

N69118.AR.001658
ST JULIENS CREEK
5090.3a

EMAIL AND THE US EPA REGION III COMMENTS ON THE DRAFT RECORD OF DECISION
SITE 5 BURNING GROUNDS AND BLOWS CREEK USEPA DESIGNATION OPERABLE UNIT
5 (OU 5) ST JULIENS CREEK ANNEX VA
04/01/2016
U S EPA REGION III PHILADELPHIA PA

From: [Stroud, Robert](#)
To: [Jones, Adrienne/VBO](#); [Staszak, Janna/VBO](#); karen.doran@deq.virginia.gov; walt.j.bell@navy.mil
Subject: BTAG RTCs Site 5 ROD
Date: Friday, April 01, 2016 3:55:53 PM
Attachments: [St J RTC ROD BTAGSite 5.doc](#)

Team BTAG has comments but concurs with the NFA remedy. Everything should still be on schedule. I just need to finalize the PCOR and that should be it.

Thanks,

Bob

Representatives of the BTAG have reviewed the subject document and offer the comments presented below. In summary, the BTAG has evaluated the data presented in referenced remedial investigation and risk assessment reports and has concluded that it is unlikely that contaminants in groundwater will pose an unacceptable risk to ecological receptors in the aquatic system under both current and future exposure scenarios. In light of this, we concur with the selected alternative.

The Response to Comment 1 states that the Blows Creek BERA (CH2M HILL, 2006; AR number 000562) evaluated potential ecological risk at Site 5 (and all sites within the Blows Creek watershed) should groundwater discharge to surface water. There is no groundwater data presented in the Blows Creek BERA. There is no comparison of groundwater data to Region 3 freshwater screening benchmarks. Outside of the glossary, there is only one mention of the word groundwater – “The primary transport pathways from IR sites are surficial runoff (...) and groundwater infiltration.” The phrase is underlined in the document as if it has some importance, but there is no analysis. The impacts of groundwater infiltration is not analyzed by simply comparing sediment contaminant concentrations to screening values.

The Expanded RI from 2006 states, “Chemicals in groundwater have the potential to move towards Blows Creek, where they could discharge and become available to aquatic life. Potential impacts to aquatic life from the surrounding watershed are being considered separately as part of the Blows Creek BERA.” As stated above, there was no analysis or comparison to the appropriate screening criteria. The 2008 USEPA OSWER Eco Update/ Ground Water Forum Issue Paper “Evaluating Ground-Water/Surface-Water Transition Zones in Ecological Risk Assessments” explains how to perform the appropriate analysis.

The BTAG compared groundwater data from the Expanded RI (2006) and the Final Site 5 Supplemental RI Report (2015) to ecological screening values. There were exceedances of several metals – aluminum, arsenic, beryllium, cadmium, cobalt, iron, and manganese. Those of most concern due to the magnitude of exceedance – iron and manganese – had very high background levels. Aluminum had a high magnitude of exceedance. It should be noted that while not designed to evaluate the potential impact of groundwater on the ecological receptors in the hyporheic zone, the sediment bioassay did not conclude there is a risk from aluminum.

Most of the contaminants were non-detect for the groundwater samples taken at Site 5 for the 2003 RI/FS. In addition to metals, the BTAG could only find values for RDX, DDT, heptachlor, carbon disulfide and chloroform in Appendix L of the 2003 RI/FS. While there were some exceedances of BTAG ecological screening values, they were not excessive and the value of using 13 year old data is questionable.

Due to the lower magnitude of exceedances in most of the metals and the high background levels of the others, the BTAG concludes that based on the information available, there is not unacceptable risk to ecological receptors from future potential migration of groundwater to surface water.

In the future, the Navy should always use the 2008 USEPA OSWER Eco Update/ Ground Water

Forum Issue Paper “*Evaluating Ground-Water/Surface-Water Transition Zones in Ecological Risk Assessments*” to properly assess the groundwater to surface water pathway and potential risk to ecological receptors. Sediment and surface water analysis does not sufficiently address this pathway. In cases where groundwater and contaminant plumes migrate toward and discharge to surface water bodies, there is a potential for both current and future risk to ecological receptors. It is imperative that the conceptual site model address current and future fate and transport of contaminants in groundwater and likely contaminant concentrations at the point of discharge to the aquatic system.