MEMORANDUM SUMMARY OF PRG DEVELOPMENT CONFERENCE CALLS 18-19 MARCH 2002 MCB CAMP LEJEUNE NC

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CH2M HILL

Summary of PRG Development Conference Calls - March 18 & 19, 2002

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This memorandum summarizes the approach for development of preliminary remedial goals (PRGs) for soil and sediment at the St. Juliens Creek Annex, Chesapeake, Virginia. Two conference calls were held between LANTDIV, USEPA Region III, VDEQ, and CH2M HILL on March 18 and 19, 2002. The purpose of the conversations were to address comments submitted by the USEPA on a technical memorandum summarizing PRG development, dated January 28, 2002 and to seek technical guidance for appropriate site clean up.

March 18, 2002 - Participants: Todd Richardson, Alvaro Alvarado, Mindy Snoparsky, Dawn Hayes, Ed Corl, Devlin Harris, Donna Caldwell, Bill Friedmann, Larry Hilsher, and Roni Warren.

The purpose of the conversation was to address comments from Alvaro Alvarado (EPA Toxicology) which focused on the use of UTLs as PRGs for soil and the use of MCLs as PRGs for groundwater.

Soil and Sediment

A USEPA comment addressed the use of the UTL for setting clean up goals, with the concern that this approach would lead to possible on-site contamination left in place at concentrations greater than the background level. During the conference call, it was agreed that the 95% UTL would be used for identifying areas of removal and for in-field "not to exceed" clean up guidance. During the removal action, XRF data for select metals would be recorded and a statistical analysis be performed in the field using the field screening data to assess site clean up and removal action limits based on population (site vs background) comparisons of the mean UCL.

Site close-out would also be accomplished by comparing the mean UCL of background with the mean UCL of the confirmatory site samples. It was agreed that no more than 8 confirmatory samples would be collected at Site 3. For Site 6, EPA indicated their support in augmenting the limited confirmatory samples at Site 6 with XRF data.

The EPA supported the approach of using background soil UTLs for identifying clean up areas in the upland drainage ditches. The upland ditches are comprised of the same soil type as the site soils (dredge fill), remain dry through the majority of the year, are vegetated with grass, and contain no viable aquatic habitat.

Groundwater

Comments regarding the proposed use of MCLs to set the PRG was addressed during the conference call. There are no human health risks identified in the RI HHRA from exposure to shallow groundwater and there are no MCL exceedences of shallow groundwater. Therefore, no issues with regard to meeting ARARs were raised.

Three inorganic compounds (arsenic, manganese, and thallium) identified in the RI HHRA as risks contributors in the deep groundwater aquifer (Yorktown) were also discussed. An error in the cancer risk for arsenic was identified. Once the cancer risk is corrected, it will be demonstrated that arsenic is not a risk. Manganese was detected in the two deep wells in the most recent sampling event; there is no established MCL for manganese. Thallium, detected in 1997 sampling event just above the MCL, was not detected in 1999 and is to be considered a false-positive, based on likely interfence with the ICP analytical method. EPA's concern for relying on the MCL as a PRG was based on potential cummulative risk from multiple contaminants. However, because manganese is the only constituent to pose a potential risk, cummulative effects are no longer a significant concern. Based on the discussion, deep groundwater is no longer a concern at Site 3.

March 19, 2002 – Participants: Todd Richardson, Simeon Hahn, Dawn Hayes, Ed Corl, Devlin Harris, Donna Caldwell, Bill Friedmann, and Mike Elias.

The purpose of the conversation was to address comments from Simeon Hahn (EPA BTAG) that focused on background concentrations of inorganics and PAHs as they compare to site concentrations; background concentrations may pose an ecological risk. The conference call began by reviewing decisions made during the previous day's phone conference.

Comments from Simeon noted concern about dredge fill background concentrations being high, particularly with respect to PAHs. A question was raised whether dredge fill has been characterized. Characterization of dredge fill to date has involved the collection and statistical analysis of ten surface soil and ten subsurface soil samples as part of the basewide background investigation. No other type of investigation has been conducted to characterize the dredge fill area, which based on the earliest aerial photographs covers an area of at least 41 acres. The concern is that even with the removal of soils from the waste and outside areas of waste (hotspots), there would still be ecological risk associated with the soils left in place due to the nature of the dredge fill. It was agreed that reports pertaining to sites located in dredge fill (Sites 3, 4, 5, & 6) will acknowledge that any removal of soils associated with these sites does mean the risk posed by background concentrations has been removed.

For removal of soils at Site 3 at this point in time, as part of an interim removal, the Navy will only be removing soil as part of the known visible waste as defined by the limits of waste investigation conducted in 2001.

A recap of groundwater issues covered on the previous days conference call was given to Simeon, including the decision that there are no MCL exceedences in the Yorktown aquifer. Simeon stated that the PRGs for groundwater should consider protection of receptors at discharge points and in the waterbody (Blows Creek). Though there will be surface and sediment samples collected during the upcoming BERA which would address discharge to Blows Creek, Simeon is interested in nature of extent of groundwater discharging into the drainage ditches. It would be beneficial to define a conceptual model for groundwater.