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LETTER AND U S NAVY RESPONSE TO U S EPA REGION III COMMENTS TO DRAFT REVISED SAMPLING AND ANALYSIS PLAN REMEDIAL INVESTIGATION SITE 31 NWS YORKTOWN VA
10/15/2012
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October 15, 2012

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Mr. Moshood Oduwole, Remedial Project Manager
NPL/BRAC Federal Facilities Branch (3HS11)
United States Environmental Protection Agency, Region 3
1650 Arch Street
Philadelphia, Pennsylvania 19103

Subject: Response to Comments *Draft Revised Sampling and Analysis Plan*
Site 31 Remedial Investigation, Naval Weapons Station Yorktown, Yorktown Virginia

Dear Mr. Oduwole:

This letter is in response to comments on the subject document provided in your letter dated 4 September 2012. Comments are shown followed by responses in italics.

1. Comment 1: Page 35: The consensus decision indicates that surface water and sediment samples upstream, at, and downstream of the outfall discharge will be collected in order to "…reevaluate ecological risk associated with discharging volatile organic compounds (VOCs)." The executive summary update (page 6) indicates soil samples will be analyzed for VOC, SVOCs, explosives, metals and CN, the same as the initial RI. It appears that surface water and sediment samples would also need to be analyzed for this longer list of COPCs, not just VOCs. A more complete explanation about the COPCs that will be included in the analyses of all media needs to be provided. Finally, the surface water and sediment samples are not to be located in erosional areas.

   Response 1: One of the goals of this phase (Phase 2) of the RI is to focus on delineating the source of the VOC plumes originating from the Shed 3 & 6 area and from an area north of Sheds 4 & 5. During Phase 2, a membrane interface probe investigation will be conducted to identify the potential source areas in vadose soils, and then soil samples will be collected of these areas for full suite (i.e., VOCs, SVOCs, pesticides, PCBs, explosives, metals, and CN) to characterize the nature of the release. Existing groundwater data at Site 31, which has been previously sampled for VOCs, SVOCs, explosives, metals, and CN, indicates VOCs were the primary contaminants with some sporadic inorganic exceedances. Groundwater was not analyzed for pesticides or PCBs because there was no indication that site activities would have contributed to a release of either analyte group. Surface water and sediment in the tributaries and drainage areas from Site 31 have been sampled for VOCs to investigate the impacts from Site 31 groundwater, but has not been sampled for full suite analysis because the previous investigations focused on the most likely contaminants. The Navy acknowledges the potential data gap associated with sampling sediments and surface water for VOCs only without first characterizing source area soils. Although the Navy plans to move forward and characterize the extent of VOC

contamination in the unnamed tributary to Ballard Creek during Phase 2, if it determined that in addition to VOCs other contaminants are associated with the source areas, surface water and sediment will again be sampled as part of a Phase 3 investigation to evaluate for these other potential contaminants.

2. Comment 2: Page 39: The text states "The area to the west of the industrial area slopes down to a ravine containing an intermittent stream that leads to Roosevelt Pond." The text also needs to clearly state why this drainage is not being addressed in this revised SAP.

   Response 2: The area west of Site 31 was investigated during the AOC 23 Site Assessment. Seep SP03 exceeded human health (but not ecological) screening values for VOCs but the sample from SP04, collected downgradient, did not contain any VOC detections. Surface water and sediment samples did not contain any detections of VOCs. As discussed in Response #1, the purpose of this phase of investigation (Phase 2) is to characterize the extent of VOC contamination in the unnamed tributary to Ballard Creek. Any data gaps associated with the area west of the industrial area will be addressed during the next phase of investigation (Phase 3).

3. Comment 3: Page 41: The text indicates there were no ecological screening level exceedances in site surface water or sediment. The text seems to suggest that this conclusion is based on data collected prior to 2008. The revised SAP also needs to confirm that currently, there is no risk associated with COPCs other than VOCs.

