



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR
GOVERNOR

MARTHA KIRKPATRICK
COMMISSIONER

October 20, 1999

Mr. Emil Klawitter
Code 1823 EK
Department of the Navy, Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, PA 19113-2090

Re: Quarterly Progress Report (April 1 – June 30, 1999), Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations, Navy Exchange Service Station, Naval Air Station, Brunswick, Maine

Dear Mr. Klawitter:

The Maine Department of Environmental Protection (MEDEP or Department) has reviewed the report entitled Quarterly Progress Report on Soil Vapor Extraction/Aquifer Air Sparging Remedial System Operations for the Period, April –30 June, 1999, Navy Exchange Service Station, dated August 1999, prepared by EA Engineering, Science and Technology. Based on that review the Department has the following comments and issues.

General Comments

1. This quarterly report does not contain responses to MEDEP's comments on the Oct-Dec 1998 and Jan-Mar 1999 reports. This current review would likely have been modified some if the Navy's responses were available. It is noted that the Department's comments may have been received after this report was finalized and/or mailed. Please include the responses to the earlier comments in the next quarterly report.
2. Because DRO in the most downgradient sampled wells (NASB 8, 9 and 10) is above the applicable State stringent cleanup goal of 50 µg/L, sampling must be undertaken at locations further downgradient of the NEX than NASB 8, 9, and 10. As pointed out in MEDEP Comment 2 for the Jul-Sep 1998 report review, the Navy responded that MW-204 would be sampled in the June 1999 event. This apparently was not done. Our request still stands that this well and at least one additional well be sampled for BTEX, DRO and GRO.
3. As stated in earlier comments, the Department would like copies of the chromatograms for the DRO and GRO analysis included in the quarterly reports to gain a better understanding of the site.

Specific Comments

4. Soil Vapor Extraction System Performance, page 2, 2nd sentence:

“Lateral trench SVE-4 was flooded and not operational during the quarter.”

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 764-1507

Relatively speaking, the winter and spring were dry periods. It is also noted that AAS-4 sparging well, located directly upgradient, was flooded, whereas nearby AAS-9 sparging well was dry. These relationships seem contradictory. Please provide more details, or an explanation.

5. SVE/AAS treatment system performance, Figure 2:

The Department notes that, by drawing multi-year straight trend lines through the plots of cumulative TVH removal before and after system reconfiguration (9/96), the rates of removal appear to be unchanged over time. Therefore, it may be concluded that the system reconfiguration did not improve mass removal. No response required.

6. Interpreted Potentiometric Surface Elevations, Figure 3:

The positioning of contours representing the potentiometric surface on the east side of Burbank Avenue is adequately supported by the distribution of gauged wells. However, the northward curvature of the contours west of Burbank Avenue are not defensible based on the scant number of gauging points. Several additional data points southwest of Second Street and northwest of Burbank Avenue are needed.

This deficiency is critical to the Department because the direction of contaminant migration downgradient of heavily contaminated well NASB-226 (see Figure 4) is dependant on the amount of curvature that actually exists in the 55, 56, and 57-foot contours. The Navy must track this core of the plume further downgradient. The Department and the Navy need to develop a plan to delineate this downgradient extent.

7. Summary of Well Gauging Data, Table 3:

The Department is pleased to see that water levels are measured in air sparging wells that were not in operation at the time of gauging. One inactive sparging well (AAS-13) was apparently missed. No response required.

8. Summary of Water Quality Indicator Parameter Measurements, Table 4:

Half of the 14 wells (monitoring and inactive air sparging) experienced large temporary changes in dissolved oxygen during the report period. In general, the decreases were commonly more than 3 or 4 mg/L and occurred within a two-week period. However, at NASB-225 a significant one-event increase occurred (high of 10.52 on May 5). Assuming that the field instrument maintained its calibration during these changes, it appears that pockets of oxygen-deficient groundwater are moving around within the shallow, thin aquifer. Is the air sparging being purposely manipulated in an attempt to improve the effect of the system? Or is it the system being manipulated in reaction to system problems? Please explain.

9. Summary of Analytical results for Ground-Water Samples, Table 5:

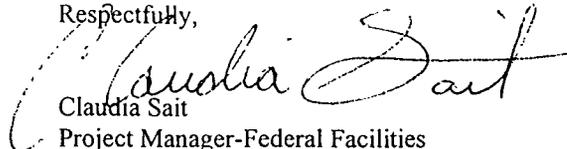
The laboratory concentration for benzene for two contaminated wells (NASB-26 and NASB-226) may be nearly 10X and 100X times the MCL cleanup goal of 5 µg/L, but is reported as less than the reporting limits of 50 and 500 µg/L, respectively. This is presumed due to the presence of high concentrations of other petroleum compounds that required sample dilution to analyze. Nevertheless, the Department would like to know what the actual values of benzene are.

During the next sampling event, please collect a second sample to avoid dilution effects and run benzene.

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Thank you for the opportunity to review this report. If you have any questions or comments please call me at (207) 287-7713.

Respectfully,


Claudia Sait
Project Manager-Federal Facilities
Bureau of Remediation & Waste Management

Cf: File
Larry Dearborn-DEP
Anthony Williams-BNAS
Michael Barry-EPA
Carolyn LePage-LePage Environmental
Chip McLeod-EA
Ed Benedikt