

5090
Ser 1811RP/00403

28 JUN 1990

Mr. Howard Hatayama
Department of Health Services
State of California
Toxic Substances Control Division
Region 2
700 Heinz Avenue, Bldg. F, Suite 200
Berkeley, CA 94710

Dear Mr. Hatayama:

Enclosed please find responses to agency review comments received by the Navy on two draft reports for the First Round Groundwater Sampling, Primary Remedial Investigation, Battery and Electroplating Shop, IR-10 and Power Plant, IR-11, at Naval Station, Treasure Island, Hunters Point Annex, both dated January 2, 1990.

By copy of this letter, the responses are also being provided to other concerned regulatory agencies for their review.

The second round of groundwater sampling can be implemented upon concurrence with the responses by the commenting agencies.

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).

Written comments if any, should be directed to Mr. Kam Tung, Commanding Officer, Naval Station, Treasure Island, Building 1 (Code 70), San Francisco, CA 94130-5000, with a copy to Commander, Western Division, Naval Facilities Engineering Command, 900 Commodore Drive, San Bruno, CA 94066-0720 (Attn: Louise T. Lew, Code 1811).

Sincerely,

Original signed by:

MICHAEL A. MIGUEL
Head, Environmental Restoration Branch

Encl:

(1) Response to Comments, First Round Groundwater Sampling, IR-10 and IR-11

Copy to:

Regional Water Quality Control Board (Attn: Steve Ritchie)
Bay Area Air Quality Management District (Attn: Scott Lutz)
U.S. Environmental Protection Agency (Attn: Jerry Clifford)
California Dept. of Fish & Game (Attn: Mike Rugg)
See Next Page

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U.S. Fish & Wildlife Service (Attn: Steve Schwarzback)
National Oceanic & Atmospheric Administration (Attn: Chip Demarest)
Hunters Point Technical Review Committee Public Member (Attn: Rev. Arelious Walker)
City and County of San Francisco (Attn: David Wells)
San Francisco District Attorney (Attn: Steve Castleman)

Blind copy to: (w/o encl)
09C9, 202, 09A2A.20, 18A2PW, 181, 1811, 1811RP, 1811JC
Harding Lawson Associates (Attn: Mary Lucas)
COMNAVBASE San Francisco
(w/ encl)
PWC San Francisco Bay (Code 420)
COMNAVSEASYSKOM (Attn: Robert Milner)
OIC Treasure Island, HPA
NAVSTA Treasure Island
Admin. Record

Writer: R. Powell, 1811RP, x2554
Typist: A. Araujo, 900626, RESPONSE TO REV CMTS
File: HP/DOHS

DHS COMMENTS AND NAVY RESPONSES

This attachment presents the Navy's response to comments dated March 9, 1990, received from the DHS regarding two HLA Draft Reports, *First Round Groundwater Sampling, Primary Remedial Investigation, Battery and Electroplating Shop, IR-10*, and *First Round Groundwater Sampling, Primary Remedial Investigation, Power Plant IR-11*.

Comment 1: The Department agrees with EPA's request to continue to run GC/MS methods in an attempt to identify unknown compounds. However, we are concerned about levels of detection for some volatile organic compounds using the GC/MS method. The Department recommends running both the GC and GC/MS analysis in situations where unknown compounds need to be identified and where levels of detection must be increased.

Response: It was recommended in the second bullet of the recommendation section of each report that GC/MS methods (Contract Laboratory Program Semivolatile Organic Compounds [CLP SOC]) be retained for analysis of SOCs in an attempt to identify unknown alkanes and acids, if present, in subsequent sampling rounds. In the laboratory preparation blanks and in groundwater samples from Sites IR-10 and IR-11, tentatively identified compounds (TICs) were found by the laboratory (on the basis of library matching of chromatogram peaks) and identified as unknown alkanes and unknown acids. The mass spectra data for these compounds were not clear-cut enough to enable a specific identification to be assigned. Thus, the nomenclature "unknown acid" and "unknown alkene" was used. The presence of these compounds in the groundwater samples is most likely due to laboratory contamination.

