



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

June 14, 1988

In Reply
Refer To: T-4-6

Mr. Warren H. Bossert
Head, Environmental Engineering Branch
Department of the Navy
Western Division, Naval Facilities Engineering Command
P.O. Box 727
San Bruno, CA 94066-0720

RE: EPA Review of Naval Shipyard Mare Island IRP Documents

Dear Mr. Bossert:

Enclosed for your information and incorporation into future Installation Restoration Program (IRP) activities at the Naval Shipyard (NSY) Mare Island are preliminary comments prepared for the Environmental Protection Agency (EPA). Please note that EPA has not fully reviewed or endorsed these comments. While the contractor who prepared these comments usually provides excellent quality work that requires minimal or no revisions, EPA will not be able to perform our usual rigorous quality assurance check on the validity of the comments until such time as this facility is, if ever, listed on the National Priorities List. Nonetheless, we are providing the comments at this time so that you may consider them as you manage the ongoing IRP activities at NSY Mare Island.

If you have any questions, please do not hesitate to contact me at 415/974-8891 or Nicholas Morgan, Superfund Federal Facilities Coordinator, at 415/974-8603.

Sincerely,


Julie Anderson
Chief, Federal Enforcement
Section

Enclosures

cc: CA DHS, TSCD, NCCS
CA RWQCB, Region 2

NAVAL SHIPYARD, MARE ISLAND, CALIFORNIA
CONFIRMATION STUDY
VERIFICATION STEP SITE EVALUATION
AND CONFIRMATION STEP WORK PLAN
TECHNICAL REVIEW

NOTICE

This document is in preliminary draft. It has not been formally released by EPA and should not at this stage be construed to represent Agency policy. It is being circulated for comment on its technical accuracy and policy implications.

BACKGROUND

The results of the Verification Step field investigation were submitted on January 1987. This investigation was conducted on seven sites on the Mare Island Complex. Six of these sites were identified in the Initial Assessment Study (IAS) as areas of potential contamination requiring further study. One of the sites was added to the Verification Step investigation as an area of potentially significant contamination which was not identified in the previous studies.

Comments on the previous studies and a general background description of the Mare Island Complex were provided in the technical review report submitted on January 13, 1987.

This report evaluates the information and plans submitted in the Verification Step field investigation and work plan outline for the Characterization Step.

GENERAL

Seven sites were investigated in the Verification Step. The purpose of the Verification Step was to determine, with limited new data, if there was contamination at the sites identified in the IAS. Contamination at seven sites was identified, and further investigation of the sites as part of the Characterization Step of the Confirmation Study was recommended.

The information that was originally presented in the IAS and work plan for the Verification Step contained significant deficiencies as described the January 13, 1987 technical review. These deficiencies were not addressed in the Verification Study submittal, and therefore, concerns still exist on the adequacy of the investigation that was conducted.

The Verification Step investigation was developed with very limited data on the existing environmental setting. Although contamination was identified in the Verification Step, pathways for contaminant transport have not been adequately characterized. Very broad conclusions have been made in the Verifications Step concerning the hydrogeologic setting and the nature of contaminant movement. Specific information is very limited in nature and inconclusive. Therefore, the scope of the Characterization Step should be designed to

characterize all potential pathways of contaminant movement since there does not appear to be sufficient evidence to limit the scope of the study at this time.

The work plan that has been provided in the Verification Step consists only of an abbreviated outline for most phases of the Characterization Step. The outline is not a specific commitment and in many instances only "suggests" approaches to be used. There is not sufficient information presented in the work plan to provide detailed comment on the proposed study plan. A detailed work plan for the Characterization Step should be provided showing how all phases of the study will be conducted and the rationale used for development of the plan. Information should be provided in sufficient detail to be able to verify that areas of contamination have been delineated and pathways of contaminant movement have been identified.

SPECIFIC COMMENTS

The following comments are on specific sections in the Verification Step report.

Executive Summary. Reference is made to review and approval of documentation by the State of California regulatory agencies and Navy personnel. The plans that were submitted for review and final field investigation methods that were approved should be provided. Significant commentary received from the reviewing agencies and the Navy should be provided.

Page 3--Subsurface sampling for soil contamination was generally conducted in soils above the ground water level. As such contamination of soils at levels below the ground water would not have been detected. The rationale for limiting the soil sampling program should be provided along with sufficient evidence showing that the extent of contamination has been identified or will be identified in the next step.

