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

Subj: DRAFT FINAL, ADDENDUM TO WORK PLAN, VOLUME 6, BASELINE  
PUBLIC HEALTH AND ENVIRONMENTAL EVALUATION

Encl: (1) Subject Document

1. In accordance with the Federal Facility Agreement for Naval Station, Treasure Island, Hunters Point Annex, enclosure (1) is forwarded for review and comment. Enclosure (1) has been prepared in response to review comments received on the Draft version of the addendum.
2. By copy of this letter, this document is also being provided to other concerned regulatory agencies.
3. Should you have any questions regarding this matter, the point of contact is Commander, Western Division, Naval Facilities Engineering Command (Attn: Louise T. Lew, Code 1811, (415) 244-2551).
4. Submit written comments, if any, to Mr. Eddie Sarmiento, Commanding Officer, Naval Station, Treasure Island, Bldg. 1 (Code 84), San Francisco, CA 94130, with a copy to Western Division, Naval Facilities Engineering Command (Attn: Louise T. Lew, Code 1811, 900 Commodore Drive, San Bruno, CA 94066).

original signed by:

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By direction

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ADDENDUM TO WORK PLAN, VOLUME 6,  
BASELINE PUBLIC HEALTH AND ENVIRONMENTAL EVALUATION  
REMEDIAL INVESTIGATION/FEASIBILITY STUDY FOR  
NAVAL STATION, TREASURE ISLAND,  
HUNTER'S POINT ANNEX  
SAN FRANCISCO, CALIFORNIA

This draft final addendum presents modifications to the *Work Plan, Volume 6, Public Health and Environmental Evaluation, Remedial Investigation/Feasibility Study Hunter's Point Annex, San Francisco, California, March, 1989* in response to comments contained in the September, 1990 Federal Facility Agreement in Attachment G for Hunter's Point Annex (HPA), as well as comments received from the EPA on March 8, 1991 (see Attachment 1).

The Baseline Public Health and Environmental Evaluation (BPHEE) Work Plan will not be revised to incorporate changes based on these agency comments. Because guidance on BPHEE preparation, as well as guidance for preparation of risk assessments is changing on a continual basis, it is expected that approved guidance up to an agreed-upon date such as the start date for the BPHEE will be followed. Guidance issued after this date will be incorporated if the results of the BPHEE would change considerably on the basis of the subsequent guidance. It is expected that agencies will be updated on any changes to the BPHEE approaches in regularly scheduled meetings.

Because the HPA site is a federal Superfund site and in U.S. Environmental Protection Agency (EPA) Region IX, EPA guidance will take precedence over other agency guidance, unless otherwise noted.

Each of the EPA comments contained in Attachment G is paraphrased below and a response is provided. Page numbers referred to in the comments refer to the BPHEE Work Plan.

Comment

Page 1-2: The comment indicates that additional guidance not published at the time the Work Plan was prepared should be consulted, specifically EPA's *Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Volume I, Part A* (RAGS) issued in December 1989, and Region IX EPA guidance issued on December 15, 1989.

Response

The list of guidance documents to be consulted in the preparation of the BPHEE have been updated to include these and other applicable guidance documents released after March 1989 (See Attachment 1). This list replaces those documents mentioned on pages 1-2, 1-3, and 1-4 of the BPHEE Work Plan. As shown in Attachment 1, the RAGS document issued in December 1989 will be consulted. Any changes to this list as a result of new publications or new guidance will be reviewed with the agencies in future meetings.

Comment

Page 1-6: The comment is made that the Work Plan suggests different methods for evaluating aquatic toxicity issues related to surface water bodies and groundwater releases and that the rationale for these differences in evaluation procedures be presented.

Response

Comments regarding the environmental evaluation portion of the BPHEE are currently being addressed in response to comments to the *Draft Environmental Sampling and Analysis Plan for Naval Station, Treasure Island, Hunter's Point Annex, San Francisco, California, August 18, 1990*. This document should be consulted for a complete discussion of aquatic toxicity issues. In addition, other work plans may be

issued in the future to clarify the approach to be used in performing a complete environmental evaluation for the BPHEE according to guidance specified in RAGS, Volume II issued in March 1989. For this reason, the differences in the aquatic toxicity evaluation methods for surface water and groundwater are not addressed in this response.

