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NWS EARLE
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TRANSMITTAL LETTER FOR THE RESPONSE TO STATE OF NEW JERSEY DEPARTMENT
OF ENVIRONMENTAL PROTECTION COMMENTS ON GROUNDWATER INVESTIGATION
REPORT FOR AREA OF CONCERN R-6/7 NWS EARLE NJ
10/2/1998
TETRA TECH


TETRA TECH NUS, INC.

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C-51-10-8-4

October 2, 1998

Project Number 5085

Mr. Brian Helland, Code 1812
 Senior Environmental Engineer
 Northern Division
 Naval Facilities Engineering Command
 10 Industrial Highway Mail Stop 82
 Lester, Pennsylvania 19113

Reference: Contract No. N62472-90-D-1298 (CLEAN)
 Contract Task Order No. 206

Subject: Response To Comments
 State of New Jersey Department of Environmental Protection
 Groundwater Investigation Report for Area of Concern R-6/7, September 1997
 NWS Earle - Colts Neck, New Jersey

Dear Mr. Helland:

The purpose of this letter is to respond to the comments provided by Bob Marcolina, Case Manager with the New Jersey Department of Environmental Protection (NJDEP) to the Navy regarding the subject report prepared by Brown & Root Environmental, [now Tetra Tech NUS (TtNUS)]. A copy of Mr. Marcolina's letter is included as Attachment A.

Comment: 1. *Section 2.2, page 2-3, 4th bullet - Further investigation is warranted regarding the lead contamination found in Wells MW-O/1, MW-O/2 and MW-O/4. The lead concentrations found cannot simply be written off as naturally occurring conditions. If turbid conditions have been encountered during the sampling event, the Department recommends utilizing low flow sampling or any other acceptable sampling technique that will minimize turbidity.*

Response: Further investigation was performed in early 1998 for the Remedial Action Work Plan and Classification Exception Area (RAWP/CEA) documentation for areas of concern (AOC) R-6/7 and R-12. The investigation included the following:

- Thirteen permanent monitoring wells were installed around the perimeter of both AOCs.
- Low flow groundwater monitoring procedures were performed at all 13 wells. Turbidity levels were monitored and recorded throughout the sampling events.
- Groundwater sample analysis included lead.

The results of the groundwater monitoring indicated only one monitoring well (MW-108) with lead (13.4 ug/L) above the NJDEP groundwater quality standard (GQS) of 10 ug/L. MW-108 is located side-gradient from AOC R-6/7. Based on this information, it appears that lead may not be a concern at the site. As a conservative measure, the Navy may choose to include lead in the analytical suite for the proposed natural attenuation monitoring program at MW-108.

Comment: 2. *Section 3.3.2, page 3-7, Since the report has stated that there are insufficient data to confirm the ground water flow pattern, it is recommended that the appropriate data be collected in order to better determine the ground water flow.*

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The hydrogeologic investigation performed for the RAWP/CEA documents for AOCs R-6/7 and R-12 described above, included the following:

- Seven piezometers were installed around the perimeter of AOC R-6/7 in late January 1998. An initial round of groundwater levels was recorded in each piezometer in late February 1998.
- A second round of groundwater level measurements was performed on the 13 permanent monitoring wells in late June 1998. Slug tests were also performed in 9 of the permanent wells.
- The horizontal and vertical position of the piezometers and the permanent wells was surveyed by a licensed New Jersey surveyor.
- TtNUS used the water levels and survey data, to estimate the groundwater table surface contours for AOC R-6/7. TtNUS used the slug test data to estimate the hydraulic conductivities of the area.

The results of the hydrogeologic investigation indicated that the apparent groundwater flow pattern is radial to the northwest and northeast. An area of low hydraulic conductivity within the north central portion of AOC R-6/7 is the likely cause of the apparent radial flow pattern.

Please refer to the draft RAWP/CEA Documentation Report for Building R-6/7 and R-12 that we submitted in September 1998, for a more detailed discussion of the results the additional investigation described above. Do not hesitate to contact me if you have questions or comments.

Sincerely


Richard J. Gorrell
Project Manager

RJG/ejc

c: Lawrence Burg, Navy - NWS Earle
John Trepanowski, P.E. - TtNUS
Garth Glenn - TtNUS
Russ Turner - TtNUS

ATTACHMENT A

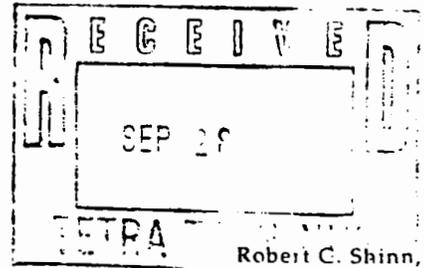
**CORRESPONDENCE- BOB MARCOLINA, CASE MANAGER, STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION, TO BRIAN HELLAND, NORTHERN DIVISION,
NAVAL FACILITIES ENGINEERING COMMAND. SEPTEMBER 24, 1998.**



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor



Robert C. Shinn, Jr.
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO: P 127 638 519

SEP 24 1998

Brian Helland
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, PA 19113

Dear Mr. Helland:

Re: Ground Water Investigation Report for
Area of Concern R-6/7
Naval Weapons Station Earle
Colts Neck Twp., Monmouth Co.

The New Jersey Department of Environmental Protection (Department) has reviewed the aforementioned documents, prepared by Brown & Root Environmental on behalf of the Naval Weapons Station Earle, dated September 1997. The Department will approve this document provided the following comments are addressed:

1. Section 2.2, page 2-3, 4th bullet - Further investigation is warranted regarding the lead contamination found in Wells MW-0/1, MW-0/2 and MW-0/4. The lead concentrations found cannot simply be written off as naturally occurring conditions. If turbid conditions have been encountered during the sampling event, the Department recommends utilizing low flow sampling or any other acceptable sampling technique that will minimize turbidity.
2. Section 3.3.2, page 3-7 - Since the report has stated that there are insufficient data to confirm the ground water flow pattern, it is recommended that the appropriate data be collected in order to better determine the ground water flow.

If you have any questions, please call me at (609)-633-7327.

Sincerely,

Bob Marcolina, Case Manager
Bureau of Federal Case Management

c: Rick Gorrell, Brown & Root Environmental
Lester Jargowsky, Monmouth County Health Dept.
Larry Burg, NWS Earle