Page 4--Methods for disposal of drilling cuttings should be described.

Page 6--The type of suction pump that was used to collect groundwater samples should be identified.

Page 6--Describe the measures taken to ensure or verify that that decontamination of the suction lines and pumps was adequate, i.e., were any pump blanks taken.

Page 6--As part of the ground water sampling procedures, wells were purged prior to sampling and the purge water contained in drums. The method of the ultimate disposal of this water should be identified.

Page 7--Reference is made to Figure II-1. This figure is not in the report.

Page 11--The statement is made that total volatile organic concentrations of less than 5 micrograms per liter are believed to exist in soils. The basis for this statement should be provided.

Page 12--The location of the Aqua Terra boring referenced on this page should be shown on a map.

Page 13--Data and analyses supporting the statement that evidence of movement of contaminants in the groundwater in the oil sump area is not present should be provided. The wells that have been constructed in this area are located in the oil sumps and could not be used to detect offsite migration. It is stated that the viscosity of the contaminants and low hydraulic gradients appear to indicate that contamination is not able to move. A technical basis for making this statement should be provided.

Page 15--Free product has only been identified in one boring. Although some of the wells have been constructed with the slotted casing below the water table and therefore would not be expected to show any free product, were any of the other wells sampled for floating product?

Page 15--A general statement is made concerning the native clayey soils being considerably less permeable and that they could tend to serve as a vertical boundary to uppermost groundwater flow. Contaminants could still be transported through the clays, and if the clays are limited in horizontal extent, they would provide only a limited barrier to vertical movement. Justification for limiting future site investigations based upon the less permeable nature of the clays should be provided.

Page 16--The method used to detect "oils and fuels" and oil and grease should be identified.

Page 17--Information should be provided which demonstrates that groundwater flow in the 900 Site Area is towards the east to northeast and that there is not significant vertical migration of contaminants.

Page 17--The listing of contaminant concentrations in the 900 Area does not appear to be complete in Table IV - 2.

Page 19--The description of the hydrogeology at the Concord Annex is very vague. The relationship between subsurface water, surface waters and tide waters has not been defined. Future site investigations should be conducted to define the

hydrology of the site and potential pathways of contaminant migration.

Page 24--Since the soil samples in the T-3 area were composited, areas of contamination may not have been identified due to dilution with potentially uncontaminated materials. Justification for limiting future sampling based upon the current study should be provided.

Page 26--Specific characterization efforts for the investigation of the landfill site, oil sumps and sludge ponds must be provided. A detailed workplan for site investigation should be developed prior to assessment of the adequacy of the proposed future investigations.

Page 26--The proposal for studying the landfill site states future studies should concentrate on the area primarily to the east of the current landfill site. The rationale for limiting the study at this time should be provided.

Page 27--Justification should be provided for limiting future analyses to contaminants identified in significant quantities in the previous studies at the sludge ponds. Since the samples collected were composites, dilution of significant contaminants could have occurred.

Page 27--The location of wells for additional sampling around the sludge ponds should be identified. Soil samples collected from the borings should not be composited.

Page 27--It is suggested that characterization efforts must preclude any remedial feasibility studies. If sufficient hazard is presented by the oil sump area, interim remedial activities should be developed.

Page 28--The characterization study for the Berth area should be expanded to include installation of additional wells to determine the extent of contamination. Since contamination was found in the T-3 area, migration of fuel and other contaminants in other areas could be possible, particularly along utility trenches.

Page 29--The basis for limiting the sampling and testing to the procedures identified for the T-3 Tank Area should be provided. It appears that the information available on potential contamination at this site is limited and limiting future studies is without basis. It appears that offsite migration of contamination associated with the berths is extensive, and migration from the T-3 area should be investigated.

Page 29--There does not appear to be sufficient evidence to limit sampling in the 900 Area. Only four soil borings have

been sampled to date. Sampling should be conducted to delineate the extent of contamination at the site.

Page 30--The location of the proposed two to three monitoring wells in the Concord Annex should be identified. It should be shown that the location and number of wells will be adequate to characterize the extent of contamination at the Concord Annex and the associated buildings.

Page 30--PCB's should be added to the list of test parameters.

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