#### Comment

Page 3-5: The comment states that RAGS methods for deriving a reduced list of chemicals for risk assessment should be used rather than the "indicator chemical" reduction approach stated in the EPA's *Superfund Public Health Evaluation Manual* (SPHEM), 1986.

#### Response

Since publication of the BPHEE Work Plan, the RAGS guidance has been issued. Therefore, several references in the current Work Plan are no longer considered applicable for use in the BPHEE. Methods and terms discussed in the RAGS December 1989 guidance and the Region IX guidance will be used in place of any methods and terms used in SPHEM. Terms such as "indicator chemical" will be replaced with terms such as "chemical of concern." Additionally, the scoring and ranking methodology described in the March 1989 BPHEE Work Plan for selecting chemicals of concern is no longer applicable and will be replaced by the current methods outlined in RAGS and by Region IX; therefore terms such as medium and chemical-specific "toxicity constants" as used in SPHEM will not be used in the BPHEE.

Selection of a list of chemicals for use in the BPHEE will be based on RAGS methodologies. A three-step process will be used to identify site-related chemicals. This data evaluation process will follow the flow chart presented in RAGS (Exhibit 5-1). These three steps include the following: a) identify background and site-related

chemicals, b) identify chemical concentrations for each medium of concern at the site, and c) identify a list of chemicals of concern. In some cases, the BPHEE risk assessment may be performed on all the identified site-related chemicals. In other cases, implementing a data evaluation process similar to that presented in Exhibit 5-1 may eliminate some chemicals from the list of site-related chemicals and consequently from the list of chemicals of concern. It is expected that additional information about HPA sites may become available to justifiably further reduce the list of site-related chemicals and chemicals of concern for a particular site. As necessary, the procedures outlined in Section 5.9 of RAGS will be used to justifiably further reduce the list of chemicals of concern. The justifications for eliminating any chemicals from further evaluation based on any of the RAGS procedures will be documented in the BPHEE. The BPHEE manager will be in continual communication with all members of the RI/FS team during the selection process, especially the RI and FS managers.

#### Comment

Page 3-8: The comment states that use of chemicals of concern selection criteria, such as statistical tests for comparing chemical concentrations to background, or regulatory criteria may not be automatically used as a benchmark for exclusion of chemicals from the risk assessment. The regulatory agencies will work with the Navy to determine whether chemicals found at or below background levels or regulatory criteria can be excluded from the risk assessment.

#### Response

RAGS and Region IX guidance will be consulted to assure that the selection process for chemicals of concern is consistent with EPA guidance. All methods will be reviewed to ascertain that they are in compliance with EPA guidance. Any methods discussed in the Work Plan that are not in compliance with current EPA guidance will

be reviewed and changed accordingly. Standard statistical tests will be used to evaluate chemical concentrations and background levels. Compliance with regulatory criteria alone will not be sufficient to exclude a chemical from the list of chemicals of concern. Full justifications will be provided to the agencies for any chemicals excluded from the list of chemicals of concern.

**Comment**

**Page 3-12:** The comment states that the likelihood of changes in population demographics in the future on and around HPA need to be incorporated in the risk assessment for the BPHEE.

**Response**

Both current and future land uses at HPA and areas within 1-, 2-, and 4-mile radii of the center of HPA will be considered in the evaluation of the demographic data as was described in the BPHEE Work Plan. Areas within and around HPA will be evaluated based on methods similar to those described in the BPHEE Work Plan while considering current and future changes in land use. As part of the evaluation of sensitive receptors, demographic data on receptors such as recreation parks, childcare centers, schools, hospitals, and nursing homes will also be provided in the BPHEE.

**Comment**

**Page 3-18:** The comment states that the term "acceptable level" should not be used as a determination of acceptability of projected risks in the risk assessment and that such decisions only be made after completion of and consideration of the risk assessment and other relevant information.

**Response**

The term "acceptable level" and any reference to the acceptability of the results of the risk assessment will not be used in the BPHEE. The conclusion section of the BPHEE will discuss the health impacts expected to exist or occur at the site by comparing chemical concentrations and risk estimates to various criteria used to assess and interpret the results of the risk assessment. These criteria will include appropriate or relevant and applicable requirements (ARARs) as well as EPA-established reference doses, slope factors, and other health-based toxicological information.

**Comment**

Page 3-18: The comment states that the use of absorption rates less than 100 percent should be used with caution.

