



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

April 5, 1996

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
Lester, PA 19113-2090

Re: *Draft Source Investigation Report, Site 9 Neptune Drive Disposal Site*
Brunswick Naval Air Station

Dear Fred:

I am enclosing the U.S. Environmental Protection Agency's (EPA) comments on the above referenced report. This report describes the additional source investigation conducted at Site 9 to evaluate potential source areas.

In general, the EPA concurs with the report's conclusion that no remedial actions are necessary and recommendation that the long-term monitoring program be continued to assess natural attenuation of the volatile organic compounds in groundwater. As for the construction of the detention pond in the southern unnamed stream at Site 9, I believe we need to discuss any impacts this will have on the long-term monitoring program.

Please call me at (617) 223-5521 should you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Robert Lim".

Robert Lim, Remedial Project Manager
Federal Facilities Superfund Section

Attachment



cc: Rick Bowen/ADL, Inc.
Jim Caruthers/NASB
Jeffrey Brandow/ABB-ES, Inc.
Nancy Beardsley/MEDEP
Susan Weddle
Tom Fusco/BACSE
Carolyn LePage
Rene Bernier/Topsham Community Rep.
Don Gerrish/Brunswick Town Manager
Alan Frazier/Brunswick Topsham Water District
David Gleason
Richard Sobocinski
James MacLeod/Brunswick Marine Resource Commission

ATTACHMENT

The following are the EPA's review comments on the report titled *Draft Source Investigation Report, Site 9, Neptune Drive Disposal Site* dated February 1996.

General Comments

1. The report requires some additional background on the site geologic and hydrologic characteristics, so that the potential contaminant migration pathways and potential source areas as stated in the report can be reviewed. For example, the aquifer characteristics (unconfined versus confined) need to be addressed in relation to the reported information that indicates that wells in close proximity to each other (e.g., MW-915 and NASB-21) have piezometric elevation differences of about 1 foot (see Table 5-4). Also many of the wells have a dark blue clay layer at about 20 to 25 feet below ground surface dividing gray fine sands. The implications of this clay layer on the distribution of contaminants throughout the site should be discussed. It is suggested that an east-west and north-south representative geologic cross-section of the site should be included in the report (See attached map for suggested locations).
2. The wells are screened at different depths and over various screen lengths and may be the cause for some of the variations in contaminants detected. A table listing the screened interval of each of the wells should be provided. The EPA believes this knowledge may help in refining the attenuation assessment of VOCs. The previous results of aquifer permeability testing should be briefly included in this report along with any calculations of groundwater pore velocity that may be used to define the source location given the current extent of the plume. Further, the contaminant constituents found and concentration distribution should be discussed in terms of whether it provides any information about the original source material or if it is consistent with single or multiple source areas.
3. The report states that the objectives of the investigation include an evaluation of potential source areas around the site and to determine if additional remedial actions are required. For example, upgradient contaminants likely to degrade to vinyl chloride should be reviewed and discussed. Also, a discussion of whether or not the environmental conditions at the site favor biotic or abiotic transformation and to what extent should be included in the report. This information could also be used to further support natural attenuation at Site 9.
4. The report summarized the characterization results of potential contamination sources immediately north and northwest of the wells in which vinyl chloride has been detected. However, Figure 5-1 of the report indicates that the flow of groundwater in the area of Buildings 216 through 220 is predominantly from the west. Although monitoring wells, MW-NASB-204 and MW-NASB-022, and test pits, TP-912 and TP-915, did not detect any VOC contamination, the report should include a discussion of whether or not further investigation of the area west of the site, as a source of the VOC contamination, is necessary. The consistent, relatively low vinyl chloride concentrations detected in the

wells at Site 9 may indicate that the contamination is the leading edge of a plume. The Site 9 VOC contamination should be evaluated from a regional perspective in relation to both regional groundwater flow and potential source areas.