In the first bullet of the recommendation section of each report it was recommended that GC methods be used for analyses for volatile organic compounds (VOCs) instead of the GC/MS CLP VOC analysis. None of the groundwater samples from Sites IR-10 and IR-11 contained VOC TICs. Thus, substitution of a GC/MS method with GC methods is appropriate and will improve the detection limits for the VOCs. If unidentified peaks are found, then GC/MS techniques will be employed to identify them.

Comment 2: We would also like to reemphasize the EPA comments regarding laboratory contamination and trip blanks. The final report should discuss measures to be taken in any future sampling to prevent the same problems. Please review the Quality Assurance Project Plan (QAPP) to ensure all sampling decontamination procedures are followed.

Response: As stated in our response to similar EPA comments, contaminants were found in laboratory blanks for three methods: CLP VOCs, CLP SOCs and CLP Inorganics (Table 1). For CLP VOC analysis, the common laboratory contaminants methylene chloride, acetone and 2-butanone (methyl ethyl ketone) were identified in laboratory preparation (method) blanks. According to Section 3.2.1, page E-18/VOA of the February 1988 organics CLP statement of work (SOW), contamination of method blanks with these compounds is acceptable if the blank concentration is less than or equal to 5 times the Contract Required Quantitation Limit (CRQL). Because the level of VOC blank contamination in the IR-10 and IR-11 samples is below 5 times the CRQL (Table 1), the level of laboratory contamination is considered normal and acceptable.

For CLP SOC analysis, contaminants within the laboratory method blanks included bis(2-ethylhexyl)phthalate and tentatively identified compounds (TIC) identified by the laboratory as unknown alkanes and unknown acids. According to Section 3.2.1, page E-36/SV of the February 1988 organics SOW, laboratory method blank contamination is acceptable if 1) the method blank contains less than or equal to 5 times the CRQL of phthalate esters in the Target Compound List (TCL), or 2) for all other TCL compounds, the method blank contains less than or equal to the CRQL of any single TCL analyte. The level of phthalate contamination in the method blanks for both IR-10 and IR-11 samples is below 5 times the CRQL. Because TIC compounds are not on the TCL list, they cannot be compared to the above criteria for method blank acceptance. Thus, on the basis of the February 1988 organics SOW, the SOC method blanks would be considered acceptable. The incidence of laboratory contamination by unknown TICs is considered very rare; it has not been observed in any of the other approximately 170 analytical results generated by Chemwest Analytical Laboratories during the Hunters Point Annex (HPA) study. At this time, the source of the unknown TICs remains unknown. In subsequent submittals the laboratory will notify HLA of any unknown TIC contamination in SOC method blanks, should it occur, and apply the necessary corrective action to 1) identify the source of contamination and 2) correct the problem.

For the inorganics, calcium, manganese, iron, sodium, zinc, copper, silver, selenium, and arsenic, laboratory blank contamination has been observed in the results from Chemwest (Table 1). Blanks include initial calibration blanks, continuing calibration blanks, or preparation blanks. According to pages E-6 and E-7 of the July 1988 inorganics SOW, if an analyte is identified in a blank above the instrument detection limit (IDL) but below the Contract Required Detection Limit (CRDL), the result is to be reported, but no correction of sample results or reanalysis is required. In inorganic blank samples for IR-11, all results are below the CRDL, thus the magnitude of the blank contamination is not enough to warrant concern.

No method blank contamination was observed during the CLP Pest/PCB analyses.

In summary, by the criteria of the organic and inorganic SOWs for CLP analysis, the level of laboratory contamination in blanks is not considered greater than what is normally expected in CLP laboratory analyses. Therefore it is not necessary to collect an additional round of groundwater samples. However, in subsequent sampling rounds, laboratory contamination TICs will be carefully scrutinized and corrective action will be taken, if necessary.

As mentioned in the response to Comment 3, VOC trip blanks will be prepared in future sampling rounds according to the frequency specified in the QAPP.

HPA field personnel have reviewed the QAPP and will continue to follow all sampling decontamination procedures.

Comment 3: Both Reports - Trip blanks are required in the QAPP. Explain why a trip blank was not prepared.

Response: The trip blank was inadvertently not prepared for this sampling round. In future sampling rounds, VOC trip blanks will be prepared with organic-free water supplied by the laboratory according to the frequency specified in the QAPP (one per shipping container per laboratory).

