

5090
Ser 1813EG/L3180
9 Feb 1993

From: Commander, Western Division, Naval Facilities Engineering Command
To: Distribution

Subj: REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) FOR
NAVAL STATION TREASURE ISLAND, SAN FRANCISCO

Encl: (1) Navy Response to DTSC Comments on the Proposed Approach For The Baseline
Human Health Risk Assessment dtd 26 Oct 1992

1. The Navy has reviewed the comments prepared by the California Department of Toxic Substances Control (DTSC) dated 15 Dec 1992 on the Navy's Proposed Approach For The Baseline Human Health Risk Assessment dated 26 Oct 1992. DTSC has not formally submitted the comments to the Navy. However, the Navy has prepared responses to the comments and are provided in enclosure (1). The responses are based on issues discussed during the December 17, 1992 working meeting between the Regional Water Quality Control Board ((RWQCB), DTSC, and Navy, and on subsequent discussions between DTSC and Navy.

2. Thank you for your guidance and involvement in this project. For further information, please contact Mr. Ernesto M. Galang, Code 1813EG, at (415) 244-2560.

GILBERT A. RIVERA
By direction

Distribution:

California Department of Toxic Substances Control (Attn: Tom Lanphar)
California Regional Water Quality Control Board (Attn: Barbara Smith)
California Department of Fish and Game (Attn: Mike Rugg)
US Environmental Protection Agency, Region IX (Attn: Julie Anderson)
US Fish & Wildlife Services (Attn: Steve Schwartzbach)
US Army Corps of Engineers (Attn: Sharon Moreland)
Bay Area Air Quality Management District (Attn: Brian Jennison)
Bay Conservation and Development Commission (Attn: Chris Perry)
National Oceanic & Atmospheric Administration (Attn: Denise Klimas)

Copy to:

NAVSTA Treasure Island (Attn: Jim Sullivan)

Blind copy to:

1813, 1813EG

Admin Records (w/3 copies of encl (1))

Writer: E. Galang, 1813EG, X-2560

File: NS, Treasure Island

Chron, blue, pink, green

RESPONSE TO DTSC COMMENTS (DECEMBER 15, 1992) ON THE PROPOSED APPROACH FOR THE BASELINE HUMAN HEALTH RISK ASSESSMENT FOR NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA, OCTOBER 26, 1992

To initiate discussion between Navy, the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) on the BHHRA methodology, Navy's contractor (PRC) prepared the Proposed Approach for the Baseline Human Health Risk Assessment (Proposed Approach) dated October 26, 1992 (PRC, 1992). The DTSC reviewed the Proposed Approach and prepared comments dated December 15, 1992 (DTSC, 1992).

The Navy has reviewed DTSC's comments. This report provides Navy's responses to the comments. As a convenience to the reader, each DTSC comment is provided in its entirety, followed by Navy's response.

DTSC General Comment No. 1

The overall approach suggested for the risk assessments appears to be in agreement with procedures used by OSA and in agreement with EPA's Risk Assessment Guidance for Superfund (RAGS), Human Health Evaluation Manual, Part A, 1989. Conducting twenty-two separate risk assessments may not be appropriate, and a consolidated operable unit approach should be considered. Furthermore, a base-wide risk assessment must be conducted in order to adequately determine the overall risk at this site. Since this is the beginning of the remedial investigation (RI) phase, the sampling data must adequately characterize the site. The statement on page 2 indicates that the RI is being treated as a screening evaluation which may not be appropriate. The RI sampling must sufficiently define the nature and extent of contamination on the sites.

Navy's Response

On December 17, 1992, DTSC, RWQCB, Navy and Navy's contractor (PRC) participated in a working meeting to consider a consolidated operable unit approach to grouping sites for the baseline human health risk assessment (BHHRA). After agreeing to specific criteria to be used to group the sites, the meeting participants reviewed the data and decided to group several sites. The criteria used

were detailed in the meeting minutes submitted to Navy. Sites 3, 21, and 25 became Group I; Sites 4 and 19 became Group II; Sites 14 and 22 became Group III; and Sites 17 and 24 became Group IV. The remainder of the sites would be treated separately in the BHHRA. Thus, it was agreed that the number of separate risk assessments to be performed would be reduced from 22 to 16.