Specific Comments

1. Pages 2-4 and 2-5, overlapping sentence - *This area, reportedly once used as a dumping area, has been more recently used as a picnic area.* Any information available concerning what was dumped in the area should be included.
2. Page 2-6, ¶ 3 - The lithology description should be expanded to provide information about the layer thicknesses, notable characteristics (e.g., color, bedding, fractures, plasticity, hardness, and permeability) to give the reader some sense of the geologic and hydrologic characteristics of these layers. Also the term "transition layer" is unclear and should be replaced with a more quantifiable description (e.g., sandy clay, clayey sand).
3. Page 3-12, Section 3.5, Ground Water Sampling - A discussion of the results of the field blank analysis should be provided and any implications these results have on the analysis results should be defined. Also, when these samples were collected in comparison to other samples collected that day should be discussed and the blank sample collection procedure should be described.
4. Page 3-14, ¶ 1 - The effect of elevated water temperatures due to the well sampling technique used on the reported volatile organic compound (VOC) data should be explained.
5. Page 5-3, ¶ 2 - Ash fill material was observed in the 4- to 5-foot interval in Test Boring 918. This information should be incorporated into the report figures that show the area of the ash landfill/dump.
6. Page 5-4, ¶ 2 - The rationale for collecting a sample from the 18- to 20-foot interval in TB-021 should be provided.
7. Page 5-10, 1st sentence - Semivolatile organic compounds (SVOCs) were detected at concentrations above the contract-required quantitation limit (CRQL) only in the sample from TB-918. However, all the reported values (Table 5-1; Page 5-7) are qualified with a J, which typically indicates that it is below the CRQL. Please provide an explanation of this apparent inconsistency.
8. Page 5-11, ¶ 1 - It appears that the sample collected from TB-917 (diluted 125 times) was analyzed by the Medium Soil Method when the Low Soil Method would have been more appropriate. The reasoning behind the analysis of this sample at the reported dilution

should be explained.

9. Page 5-11, ¶ 2 - The likelihood that there is any correlation between the reported 238 mg/kg volatile tentatively identified compounds (TICs) and the 200 mg/kg TPH results is very small. The summation of reported TIC concentrations for comparison to TPH values may not be reasonable.
10. Page 5-21, Figure 5-2 - It would be helpful if the water level contours were placed on this concentration distribution figure.
11. Page 5-22, Table 5-5 - Data from the analysis of the MW-NASB-204 sample are missing from Table 5-5.
12. Page 5-23, Table 5-5 - The volatile data is reported as "Not Applicable" for the sample from Well MW-909. This is inconsistent with the analytical program information presented in Table 4-2 (Page 4-3) which indicates that the sample would be analyzed for Contract Laboratory Program (CLP) volatiles. This inconsistency should be explained.
13. Page 5-24, ¶ 2 - The proposed source of the gasoline in the sample from well MW-907 should be stated. If the detection of "gasoline" as described in the text is representative of the well water, other compounds associated with gasoline would be expected. This discrepancy should be explained.
14. Page 6-4, ¶ 1 - A proposed mechanism of contaminant migration beyond the stream (i.e., upgradient) should be provided. It is possible that the contamination detected at well MW-909 was derived from a contaminant source to the south, upgradient of MW-909.
15. Page A-7 - The type of material placed in the bore hole between 17 feet and 24 feet should be noted.
16. Page A-18 - The type of material placed in the bore hole between 20 feet and 15 feet should be noted.



LEGEND

- ◆ MONITORING WELL LOCATION
- TERRAPROBE LOCATION
- SOIL BORING
- STREAM
- ⊕ TEST PIT
- ▲ SURFACE WATER/SEDIMENT SAMPLING LOCATION
- LEACHATE SAMPLING LOCATION
- CP CONE PENETROMETER
- 48 --- INTERPRETIVE WATER LEVEL CONTOUR LINE
- 47.37 GROUNDWATER ELEVATIONS MEASURED ON 29 SEPTEMBER 1995 (FEET MSL)
- 37.1 ELEVATIONS OF GROUND SURFACE AT STREAM LOCATIONS (FEET MSL)
- ➔ INTERPRETIVE GROUNDWATER FLOW DIRECTION