Comment 4: Both Reports - Please use the latest LUFT (June 1989) as the reference.

Response: The samples collected for both sites were analyzed in March 1989, before the release of the June 1989 LUFT Manual. Thus, they were analyzed under a previous version (May 1988) of the LUFT Manual. Future work will be performed in accordance with the June 1989 LUFT Manual.

Comment 5: Both Reports - Organic Analyses - Ensure the contractor is familiar with the laboratory sample volume requirements so matrix spikes can be performed.

Response: The laboratory was contacted and sample volumes for QA/QC samples have been determined to be 1 liter per analysis. In the case of the QA/QC matrix spike and matrix spike duplicates, it will be necessary to collect at least 3 liters (1 liter for the pure matrix, 1 liter for the matrix spike, and 1 liter for matrix spike duplicates). HLA field personnel will be informed of this sample volume requirement, and in subsequent sampling rounds, sufficient volumes will be collected for matrix spike analysis.

Table 1. Contaminants on Target Compound List in Blanks, IR-10 and IR-11

CLP VOC

<u>Analytes</u>	<u>Concentration ($\mu\text{g/l}$)</u>	<u>CRQL ($\mu\text{g/l}$)</u>	<u>5 times CRQL ($\mu\text{g/l}$)</u>
methylene chloride	1,ND(5)	5	25
acetone	7,9	10	50
2-butanone	10,13	10	50

CLP SOC

<u>Analytes</u>	<u>Concentration ($\mu\text{g/l}$)</u>	<u>CRQL ($\mu\text{g/l}$)</u>	<u>5 times CRQL ($\mu\text{g/l}$)</u>
bis(2-ethyl- hexyl)phthalate	5,ND(10)	10	50

CLP Inorganics

<u>Analytes</u>	<u>Highest Concentration in Blank (Method, ICB, CCB; $\mu\text{g/l}$)</u>	<u>CRDL ($\mu\text{g/l}$)</u>
Calcium	226.2	5,000
Copper	9.6	25
Iron	48.7	100
Manganese	3.0	15
Sodium	241.1	5,000
Zinc	16.9	20
Arsenic	2.6	10
Silver	7.4	10
Selenium	2.8	5

ND = Not detected; detection or quantification limit is included in parentheses.

$\mu\text{g/l}$ = microgram per liter

CRQL = Contract Required Quantification Limit

ICB = Initial Calibration Blanks

CCB = Continuing Calibration Blank

CRDL = Contract Required Detection Limit

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM
2151 BERKELEY WAY, ANNEX 9
BERKELEY, CA 94704



March 9, 1990

Commanding Officer
Naval Station Treasure Island
Building I (Code 70)
San Francisco, CA 94130-5000
Attn: Kam Tung

003122

Dear Mr. Tung:

DHS COMMENTS ON DRAFT GROUND WATER SAMPLING AT SITES IR-10 AND IR-11 - HUNTERS POINT ANNEX

Enclosed are the Department of Health Services (Department) comments on the draft copies of the above referenced reports. We received and reviewed EPA comments and concur with those comments. The Department would like to further address an issue identified by the EPA.

The Department agrees with EPAs request to continue to run GC/MS methods in an attempt to identify unknown compounds. However, we are concerned about levels of detection for some volatile organic compounds using the GC/MS method. The Department recommends running both the GC and GC/MS analysis in situations where unknown compounds need to be identified and where levels of detection must be increased.

We would also like to reemphasize the EPA comments regarding laboratory contamination and trip blanks. The final report should discuss measures to be taken in any future sampling to prevent the same problems. Please review the Quality Assurance Project Plan (QAPP) to ensure all sampling decontamination procedures are followed.

If you have any questions regarding these comments, please contact Mark Malinowski at (415) 540-3816.

Sincerely,

A handwritten signature in cursive script, appearing to read "Mark Malinowski".

