03.01 - 2/17/2000-00127

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

2/17/00

Atlantic Division, Naval Facilities Engineering Command
Attention Mr. Tim Reisch
1510 Gilbert Street
Norfolk, VA 23511-2699

Re: Naval Station Norfolk, St Juliens Creek Annex

Dear Mr. Reisch:

Thank you for the opportunity to comment on the Draft Final Master Project Plan and the Draft Final Site Management Plan for the US Navy St. Juliens Creek Annex , Chesapeake, VA. Please consider the following comments with regard to: general content, toxicological/risk assessment issues, and ecological concerns.

General Content:

1. Please insure that all of the identified RCRA SWMUs and AOCs that require investigation are included in the final SMP, especially all ordnance production facilities, including but not limited to:

Building 190	-Medium Caliber Loading/Renovation Plant/Degreasing
Building 89	-Major Caliber Loading and Renovation Plant.
Building 46	-Medium Caliber Cartridge Renovation and
Assembly	
Building 39	-20 mm & 40 mm Breakdown Plant
Building 13	-Tank Renovation Plant
Building 18	-Fuse and Primer Renovation and Black Powder Filling
Building Me Annex	-Medium Caliber Projectile Washout Plant
Building 272	-Pyrotechnics Renovation Plant
Building 41	-20 mm & 40 mm Renovation Building
Building 185	-Bag Loading operations/Ammunition Breakdown
Building 44	-Explosive Loading into railroad tank cars
Drainage swales	-Along Building 13
Bldgs. M-3/M-4/M-5	-Mark VI mine loading facility/Steam out
Building 188	-Pyrotechnic loading

Building 184	-Primer Renovation facility
Building 222	-Ammunition Steam out
Building 47	-Ammunition Degreasing operations
Building 227	-Ordnance Degreasing
Wharf Areas	-Ordnance Dumping
Building 163	-NBC Agents Storage area
Out falls 1,2,3,4	-Water Pollution Out falls Map, July 8, 1971.
Septic Drainage Field	-Southeast of Building 269
Septic Drainage Field	-Southwest of Building 305

2. In order to ensure a through evaluation of the facility, I recommend the inclusion of more indepth descriptions of the following AOCs as identified in the EPA EPIC Aerial Photography Analysis:

Please include a more detailed description of the following:

-Former Waste Water Treatment Plant & Q.E. Lab (Building 277)
-1974 Waste Disposal Area, near Buildings 176 & 179
-1937 Waste Disposal Area, near Buildings 182, 181, & 348 (*burning ground?*)
-Site 7 expanded per 1964 aerial photography
-Mounded material and ground scarring, near Buildings 162, 341, & M-1
-1937 excavated area to the northeast of Building 89
-1974 pit northeast of Building 70

3. The following sites are listed as site screening areas based upon EPA interviews:

- Interview with Rodney Bradley -telephone # (757) 487-0244, 6/95
  - A. Building 10 -APopping Oven@
  - B. Building 277 -Explosive Testing Lab

- Interview with Bill Davis -telephone # (757) 887-7441, 6/95
  - A. Marsh Behind Bldg. 190 -Dump Area
  - B. Building 190 -In late 1960s, had an explosion.

Risk Assessment Issues

1. Section 5.1.2 - Sampling and Analysis Plan
Re FSP: An additional table indicating the depths of wells and their associated lithology/geologic unit should be added to the list noted in this section.

2. Section 5.5.1.3 Toxicity Assessment.
This section states that one source for toxicity data is the Environmental Criteria and Assessment Office. The name of the office has changed to National Center for Environmental Assessment (NCEA).

3. Section 5.6 Task 6: RI Report
An additional section should be added that discusses current and potential use of groundwater as a drinking water source. Local and/or state well records, and/or information from local water authorities, if applicable, should be investigated to document this section. Local ordinances, if any, should be described and provided as an Appendix. If domestic wells are not catalogued, a door to door well survey may be appropriate. This information is crucial for the Risk Assessment.

4. Section 5.7, pages 5-18 and 5-19:
The first paragraph of this section states that the results of screening will either identify the area as requiring additional investigation, at which time the SSA will become an RI/FS site or no further remediation. I recommend that we consider a third alternative. There may be sites that do not rise to the level of an RI/FS, but still pose an unacceptable risk to human health and/or the environment, such as small hot spots. In these cases a removal action may be a cost effective alternative to an RI/FS.