During a discussion between DTSC and Navy's contractor on January 13, 1993, both parties agreed that a basewide risk assessment would be conducted, but that the appropriate approach to a basewide risk assessment should be based on the results of the 16 separate risk assessments. Thus, it was concluded that both parties would continue discussions on the appropriate approach, but that a basewide risk assessment would not be included in the draft BHHRA report. DTSC expects to approve an approach following review of the draft report. The basewide risk assessment would then be included in the draft final report.

The sampling data will sufficiently define the nature and extent of contamination at the sites. During the meeting on December 17, 1992, Navy's contractor stated that any data gaps in the remedial investigation (RI) data would be identified early and data would be collected to be included in the RI report.

DTSC General Comment No. 2

In addition to the basic guidance in EPA RAGS, OSA/DTSC has issued the document, "Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities, July 1992," which PRC should refer to in writing the risk assessment. This document may be obtained by calling Ms. Frances Tsuruda at (916) 255-2007. Also, attached are two memos dated August 20, 1991 and October 17, 1991 which state OSA's current approaches for health criteria for risk assessments and for assessing PAHs. A table with the current dermal absorption factors for various chemicals has also been included. Finally, all exposure models which may be used in estimating fate and transport of chemicals, such as an air emissions model for VOCs from contaminated ground water, must be approved by EPA, DTSC, or California Air Resources Board.

Navy's Response

Navy's contractor will refer to the OSA/DTSC document, the two memos on health risk criteria and PAHs, and the dermal absorption table in preparing the BHHRA.

In addition, any model used for estimating VOC emissions from ground water will be approved by DTSC, EPA, or the Air Resources Board before the results are used in the BHHRA draft report.

DTSC Specific Comment No. 1

Page 2: Data from Former Investigations. It may be appropriate not to include these data, however, if chemicals were detected in earlier investigations that were not detected in the current sampling or if large discrepancies in concentration values are present, these data may require inclusion. A thorough discussion of exclusion or inclusion of data is needed.

Navy's Response

Navy's contractor will review data from former investigations, identify any anomalous chemicals or concentration discrepancies, and discuss these matters in the BHHRA report.

DTSC Specific Comment No. 2, Part 1

Pages 3 - 4: Background Soil Constituents. Justification for excluding inorganics in ground water must be provided. Depth of ground water, potential ground-water uses, and soil contamination must be considered.

Navy's Response

Ground water at NAVSTA TI is not of potable quality due to high levels of total dissolved solids. People are not directly exposed to ground water and are not expected to be exposed in the future. Although some volatile organic compounds (VOCs) in ground water could migrate to a point

(land surface) where people might be exposed and are therefore a potential concern, inorganic constituents in ground water will not migrate as such, and therefore do not pose a risk to human health. This justification for excluding inorganics in ground water will be provided in the BHHRA report.

DTSC Specific Comment No. 2, Part 2

References for background concentrations should be approved by the project officer, and they should be relevant for this site. Chemical concentrations "significantly greater than the maximum background concentration" should be defined. Is this a statistical analysis and what is the level of significance?

It may be appropriate to do background sampling on Treasure Island as well as bay sediments for comparison.

If site specific chemicals are found in significant concentrations but are not linked to past site activities, they should be included in the risk assessment.

Navy's Response

References for background concentrations will be presented to DTSC and the RWQCB for their review.

The word "significantly" was not intended to imply a statistical comparison. To clarify any inference to that effect, Navy's contractor will delete the word, and make no determination of significance in comparing on-site concentrations with background levels. Such comparisons will be made on a strict greater-than or less-than basis.

During the meeting on December 17, 1992, Navy, DTSC, and RWQCB discussed background sampling on Treasure Island and agreed that at this time it did not appear necessary. On-site concentrations of inorganic constituents will be compared to background or ambient levels obtained from relevant literature sources and approved by DTSC and RWQCB.

And finally, even if site-specific chemicals could not be linked to past site activities, they would certainly be included in the risk assessment.

DTSC Specific Comment No. 2, Part 3

Toxicity-concentration screening evaluation should only be used for sites with chemicals in excess of 30, or by consultation with an OSA toxicologist. In addition, chemicals in certain classes (i.e. phthalates, PAHs, etc.) should be combined instead of eliminated. Chemicals that are classified by EPA or Cal/EPA to be known human carcinogens or known human reproductive or developmental toxicants may not be eliminated from the risk assessment. If toxicity-concentration screening is used, RAGS guidance must be followed. All calculations must be presented.

Elimination of pesticides and PAHs based on background data must be approved by an OSA toxicologist.

Navy's Response

Any toxicity-concentration screening evaluation will be presented to the DTSC/OSA toxicologist for approval prior to use in the BHHRA.

Any phthalates, PAHs, or other chemicals that are classified by EPA or DTSC as known human carcinogens or reproductive or developmental toxicants will be included in the BHHRA.

In addition, elimination of any pesticides or PAHs from the BHHRA based on background data will be discussed and approved by DTSC and RWQCB.

DTSC Specific Comment No 3

Page 5: Environmental Media to be Evaluated. Documentation must be provided to support the exclusion of ground-water exposure pathways other than VOC emissions.

Navy's Response

Such documentation will be provided in the BHHRA report.

DTSC Specific Comment No. 4

Pages 5-13. Exposure Estimates. Presentation of typical case and reasonable maximum exposure are acceptable. It appears that the only difference between the two estimates is the exposure point concentration (EPC). All other exposure parameters for both estimates are the same. If different assumptions are used for the separate estimates, they will be subject to review.

Navy's Response

The observation is correct that the only difference between the proposed typical case and reasonable maximum exposure estimates is the EPC. Navy acknowledges that if different assumptions are used, they will be subject to review.

DTSC Specific Comment No. 5

Page 13: Toxicity Evaluation. All chemicals must be assumed to produce adverse effects by all routes of exposure (oral, inhalation, and dermal) unless there is sufficient evidence presented in the document to eliminate a particular pathway.

Navy's Response

Navy acknowledges that unless sufficient evidence can be provided to eliminate a particular pathway or exposure route, all chemicals will be assumed to pose potential effects by the oral, inhalation, and dermal routes of exposure. For example, Navy intends to implement this assumption by using oral toxicity values for evaluating the risks associated with inhalation and dermal exposure when inhalation and dermal toxicity values have not been developed.

DTSC Specific Comment No. 6

All assumptions and data should be clearly summarized in tables in the document. The tables should be presented in a manner which would allow one to calculate the potential risks from information in the summary tables from each section.

Navy's Response

All assumptions and data will be summarized in such tables. The information provided should be sufficiently complete and well-organized so as to allow the easy calculation of potential risks.

DTSC Specific Comment No. 7

After the submitted risk assessment has been reviewed by DTSC staff, all subsequent revisions to the text must be clearly identified. This may be done in several ways: for example, by submitting revised pages with the reason for the changes noted, by the use of strikeout and underline, by the use of shading and italics, or by cover letter stating how each of the DTSC comments has been addressed. Any changes to the document that have not been made in response to specific DTSC comments must also be clearly identified and the reason for the change justified.

Navy's Response

Navy notes this comment and submits that following DTSC review, any changes to the document will be clearly identified and the reason for the change will be justified.

DTSC Conclusion

The above concerns should be incorporated into the risk assessment protocol and addressed in the baseline risk assessment. The question of appropriate operable units should still be determined and an overall assessment of risks for the entire Naval Station must be conducted.

Navy's Response

Based on discussions between DTSC and Navy's contractor, the risk assessment protocol (the Proposed Approach) will be considered to be revised by this report. The Proposed Approach will not be rewritten. DTSC's concerns as reflected by the comments presented in this report will be addressed in the BHHRA report.

The question of appropriate operable units was addressed and resolved at the December 17, 1992, meeting between DTSC, RWQCB, and Navy.

As discussed previously in this report, the overall assessment of risks for the entire Naval Station (the base-wide risk assessment) will be conducted, but the approach and the assessment will most likely be developed following DTSC's and RWQCB's review of the site-specific risk assessments presented in the draft BHHRA report.

In conclusion, Navy makes said changes to the Proposed Approach by submittal of these responses. Navy recognizes that any additional changes will be subject to review by DTSC and RWQCB. However, continued dialogue between DTSC, RWQCB, and Navy, on the methodology and presentation of the BHHRA should minimize extensive reviews.

REFERENCES

- DTSC, 1992. Memorandum to T. Lanphar, Site Mitigation Branch, Department of Toxic Substances Control from D. Oudiz, Office of the Science Advisor, Department of Toxic Substances Control on the Risk Assessment Protocol for Treasure Island Naval Station PCA 14650, Site #200231-43. December 15, 1992.
- PRC, 1992. Proposed Approach for the Baseline Human Health Risk Assessment, Naval Station Treasure Island, San Francisco, California. Prepared by PRC Environmental Management, Inc. under Navy CLEAN Contract No. N62474-88-D-5086. October 26, 1992.