

**RESPONSES TO COMMENTS ON THE DRAFT PROPOSED PLAN/DRAFT  
REMEDIAL ACTION PLAN FOR THE FORMER NORTHERN BUILDING WAYS  
AREA, INVESTIGATION AREA A2, MARE ISLAND NAVAL SHIPYARD, VALLEJO,  
CALIFORNIA  
AUGUST 14, 2009**

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This document presents the Department of the Navy's responses to regulatory comments from Paisha Jorgensen of the San Francisco Bay Regional Water Quality Control Board (Water Board), Carolyn d'Almeida of the U.S. Environmental Protection Agency (EPA), and Janet Naito of the Department of Toxic Substances Control (DTSC) on the "Draft Proposed Plan/Draft Remedial Action Plan (PP/RAP), Former Northern Building Ways (FNBW) Area, Investigation Area (IA) A2, Former Mare Island (Mare Island) Naval Shipyard, Vallejo, California," dated November 26, 2008.

The comments addressed below were sent by Mr. Jorgensen via electronic mail on January 6, 2009, Ms. d'Almeida on June 5, 2009, and Ms. Naito on August 6, 2009. The comments and responses are provided below.

**RESPONSE TO WATER BOARD COMMENT**

1. **Comment:** This Proposed Plan (PP) and RAP do not cover TPH or PCB issues. TPH and PCB remedial actions are not discussed until pages 3 and 4 of the PP. Add a sentence to the first section stating that this PP does not address or cover TPH or PCB issues. Acknowledging this at the very beginning of the PP makes it clear that the Navy isn't trying to bury TPH and PCB issues at the back of this PP.

**Response:** The Navy will add a sentence to the first section of the Draft Final PP/Draft RAP to indicate that total petroleum hydrocarbon (TPH) and polychlorinated biphenyl (PCB) issues will be addressed under their respective programs separate from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and are not included in this PP/RAP.

**RESPONSES TO EPA COMMENTS**

1. **Comment:** There are still PCB sites in Investigation Area (IA) A2 needing closure under TSCA.

**Response:** The Navy intends to complete cleanup of all PCB sites that require action under the Toxic Substances Control Act (TSCA) before the record of decision (ROD) is finalized. The text will be revised to clarify that PCB sites will be addressed under the self-implementing TSCA program separate from CERCLA.

2. **Comment:** There is still no comprehensive investigation of vapor intrusion risk for Mare Island; therefore, the EPA recommends a Land Use Covenant requiring vapor intrusion mitigative measures be incorporated in the design of any new construction on the site. Please see the April 2009 guidance document published by California Department of Toxic Substances Control (DTSC), available online at [www.dtsc.ca.gov/SiteCleanup/upload/VI Mitigation Advisory Apr09r.pdf](http://www.dtsc.ca.gov/SiteCleanup/upload/VI_Mitigation_Advisory_Apr09r.pdf).

**Response:** The Navy is proposing no further action for the site under CERCLA with unrestricted land use and has multiple lines of evidence to show no vapor intrusion (VI) risk at IA A2. Extensive soil and groundwater samples were collected and evaluated during the remedial investigation (RI) (Tetra Tech EM Inc. [Tetra Tech] 2008). Volatile organic compounds (VOCs) were not reported above their respective preliminary remediation goals (PRGs) in soil or groundwater. Additionally, a VI risk assessment was conducted during the RI (Tetra Tech 2008) and did not identify a concern posed by VOCs at the site; thus, land use covenants that would require mitigation measures for VI are not necessary.

## RESPONSES TO DTSC COMMENTS

1. **Comment:** The document is intended to be a Proposed Plan/Draft Remedial Action Plan. Therefore, it would be useful to refer to the document as a "Proposed Plan/Draft Remedial Action Plan" or "Proposed Plan/Draft RAP" throughout the text.

**Response:** The Draft PP/Draft RAP has been submitted and revised in accordance with agency comments, as per the Site Management Plan schedule. Therefore, the document will remain Draft Final PP/Draft RAP.

