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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Peter W. Schmidt
Director

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January 4, 1996

Department of Navy
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, Va 23511-2699

Attn: Mr. Dave Forsythe
Code 1822

Re: Draft Final Remedial Investigations and Draft Final Feasibility Studies; Building LP-20 site.

Dear Mr. Forsythe:

Thank you for providing the Department of Environmental Quality, Waste Division, the opportunity to comment on the above referenced documents.

Attached are our comments on these documents. If you have any questions concerning these comments, please contact me at (804) 698-4204.

Sincerely,

Dinesh Vithani

Dinesh Vithani
Project Officer,
Federal Facilities Program

Attachments
cc: Rob Thomson, EPA Region III
Dianne Bailey, Norfolk Naval Base
Erica Dameron
Pat McMurray
Paul Spaulding
Steve Mihalko

Comments
Draft Final Remedial Investigations and
Draft Final Feasibility Studies for the site Building LP-20

Draft Final Remedial Investigations:

1. Section 5.2, Page 5-5: Although no DNAPL's were found at monitoring wells LP20MW2 and LP20MW3, according to the Clay Contour Map (fig. 5-8) the clay layer dips significantly around Building LP-14 and there is a possibility that DNAPL's are accumulated in this area (close to monitoring well LP20MW4).

2. Table 6.17: The RBC values specified in this table are off by a factor of 10. For example RBC value specified for Chloro Ethane should be $31x10^6$ and not $3.1x10^6$.

3. Section 8.3.3.2, Page 8-18 & Section 10, Page 10-1: Since Shallow aquifer appears to be connected to the Deeper Yorktown aquifer, it is necessary to fully define the contamination in the Shallow aquifer before remediation to avoid recontamination of deeper aquifer. According to Section 10, the contamination in Shallow aquifer is not fully defined in the areas south & west of Bldg. 132, east of Bldg. LP-14 and south of Bldg. LP-13.

4. Section 8.4.4.3, Page 8-28: It is not clear why Inorganic value has been left out for skin absorption under current and future on-site workers scenario.

5. Section 8.6, Page 8-43: This section refers to Table 8-23 which does not exist.

6. According to Tables 2.12 & 2.13 and fig. 2-5, Free Product was encountered in samples. Should risk to human health and the environment be evaluated separately due to Free Product?

7. According to the Footnote at the end of Table 8-13, all inorganics will have a value of 20% as absorbed value. It is not clear why Table 8-13 uses different values for several inorganics.

Draft Final Feasibility Studies:

1. Table ES-1: Risk based clean-up goal for TCE should take in to consideration the fact that remaining TCE (after clean-up) will degrade to Vinyl Chloride. The concentration of Vinyl Chloride after degradation should not exceed the risk based concentration of 6 Ug/l(Risk based concentration for Vinyl Chloride).

2. Table 2-3b; Virginia Air Pollution Control Regulations; Items 2 & 3: Both these items refer to VR 120-04 (Rule 4) which is used for old sources which existed before air regulations went

in to effect. Please correct the citation to VR 120-05 which is for new and modified sources.

3. Figures 4-2, 4-5 and 4-7: The conceptual layout in these figures do not cover areas east of Bousch Creek Culvert. According to RI, some areas east of Bousch Creek Culvert are contaminated in Shallow aquifer. Due to flow direction of NE in Shallow aquifer, the existing layout will not be able to remediate these contamination.

Following are comments from our toxicologist Pat McMurray. If you have any questions, you may directly contact her at (804) 698-4186

<u>Draft Final Remedial Investigations and Baseline Risk Assessment:</u>

1. Section 4: It is not clear why TCL (target compound list) Pesticides and PCBs were not included in the investigation. Have these been ruled out as contaminants of concern in previous investigations? Please provide a rationale for not including Pesticides and PCBs.

2. Table 8-1: It appears that the COPC (contaminant of potential concern) Screening Levels used for Dibenzofuran are incorrect. Therefore Dibenzofuran does not need to be retained as COPC.

3. Table 8-3: It appears that the COPC Screening Level used for Manganese has not been adjusted to a target hazard quotient of 0.1. Several of the Manganese detections exceed the adjusted screening level. Therefore Manganese should be retained as a COPC in shallow groundwater.

4. Table 8.13, Section 8.3.1: The characterization of the exposure setting should include a discussion of the closure plans for the NADEP area in the vicinity of LP-20. This has been briefly discussed in 1.4.1 of the RI and also in the FS. A more detailed discussion should be included in the risk assessment since this may effect potential future exposures.

5. Page 8-14, Section 8.3.2: A civilian residential exposure scenario should also be presented, particularly in light of the fact that this area is scheduled for closure.

6. Page 8-19, Section 8.3.3.2: Volatilization during showering is discussed in this section. Please also discuss the potential for volatilization in basements or ground floors of the existing buildings. Because the concentrations of volatile organic contaminants are so high and the plumes appear to occur beneath the buildings, air sampling is also recommended to assess risk to current and future workers.

7. Appendix O, Tables 3 and 4: I was unable to verify some of the 95% UCL (upper confidence limit) values using the equation for lognormal distributions. The calculations should be checked, particularly the H-statistic values, and corrected if

necessary.

8. Appendix R, Groundwater Tables: It appears that the permeability constant (PC) used for Benzene is incorrect by an order of magnitude. Please check and correct as necessary.

Draft Final Feasibility Study:

1. Table 2-1: The table indicates that the clean-up levels are based on potential future non-potable industrial use. Therefore the selected remedy should include a provision to insure that the aquifer cannot be used as a potable source or as non-potable source under a residential scenario.

2. Page 3-3, Section 3.3.1: The first paragraph indicates that institutional controls could be implemented under the Base Master Plan. However, it had been stated previously that this area is subject to closure under BRAC. It is therefore not clear how the institutional controls would be implemented.

