

1.01-4/13/1995-00444



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Peter W. Schmidt  
Director

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April 13, 1995

Ms. Nina M. Johnson, P. E.  
Code 18  
Department of the Navy  
Atlantic Division  
Naval Facilities Engineering Command  
1510 Gilbert Street  
Norfolk, VA 23511-2699

RE: Draft Final RFI Phase II Report for sites 2D, 2E, 15, 24,  
and 25 at Naval Air Station Oceana, Virginia Beach,  
Virginia

Dear Ms. Johnson:

Thank you for providing the Department of Environmental Quality, Waste Division, the opportunity to comment on the "Draft Final Phase II Report" for sites 2D, 2E, 15, 24, and 25 at Naval Air Station Oceana, Virginia Beach, Virginia.

Attached are our comments and questions concerning the Draft Final Phase II Report. If you have any questions concerning these comments or questions, please contact me at (804) 762-4226.

Sincerely,

A handwritten signature in cursive script that reads "Devlin Harris".

Devlin M. Harris  
Remedial Project Manager  
Federal Facilities Program

Attachments

cc: James Harris, LANTDIV  
Erica Dameron, Federal Facilities Program

Draft Final Phase II Report of  
Sites 2D, 2E, 15, 24, and 25  
at Oceana Naval Air Station, Virginia Beach, VA.

**General Comments**

1. After reviewing the Draft Final Phase II Report on the five sites mentioned above, it appears that more accurate information is needed concerning the groundwater and the contaminant plumes associated with it. This information could be obtained by performing a groundwater modeling study. This study could prove to be invaluable in determining the extent of contamination, as well as future risks associated with it. A groundwater modeling platform would allow for rapid simulation of various site conditions and remedial design options. Furthermore, a good platform is capable of tracking two plumes in three dimensions. .

**Site Specific Comments**

1. **Site 2D, Data Interpretation-** According to this section, "the total BTEX concentration in the mobile laboratory sample from 2D-GS2 was 1,960 ppb versus 6 ppb in the split sample sent to the offsite laboratory". A deviation of this magnitude is not considered accurate and cannot be used. It is recommended that another split sample be taken at this location to determine the correct BTEX concentrations.
2. **Site 2D, Health and Environmental Assessment** -This section states that the threat to human health and the environment is minimal because "The area of groundwater contamination is small and does not appear to be migrating". Please explain why the contamination does not appear to be migrating. It is also mentioned that the "contaminated area is paved with asphalt or concrete and therefore is not accessible". However, asphalt is highly porous and would not stop rain from penetrating it and making its way to the contamination causing further potential for contaminants to migrate. Also stated in this section is that "there is no contact with groundwater at the site". Is groundwater used by anyone on or off site for such things as washing cars, watering lawn etc? If so, they are a potential target if contamination reaches that aquifer. Due to the potential at this site, a monitoring program is strongly recommended. It is also highly recommended that a groundwater modeling study be performed to answer some of these questions.

3. **Site 2E, Data Interpretation-** In this section, it also states that the "results of duplicate TPH analysis at well 2E-MW7 was considerably lower (730 ppb than the initial sample (3,790,000 ppb)". A deviation of this magnitude warrants re-sampling. See comment #1. This site would also benefit from a groundwater modeling study.
4. **Site 15-** Due to the widespread contamination at this site, and the need for further data (Conclusions and Recommendations 2-30), it is recommended that groundwater modeling be part of the proposed CMS.
5. **Site 24-** As with the other sites in this report, site 24 is missing essential data that could be obtained if a groundwater modeling program was in place to ensure that contamination migration is being properly tracked.
6. **Site 25-** The report does not address the dioxin/furan compounds that were detected in surface water sample SW2. Dioxin/furan compounds were detected from 0.037 ppb to 0.15 ppb. Note that the Virginia surface water standard for dioxin is 1.2 ppq (parts per quadrillion) or .0000012 ppb. The federal surface water criteria are 0.000000013 ppb and 0.000000012 ppb for consumption of water and organisms and consumption of organisms only, respectively. The federal criteria for protection of aquatic life are 0.01 ppb and 0.00001 ppb for acute and chronic effects, respectively.

Although the water at the site is not used for drinking, the fact that the concentrations exceed standards and criteria by several orders of magnitude indicates that even inadvertent contact may be a concern. Since dioxin was only analyzed for in one sample, additional sampling should be performed for both surface water and sediment, including downstream locations. The dioxin/furan congeners should be reported separately since the toxicity of the congeners varies. Sampling for PCBs is also recommended if this has not already been done since dioxins are sometimes associated with PCBs. In addition, an exposure assessment should be performed. Is the site accessible to the public or employees of the installation?

Could the stream to which the pond discharges possibly be used for fishing or crabbing?

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In addition, it should be noted that EPA Region III generally recommends the use of the ER-L (effects range-low) for screening sediment concentrations (See Region III BTAG Screening Levels, interim draft, 1/19/95). This report uses ER-M (effects range-median) values. The exceedances noted would therefore be greater if the ER-L were used for comparison.