   Response 3: The text is referring to VOCs data collected during the Site Assessment completed in 2008. It will be updated to:

   - *There were no screening level exceedances identified for ecological receptors exposed to <u>VOCs in</u> site surface water and sediment <u>(2008 samples);</u> however, the concentration of TCE in the <u>2008</u> outfall sample (included as a seep sample) exceeded the screening value for TCE. The concentration in this sample was 130 µg/L.*

   As discussed in Response 1 and 2, any data gaps that exist for sediments or surface water regarding the location of the samples and/or the types of potential contaminants evaluated in these samples will be addressed during the next phase of investigation (Phase 3).

4. The RI to be conducted also needs to include quantification of ecological risk from soils, surface water, and sediment.

   Response 4: Historical data as well as data collected during Phases 1, 2, and 3 of the RI will be used to quantify ecological risk from soils, surface water and sediments.

5. Page 45: The fourth bullet identifies the site as being composed of buildings, pavement, and gravel. On page 32, the text states "…the site is entirely paved…." The text needs to consistently identify the surface features of this site. If the soil at the edge of the pavement has not been sampled for COPCs, then this needs to be included in the investigation.

Response 5: The text on Page 35 contains a more detailed description of the site; the text on Page 32 is from a consensus statement (dated April 29, 2009) and indicates that the site is "currently paved" (not entirely paved) which is basically accurate. Soil samples were collected during Phase 1 of the RI and will be collected during Phase 2. If it is determined based on the location of the soil source areas that additional soil sample locations are needed at the edge of pavement in some areas, those samples will be collected during Phase 3.

6. Page 49: The text states "There are those instances where a laboratory limit of detection (LOD) for a specific constituent will be above its PAL. In those cases, an undetected value will be considered as the analyte not being present." The logic behind this approach needs to be clearly explained.

   Response 6: The text will be updated to read:

   There are those instances where a laboratory limit of detection (LOD) for a specific constituent will be above its PAL. In those cases, an undetected constituent will ~~be considered as the analyte not being present~~ not generally be considered a COPC (except in ERA Step 2), but will be considered when evaluating the potential for underestimating the total risk (that is, as an uncertainty). ~~When samples have other detected constituents and an undetected analyte with the LOD above the PAL, the non-detect reporting limit will be compared to background values, and the PC, risk assessors, and Tier I team will be consulted and a decision rendered on how to treat the constituent~~.

7. Figure 17 shows the proposed surface water and sediment sample locations. Three of the six sample locations do not appear to be in the intermittent drainage channel. Also, this does not appear to be consistent with the text where it indicates that one sample will be upstream of the outfall, one sample will be at the outfall and the rest will be downgradient of the outfall. This implies these samples will be in the intermittent drainage channel. Please clarify the location of these samples and the outfall, including where the outfall enters the intermittent channel.

   Response 7: The intermittent stream where the outfall discharges was not depicted on the figure as it is not present in the Base GIS database. The sample locations that were previously sampled were recorded with a GPS and are accurate. This figure has been updated to show the location of the intermittent stream and outfall.

8. In SAP Worksheets #15-8 through #15-16, risk-based screening levels for determining Contaminants of Potential Concern are provided. For soil, in addition to the direct contact screening levels provided in the tables, comparison to soil-to-groundwater migration values should also be performed. Many chemicals, primarily VOCs, have much higher direct contact screening levels than soil-to-groundwater migration values. In order to rule out soil as a continuing source of groundwater contamination, the latter comparison needs to be made.

Response 8: The Project Action Limit has been selected as the risk-based screening levels. As discussed in Worksheet 11, the soil to groundwater screening levels (SSLs) will be used to support additional lines of evidence for characterizing the Site but will not be considered action limits that will trigger future site management decisions. Because of this, the numerical values of the SSLs are not provided in Worksheet 15's.

Sincerely,

CH2M HILL

Kristin Rogers
Project Manager

cc: Mr. Jim Gravette/NAVFAC
Mr. Wade Smith/VDEQ
Mr. Bill Friedmann/CH2M HILL
Mr. Adam Forshey/CH2M HILL