Mark Malinowski
Engineering Geologist
Region 2
Toxic Substances Control Program

Enclosure

Comments on Hunters Point Annex
Ground Water Sampling Reports for IR-10 and IR-11

Specific Comments

Pg.	Sec.	Pgph.	Comment
3	2.0	2	Both Reports - Trip blanks are required in the QAPP. Explain why a trip blank was not prepared.
4	3.0		Both Reports - Please use the latest LUFT (June 1989) as the reference.
6	4.2		Both Reports - Organic Analyses - Ensure the contractor is familiar with the laboratory sample volume requirements so matrix spikes can be performed.
8	4.4	1	IR-10 Report - Regarding the barium and antimony in field blanks, what type of water was used in preparing the field blanks?
12	5.4	1	IR-10 Report - The CHEMWEST narrative in Appendix A indicates that hydrocarbon peaks extend beyond the diesel #2 standard. Is it possible to use the results of tank sampling from the tank farm (IR-6) as the standard?
15	7		IR-10 Report - Bullet 1; See general comment in letter. Bullet 4 - Recommend TPH analysis using results of tank farm (IR-6) sampling. If IR-6 results are not used, please have the lab analyses for TPH at the higher range as indicated in the narrative. If TPH is not detected in the second round of sampling, TPH analysis can be dropped for round three sampling.

cc: Richard Powell
Naval Facilities Engineering
P.O. Box 727
San Bruno, CA 94066-0720

EPA - Region IX
Chuck Flippo (T-4-2)
Remediation Project Manager
215 Fremont Street
San Francisco, CA 94105

EPA COMMENTS AND NAVY RESPONSES

This attachment presents the Navy's response to comments dated February 28, 1990, from the EPA regarding two HLA draft reports, *First Round Groundwater Sampling, Primary Remedial Investigation, Battery and Electroplating Shop, IR-10*, and *First Round Groundwater Sampling, Primary Remedial Investigation, Power Plant, IR-11*.

Comment 1: First, the laboratory contamination appears to be greater than what would normally be expected, based on normal laboratory protocol. We believe the laboratory contamination issue needs to be investigated further to understand why this level of contamination exists. It may be acceptable to evaluate one additional round of ground water analyses prior to beginning this investigation.

Response: Contaminants were found in laboratory blanks for three methods (Table 1): Contract Laboratory Program (CLP) volatile organic compounds (VOCs), CLP semivolatile organic compounds (SOCs) and CLP Inorganics. For CLP VOC analysis, the common laboratory contaminants methylene chloride, acetone and 2-butanone (methyl ethyl ketone) were identified in laboratory preparation (method) blanks. According to Section 3.2.1, page E-18/VOA of the February 1988 organics statement of work (SOW), contamination of method blanks with these compounds is acceptable if the blank concentration is less than or equal to 5 times the Contract Required Quantitation Limit (CRQL). Because the level of VOC blank contamination in the IR-10 and IR-11 samples is below 5 times the CRQL, the level of laboratory contamination is considered normal and acceptable.

For CLP SOC analysis, contaminants within the laboratory method blanks included bis(2-ethylhexyl)phthalate and tentatively identified compounds (TIC) identified by the laboratory as unknown alkanes and unknown acids. According to Section 3.2.1, page E-36/SV of the February 1988 organics SOW, laboratory method blank contamination is acceptable if 1) the method blank contains less than or equal to 5 times the CRQL of phthalate esters in the Target Compound List (TCL), or 2) for all other TCL compounds, the method blank contains less than or equal to the CRQL of any single TCL analyte. The level of phthalate contamination in the method blanks for both IR-10 and IR-11 samples is below 5 times the CRQL. Because TIC compounds are not on the TCL list, they cannot be compared to the above criteria for method blank acceptance. Thus, on the basis of the February 1988 organics SOW, the SOC method blanks would be considered acceptable. The incidence of laboratory contamination by unknown TICs is considered very rare; it has not been observed in any of the other approximately 170 analytical results generated by Chemwest Analytical Laboratories during the Hunters Point

Annex (HPA) study. At this time, the source of the unknown TICs remains unknown. In subsequent submittals, the laboratory will notify HLA of any unknown TIC contamination in SOC method blanks, should it occur, and apply the necessary corrective action to 1) identify the source of contamination and 2) correct the problem.

