UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING (HBT)
BOSTON, MASSACHUSETTS 02203-2211

February 11, 1998

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

Re: Naval Air Station, Brunswick, Maine
Monitoring Event 9-July 1997-Sites 1 and 3 and Eastern Plume

Dear Emil:

Thank you for the opportunity to review and comment to the Monitoring Event 9 Report, attached are the U.S. Environmental Protection Agency's (EPA) comments to the report for this monitoring event. I regret the delay in forwarding these comments to you.

With the aim of reducing paper and expediency, this letter will be sent by E-mail as an attached file in Word Perfect version 6.1 and fax only. Please call me at 617-223-5579 or E-mail me at barry.michael@epamail.epa.gov for any questions or problems downloading this letter.

Sincerely,

Michael S. Barry, Remedial Project Manager
Federal Superfund Facilities Section

Attachment

Cc. All cc. addresses are by US Mail only.
Jim Caruthers/NASB
Claudia Sait/MEDEP
Susan Weddle/BACSE
Carolyn LePage/LePage Environmental
Rene Bernier/Topsham Community Rep.
Rayo Bhumgara/GF
Charles MacLeod/EA
Jeffery Brandow/ABB

ATTACHMENT

The following are the EPA's comments to the report titled *Final Report, Monitoring Event 9 - July 1997, Sites 1 and 3 and the Eastern Plume, Naval Air Station, Brunswick, Maine*. This report has been reviewed by Gannett-Fleming, Inc. in support of the EPA's oversight activities.

GENERAL COMMENTS

1. Including a table comparing previous monitoring events results to Monitoring Event 9 data would support the conclusion that this event is comparable to past sampling events. An example table is enclosed. Due to the long lag time until the detailed analysis in the Annual Reports is available, a data trend analysis such as this would be very useful in evaluating groundwater extraction and treatment system performance.

2. EA has undertaken significant effort to set up monitoring event data into dBASE files. However, I have so far been unable to access these files and plan to seek further guidance.

3. Features noted in the text should be included in the accompanying figures on future reports. The nine background monitoring wells sampled in monitoring event nine are an example. The majority of these wells have not been identified on the accompanying figures.

SPECIFIC COMMENTS

1. Section 1.3, Ground-Water Monitoring, Sampling, and Analysis, page 3, par. 1 and 2. The EPA notes that most monitoring wells were sampled in this event, and that all wells in the Eastern Plume were sampled.

2. Section 1.3, Ground-Water Monitoring, Sampling, and Analysis, page 3, par. 3. Groundwater samples were collected from nine background monitoring wells located throughout the base, yet a majority of these wells are not shown on the corresponding figures. The location of the following background monitoring wells should be shown on the corresponding figures: MW-320, MW-403, MW-703, MW-705, MW-801 and MW-NASB-020.

3. Section 1.3.1, Water Quality Indicator Parameter Measurements, page 4, par. 2. The text states that 13 of the 15 wells sampled at Sites 1 and 3 reached equilibrium. Section 1.3 however, states that groundwater samples were collected from 17 of the 20 well locations. Please clarify this inconsistency.

4. Section 1.5, Landfill Gas Monitoring and Cap Inspection, page 5, par. 1. Gas measurements were taken at 3 gas probes (GP-04 - GP-06) located in the vicinity of the Weapons Compound, as well as the 14 gas vents (GV-01 - GV-14). The locations of the gas probes and vents however, are not shown on the corresponding figures. These locations should either be added to the figures or develop a new enlarged figure of sites 1 and 3 with these sites

denoted in future reports.

5. Section 1.5, Landfill Monitoring and Cap Inspection, page 6, paras. 2,3,4. The EPA notes erosion, and sedimentation of the cap and drainage system. Has the corrective measure noted regarding sedimentation been performed? The potential broaching of liner system integrity by an animal burrow is noted. What measures are in place to prevent this problem? Also, has any analysis of the location of the animal burrow to that of the one monitoring well in which rising water level was noted at the RAB on 14 January?

6. Section 1.6, Quality Assurance/Quality Control, page 6, par. 1. Several field record forms of well gauging, purging and sampling from Sites 1, 3 and the Eastern Plume are missing from Appendix A.2, including forms from monitoring wells, MW-201R, MW-210A, MW-211A, MW-316A, MW-316B, MW-317A and MW-317B. These forms should be added to the document.

7. Section 2.2.3, Ground Water Extraction and Treatment System, par. 2. The EPA notes that higher pH and conductivity values, and nominally lower turbidity and redox potential values for extracted groundwater water were indicated on Monitoring Event 9 as compared to Monitoring Event 8.

8. Section 2.3.1, Sites 1 and 3, page 11, paras. 2,3,4. VOC levels at a maximum of 1-2 orders of magnitude above the MCL's/MEG's in 3 monitoring wells, with the majority of wells either non-detect or less than 5 µg/L are noted.

10. Section 2.3.1, Sites 1 and 3, page 11, par. 4. Arsenic at 99.6 µg/L parts per billion (ppb), roughly twice the MCL of 50 ppb in MW-218 is noted.

