



DEPARTMENT OF THE NAVY

NAVY ENVIRONMENTAL HEALTH CENTER
2510 WALMER AVENUE
NORFOLK, VIRGINIA 23513-2617

N00217.003191
HUNTERS POINT
SSIC NO.5090.3

5090.11
Ser EP/WE:4119/ 03424

02 JAN 1996

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: REVIEW OF RESPONSES FROM PRC ENVIRONMENTAL MANAGEMENT INC
(PRC)

Ref: (a) NAVENVIRHLTHCEN ltr 5090.11 Ser EP/HE:4110/03010 of
4 Dec 95
(b) EFA WEST Fax Memo of 12 Dec 95
(c) PHONCON NAVENVIRHLTHCEN (EP/WE, Mr. Etheridge; EP/DM,
Mr. McConaughy)/EFA WEST (Code 1832.3, Mr. Song) of
13 Dec 95

Encl: (1) Review of Responses from PRC Environmental Management,
Inc. on the NAVENVIRHLTHCEN Medical Review of Basewide
Quality Assurance Project Plan, Preliminary Draft,
Hunters Point Annex, San Francisco, California
(2) Medical/Health Comments Survey

1. Reference (a) provided comments and recommendations on the
"Engineering Field Activity, West, Naval Facilities Engineering
Command, Hunters Point Annex, San Francisco, California, Basewide
Quality Assurance Project Plan, Preliminary Draft" (Volumes I -
II).

2. Reference (b) requested the Navy Environmental Health Center
(NAVENVIRHLTHCEN) evaluate the responses from PRC Environmental
Management, Inc. (PRC) to reference (a). In general, PRC
accepted the majority of our recommendations and will include
them in the revised version. During reference (c) telephone
conference, we discussed our disagreement with selected responses
by PRC to our comments. As requested during reference (c), we
have provided our additional comments to those selected responses
by PRC in enclosure (1).

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

4. 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-
5549 or (804) 363-5557, DSN prefix 864.

W. E. Luttrell
W. E. LUTTRELL
By direction

**REVIEW OF RESPONSES
FROM PRC ENVIRONMENTAL MANAGEMENT, INC. ON THE
NAVENVIRHLTHCEN MEDICAL REVIEW OF
BASEWIDE QUALITY ASSURANCE PROJECT PLAN
PRELIMINARY DRAFT
HUNTERS POINT ANNEX
SAN FRANCISCO, CALIFORNIA**

- 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. PRC Environmental Management, Inc. (PRC) reviewed the comments and recommendations provided by the NAVENVIRHLTHCEN to the Engineering Field Activity, West, Naval Facilities Engineering Command on 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" (Volumes I - II).
2. The majority of responses provided by PRC to our recommendations were found acceptable and are not included below; however, the following specific responses submitted by PRC were found unacceptable and require further clarification.

Review Comments and Recommendations:

1. 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).

Enclosure (1)

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.

PRC Response: Because of the sampling methodologies used at HPA, some of which necessitates the use of 1-inch diameter cores, and because of the need to collect a large amount of sample to meet analytical requirements, it is necessary to sample surface soil at depths of greater than 6 inches bgs. For risk assessment purposes, data from soil samples collected from down to 2 feet bgs are considered representative of surface soil.

Additional Comments: We do not agree that data from soil samples collected down to 2 feet bgs are considered representative of surface soil. Section 4.5.2 of reference (c) states "Assessment of surface exposures will be more certain if samples are collected from the shallowest depth that can be practically obtained, rather than, for example, zero to two feet." Again, we recommend surface soil sampling be conducted in accordance with references (c) and (d).

2. 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.

PRC Response:

a. Groundwater samples designated for metals analysis at HPA are routinely collected, after well purging, with a stainless steel bailer and filtered in the field using a 0.45 um filter. A pilot study is currently being conducted under Contract Task Order No.276 to evaluate the differences between filtered and unfiltered groundwater data. The pilot study involves the collection of both filtered and unfiltered samples by two techniques, (1) bailer sampling and (2) low-flow purging and sampling. A statistical evaluation of the analytical results will be performed. If the filtered and unfiltered results are statistically different, a determination will be made regarding the continued use of a 0.45 um filter. Results of this study will be submitted by Harding Lawson Associates (HLA) to the Navy in December 1995. In the meantime, the QAPjP will specify continued use of a 0.45 up filter at HPA for comparability purposes. The results of the study will influence the implementation of the basewide groundwater monitoring program at HPA which is expected to be implemented in 1996.

b. Groundwater samples at HPA have been collected and filtered using a 0.45 up filter since December 1988. Changing the sampling methodology at this time may cause comparability problems because new data may not be comparable to old data. For the human health risk assessment of potable water, a complete set of comparable historical data is required.

Additional Comments:

a. The response by PRC concerning the pilot study fails to mention the acceptance of this study by the cognizant Regional Water Quality Control Board (Regional Board) within the state of California. Because the results of this study will influence the implementation of future basewide groundwater monitoring efforts at HPA, we recommend the approval of this study by the cognizant Regional Board prior to use in the human health risk assessment.

b. Additionally, while the use of filtered groundwater samples provides useful information for understanding chemical transport within an aquifer, the use of filtered samples for estimating exposure is stated in reference (c) as "very controversial because these data may underestimate chemical concentrations in water from an unfiltered tap." Again, we recommend that data from unfiltered samples be used to estimate exposure concentrations.

3. 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).

PRC Response:

- a. The definitions provided for MDL and IDL have been revised.
- b. The PRC Statement of Work (SOW) for Laboratory Analyses (Appendix A of the QAPjP) and the referenced analytical methods discuss the adjustment of CRQLs based on factors such as percent moisture, sample volume, and sample dilution to generate sample-specific quantitation limits. The PRC SOW also includes detailed reporting instructions for each analytical task. Definitions of CRQL and SQL have been added to Section 9.4 of the QAPjP.

Additional Comments: The response by PRC does not explain the use of the CRQL and SQL in reporting positively detected and/or non-detected sample results. These procedures, as recommended by reference (c), should be stated specifically in the PRC SOW.

4. 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).

PRC Response: Table 9-1 and Section 9.1.2 have been revised to indicate that field blanks will be collected at a frequency of one source per events for all analytes. The guidance in reference (a) for the collection of equipment blanks on a daily basis is intended for small to

moderate sampling efforts. Because HPA sampling events are continuous and long-term, PRC proposes to continue collecting equipment blanks twice weekly.

Additional Comments: Table 3.4 of reference (a) requires equipment rinsates for Levels C, D, and E at a frequency of one per day. Additionally, equipment rinsate samples are collected daily; however, only samples from every other day are analyzed. Other samples are held and analyzed only if evidence of contamination exists. Again, we recommend collecting equipment rinsate blanks at the required frequency of one per day vice the proposed twice weekly.

ENCLOSURE (2)

MEDICAL/HEALTH CONCERNS SURVEY

**COMMENTS ON RESPONSES FROM PRC ON
NAVENVIRHLTHCEN MEDICAL REVIEW OF
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:

**DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132**

TELEPHONE: (619) 532-3676