For the inorganics, calcium, manganese, iron, sodium, zinc, copper, silver, selenium, and arsenic, laboratory blank contamination has been observed in the results from Chemwest. Blanks include initial calibration blanks, continuing calibration blanks, or preparation (method) blanks. According to pages E-6 and E-7 of the July 1988 inorganics SOW, if an analyte is identified in a blank above the instrument detection limit (IDL) but below the Contract Required Detection Limit (CRDL), the result is to be reported, but no correction of sample results or reanalysis is required. In inorganic blank samples for IR-11, all results are below the CRDL, thus the magnitude of the blank contamination is not enough to warrant concern.

No method blank contamination was observed during the CLP Pest/PCB analyses.

In summary, by the criteria of the organic and inorganic SOWs for CLP analysis, the level of laboratory contamination in blanks is not considered greater than what is normally expected in CLP laboratory analyses. However, in subsequent sampling rounds, laboratory contamination by TICs will be carefully scrutinized and corrective action will be taken, if necessary.

Comment 2: Second, the reports indicate that GC methods will be implemented for those organic constituents detected by GC/MS methods. We feel that samples should continue to be analyzed by GC/MS until unknown compounds have been identified. GC methods may not be sufficiently accurate to detect the tentatively identified compounds.

Response: As stated in the first recommendation of each report, GC methods would be substituted for GC/MS methods only for CLP VOC analyses and not for the CLP SOC analyses that contained the unknown TIC compounds in samples and blanks. No tentatively identified VOC compounds were found in the CLP VOC analyses. As stated in the second recommendation, GC/MS methods should be continued for SOC compounds to verify the presence/non-presence of the TICs observed in the first sampling round.

General and specific comments presented below apply to both documents.

GENERAL COMMENTS

Comment 1: A brief summary of the background, history, and suspected areas of contamination would be helpful prior to discussion of groundwater sampling results.

Response: Such a summary is beyond the intent of these reports, but may be found in the *Work Plan Volume 2B, Sampling Plan - Group II sites Remedial Investigation/Feasibility Study Naval Station, Treasure Island Hunters Point Annex San Francisco, California, November 1988*.

Comment 2: Information on the direction of groundwater flow at the site, if known, should also be presented along with water-level measurements obtained from this sampling round. The magnitude and direction of the groundwater gradient at the site should be recalculated using the specific water levels for verification.

Response: Again, this information is beyond the intent of the report, which was to present the chemical results of the first round of water sampling at IR-10 and IR-11 for reevaluation of the groundwater analytical program. Water-level measurements and the magnitude and direction of the groundwater gradient will be presented in the interim and RI reports which will be prepared for the groups which include these sites.

Comment 3: An upgradient offsite well might be included in the network of monitoring wells to determine background levels of contamination.

Response: The approach for background soil and groundwater sampling is currently being considered by the Navy. Establishing background groundwater quality is beyond the intent of the interim reports.

Comment 4: A review of whether sample holding times were met or were exceeded by the laboratory should also be included in the QA/QC Results and Assessment, Section 4.

Response: Holding times were met for all extractions and analyses performed on all samples except for the CLP SOC analysis for Sample W-25 (IR-11). According to the February 1988 organics SOW, the holding time for a CLP analysis is the difference between the date of extraction/analysis and the validated time of sample receipt (VTSR). For Sample W-25, the holding time for extraction (based on the above calculation, or 5 days) was not exceeded (the sample was extracted after 4 days). When compared to the date of sample collection, the holding time for CLP SOC was exceeded by one day. This exceedance is not considered to be significant.

Comment 5: Both a trip blank and an external spike were specified in the QAPP, but were not submitted for analysis. The trip blank is particularly important when volatile organic compounds are being transported.

Response: Trip blanks for VOC analysis will be submitted during the next groundwater sampling round according to the frequency specified by the QAPP. The QAPP specifies that an external spike be submitted with every other lot (20 samples) of samples. Because sample designation groups (SDGs) 3439 and 3440 contained less than 20 samples, no external spike was prepared for the first round of groundwater sampling. An external spike will be prepared for the next lot of groundwater samples according to the frequency specified in the QAPP.

SPECIFIC COMMENTS

Section 2.0, Page 3 of Both Reports

Comment 6: Clarify whether the Teflon bailer used to obtain the groundwater samples was a double check valve bailer since samples were to be analyzed for volatile organic compounds.