11. Section 2.3.1, Sites 1 and 3, page 11, par. 4. The list of target analytes reported above MCL's/MEG's should be expanded to include chromium. Table 12 indicates chromium at 112 (ppb) from monitoring well MW-217B, which exceeds the MCL/MEG of 100 ppb. Also, manganese was detected in monitoring well MW-218 at 99.6 ppb according to the text, but listed as 633 ppb on table 12. Please clarify this inconsistency.

12. Section 2.3.2, Eastern Plume, page 12, par. 2 VOC.'S detected of up 2 to 4 orders of magnitude above the MCL's/MEG's in numerous monitoring wells, with highest levels observed in MW-311, are noted.

12. Section 2.3.2, Eastern Plume, page 12, par. 2, 1st bullet. This list of wells in which 1,1,1-Trichloroethane was detected above the MCL/MEG of 200 ppb, should be expanded to include piezometer P-105 because table 13 indicates that 1,1,1-trichloroethane was detected at 1,700 ppb.

13. Section 2.3.2, MW-311 Ground Water Extraction, page 13, par. 2. Generally decreasing concentrations of VOC's in MW-311 during extraction in July are noted.

14. Section 2.3.2, Eastern Plume: Total Volatile Organic Compound Isoconcentration

Maps, page 14, par. 1. Detections of VOC's above MCL's/MEG's in MW-229B for this event when past event results have been a non detect for VOC's is noted.

15. Section 2.3.2, Eastern Plume: Total Volatile Organic Compound Isoconcentration Maps, page 14, par. 2, last sentence. Results consistent with past sampling rounds are noted. "Consistent" could be implied to be either remaining the same or proceeding in a general trend. Such an analysis is beyond the current scope of the monitoring reports. Per the general comment, this statement should be caveated in future reports.

16. Section 2.3.3, Background Monitoring Wells, page 15, par. 1. Detection of target analytes in all background monitoring wells is noted. Specifically, concentrations of aluminum and manganese ranging from slightly above to one order of magnitude above the State MEG were observed in a minority of background wells.

17. Section 2.3.4, Groundwater Extraction and Treatment System, page 15. Extraction of VOC's of concern at a concentration of one to two orders of magnitude is noted and zero exceedances of the system treatment plant discharge permit is acknowledged.

18. Sections 2.4, Surface Water and 2.5, Sediment, page 15-16. The absence of VOC's of concern in surface water and sediment samples at sites 1 and 3 is noted as are elevated levels of inorganics in the vicinity of the landfill "toe".

18. Section 2.6.2, Leachate Station Sediment Samples. Detection of mercury at concentrations greater than 1.0 ppm, the risk-based cleanup level specified in the ROD, in 2 of 5 samples are noted.

19. Figure #3. A symbol for the gas probes should be given in the legend. Also, the number of the gas probe samples located in the vicinity of monitoring wells MW-309B and MW-309A is not shown on the figure. This should be added to the figure, or a new figure for gas probe sample locations should be developed.

20. Figure #6. The contour for the 24-foot elevation should be moved slightly to the south to encompass monitoring well MW-225B(24.34 feet) between the 24 foot and 27 foot contours.

21. Figure #8. The contour for the 24-foot elevation should be moved slightly to the south to encompass EP-8 (26.80 feet) between the 24 foot and 27 foot contours.

Table 2-5
Historical Review of Analytical Results
for the Eastern Briarwood Area

Num	Well Identification	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL=5 ug/L	Tetrachloroethene ug/L (ppb) MCL=5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL=70 ug/L	1,2-Dichloroethane ug/L (ppb) MCL=5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL=200 ug/L	Benzene ug/L MCL=5	Toluene ug/L (ppb) MCL=1000	Ethylbenzene ug/L (ppb) MCL=700	Xylenes (Total) ug/L (ppb) MCL=10,000 ug/L	Chloroform ug/L (ppb) MCL=100 ug/L	MTBE ug/L (ppb) MCL=70 ug/L
1	98MW0001	Fifth	03-Oct-97	0.84J	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Fourth	11-Jul-97	1.5	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Third	10-Apr-97	1	3.3	ND	ND	ND	ND	ND	ND	1.9	ND	ND
		Second	06-Jan-97	0.78 J	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	25-Oct.-96	2	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Historical	25-May-93	2	ND	0.2 J	ND	ND	ND	ND	ND	ND	ND	ND
2	37MW0002	Fifth	25-Sep-97	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Fourth	08-Jul-97	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Third	07-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Second	15-Jan-97	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	0.92 J
		First	10-Oct-96	ND	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Historical	19-Apr-93	ND	1.0	ND	ND	6	ND	ND	ND	ND	ND	ND
		Historical	4-Apr-90	ND	2.0	ND	ND	0.3 J	ND	ND	ND	ND	ND	ND
3	37MW0004	Fifth	25-Sep-97	ND	0.7J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Fourth	08-Jul-97	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Third	08-Apr-97	ND	0.77 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Second	15-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	10-Oct-96	ND	0.70 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Historical	19-Apr-93	ND	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Historical	4-Apr-90	ND	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
4	MAMW0512A	Historical	25-May-93	1	ND	0.8	ND	4	ND	ND	ND	ND	ND	ND
5	MAMW0512C	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	MAMW0512D	Fifth	22-Sep-97	ND	0.81J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Fourth	03-Jul-97	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Third	07-Apr-97	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Second	24-Jan-97	1.1	0.81 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	15-Oct-96	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND