



DEPARTMENT OF THE NAVY

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HUNTERS POINT
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04 DEC 1995

From: Commanding Officer, Navy Environmental Health Center
To: Commander, Engineering Field Activity, West, Naval
Facilities Engineering Command, Attn: Dave Song,
900 Commodore Drive, San Bruno, CA 94066-2402

Subj: MEDICAL REVIEW OF INSTALLATION RESTORATION PROGRAM
DOCUMENTS FOR HUNTERS POINT ANNEX, SAN FRANCISCO, CA

Ref: (a) ENGFLDACTWEST memo of 11 Oct 95

Encl: (1) Medical Review of "Engineering Field Activity, West,
Naval Facilities Engineering Command, Hunters Point
Annex, San Francisco, California, Basewide Quality
Assurance Project Plan Preliminary Draft (Vols I-II)"
(2) Medical/Health Comments Survey

1. Per reference (a), we have completed a medical review of the
"Engineering Field Activity, West, Naval Facilities Engineering
Command, Hunters Point Annex, San Francisco, California, Basewide
Quality Assurance Project Plan Preliminary Draft (Vols I-II)."
Our comments are provided in enclosure (1).

2. Please complete and return enclosure (2). Your comments are
needed to continually improve our services to you.

3. We are available to discuss the enclosed information by
telephone with you and, if necessary, with you and your
contractor. If you require additional assistance, please call
Mr. William H. Etheridge or Mr. David McConaughy at (804) 363-
5557 or (804) 363-5549, DSN prefix 864.

W. E. Luttrell

W. E. LUTTRELL
By direction

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**MEDICAL REVIEW OF ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA
BASEWIDE QUALITY ASSURANCE PROJECT PLAN
PRELIMINARY DRAFT**

- Ref: (a) Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, June 1988 (NEESA 20.2-047B)
- (b) State Groundwater Regulation; Guide to Laws, Standards, and Risk Assessment by Sally Benjamin and David Belluck, BNA Books, 1994
- (c) Risk Assessment Guidance for Superfund, Vol I, Part A: Human Health Evaluation Manual, Dec 1989 (EPA 540/1-89/002)
- (d) Agency for Toxic Substances and Disease Registry, Public Health Assessment Guidance Manual, 1994

General Comments:

1. The draft document entitled "Engineering Field Activity, West, Naval Facilities Engineering Command, Hunters Point Annex, San Francisco, California, Basewide Quality Assurance Project Plan Preliminary Draft (Vols I - III)" dated 4 October 1995, was provided to the Navy Environmental Health Center (NAENVIRHLTHCEN) for review on 16 October 1995. The report was prepared for the Engineering Field Activity, West, Naval Facilities Engineering Command by PRC Environmental Management, Inc. Our comments and recommendations are provided below.
2. The comments and recommendations listed below do not contain page numbers for the applicable sections. Of the approximately 100 pages contained in Volume I, only 26 of these pages were numbered and, unfortunately, the page numbers were incorrect. We recommend that the revised document contain correct, sequential page numbers which will allow for a more user friendly format.

Review Comments and Recommendations:

1. Table of Contents

Comment: The Table of Contents and subsequent section headings contained in Volume I require numerous organizational corrections. For example, in the Table of Contents, Sections 1.0 through 13.0 all appear on page 1 of the document; in Volume I, each of the Sections 4.4.1, 4.4.2, and 4.4.3 appear twice in the document with different headings assigned to each section; Table 7-4 does not appear in Volume I; several page numbers appear randomly throughout the document on text pages, tables, and figures.

Enclosure (1)

Recommendation: Revise the Table of Contents, the section headings, and assign sequential page numbers to all text pages, tables, and figures in Volume I; delete the current page numbers and align the entire contents of Volumes I, II, and III according to these revisions.

2. Section 4.4.2, Appropriate Analytical Level

Comments:

a. This section, which should be Section 4.3.2, provides a brief discussion of the definitive data subjected to formal quality control (QC) checks to support remedial investigation (RI), remedial action (RA), and risk assessment activities; however, there is no mention of the specific analytical level (i.e., C, D, or E) required to support the data collection.

b. As noted in reference (a), five general levels of analytical options to support data collection are identified by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Three of these analytical levels (i.e., C, D, and E) are used by the U. S. Navy as QC requirements, of which Level D QC is used for sites on the National Priorities List (NPL). The level of QC required at the site is decided by the Navy engineer in charge (EIC) or remedial project manager (RPM).

Recommendation: Define the analytical level which will be used to support the data collection at Hunters Point Annex (HPA).

3. Section 4.4.3, Levels of Concern and Analytical Detection Limits

Comment: This section, which should be Section 4.3.3, contains the statement, "since cleanup levels (i.e., ARARs) for soils or groundwater have not been established, measurement quantitation Data Quality Objectives (DQOs) will be contract required quantitation limits (CRQL)." While it may be appropriate to use CRQLs as DQOs, we do not agree that there are no ARARs which should be considered in the RI process. For example, reference (b) explains that water quality objectives (WQOs) are established by nine Regional Water Quality Control Boards (Regional Boards) within the state of California and are used to protect beneficial uses of the region's water, including groundwater. The ARARs should be determined early so that they can be compared with the CRQLs. Determination of compliance with specific ARARs is precluded where the detection limit of the analytical method employed is above the comparison ARAR.

Recommendation: Define the ARARs which will be used in comparing site concentration of contaminants. Ensure that the detection limits are set sufficiently below the ARARs so that they are relevant for comparing with the sample results.