2. **Comment:** The document is intended to be a Proposed Plan/Draft Remedial Action Plan. Therefore, the document must meet the requirements of California Health and Safety Code section 25356.1. I have taken a look at other Proposed Plan/Draft Remedial Action Plan documents prepared for other military facilities and request the following be added to the document:

- a) A non-binding preliminary allocation of responsibility amongst all identified potentially responsible parties. This language is taken from another Proposed Plan: "HSC section 25356.1 (e) requires DTSC to prepare a preliminary nonbinding allocation of responsibility among all identifiable potentially responsible parties. HSC section 25356.3(a) allows potentially responsible parties with an aggregate allocation in excess of 50 percent to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. Based on available information regarding the former Mare Island Naval Shipyard,

DTSC determines that the Department of the Navy is a responsible party with aggregate alleged liability in excess of 50 percent of the costs of removal and remedial action pursuant to HSC section 25356.3. The Navy may convene arbitration if they so choose."

- b) It would also be useful to clarify that this document is intended to meet the requirements of the California Health and Safety Code (HSC) section 25356.1 for hazardous substance release sites. The following language is taken from another Proposed Plan: This document is intended to meet the requirements of the California Health and Safety Code (HSC) section 25356.1 for hazardous substance release sites. The HSC requires preparation of a Remedial Action Plan for sites that are not listed on the National Priority List, such as Mare Island. Therefore, this document also serves as a Draft RAP in order to fulfill the public notice and comment requirements of the HSC. The final RAP will be incorporated in the ROD for this site.
- c) It would be useful to clarify that a Notice of Exemption is being prepared to meet DTSC's CEQA obligations. The following language is taken from another fact sheet: As required by California state law (the California Environmental Quality Act, or CEQA) we studied the possible effects the proposed cleanup could have on the environment. The findings of the study can be reviewed in a document called a Notice of Exemption (commonly referred to as an NOE). The NOE states that the proposed cleanup will have no negative impact on the environment.

**Response:** In an effort to comply with DTSC's request to make the Navy's PP a combined PP/RAP, the requirements of California Health and Safety Code Section 25356.1 will be incorporated into the Final RAP for this site. Additionally, findings of the Notice of California Environmental Quality Act (CEQA) Exemption will be incorporated into the Final RAP.

- 3. **Comment:** Page 2, Site Information. This section describes the uses of Buildings 575 and 593. Please describe the uses for building 643 and 641 within the FNBW Area.

**Response:** The Draft Final PP/Draft RAP will be revised to add a short description about the past uses of Buildings 589 (storage), 641 (former fire station), and 643 (former electrical substation).

- 4. **Comment:** Page 3, Previous Investigations and Summary of Site Risk, Paragraph 2, last sentence. Please clarify whether TPH in the motor oil range has been addressed. If so, please change the tense within the sentence to reflect this.

**Response:** A petroleum corrective action was conducted at IA A2 in April 2009 to address petroleum hot spots identified during previous site investigations conducted at IA A2 between 1997 and 2003 (TN & A 2009). Field activities involved removing surface and subsurface soil that exceeded the Tier 2 residential environmental screening levels (ESLs) for total petroleum hydrocarbons as motor oil (TPH-mo) in accordance with the eastern early transfer parcel criteria for soil (CH2M Hill 2009). A total of 17 areas of concern were excavated and TPH-mo was reported below the Tier 2 residential ESLs (500 milligrams per kilogram [mg/kg]) in all confirmation soil samples (TN & A 2009). The referenced sentence will be modified to reflect the removal of petroleum hydrocarbons (as motor oil).

**5. Comment:** Page 3, Risk Assessments. The discussion in the risk assessment should be expanded to clearly discuss the background risks versus the risks associated with the residual chemical levels at the Site.

