STATE OF CALIFORNIA
PETE WILSON, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
1101 WEBSTER STREET, SUITE 500
OAKLAND, CA 94612
(510) 286-1255

June 9, 1993
File No. 2119.1057

Mr. Lou Ocampo
Project Manager
WESTDIV
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

SUBJECT: COMMENTS ON POINT MOLATE NAVAL FUEL DEPOT TREATMENT PONDS AREA DRAFT SITE CHARACTERIZATION REPORT, OCTOBER 1992

Dear Mr. Ocampo:

The following comments are based on the San Francisco Bay Regional Water Quality Control Board staff's review of the Point Molate Fuel Depot Treatment Ponds Area Draft Site Characterization Report, dated October 1992.

GENERAL COMMENTS:

1. It was indicated that the Point Molate site is still active; specifically what activities transpire on the site to define it as active and are these activities the same as before the need for clean up.

2. There are three "hot spots" throughout Point Molate (the Landfill, the Sandblast Grit Disposal areas, and the Treatment Ponds site). Only the Treatment Pond area was significantly investigated, the other two were omitted without a complete investigation of the soil and groundwater contamination.

3. Site 2, the Sandblast Grit Disposal area, is still in use. How is the sandblast grit disposed of currently? Have any changes been made as to the sandblasting practices on the site? If not, have any new methods or precautions been implemented to prevent further contamination?

4. The sources of contamination at Point Molate Fuel Depot have not been accurately identified. Leaks from pipes, valve boxes, tanks, treatment ponds, and french drains are just

23

some of the expected sources of contamination. Identification of the historic and existing sources; and the result of the impacts are very important for remediation of the site.

5. The RWQCB requests a map outlining the stormwater drainage system and the french drain system at PMFD.

6. The site characterization was to include an investigation to determine if a second water bearing zone exists. After studying both the geologic soil profiles and the field borelogs, the RWQCB believes that the investigation was not thorough enough to detect a deeper water bearing zone. The screens only monitored the first zone (20-25 feet). The colluvium channel, located under the bay mud, was not screened. Additional wells are needed to screen the second water bearing zone presumably located in the colluvium channel. Once the possibility of a second water bearing zone has been established, the degree of containment of the groundwater can be addressed in the ICA.

7. From the geologic soil profile it is observed that the mud pinches out as it moves further inland as a result the fill eventually comes in contact with the colluvium layer. A complete investigation of the colluvium channel is needed to assess the possibility of this pathway for contaminants. The investigation should include testing the colluvium layer upgradient (where it comes in contact with bay mud) and towards the shoreline as the bay mud layer thickens.

8. Identifying background locations for both soil and groundwater requires knowing which direction is upgradient/upstream. The locations of background samples must be from areas that are not impacted by any contamination from the site, but that do have the same basic characteristics as the medium of concern at the site. Statistical analysis maybe used sometimes to evaluate background samples collected (EPA 1988b, 1988c, 1988d, 1989b).

SPECIFIC COMMENTS

9. Site History: The history of the tanks was not included in the Site History section. The tanks are sources of contamination at Point Molate and they were not thoroughly investigated. How were the tanks originally built in the 1940's? Do all the tanks exist today? What is the capacity of each of the tanks? What was stored in each of the tanks since the 1940's?

10. Page 1-1, 4th paragraph: One of the three smaller capacity secondary storage tanks is abandoned. Why was this abandonment necessary and what are the future plans for this tank (i.e. removal, future re-use)?

11. Page 1-3, 1st paragraph: The large diesel fuel leak discovered in 1981 was not sufficiently described. Where was the leak, what was the duration of the leak, and the volume of the leak (in gallons)?

12. Page 1-3, 2nd paragraph: How were the contents of the historical sump pond researched? Is there documentation as to the existence of bunker fuel, tank sludges, contaminated fuels, leaking drums, and other liquid wastes in the vicinity of the former sump pond.

13. Page 2-4, 5th paragraph: The existence of paleochannels are mentioned in the report. Are their physical characteristics known (e.g. size, location, depth)? Because these channels are potential conduits for contaminants, knowledge of its characteristics are crucial when selecting an appropriate remediation technique.

14. Page 2-15, 1st paragraph: There have been several previous investigations at PMFD since 1973. Only the studies pertinent to the Treatment Pond area were discussed in the report. What did the other studies discover about the rest of the base, in particular the Landfill and Grit Disposal areas.

15. Page 2-21, 3rd paragraph: Petroleum seepage was discovered along the shoreline near Burma Road. The seep was analyzed but the results were not available at the time of this report, what is the status of their availability at this present time?

16. Page 2-22, 3rd paragraph: Could you specify what is meant by TEH contamination.

17. Page 3-11, 1st paragraph: In the report is was mentioned that drums were used as storage facilities for soil cuttings from boreholes. What happened to these drums and how were they disposed of (e.g. put in storage, sent for soil washing)? How were the rest of the investigation derived waste (IDW) discarded both soil samples and water samples?

18. Page 3-18, 4th paragraph: Basing a sample selection of sediments on visual oil contamination is very crude. A type of gradient pattern is frequently implemented to select a representative sample of sediments. If observation with the naked eye is the only manner in which sediments were selected for analysis, the sediment investigation will not

be considered thorough.

19. Page 4-1, 3rd paragraph: Why was the most down gradient point (B 123-2) of site 2 considered the background soil sample location for PMFD? See comment 9.

20. Page 4-4, 4th paragraph: Constant reference is made to an unknown source of contamination at MW11-22. Have efforts been made to identify this unknown source? And if so, what efforts.

21. Page 4-10, 2nd paragraph: The method that was used to determine the concentrations of Bunker fuel in the soil is unacceptable. In general, SFRWQCB requires that discreet soil samples be taken for analysis to properly define the extent of contamination in the soil. If two or more samples were collected in the displayed interval, each of them having different concentration values of bunker fuel, it is unacceptable to take the average of the values to come up will one concentration representing that interval of soil.

22. Page 4-30, 1st paragraph: Gasoline was detected in some soil samples and in some groundwater samples (Page 4-75, 3rd paragraph), this is a surprise since gasoline recently has not been stored at PMFD. The RWQCB agrees, it is possible that during the gas chromatography a mixture of other fuel constituents produced peaks similiar to gasoline. There is a possibility that no gasoline exists on site. If the current method for analyzing gasoline is inconclusive because of errors with the gas chromatography another method should be implemented to identify the peaks, so that the existence of gasoline at PMFD can be determined. The RWQCB suggests method gcfid (5030) from the Tri-Regional Board Staff Recommendations.

23. Page 4-55, 3rd paragraph: The RWQCB concurs with the suggestion that additional SVOC sampling may be necessary to define the extent of SVOC's in the Treatment Pond area.

24. Page 4-61, 1st paragraph: Comparison was made to the background soil values, see comment 9.

25. Page 4-62, 1st paragraph: Using PRC #1 (previously B123-2) is unsuitable for background groundwater data for the treatment ponds area. Refer to comment 9.

26. Page 4-68, 1st paragraph: When monitoring well MW 11-22 was first analyzed on May 29, 1992, no immiscible phase had developed and the groundwater had no indication of hydrocarbons. But when MW 11-22 was sampled on July 22, 1992, an immiscible phase was present and hydrocarbons were found in the groundwater. It is difficult to understand the

behavior of the fuels with such a substantial difference in just two months, has any thought been given to further investigation in that vicinity to better understand the behavior of the fuels.

27. Page 4-72, 3rd paragraph: It was mentioned in the report that motor oil in the soil was not included in the extractable TPH analysis; consequently, the source of motor oil in the groundwater is unidentified. This portrays the possibility of an unknown source.

28. Page 4-91, 2nd paragraph: The MCL value for chloride is 250 ppm. Please confirm the MCL value for phosphate.

29. Page 4-101, 2nd paragraph: Concentration of metals in tidal flats sediment samples should not be compared to TTLC values. TTLC values are used for disposal purposes in determining hazardous waste levels, TTLC values are not to be used for clean-up target values. Again, reference to background soil data is invalid, please refer to comment 17.

30. Page 4-107, 1st paragraph: QA/QC samples are required to be taken at the same time the samples for analysis are obtained. This approach helps in establishing the validity of the data acquired from the samples. No QA/QC samples were taken for beach sediment sampling; therefore, the results of the sampling are accepted only for screening purposes.

31. Page 7-1, 3rd paragraph: Basing fuel contamination in surficial soil solely on visual observation is unsatisfactory. Surficial soil samples should have been taken to assess a runoff situation (e.g. storm drainage system). It was stated in the report that soil was monitored with field screening methods. Were strictly visual screening methods utilized or were others implemented and if so where is the data for this field monitoring to satisfy the statement "surficial soil contamination does not present an immediate threat to the environment or to the San Francisco Bay"? It is noted in the report that there was soil contamination present in the 0 - 10 feet zone.

32. Page 7-3, 1st paragraph: PAH discovered in the beach sediment samples was diagnosed as not being a threat to San Francisco Bay or aquatic species in the bay, but in the third paragraph the report mentions PAH as being bioaccumulative and possibly affecting certain aquatic species and the near-shore environment. These two statements are contradictive. What is the affect of PAH to the bay and to the aquatic life in the bay? What combination of elements did the lab consider as the definition of PAH?

33. Page 7-3, 2nd paragraph: It is stated in the report that the oil contained in the beach sediment equilibrated with the surrounding environment, but there is a presence of a hydrocarbon sheen on occasion in the tidal flats and beach sediments. This sheen seems to be an argument against the possible "equilibrium" between the oil and the environment. Further investigation is warranted to determine the behavior of the oil in the beach sediment.

34. Page 7-3, 4th paragraph: The RWQCB strongly disagrees with the statement that "soil contamination (at PMFD) is not considered a threat to human health". Of course, humans must have exposure to the contaminants in order to be affected by them. Human exposure to contaminants can be accomplished through several pathways: future vegetation in contaminated soil, ecological food chain beginning from groundwater and sediment dwellers (i.e. clams, fish). An Ecological Risk Assessment must be performed before any conclusions can be made concerning human health and water quality risk.

35. Page 7-5, 1st paragraph: Along with providing sufficient data to provide a comprehensive investigation of the Treatment Ponds area, additional investigations must be performed at the other two sites suspected of contamination. This includes defining a groundwater gradient for the Waste Disposal area and the Sandblast Grit Disposal area (e.g. installing more monitoring wells in those areas), defining the vertical and lateral extent of soil and groundwater contamination.

36. Page 7-7, 3rd paragraph: What is heterotrophic plate count?

37. Page 7-8, 9th recommendation: Could you explain what is meant by assessment of limited access on the PMFD property.

38. Page 8-2, 3rd paragraph: Under the partial containment option, was modeling performed to prove that partial containment by the use of extraction wells alone is sufficient in containing floating fuel product from entering the bay? If so, explain.

39. Page 8-3, 1st paragraph: A one month agency and Navy review period conceivably won't be enough time. RWQCB requests 2 months to review documents.

40. Page 8-5, 1st paragraph: The RWQCB requests to look at all documents created by PRC and submitted to the Navy, this includes geotechnical reports, construction cost estimate reports, and any other reports.

41. Page 9-1, 2nd paragraph: The investigation was targeted at four points none of which were completely satisfied.

    (1) The contaminants were identified and the high concentration areas were located. No effort was made to pinpoint the source of contamination, it was consistently labeled an unknown source. Although it is important to find where the "hot spots" exist, it is equally important to determine the full extent of contamination especially along the shoreline.

    (2) Assessing the potential impacts on the San Francisco Bay by the contaminants requires an Ecological Risk Assessment. Before the assessment is completed, any theories describing the potential impact on the bay is purely speculation.

    (3) The hydraulic and hydrogeologic parameters were sufficiently investigated for the Treatment Ponds area, but the same parameters need to be analyzed for the other two sites (Landfill, Sandblast Grit Disposal).

    (4) This point was fulfilled through the investigation.

42. Page 9-4, 2nd paragraph: The conclusion made on the affects of Bunker fuel to the bay to be insignificant is unacceptable. Additional sediment sampling and sampling of the storm drainage system (e.g. outfalls, storm drains, and drainage pathways) is necessary for an accurate conclusion.

43. Page 9-4, 3rd paragraph: The RWQCB suggests that the sandbags near wells MW11-15 and MW11-16 be tested as a source for contamination under stormwater runoff scenarios directly impacting the bay.

If you have any questions or concerns, please call me at the San Francisco Bay Regional Water Quality Board at (510) 286-4267.

Sincerely,

G Kathuria

Gina Kathuria
Project Manager

cc: David L. West
PRC Environmental Management, Inc.
1099 18th Street, Suite 1960
Denver, CO 80202