4. Section 4.4.1, Precision

Comment: This section states that the precision of field measurements, such as the photoionization detector, will be evaluated based on the results of duplicate measurements. Reference (c) considers the types of analytical results obtained from portable field instruments inappropriate for quantitative risk assessment and, in addition, recommends a confirming analysis by gas chromatography/mass spectrophotometry (GC/MS) be performed on a subset of the samples in a laboratory prior to use in the risk assessment.

Recommendation: Confirm the results from portable field instruments by GC/MS prior to use in the risk assessment process.

5. Section 4.4.3, Representativeness

Comment: This section discusses the use of samples and locations in order to establish "true" site conditions; however, there is no discussion on the different types of background levels of chemicals and the appropriate location and/or number of background samples, etc.

Recommendation: Define the background sampling requirements needed to distinguish site-related contamination from naturally occurring or anthropogenic levels of chemicals.

6. Section 5.3.2.1, Surface Soil and Sediment Sampling Procedures

Comment: The methods used to collect soil or sediment samples are stated to occur in the uppermost 2 feet below ground surface (bgs) and, in limited situations, the uppermost 6 inches bgs. The collection of surface soil samples at 0 to 6 inches, versus 2 feet bgs, is more consistent with U. S. Environmental Protection Agency (USEPA) guidance such as found in reference (c); however, it is inconsistent with the depth of surface soil sampling (i.e., 0 to 3 inches), as defined in reference (d).

Recommendations:

a. We do not recommend the use of soil samples collected in the uppermost 2 feet bgs for residential screening in the human health risk assessment.

b. To facilitate correlation between Public Health Assessments and Health Risk Assessments and to minimize costs associated with redundant sample collection and analysis, we recommend the adoption of 0 to 3 inches as the norm for surface soil sample collection for any future site soil sampling investigations and/or monitoring efforts. The adoption of this sampling protocol will not be in controversy with current USEPA guidance, since reference (c) directs that surface soil samples should be collected at the shallowest depth practical to accurately reflect potential surface soil exposure pathways.

7. Section 5.3.3.2, Groundwater Sampling Procedures

Comments:

a. In the discussion of groundwater sampling, the document states that samples analyzed for dissolved metals will be filtered in the field using a 0.45 micron membrane filter prior to filling sampling containers. Reference (c) states that a 0.45 micron membrane filter may screen out some potentially mobile particulates to which contaminants are absorbed and thus under-represent contaminant concentrations; consequently, a 1.0 micron membrane filter may be a more appropriate filter size.

b. There is no discussion on the collection or analysis of unfiltered water samples. This information would be valuable in the evaluation of chemical migration in groundwater. Again, reference (c) states that if unfiltered water is of potable quality, data from unfiltered water samples should be used to estimate exposure and, if only one type of water sample is collected (e.g., unfiltered), justification for not collecting the other type of sample (e.g., filtered) should be provided in the sampling plan.

Recommendation: We recommend the use of a 1.0 micron filter for collecting groundwater samples; the use of unfiltered water samples, where applicable; and, justification for the use of filtered/unfiltered water samples.

8. Section 9.4, Laboratory Quality Control Procedures

Comments:

a. The definitions provided for the method detection limit (MDL) in Section 9.4.1 and the instrument detection limit (IDL) in Section 9.4.2 are identical. These two types of detection limits are different in that the IDL is generally the lowest amount of a substance that can be detected by an instrument and does not consider any effects that sample matrix, handling, and preparation may have; the MDL takes into account the reagents, sample matrix, and preparation steps applied to a sample in specific analytical methods.

b. Additional definitions are required in this discussion of laboratory quality control, namely, sample quantitation limits (SQLs) and CRQLs. The use of the CRQL and SQL in reporting positively detected and/or non-detected sample results should also be included in these procedures.

Recommendation: Revise the current definitions provided in the document for the MDL and the IDL; define the CRQL and SQL and their use in reporting sample results, as recommended by reference (c).

9. Table 9-1, Field Quality Control Samples

Comment: The frequency of sampling and analysis for field blanks and equipment rinsate blanks is incorrect. Reference (a) requires field blanks at a frequency of one per source per event for all levels and all analytes, not one per week; likewise, equipment rinsate blanks are required at a frequency of one per day versus two per week as stated in the table.

Recommendation: Revise Table 9-1 to reflect the correct field QC samples per sampling event, as required by reference (a).

10. Section 10.3.2, Laboratory Data

Comment: The procedures for laboratory validation and corrective action discussed in this section and Appendix B, the laboratory QA plan, do not include a discussion or procedures for reporting non-detected results.

Recommendation: Include the procedures for reporting non-detected sample results, proxy concentrations to be used, etc., as recommended by reference (c).

ENCLOSURE (2)

MEDICAL/HEALTH CONCERNS SURVEY

**COMMENTS ON BASEWIDE QUALITY
ASSURANCE PROJECT PLAN (QUAPP)
PRELIMINARY DRAFT**

**THE ABOVE IDENTIFIED ENCLOSURE IS NOT
AVAILABLE.**

**EXTENSIVE RESEARCH WAS PERFORMED BY
SOUTHWEST DIVISION TO LOCATE THIS
ENCLOSURE. THIS PAGE HAS BEEN INSERTED
AS A PLACEHOLDER AND WILL BE REPLACED
SHOULD THE MISSING ITEM BE LOCATED.**

QUESTIONS MAY BE DIRECTED TO:

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