Response: The Teflon bailer was a double check valve bailer.

Comment 7: Provide information on which parameters the purge water stored in the Baker tanks will be analyzed and how it will be analyzed.

Response: The purge water stored in the Baker tanks was analyzed according to specifications set down by the San Francisco Public Works Industrial Waste Division (SFPWIWD). Purge water samples were analyzed for:

CAM 17 priority pollutant metals
Volatile organics (EPA 624)
Semivolatile organics (EPA 625)
Chemical oxygen demand
Total oil and grease (SMWW 503A)
Suspended solids (SMWW 209O)
pH (SMWW 423)

From the results of these analyses, SFPWIWD determined that the water could be discharged to the sanitary sewer under the existing discharge permit at HPA. Small amounts of purge water generated during sampling activities were stored in the Baker tanks subsequent to sampling and analysis of tank waters. This water was considered by HLA to be suitable for discharge because the composition was expected to be similar to the water that was sampled.

Section 4.2, Page 6 of Both Reports

- Comment 8:**
- a. Provisions need to be made to collect double or triple volume for QA/QC samples, as matrix spikes for semivolatile organic compound analysis were not performed because of insufficient sample volume.
 - b. More thorough decontamination of equipment is needed to ensure that compounds are not detected in the equipment blank.

- Response:**
- a. The laboratory was contacted and sample volumes for QA/QC samples have been determined to be 1 liter per analysis. In the case of QA/QC matrix spikes and matrix spike duplicates it will be necessary to collect at least 3 liters (1 liter for pure matrix, 1 liter for the matrix spike, and 1 liter for the matrix spike duplicate). Sufficient sample for matrix spikes will be collected in subsequent groundwater sampling rounds.
 - b. The issue of equipment contamination has been noted and the equipment decontamination procedures outlined in the QAPP have been reviewed and determined to be adequate. HLA field personnel will be informed of the equipment blank contamination, referred to the procedures outlined in the QAPP, and advised to continue to carefully follow these procedures in future sampling rounds. Field blanks will continue to be collected to monitor potential field contamination.

Section 5.2, Page 10 of Both Reports

- Comment 9:** The laboratory should also tentatively identify the ten largest peaks of unknown compounds found in the laboratory preparation blanks and in the groundwater samples.

- Response:** Tentatively identified compounds found in laboratory preparation blanks and in the groundwater samples were identified by the laboratory in the original data sheets as unknown alkanes and unknown acids. These compounds were commonly early eluting compounds from the column and produced a general alkane or acid chromatography signature. However, insufficient detail in the mass spectra was available to be able to characterize the specific alkane or acid. Because most of the compounds appeared in laboratory blanks, it is presumed that laboratory contamination contributed the bulk of the TIC to blank and groundwater samples. The analytical results from subsequent groundwater sampling rounds will be monitored; if CLP SOC analyses indicate the presence of unknown TIC compounds, the laboratory will be requested to attempt to identify the unknown TICs (e.g., unknown alkane, unknown acid), if possible.

Section 6.0, Page 13 of IR-10 Report, Page 12 of IR-11 Report

Comment 10: Total dissolved concentrations (cation and anion constituents) should be compared with water quality parameters from actual field samples collected from background wells to determine whether these concentrations are due to the "native brackish character of groundwater" or contamination.

Response: At this time background wells are unavailable and this comparison cannot be made. When background wells become available, the groundwater quality of site wells and background wells will be compared to determine if brackish groundwater conditions are present at the sites or if the concentrations are due to contamination.

Table 1. Contaminants on Target Compound List in Blanks, IR-10 and IR-11

CLP VOC

<u>Analytes</u>	<u>Concentration ($\mu\text{g/l}$)</u>	<u>CRQL ($\mu\text{g/l}$)</u>	<u>5 times CRQL ($\mu\text{g/l}$)</u>
methylene chloride	1,ND(5)	5	25
acetone	7,9	10	50
2-butanone	10,13	10	50

CLP SOC

<u>Analytes</u>	<u>Concentration ($\mu\text{g/l}$)</u>	<u>CRQL ($\mu\text{g/l}$)</u>	<u>5 times CRQL ($\mu\text{g/l}$)</u>
bis(2-ethyl-hexyl)phthalate	5,ND(10)	10	50

CLP Inorganics

<u>Analytes</u>	<u>Highest Concentration in Blank (Method, ICB, CCB; $\mu\text{g/l}$)</u>	<u>CRDL ($\mu\text{g/l}$)</u>
Calcium	226.2	5,000
Copper	9.6	25
Iron	48.7	100
Manganese	3.0	15
Sodium	241.1	5,000
Zinc	16.9	20
Arsenic	2.6	10
Silver	7.4	10
Selenium	2.8	5

ND = Not detected; detection or quantification limit is included in parentheses.

