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EMAIL AND COMMENTS FROM U S EPA REGION III REGARDING DRAFT SITE INVESTIGATION WORK PLAN SAMPLING AND ANALYSIS PLAN FOR SITE 7 CHEATHAM ANNEX FISC WILLIAMSBURG VA
05/10/2010
U S EPA REGION III

## Monica Marrow

**From:** Haug.Susanne@epamail.epa.gov
**Sent:** Monday, May 10, 2010 9:34 AM
**To:** christopher.r.murray@navy.mil; Wade.Smith@deq.virginia.gov; Marlene.Ivester@CH2M.com; Stephanie.Sawyer@CH2M.com
**Subject:** CAX Site 7 SI comments
**Attachments:** CAX Site7 draft SI EPA comments.doc

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Comments on the Draft Site 7 SI Work Plan SAP are attached. Please let me know if you have any questions.

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Date: May 10, 2010

Mr. Christopher Murray
NAVFAC MIDLANT, Code OPHREV4
9742 Maryland Avenue, Bldg N-26
Norfolk, VA 23511-3095

Re: Review of Draft Site 7 – Old Dupont Disposal Area, Site Investigation Work Plan and Sampling and Analysis Plan, Naval Weapons Station Yorktown Cheatham Annex, Williamsburg, Virginia, January 2010

Dear Mr. Murray:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document and would like to submit the following comments.

1. In 2003, Hurricane Isabel eroded approximately 15 to 20 feet of shoreline which exposed a large amount of debris on the shoreline. This suggests that there may be more debris just offshore in the York River. Please review aerial photos of the Penniman era to determine where the shoreline was at that time. After determining the Penniman-era shoreline location, the Navy should look for more debris between it and the current shoreline.

2. Page 46, bullet under Groundwater. Should “MDL” be “MCL”?

3. Page 61, Monitoring Well Installation. In the middle of the paragraph it says, “If the Yorktown aquifer is encountered…” Should this say, “If the Yorktown confining unit is encountered…”?

4. Please update the schedule in Worksheet #16 when the dates are final.

5. Worksheet #17 states that the upgradient samples will be analyzed for total/dissolved metals, cyanide, and dioxin. Under “Rationale” it states that a full suite analysis will be conducted. Please make the table consistent.

6. The handling of non-detects is addressed in SAP Worksheet #37; one half the reporting limit is proposed for statistical comparisons of non-detects. Note, however, that for estimating exposure point concentrations in the risk assessment, the methodology employed by Pro UCL (4.0) for non-detects should be applied.

7. Table 5 presents potential receptors and exposure pathways at the site. It's not necessary to evaluate Trespassers/Visitors (adult and adolescent) under a future land-use scenario, since the other receptors being assessed (resident, industrial worker and construction

worker) have greater exposure potential and will capture any possible threats associated with the site. (Note that exposure of Trespassers/Visitors to *surface* soil is being evaluated under current scenarios for this site.)

8. The report does not mention surface water and sediment sampling. However, historical sampling along the property boundary adjacent to the York River does reveal slightly elevated levels of metals and dioxin (Figures 5 and 6). Surface water and sediment samples should be collected in the river.

9. Figure 6 indicates a maximum dioxin concentration of 2.7E-04 mg/kg (2.7E-01 ug/kg) in subsurface soil (NWSY-90-7-SC-FLR-139). Table 2.1, on the other hand, gives a dioxin concentration of 2.7E-07 mg/kg at this location. The units on one of these pages are wrong by three orders of magnitude. Please correct the report, as necessary.

10. Worksheet #10 on page 38 states that post-removal soil samples were collected from the side walls and bottom of the excavation to evaluate post-removal conditions and assess the need for additional investigation/action. These samples are shown in Figure 4. Successful completion was based upon visual confirmation of debris removal and post-removal soil lead results. Following removal activities, the excavated area was backfilled with approximately 2,181 cubic yards of clay backfill, 6 inches of topsoil, and seeded. Because the backfill is only specified in volume and not depth, the depth of backfill used at the site is unclear. Because cleanup goals specific to ecological risk were not developed and used, if less than two feet of backfill was used, ecological risk in these areas still needs to be evaluated.