5. Section 5.6 Task 6: RI Report
An additional section should be added that discusses current and potential use of groundwater as a drinking water source. Local and/or state well records, and/or information from local water authorities, if applicable, should be investigated to document this section. Local ordinances, if any, should be described and provided as an Appendix. If domestic wells are not catalogued, a door to door well survey may be appropriate. This information is crucial for the Risk Assessment.

6. Section 5.6.7 Nature and Extent of Contamination...
should be depicted for all media using scaled maps and included in the discussion of results.

7. Section 5.7.1 Human Health Risk Screening:
The second bullet states that contaminants that are detected in less than five percent of samples in a given medium where at least 20 samples have been collected will not be considered COPCs. Risk Assessment Guidance for Superfund Volume I part A (section 5.9.3, page 5.22) is clear on the use of frequency of detection criteria for eliminating COPCs. There are three criteria which must be met in order to consider a chemical a candidate for elimination: one, it is detected infrequently; two, it is not detected in any other sample media or at high concentrations; and three, there is no reason to believe that the chemical may be present. I recommend that we only consider frequency of detection in COPC selection when it meets all three criteria as stated in RAGS Volume I (part A). I recommend that the text include all three criteria.

8. Section 5.7.1 Human Health Risk Screening:

Bullet three deals with comparison to background. Considering naturally occurring levels is very important when determining a release, calculating risk and setting PRGs. It is an issue that warrants more detail than what is presented in the text. For example, there should be a minimum of two statistical tests for background comparison: one for hotspot detection (such as the 95th upper tolerance limit on the 95th percentile measurement) and one for a comparison of the mean of on site samples with the mean of background samples (such as the Students t-test or Wilcoxon Rank Sum test). We also need to agree on the number and location of background samples. I also recommend that we remain cautious with regard to removing COPCs a priori rather than carrying them through the risk assessment.

9. Section 5.7.1 Human Health Risk Screening:
Bullet six on page 5-20 deals with tentatively identified compounds (TICs). I agree that there is no need to include TICs in the quantitative risk assessment when they are detected at low levels and there is no information to indicate that they may be site related. However, I recommend that rationale for excluding TICs be included in the text.

Ecological Concerns

1. Section 3 Environmental Setting:
Section 3.2 should discuss the general aquatic habitats associated with the surface drainage (i.e. hydrology) in the vicinity of the site. The document states that in recent years the Commonwealth of VA has noted that the concentrations of oil and grease, heavy metals, and coliform bacteria in the waters have increased. I believe the most recent data, as stated in the Elizabeth River project newsletter, indicates that these contaminant levels have decreased. The section also should include information on wetland and terrestrial habitats at the site. The information will be important when addressing ARAR's identified in Section 4.0.

2. Page 5-13 General Methodology for the Screening ERA.
The document states that site assessments will consider on-site and perimeter data first; evaluations will continue downgradient as results warrant. The site assessment should be based on the site conceptual model, which includes fate and transport information. In many instances the releases are from historic pathways and/or site conditions at the site or perimeter have changed since site activity was conducted. This approach is clearly outlined in the 1997 EPA ERA Guidance document and DoD/Navy guidance as well.

The ERA terminology should be consistent with the EPA Guidance. Step 1 is the Screening Level Problem Formulation and Ecological Effects Evaluation, not screening values. Step 2 is the screening level exposure estimate, not food

chain considerations. Note screening against benchmarks (i.e. direct toxicity) and food chain considerations are not sequential steps.

3. Section 5.6 indicates that the RI report would only contain screening ERA's. The screening ERA should be included before or within the RI workplan. If a baseline ERA is warranted it should be included in the RI report. The baseline ERA information will need to be available to perform a thorough Feasibility Study (Section 6 of this document).

The Master Field Sampling plan has a section for Biota sampling which includes methods for collecting aquatic macroinvertebrates and fish. Other ecological receptors may be collected as indicated in this section. The section should also indicate common laboratory tests for assessing ecological risk as there is a reasonable likelihood that they will be used in the BERA.

If you have any questions concerning the above comments, please feel free to contact me either via e-mail (Richardson.Todd@epa.gov) or by phone at (215) 814-5264

Sincerely,

Todd Richardson
RPM, Fedreral Facilities Section

Copy to: Sharron Wilcox (RPM,Va Department of Environmental Quality)