$\mu\text{g/l}$ = microgram per liter

CRQL = Contract Required Quantification Limit

ICB = Initial Calibration Blanks

CCB = Continuing Calibration Blank

CRDL = Contract Required Detection Limit



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, CA 94105

February 28, 1990

Commanding Officer
Naval Station Treasure Island
ATTN: Kam Tung, Hunters Point Annex
Building I (Code 70)
San Francisco, CA 94130-5000

Dear Mr. Tung:

Enclosed are EPA's comments on the ground water sampling reports for IR Sites 10 and 11. In addition to the comments presented in the attachments, we suggest two revisions to Section 7.0 of both reports.

First, the laboratory contamination appears to be greater than what would normally be expected, based on normal laboratory protocol. We believe the laboratory contamination issue needs to be investigated further to understand why this level of contamination exists. It may be acceptable to evaluate one additional round of ground water analyses prior to beginning this investigation.

Second, the reports indicate that GC methods will be implemented for those organic constituents detected by GC/MS methods. We feel that samples should continue to be analyzed by GC/MS until unknown compounds have been identified. GC methods may not be sufficiently accurate to detect the tentatively identified compounds.

Please refer to the attachment for additional comments. If you have questions or wish to discuss these comments further, please don't hesitate to call me at (415) 865-7630.

Sincerely,


Chuck Flippo
Federal Enforcement Section

MAR -5 18:02 '90

Enclosure

cc: Louise Lev, WESDIY
Mark Kalinowsky, DHS
Don Dahlke, RWXCB

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REVIEW OF GROUND-WATER SAMPLING REPORTS
FOR
HUNTERS POINT ANNEX: SITES IR-10 AND IR-11

General and specific comments presented below apply to both documents.

GENERAL COMMENTS

- G.1 A brief summary of the background, history, and suspected areas of contamination would be helpful prior to discussion of ground-water sampling results.
- G.2 Information on the direction of ground-water flow at the site, if known, should also be presented along with water level measurements obtained from this sampling round. The magnitude and direction of the ground-water gradient at the site should be recalculated using the specific water levels for verification.
- G.3 An upgradient off-site well might be included in the network of monitoring wells to determine background levels of contamination.
- G.4 A review of whether sample holding items were met or were exceeded by the laboratory should also be included in the QA/QC Results and Assessment, Section 4.
- G.5 Both a trip blank and an external spike were specified in the QAPP, but were not submitted for analysis. The trip blank is particularly important when volatile organic compounds are being transported.

SPECIFIC COMMENTS

Section 2.0, Page 3 of Both Reports

Clarify whether the teflon bailer used to obtain the ground-water samples was a double check valve bailer since samples were to be analyzed for volatile organic compounds.

Provide information on which parameters the purge water stored in the Baker tanks will be analyzed and how it will be analyzed.

SPECIFIC COMMENTS (cont'd)

Section 4.2, Page 6 of Both Reports

Provisions need to be made to collect double or triple volume for QA/QC samples, as matrix spikes for semivolatile organic compound analysis were not performed because of insufficient sample volume.

More thorough decontamination of equipment is needed to insure that compounds are not detected in the equipment blank.

Section 5.2, Page 10 of Both Reports

The laboratory should also tentatively identify the ten largest peaks of unknown compounds found in the laboratory preparation blanks and in the ground-water samples.

Section 6.0, Page 13 of IR-10 Report, Page 12 of IR-11 Report

Total dissolved concentrations (cation and anion constituents) should be compared with water quality parameters from actual field samples collected from background wells to determine whether these concentrations are due to the "native brackish character of ground water" or contamination.