**Response:** Based on the RI (Tetra Tech 2008), polycyclic aromatic hydrocarbons (PAHs) were identified as risk drivers at the site. However, the distribution of PAHs in soil is comparable to ambient conditions at Mare Island and there is no identifiable point source of PAHs at the site. The distribution of soil samples that exceed the residential PRG were collected within the artificial fill material, or below the fill (9 feet below ground surface) within the native silty clay unit. A benzo(a)pyrene (BAP)-equivalent concentration evaluation was conducted in the RI (see Table 3-5 of the RI [Tetra Tech 2008]) to determine whether the PAH concentrations are present at ambient levels. Based on this evaluation, the maximum (0.53 mg/kg) and average (0.35 mg/kg) BAP-equivalent concentration are both less than the ambient concentrations observed at Mare Island. In addition, these concentrations are less than the risk-based screening value of 0.62 mg/kg (Tetra Tech 2008). Thus, the cancer risks associated with the risk drivers (PAHs) are considered representative of ambient conditions at Mare Island.

**6. Comment:** Page 3, Radiological Investigation.

- a) Sentence 1. Please revise the sentence to read: "The only area within IA A2 identified as having an historical radiological use ....."
- b) Last sentence. Please revise this sentence to state that DTSC, DPH and EPA concurred on a finding of no further action for Building 593 in 1996.

**Response:** a) Sentence 1 of the Draft Final PP/Draft RAP will be revised to the following: "*The only area within IA A2 identified as having a historical radiological use was Building 593.*"

- b) The last sentence of this paragraph will be revised to the following:  
*"Based on the results of the investigation, DTSC, the Department of Public Health, and EPA concurred with the finding of no further action for Building 593 in 1996."*

**7. Comment:** Pages 3 and 4, Petroleum Program. Please update this paragraph to reflect the work conducted. Please also clarify whether any constituents were found during this removal action that would need to be address in the Proposed Plan.

**Response:** The only chemical of concern (COC) sampled and analyzed during the petroleum corrective action was TPH-mo by EPA Method 3550B/8015M. As noted above, all confirmation soil analytical results were reported below the Tier 2 residential ESL for TPH-mo (500 mg/kg) (TN & A 2009).

**8. Comment:** Page 4, PCB Program.

- a) It would be useful to discuss the number of PCB sites identified within IA A2, the number of assessments conducted and the number of PCB sites requiring cleanup. Please also indicate the Navy's intent to cleanup PCBs found above the TSCA screening level of 1 milligram per kilogram.
- b) DTSC and the Navy disagree as to whether the CERCLA definition of a hazardous substance or hazardous waste would cover polychlorinated biphenyls (PCBs). The Navy has indicated that it intends to cleanup all of the PCB sites within IA A2 to achieve the TSCA unrestricted use standard. Achieving this goal would result in an average concentration of PCBs below 1 milligram per kilogram (mg/kg). The resulting risk would be within DTSC's risk range. However, if the Navy cannot meet the TSCA unrestricted use standard at one or more of its PCB sites, then DTSC and the Navy would need to enter into a land use covenant to restrict the future use of a portion of IA A2. Entry into a land use covenant and the operation and maintenance of those restrictions could be considered a response action. This would require amendment of the remedy selection document.
- c) If there were releases from PCB sites on the Pier, this would have resulted in a release to Mare Island Strait. While it is clear that the Navy is proposing to cleanup the sites on the Pier, it would be useful to clarify whether any releases were noted from these facilities and whether they may have been transported to Mare Island Strait. If so, it would be useful to clarify whether these releases would be addressed under Investigation Area K.

- Response:** a) The third sentence will be revised to list the number of sites previously identified as having potential PCB concerns: "The PCB assessment evaluated 13 sites, including Buildings 163, 589, 591 (demolished), 593, 641, 643, 799, 825, railroad tracks, and former pier areas. Of the 13 sites, three sites are currently recommended for closure, and the other ten sites are undergoing further verification sampling and abatement."

In addition, a sentence will be added to note that soil will be removed if the screening criterion of 1 mg/kg is exceeded: "Soil will be removed if confirmation soil samples exceed the TSCA screening criterion of 1 part per million."

- b) The Navy intends to reduce residual concentrations of PCBs at the site to 1 mg/kg or lower. The resulting cancer risk for a PCB detection of 1 mg/kg is within the risk management range of  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$  for a hypothetical residential receptor ( $5 \times 10^{-6}$ ) and is equal to the point of departure for carcinogens for the industrial worker ( $1 \times 10^{-6}$ ). Noncancer hazard results for both receptors would be less than the threshold of 1 for noncarcinogens.