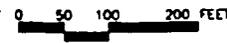
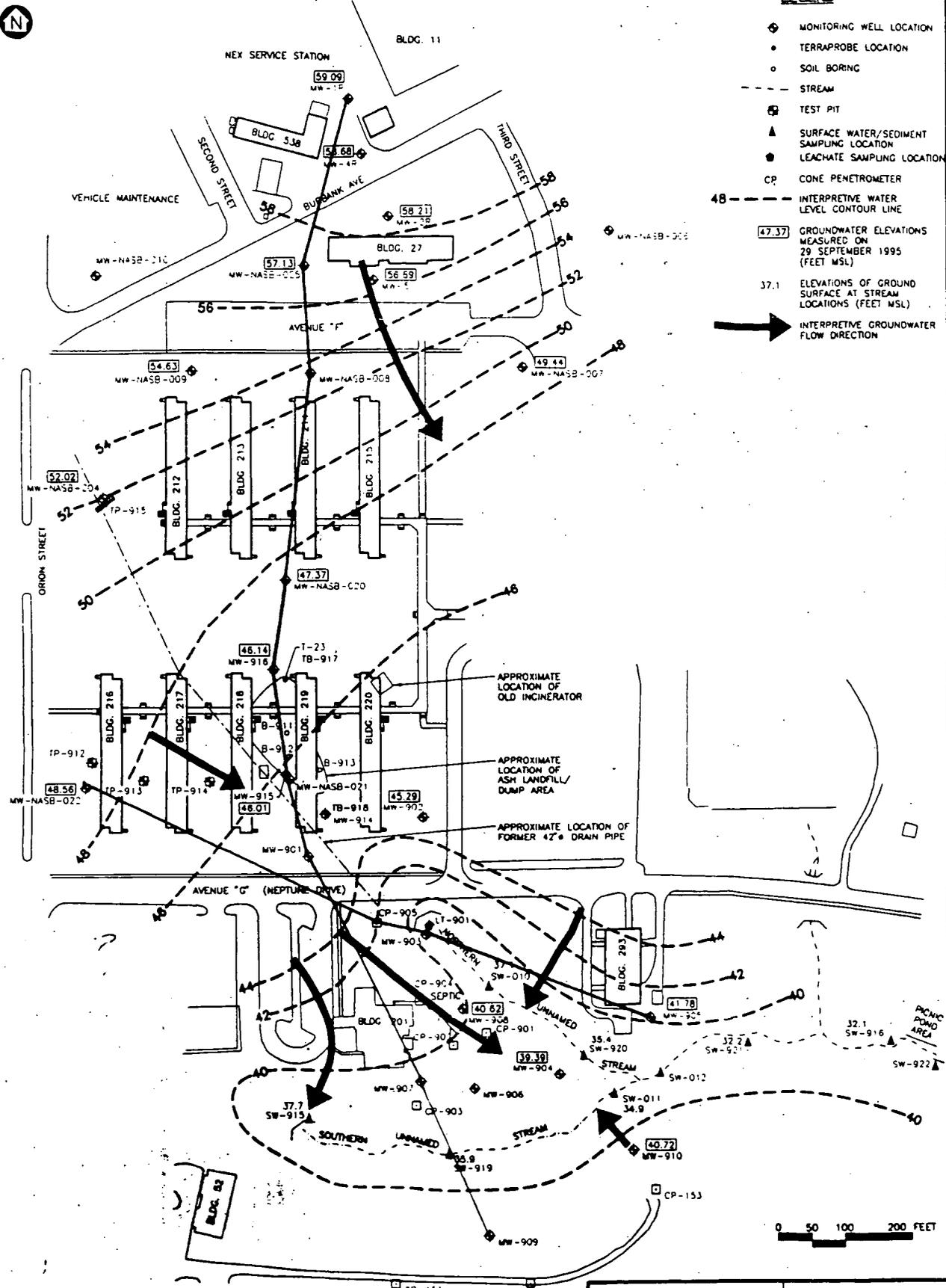


ABB ABB Environmental Services, Inc. INSTALLATION RESTORATION PROGRAM NAVAL AIR STATION BRUNSWICK, MAINE	INTERPRETIVE GROUNDWATER CONTOUR MAP: SITE 8
	SOURCE INVESTIGATION 48-07-08-09 FIGURE 5-1