**Response**

It is expected that chemical- and exposure pathway-specific absorption rates or factors other than the default value of 100 percent will be used in the BPHEE provided there are adequate scientific literature and guidance to support the alternate values. Any absorption factors obtained from the scientific literature will be fully referenced and justified in the BPHEE. Agency approval will be obtained prior to incorporation of absorption factors other than 100 percent in the BPHEE.

**Comment**

Page 3-20: The comment refers to the issue of acceptability of estimated health risks.

**Response**

As noted in the response above, the terms "acceptable" will not be used in the BPHEE.

**ATTACHMENT 1  
NAVY RESPONSE TO EPA COMMENTS**

Following are Navy responses to EPA comments on the draft *Addendum to Work Plan, Volume 6, Baseline Public Health and Environmental Evaluation, Remedial Investigation/Feasibility Study for Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California* received March 8, 1991. The previously submitted addendum dated February 6, 1991, was revised to address EPA comments.

**Comment 1: Page 1, third paragraph.**

This sentence cites "EPA (Federal and State) guidance..." EPA does not issue guidance on behalf of the State. Did you mean to refer to "EPA and DHS" guidance? Please clarify.

**Response:**

The words "Federal and State" have been deleted from this paragraph.

**Comment 2: Page 3.**

The first paragraph in the "Response," last sentence, says that "terms such as . . . 'toxicity constants' as used in SPHEM will be in the BPHEE." Since the preceding discussion correctly states that RAGS methods and terms will replace those from the out-dated SPHEM, this sentence should be corrected to read "will not be used in the BPHEE." In addition to RAGS, "Risk Assessment Guidance for Superfund: Human Health Risk Assessment: US EPA Region IX Recommendations (December 15, 1989, Interim Final)," should be referenced.

**Response:**

The word "not" has been added to the sentence and reference to the US EPA Region IX recommendations has been added.

**Comment 3: Page 3.**

The second paragraph in the "Response" states that RAGS methodologies "will" be used to reduce the number of site-related chemicals for use in the BPHEE. This should be rewritten to read: "If it is necessary to reduce the number of site related chemicals to a list of chemicals of concern for use in the BPHEE, RAGS methodologies will be used."

RAGS states:

If conducting a risk assessment on a large number of chemicals is feasible (e.g., because of adequate computer capability), then the procedures presented in this section should not be used. (Emphasis added.) (Pages 5-20).

and

...the procedures [for reducing the number of chemicals] may be needed only in rare instances. (Pages 5-21).

The last sentence in the response paragraph, concerning chemicals "most representative of . . . site conditions," is ambiguous and, given the requirement to follow the RAGS procedure, unnecessary. It should be deleted.

**Response:**

The previous response has been rewritten to clarify the procedures to be used for selection of site-related chemicals and chemicals of concern.

**Comment 4: Page 3, last paragraph.**

The last sentence on the page somewhat misstates EPA's original comment, which was that the fact that a chemical concentration is not significantly above background or is below regulatory criteria may not be sufficient grounds for excluding the chemical. EPA has not said that such chemicals cannot be excluded, only that they cannot automatically be excluded, as was suggested in the original PHEE workplan. After chemical concentrations, including background, have been identified, the regulatory

agencies will work with the Navy to determine whether chemicals found at or below background levels or regulatory standards can be excluded from the Risk Assessment.

**Response:**

The comment has been rewritten to clarify EPA's original comment.

**Comment 5: Page 4, first paragraph.**

The fourth sentence in this paragraph refers to a "method" which is "consistent with . . . RAGS." No "method" is presented in the preceding discussion, however; there is merely a general statement about excluding chemicals. The RAGS and Region IX procedures for reducing the number of chemicals are quite specific and reference to them should suffice here. The discussion of "a combination of criteria" and "a separate analysis of chemicals in question" only serves to obscure the Navy's intent to follow the procedures in Section 5.9 of RAGS.

**Response:**

The response has been rewritten to reflect the EPA's concerns.

**Comment 6: Page 4, middle paragraphs.**

Concerning the identification of changes in population demographics around HPA, population numbers and sensitive receptors (e.g., childcare centers, schools, hospitals, nursing homes) need to be identified as well as "land uses."

**Response:**

The following statement was added to the response to address the EPA comment: "As part of the evaluation of sensitive receptors, demographic data on receptors such as recreation parks, childcare centers, schools, hospitals, and nursing homes will also be provided in the BPHEE."

**Comment 7: Page 5, middle paragraph.**

Use of an absorption rate or factor other than 100% must be approved in advance by EPA and DHS toxicologists. Absent advance approval, 100% must be used.

**Response:**

The following statement was added to the response to address the EPA comment: "Agency approval will be required prior to incorporation of absorption factors other than 100% in the BPHEE."

**Comment 8: Page 6.**

The opening sentence of Attachment 2 (formerly Attachment 1) should read "The EPA has ...". Also, the phrase "To the extent applicable and feasible" at the start of the second sentence should be deleted. Because decision-making at Superfund sites needs to be made using consistent risk assessment procedures and criteria, EPA's RAGS guidance must be followed. There is, however, flexibility built into the guidance to adapt the application of these procedures to site-specific situations. Therefore, the reference to "applicable and feasible" is unnecessary and perhaps misleading.

**Response:**

The opening sentence has been rewritten.

**ATTACHMENT 2  
REFERENCES**

The following EPA guidance documents will provide the basic framework for preparing the BPHEE:

- o U.S. EPA, Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final. Office of Emergency and Remedial Response, Washington, D.C. 20460, EPA/540/1-89/002, December, 1989;
- o U.S. EPA, Superfund Exposure Assessment Manual, Office of Emergency and Remedial Response, Washington, D.C. 20460, EPA/540/1-88/001, April, 1988;
- o U.S. EPA, Exposure Factors Handbook, Office of Health and Environmental Assessment, Washington, D.C. 20460, EPA/600/8-89/043, March 1990;
- o U.S. EPA, Exposure Assessment Methods Handbook, Draft, Office of Health and Environmental Assessment, Athens, GA, when document becomes available;
- o U.S. EPA, Guidance for Data Usability in Risk Assessment, Office of Solid Waste and Emergency Response, EPA/540/G-90/008, October, 1990;
- o U.S. EPA Health Effects Assessment Summary Tables, Most Current Quarter, FY 1990/91;
- o U.S. EPA, Integrated Risk Information System Data Base, Current Printout, 1990/91;
- o U.S. EPA, Risk Assessment Guidance for Superfund; Volume II, Environmental Evaluation Manual, Interim Final, Office of Emergency and Remedial Response, Washington, D.C. 20460, EPA/540/1-89/001A, March, 1989;
- o U.S. EPA, Risk Assessment Guidance for Superfund, Human Health Risk Assessment; U.S. EPA Region IX Recommendations, Interim Final, December 15, 1989.

Other guidance documents that may be consulted in the preparation of the BPHEE include:

- o CAPCOA, Toxic Air Pollutant Source Assessment Manual, revised December, 1989;
- o State of California, Department of Health Services, The California Site Mitigation Decision Tree Manual, May, 1986;
- o State of California, Department of Health Services, Scientific and Technical Standards for Hazardous Waste Sites, Draft Book II, August 1990;
- o U.S. EPA, Guidelines for Carcinogen Risk Assessment, 51 Federal Register 33992, September 24, 1986;
- o U.S. EPA, Guidelines for Exposure Assessment, 51 Federal Register 34042, September 24, 1986;
- o U.S. EPA, Guidelines for Health Risk Assessment of Chemical Mixtures, 51 Federal Register 34014, September 24, 1986;
- o U.S. EPA, Guidelines for Health Assessment of Suspect Development Toxicants, 51 Federal Register 34028, September 24, 1986;
- o U.S. EPA, Guidelines for Mutagenicity Risk Assessment, 51 Federal Register 34006, September 24, 1986;
- o U.S. EPA, Proposed Amendments to the Guidelines for Health Assessment of Suspect Developmental Toxicants, 54 Federal Register 9386, March, 1989.
- o U.S. EPA, Review Draft Interim Guidance for Dermal Exposure Assessment, OHEA-E-367, March, 1991.

The BPHEE is being prepared in response to the following requirements:

- o Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA);
- o National Oil and Hazardous Substances Pollution Contingency Plan (NCP), revised and amended March, 1990;
- o California Department of Health Services (DHS), Remedial Action Order (RAO), Docket No. HSA87/88-034RA, dated January 7, 1988.
- o Federal Facility Agreement, September, 1990

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DATED 01 MARCH 1989 IS VOLUME 6 OF THE:

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WORK PLANS

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