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LETTER REGARDING U S EPA REGION IV REVIEW AND COMMENTS ON ROUNDS 2 AND
3 GROUNDWATER SAMPLING AT STUDY AREA 36 NTC ORLANDO FL
4/2/2002
U S EPA REGION IV

00512

April 2, 2002

4WD-FFB

Ms. Barbara Nwokike
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
Charleston, SC 29419-9010

SUBJ: Report for Rounds 2 and 3 Groundwater Sampling Event for Study Area 36, Main Base, Naval Training Center Orlando, Orlando , Florida, Revision No. 00, November 2001 and January 2002.

Dear Ms. Nwokike:

The United States Environmental Protection Agency (EPA) has completed its review of the subject documents.

GENERAL COMMENTS

- 1. The Environmental Protection Agency agrees with the conclusions and recommendation presented in these two reports. Natural attenuation appears to be taking place at this site. The geochemical and chemical analyses appear to support the conclusions regarding natural attenuation. Additional injections of vegetable oil do appear to be called for. There is some concern with the monitoring wells being abandoned to allow the developers to proceed with work. The concern is primarily focused on the suspension of the monitoring program and the ability to track the progress of the natural attenuation. Certainly, the time frame for development projects is shorter than the typical pace of natural attenuation of groundwater contaminants. The EPA is confident that the groundwater monitoring will continue once the surface activities have been completed. These reports are acceptable for their intended purpose. The primary issue is the interpretation of the groundwater maps and how that plays into future activities at the site. These issues are detailed below in the Specific Comments.**
- 2. The data on the Round 3 compact disk was difficult to access. The report is listed at 6400+ pages and the reviewer was not able to access Appendix C, the Natural Attenuation Memo. This is an important portion of this report as it contains the**

trend graphs which are informative as to the site's progress. It is understood that all those lab reports need to be somewhere and electronic versions take up far less space. But in this case, their inclusion on this disk apparently inhibited access to more critical portions of the report. Fortunately, the subcontractor was able to provide an electronic copy of the Appendix.

SPECIFIC COMMENTS

1. There are several problems with the potentiometric surface maps for both Round 2 and 3. For Round 2, Figure 2-1 is contoured correctly. In Figure 2-2, the 107.00 contour is improperly drawn. This contour should be drawn to the north and east of wells OLD-36-28B and -08B and the west of well OLD-36-10B. As for Figure 2-3, two points are significantly out of the pattern. The water level in well OLD-36-12C is a foot above the adjacent wells but the contour does not reflect this anomaly. The water level in well OLD-36-37C is two feet below the adjacent well. Additionally, this data point indicates a groundwater flow direction 180° from the stated direction.

For Round 3, similar inconsistencies exist in Figures 2-1, -2 and -3. For Figure 2-1, the water level in well OLD-36-27A is three feet above the adjacent wells. The water level in well OLD-36-02A is three feet below the closest contour and nearly six feet below the water level in well OLD-36-33A located to the southeast. For Figure 2-2, the water level for well OLD-36-08B is nearly lower than the contour drawn nearly directly on top of the well symbol. The water level for well OLD-36-34B is significantly higher than the nearby wells and perhaps more curiously, eight feet higher than well OLD-36-35C, a well screened in the lower interval but less than 20 feet away. As also seen in Round 2 data, for Figure 2-3, two points are significantly out of the pattern. The water level in well OLD-36-12C is a foot above the adjacent wells but the contour does not reflect this anomaly. The water level in well OLD-36-37C is two feet below the adjacent well. Additionally, this data point indicates a groundwater flow direction 180° from the stated direction.

The text for both reports states that these maps are consistent with previous data. While that may be true, there is still something amiss with this data and its interpretation. Questions that arise include were these wells surveyed properly, has there been some data transposition problem somewhere and is there some leaky pipe somewhere that is confusing the representation of natural conditions? These issues need to be resolved prior to the next report and the next injection of vegetable oil as it appears to bring into question the whole concept of which way does the groundwater flow in this area.

If you have any questions, please call me at (404) 562-8544.

Sincerely,

Gregory D. Fraley
Senior Remedial Project Manager

cc:

David Grabka, FDEP