

N69118.AR.000984
ST JULIENS CREEK
5090.3a

Staszak, Janna/VBO

From: Burchette.John@epamail.epa.gov
Sent: Thursday, December 18, 2008 9:34 AM
To: walt.j.bell@navy.mil
Cc: Jones, Adrienne/VBO; Staszak, Janna/VBO; kmdoran@deq.virginia.gov; jlcutler@deq.virginia.gov
Subject: EPA Response to Site 21 FS response
Attachments: Site 21 FS Arsenic Issue (Comments).doc

Hey guys I spoke with Linda this morning and our general response is attached. I will be in all day, but need to prep for a presentation that I have to give to our division directors shortly after lunch. Please let me know your thoughts when you get the opportunity as I (and you guys) would like to get this issue resolved ASAP. Basically, Linda has stated she believes there are 2 options. 1 arsenic has been proven to be naturally occurring through a comparison to background or 2 arsenic cannot be proven to be background and must be included as a COC.

Regards,

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EPA Comments
Site 21 FS
St. Juliens Creek Annex
Chesapeake, Virginia

Original EPA Toxicologist Comment: EPA is concerned with arsenic not being included as a COC and only monitored during the RD. Although the cumulative MCL risk from VC and TCE are within the risk arrange, the mobilization of arsenic will undoubtedly occur during the active remedy at Site 21. Thus the addition of arsenic may cumulatively present additional carcinogenic risk outside of the acceptable range. By not including arsenic, the cumulative carcinogenic risk contributed by arsenic is not being accounted and thus carcinogenic risk contributed by arsenic would remain in the groundwater.

Response: Although arsenic was a contributor to the cumulative risk in the HHRA, it was concluded in the Site 21 RI Report (CH2M HILL, 2008) that it is *naturally occurring* and not a site-related contaminant. Arsenic commonly occurs as natural mineral coatings of the sand and gravel in the aquifer. Remediation of naturally occurring substances is not required under CERCLA [42 USC 9604 (a)

(3) (a)]. Because arsenic was a contributor to the cumulative risk in the HHRA, it will continue to be a contributor during remediation, but will still not be a result of a CERCLA release. The fact that naturally occurring arsenic may be mobilized was evaluated as short-term effectiveness in the FS, which considers environmental impacts from the remedy. The evaluation acknowledges that naturally occurring arsenic may be mobilized, but it is not expected to be very mobile and to stabilize over time, and arsenic monitoring will be conducted to confirm. *The monitoring plan, including duration and frequency of monitoring and contingencies for addressing any adverse effects*, will be developed during the Remedial Design. Exposure to the groundwater will be prevented through the LUCs that will be implemented at the site to prevent exposure to site COCs until the RAOs are achieved.

EPA Response: "**Naturally occurring**": Has the Navy proven that arsenic is naturally occurring by performing an EPA statistically accepted background comparison test? If so, we are okay with what has been proposed in the response, if not then we cannot prove that arsenic is naturally occurring as stated above.

"The monitoring plan, including duration and frequency of monitoring and contingencies for addressing any adverse effects". If the Navy is going to develop a monitoring plan and contingencies for addressing any adverse effects for arsenic specifically, this is what is typically the standard procedure of what is done to COC's that are identified in the RI/FS process. Further, the EPA is curious to how specifically do the Navy plan to address adverse effects? Does this mean a HHRA?