The risk assessment evaluates the risk posed by contaminant concentrations present in the soil, regardless of whether a barrier is present.

24. **Comment:** **Page 60, Item 2.9.3 (Long-Term Effectiveness): How does Alternative 2 provide effective management of Parcel D VOCs?**

Response: Alternative 2 provides long-term effectiveness because Parcel D contaminants are removed by excavation and disposed of at an off-site facility. VOCs present at Parcel D do not exceed the cleanup goals for cleanup goal scenario 1, the selected cleanup goal scenario; therefore, VOCs will not require remediation. Under cleanup goal scenario 1, none of the alternatives would manage Parcel D VOCs.

25. **Comment:** **Page 62, Item 2.10 (Selected Remedy): If Alternative 2 is the selected remedy, then review and comment on proposed remedial design/remedial action documents is important. Is the schedule for implementation of all tasks still "TBD"?**

Response: Tentative dates have been included in the ROD.

26. **Comment:** **Page 63, Item 2.1 (Selected Remedy): The third paragraph states that future soils generated must be managed as potential hazardous wastes. If so, who will be the "generator" and who will pay for characterization and disposal?**

Response: The Navy proposes to develop, in conjunction with the city, a base management plan. The purpose of the base management plan will be to identify physical and fiscal responsibility for conditions not covered under the CERCLA remedial design/remedial action.

27. **Comment:** **Page 64, Item 2.1 (Selected Remedy): SFRA and City staff wish to participate in the review and comment process should groundwater criteria be exceeded.**

Response: The Navy is willing to provide the SFRA with copies of HPS documents and to receive comments from SFRA. However, only the Base Realignment and Closure (BRAC) Cleanup Team (BCT) has decision authority.

28. **Comment:** **Page 66, Item 2.11 (Statutory Determinations): The Navy suggests a CERCLA Section 121 review be held at least once every five years. Since the selected "remedy will result in hazardous substances remaining onsite above health-based levels," SFRA and City staff feel that this process initially involve a yearly review.**

Response: CERCLA Section 121 dictates conducting a review of the remedy at least once every 5 years after commencement of the remedial action to ensure that the remedy is still protective of human health and the environment. A 5-year review of the remedy effectiveness is sufficient for the selected remedy for Parcel D. Groundwater monitoring will initially be conducted more frequently than every 5 years in accordance with the RAMP.

29. **Comment:** **Page 67, Item 2.12 (Document of Significant Changes): The Navy proposes additional controls "specifically additional deed notification" as a response to concerns raised by SFDPW. We are not certain that deed restrictions are an appropriate response to issues raised in SFDPW's written comments.**

Response: The Navy assumes that SFRA is referring to SFDPW comment number 1 in Appendix B to the ROD, which contains the Responsiveness Summary for Parcel D Proposed Plan. In SFDPW comment number 1, SFDPW expresses concern regarding the selected cleanup goal for industrial use. The Navy's response indicates that the selected cleanup goal for industrial use is consistent with City of San Francisco plans to adapt Parcel D for industrial use or uses that are consistent with the industrial use scenario evaluated in the risk assessment. Deed restrictions are necessary to ensure that the property is not used for residential purposes.

Subsequently, regulatory agencies have expressed concern regarding how the deed restrictions will be enforced. A base management plan, detailing the parties responsible for enforcing deed restrictions and notifications, is currently subject to discussion between the Navy and the City of San Francisco. Section 2.12 of the ROD will not be revised.