Following are the comments from our ARARs coordinator Paul Spaulding. If you have questions, you may directly contact him at (804) 698-4187.

Draft Final Feasibility Study:

1. Table 2-3(a) correctly identifies the Virginia Water Quality Standards as they pertain to the natural discharge of groundwater to surface water. The appropriate groundwater clean-up level at the point of compliance where groundwater naturally discharges to surface water is the effluent discharge limit that would be established if it were a point source discharge. This concentration level can be established by the DEQ Water Division in accordance with the Virginia Pollution Discharge Elimination System Regulations (VPDES) (VR-680-14-01). Information that is needed to develop the discharge limit includes the parameters of concern, the estimated flow rate of the natural discharge, and the location of the discharge. Depending on the characteristic of the receiving stream, a dilution factor may be taken in to account in establishing the discharge limit/clean-up level, as well as the hardness value for the stream. If the stream is intermittent, the in-stream water quality standard would be the clean-up level at that point of compliance.

2. Table 2-3(a) indicates that the Virginia Regulations for the Control and Abatement of Air Pollution are not enforceable and are therefore only a TBC for excavation activities. The standard included in these regulations are enforceable and should be included as potential ARAR in Table 2-3(a). (Please note that Table 2-3(b) states that these regulations are applicable to emissions from excavation activities, as well as to emissions from groundwater treatment systems.)

3. Table 2-3 (b) states that DON has the authority for approval of an erosion and sediment control plan. Typically an erosion sediment control plan must be submitted for review and approval by the soil and water conservation district or locality. Does the facility intend to have their plan reviewed by the local soil and water conservation district or the City of Norfolk?

4(a) The Virginia Pollutant Discharge Elimination System Regulations (VPDES) (VR 680-14-01) are identified in Table 2-3(b) as being "relevant and appropriate" to the discharge of treated water to surface water onsite. These regulations should be listed as being applicable.

4(b) The Virginia Water Protection Permit Regulations (VR 680-15-01) would also be applicable to discharges to surface water. These regulations include procedures and requirements to be followed in connection with activities such as dredging, filling or discharging any pollutant into or adjacent to, surface waters, or any activity which impacts the physical, chemical or biological properties of surface waters. The definition of surface waters includes wetlands. (The standards are typically required in addition to the U.S. Army Corps of Engineers § 404 permit, and are established in coordination with requirements of the Chesapeake Bay Preservation Act administered by local permitting boards or requirements of the Virginia Resource Commission.)

5(a) The Virginia Hazardous Waste Management Regulations (VHWMR) (VR 672-10-1), the Virginia Solid Waste Management Regulations (VSWMR) (VR 672-20-10), and the Virginia Regulations for the Transportation of Hazardous Materials (VR 672-30-1) should be included in the Table 2-3(b) as potential action specific ARARs. Depending upon the nature of previous activities at this site, certain areas may be subject to consideration as Solid Waste Management Units under RCRA. VHWMR/RCRA closure and post-closure care requirements may be potential ARARs for such units. In addition, if the remedy involves the temporary storage, treatment or disposal of a VHWMR/RCRA hazardous waste, various VHWMR/RCRA requirements may need to be complied with as specified in VHWMR and/or the applicable 40 CFR Parts.

(Because Virginia administers an authorized State RCRA program, the Virginia Hazardous Waste Management Regulations (VHWMR) will serve as the governing ARAR in place of the RCRA regulations contained in the 40 CFR Parts, except for the Land Disposal Restrictions of 40 CFR Part 268. At this time, Virginia does not have authorization for administering the LDR's.)

Some sample VHWMR Part X Sections corresponding to RCRA regulations of 40 CFR Part 264 are listed below:

	VHWMR §	40 CFR Part 264
Releases from Solid Waste Management Units	10.5	Subpart F
Closure and post-closure	10.6	Subpart G
Use and Management of containers	10.8	Subpart I
Tank Systems	10.9	Subpart J
Surface Impoundments	10.10	Subpart N
Waste Piles	10.11	Subpart L
Land Treatment	10.12	Subpart M
Landfills	10.13	Subpart N

5(b) The transportation of hazardous waste must be conducted in compliance with VHWMR Parts VI and VII and the Virginia Regulations for the Transportation of Hazardous Materials.

5(c) The disposal of any soil, debris, sludge or any other **Solid** Waste from a site must be done in compliance with VSWMR.

6. Potential location specific state ARARs should be included as Table 2-3(c). These include:

(a) The Virginia Wetland Regulations (VR 450-01-0051). Any activities to take place in, or impact on, a tidal wetland must meet the provisions of the Virginia Wetland Act and regulations as applicable. (The Virginia Water Protection permit regulations cited above is also applicable to activities impacting wetlands, as well as the Chesapeake Bay Preservation Act which is referenced below.)

(b) The Chesapeake Bay Preservation Act, Code of Va. § 10.1-2100 et seq., and the Chesapeake Bay Preservation Area Designation and Management Regulations (CBPA Regulations) (VR 173-02-01). Under these requirements, certain locally designated tidal and non-tidal wetlands, as well as other sensitive land areas, are subject to limitations regarding land-disturbing activities, removal of vegetation, use of impervious cover, erosion and sediment control, stormwater management, and other aspects of land use that may have effects on water quality.

(c) The Coastal Management Plan, City of Norfolk, under the requirements of the Coastal Zone Management Act, 16 U.S.C. 1451 et seq., and the National Oceanic and Atmospheric Administration (NOAA) Regulations on Federal Consistency With Approved State Coastal Zone Management Programs, 40 CFR Part 930. Under these programs, activities within a Coastal Management Zone must be in compliance with local requirements.