Based on EPA guidance, the Navy prepares risk estimates based on a reasonable maximum exposure for potential receptors at the site. Post-removal and PCB cleanup, the Navy expects the resulting site maximum concentration of PCBs to be less than or equal to 1 mg/kg, which is not the average concentration a receptor is expected to encounter while visiting the site. A revised risk estimate for PCBs in soil would be based on the average site concentration, which is expected to be less than 1 mg/kg. Thus, the residual site risk resulting from the average concentration of PCBs in soil will be less than the cancer risks reported above for the hypothetical resident and industrial worker. Although the Navy intends to clean up all soils with concentrations of PCBs greater than 1 mg/kg and does not believe a land use covenant will be necessary, the portion of the comment relating to land use covenants is noted. No revisions will be made to the Draft Final PP/Draft RAP as a result of this comment.

- c) Releases of PCBs to eight sites on the Fleet Reserve Pier have been identified during previous site investigations. The Draft Final PP/Draft RAP will be revised to indicate that several PCB sites are located on the pier and there are no records of PCB releases from the pier to Mare Island Strait. However, the Draft Final PP/Draft RAP will note that potential releases to Mare Island Strait sediment adjacent to the pier will be evaluated and further characterized in the upcoming RI for IA K.

9. **Comment:** Glossary of Technical Terms. It would be useful to define terms used to describe risk in the glossary. A Treasure Island Proposed Plan defined Risk, Risk Management Range and Unacceptable Risk.

- **Risk** – Likelihood or probability that a hazardous substance released to the environment will cause adverse effects on exposed human or other biological receptors. Risk calculations incorporate very conservative assumptions. Adverse health effects can be classified as carcinogenic (cancer-causing) or non-carcinogenic. Risk from cancer is expressed as a probability such as 1 in 1,000,000 (also expressed  $1 \times 10^{-6}$ ). This means that one person in a population of 1,000,000 are more likely to get cancer over their lifetime. Non-cancer risk is expressed as a hazard Index (HI), see above.
- **Risk Management Range** – The risk management range is considered to represent a risk between 1 in 10,000 and 1 in 1,000,000 ( $1 \times 10^{-4}$  and  $1 \times 10^{-6}$ ).
- **Unacceptable Risk** – A quantification of potential harm to humans, animals, or plants from exposure to contaminants at elevated levels. An unacceptable risk means there is a threat to human health or the environment and that a remedial action must be taken. Unacceptable risk is characterized by a site risk above 1 in 10,000 ( $1 \times 10^{-4}$ ).

**Response:** The Navy will include the definitions for two of the three terms listed in the above comment: risk and risk management range. The Navy will revise the Risk Assessment section of the Draft Final PP/Draft RAP to be more clear of how the risk relates to the risk management range and hazard index and unacceptable risk will also be included as follows:

- **Hazard Index** – A calculated value used to represent a potential noncancer health effect. A hazard index value of 1 or less is considered protective of human health.
- **Unacceptable Risk** – Unacceptable risk is determined based on the baseline risk assessment results. The definition of unacceptable risk means a potential threat to human health or the environment.

10. **Comment:** For More Information. Please update this section to include my contact info instead of Chip's.

**Response:** The contact information for DTSC will be updated to include information for Janet Naito, rather than for Chip Gribble.

## REFERENCES

- CH2M Hill. 2009. "Technical Memorandum: Tier 2 Risk Assessment Approach for Water Board Sites in the Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California." April 9.
- Tetra Tech EM Inc. 2008. "Investigation Area A2 Former North Building Ways Area, Remedial Investigation, Former Mare Island Naval Shipyard, Vallejo, California." September 22.
- TN & A. 2009. "Draft Petroleum Corrective Action Plan Completion Report Former North Building Ways Within Investigation Area A2, Former Mare Island Naval Shipyard, Vallejo, California." August.



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