11. Worksheet #10 on page 40 states that all of the detected constituents in soil samples within the 0 to 24 inch depth stratum (the applicable depth range for ecological exposures) were screened. Depending on the depth of backfill, this could represent backfill material. It is unclear why ecological risk would be evaluated on backfill if sampling has already determined the fill material to be clean. This should be clarified.

12. Page 40 (under Ecological) – The source of the ecological soil screening values needs to be identified.

13. Page 41 – The text states (under item 1) "There is no historical information indicating the potential for an up-gradient source of VOCs and SVOCs to groundwater, therefore these constituents will not be analyzed." The text states (under item 2) "…groundwater samples will be analyzed for VOCs, SVOCs, pesticides/PCBs, total and dissolved metals, cyanide, dioxin, and explosives." These two statements appear inconsistent. This inconsistency needs to be adequately resolved.

14. Page 45 (under item 7) – The text indicates that only human health risk will be assessed. Ecological risk, particularly that potentially associated with the landfill soils, shoreline, intertidal area, and York River, also needs to be assessed. Regarding the upland soils, existing data, including data proposed in this report, may be sufficient. Regarding sampling in the York River, it would be beneficial to identify the areas where debris from this site was found and where groundwater from this site enters the York River. Lacking

this information would require making sampling assumptions. Initial thoughts would be to locate the samples along the area protected by the geotubes, the intertidal area, and the York River.

15. Please discuss the data limitations of measuring the pH of soil for the current Site Investigation to determine the pH-based ecological soil screening values for aluminum and iron that were collected from the past, but had no supporting pH data before. This information is located in SAP Worksheet #10 under the Ecological header. Soil conditions in the past may be different from current conditions. Therefore, any new pH data that may be gathered would only be useful for informational purposes and cannot be used for legal purposes.

16. Describe the reason why the National Functional Guidelines will not be used to validate data or used to determine measurement performance criteria for the QC samples in the project. Currently, the SAP states that data qualification will be based mainly on the analytical methods and lab SOPs presented in this document. Additionally, the Region III Modification to the National Functional Guidelines is another recommended document used to validate data.

17. According to Worksheet #15 (Reference Limits and Evaluation Table), the ecological screening values listed are based on literature compiled for use at WPNSTA Yorktown for Marine Surface Water. However, freshwater/groundwater and not saltwater is being collected for this project. Please justify and explain the limitations of using these values. Also, where can this document be located for reference?

18. The "Tap Water RSLs" for EPA Region III were updated in December 2009. Please change the values in Worksheet #15 accordingly, as the SAP currently uses the RSLs from the October 2008 version. Also, please mention that the Noncancer Hazard Index will be used when the Carcinogenic Target Risk is unavailable for the RSLs.

19. In Table 12, the field and rinsate blanks are merged together under a single heading. However, the two have different functions. A rinsate blank is used to measure contamination on equipment that is used repeatedly in the field while a field blank is used to measure the contamination that occurs as deionized water is poured into a clean container in the field. If the equipment being used is disposable, then a rinsate blank is not needed. Additionally, field blanks are collected at a rate of 1 per 20 samples, 1 per day, 1 per matrix type or whichever is more frequent. The table correctly lists the frequency that rinsate blanks should be collected. Please edit the information discussed in this paragraph.

20. It is strongly recommended that Tentatively Identified Compounds (TICs) are added to the Target Compound List. While SW-846 methods do look for a wide range of compounds, they will miss other compounds in the site not on the Target Compound List that may need to be addressed at the site.

21. SAP Worksheet #15-2 (Reference Limits and Evaluation Table) only lists the Semi-Volatile Organic Compounds (SVOCs) up to pyrene. Is this intentional or are the pages

missing? Also, Table 15-3 is missing from the text, but listed in the table of contents. Is this also intentional or are the pages missing?

22. It is recommended that a Health and Safety Plan (HSP) be attached with any SAP that is submitted for review for reference.

23. Laura Maschoff is listed as the data validator for this project. Please provide information on her background that shows she is qualified for this position.

24. Please notify us when a team leader for a field team is determined. This will ensure that the project is effectively planned and documented.

If you have any questions, please call me at (215) 814-3394.

Sincerely,

Susanne Haug, P.E.
NPL/BRAC Federal Facilities Branch

Cc: Wade Smith (VaDEQ, Richmond)