

St. Juliens Creek Annex Site 2 Proposed Plan Public Meeting Summary: May 18, 2010 Meeting

Meeting Attendees:

Walter Bell	NAVFAC Mid-Atlantic	Janna Staszak	CH2M HILL
Kelly Jobst	PWD Portsmouth	Adrienne Jones	CH2M HILL
Robert Stroud	USEPA (Region III)	Bill Squire	Shaw Environmental, Inc.
Karen Doran	Virginia DEQ		

Location:	Major Hillard Library, Chesapeake, Virginia
Meeting Date:	August 2, 2010
From:	Adrienne Jones/CH2M HILL
Minutes Date:	July 30, 2010

Welcome and Introductions

At 5:00 PM Mr. Bell provided opening remarks and introductions to the public meeting attendees. Mr. Bell indicated that the purpose of the meeting was to provide the public with an explanation of the Proposed Plan for Site 2 at St. Juliens Creek Annex (SJCA). Handouts of the presentation were distributed.

Site 2 Proposed Plan

Ms. Staszak presented a summary of the Site 2 Proposed Plan. The objectives of the presentation were to present the Proposed Plan for Site 2 and answer questions and seek community feedback on the document.

Ms. Staszak provided an overview of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) process and explained that Site 2 is currently in the Proposed Plan phase. A Proposed Plan is a document that presents the preferred remedial alternative to the public for review. The objectives of a Proposed Plan are to summarize the alternatives developed and evaluated during the Feasibility Study (FS), highlight key factors that led to the selection of the preferred alternative, and encourage public involvement in the remedy selection process in order to fulfill the public participation requirement established by CERCLA and National Oil and Hazardous Substance Pollution Control Contingency Plan (NCP).

Ms. Staszak provided an overview of the operational history at the site. Site 2 is a former waste disposal area that was operated from 1921 to sometime after 1947. Initially refuse was burned openly and used to fill in the swampy area of the site. An incinerator was installed in 1943 to replace open burning practices. Wastes disposed at the site include mixed waste, abrasive blast material, waste ordnance, organics (including solvents), inorganics, and

construction debris (concrete, brick, and wood). The site currently covers approximately 5.7 acres. Figures showing the location of Site 2 within SJCA and the site features were projected.

A summary table of the investigations that have occurred at the site was projected. The results of the investigations indicated contamination associated with waste; inorganics, polycyclic aromatic hydrocarbons (PAHs), pesticides, and one polychlorinated biphenyl (PCB) in soil; volatile organic compounds (VOCs), one semivolatile organic compound (SVOC), one pesticide, and inorganics in shallow groundwater; VOCs in deep groundwater; VOCs and inorganics in surface water; and VOCs, SVOCs, pesticides, and inorganics in sediment. A figure depicting the areas of contamination was projected. A conceptual site model (CSM) of Site 2 was projected. The CSM depicts the site conditions including the contaminants of concern (COCs), impacted media, fate and transport of COCs, and potential exposure routes and receptors. Ms. Staszak noted that the shallow groundwater shown on the CSM is the surficial Columbia aquifer.

Ms. Staszak provided a brief explanation of human health risk assessments (HHRAs) and the results of the HHRA conducted for Site 2. HHRAs estimate the “baseline risk”, or the likelihood of health problems occurring if no cleanup actions are taken at a site. The Site 2 HHRA evaluated risks to current and future receptors from exposure to soil, shallow groundwater, sediment, and surface water. Risk from exposure to deep groundwater was not quantitatively evaluated because the results of the investigations conducted determined that the contamination was carried down and naturally degraded. Tables summarizing the unacceptable human health risks from exposure to soil, shallow groundwater, and sediment were projected. No unacceptable human health risks from exposure to surface water were identified.

Ms. Staszak provided a brief explanation of ecological risk assessments (ERAs) and the results of the ERA conducted at Site 2. ERAs are conceptually similar to HHRAs, except that they evaluate the potential risks and impacts to ecological receptors (plants, animals, habitats). The Site 2 ERA evaluated risks to current receptors from exposure to soil, sediment, and surface water. Potential risk to terrestrial receptors (e.g., maple trees and earthworms) was identified based on the presence of several PAHs, pesticides, inorganics, and one PCB in surface soil. Potential risk to aquatic receptors (e.g., crabs) was identified based on the presence of PAHs, pesticides, PCBs, and inorganics in Site 2 sediment; PAHs and inorganics in sediment within localized area of St. Juliens Creek at the outfall connecting to Site 2; and inorganics and VOCs in surface water. Potential risk to wildlife receptors (e.g., American woodcock and belted kingfisher) was identified based on inorganics (lead and zinc) and one pesticide in soil and mercury in sediment.

Ms. Staszak explained that an FS was conducted to develop and evaluate alternatives to address the unacceptable risks identified in the expanded RI. Ms. Staszak presented the remedial action objectives (RAOs) for the site, which were established based on the risks identified in the human health and ecological risk assessments. The RAOs for waste, soil, and sediment (including sediment pore water) are to prevent direct media contact with human and ecological receptors at concentrations that pose unacceptable risks; prevent migration of contaminants through surface water runoff and erosion pathways; and prevent or minimize transport of COCs from waste to site media. The RAOs for shallow groundwater are to reduce contaminant source mass to the maximum extent practicable;

prevent activities that might cause migration of chlorinated VOCs in the Columbia aquifer to the underlying Yorktown aquifer; prevent chlorinated VOC migration from the shallow groundwater to surface water and sediment; and reduce chlorinated VOC concentrations in shallow groundwater to the maximum extent practicable and maintain land use controls (LUCs) until concentrations allow for unlimited use and unrestricted exposure. The RAO for surface water is to minimize degradation of surface water through source control in shallow groundwater, waste, surface soil, and sediment. Mr. Bell asked why there was no RAO for deep groundwater. Ms. Staszak responded that because no unacceptable risk from exposure to deep groundwater was identified, no RAO was needed for deep groundwater.

In order to achieve RAOs, preliminary remediation goals (PRGs) were developed for the COCs. Tables listing the PRGs and figures depicting the remediation areas that were developed for the site were projected. Ms. Staszak explained that remediation areas were not developed for sediment pore water and surface water, as the associated risk would be addressed via the remediation of waste, soil, sediment, and shallow groundwater. A table listing the remedial alternatives that were developed for the remediation areas was projected. Ms. Staszak explained that all of the alternatives have the same remediation actions for the soil, waste, and sediment and St. Juliens Creek sediment remediation areas. To address the high-concentration groundwater remediation area, monitored natural attenuation (MNA), sheet pile, enhanced reductive dechlorination (ERD), funnel and gate, and excavation were evaluated. To address the low-concentration groundwater remediation area, ERD and MNA were evaluated.

Ms. Staszak explained that the alternatives were evaluated against the nine NCP criteria. A table listing the nine NCP criteria was projected. The criteria are divided into threshold, primary, and modifying criteria types. Threshold criteria are the criteria that have to be met and comprise protection of human health and the environment and compliance with applicable or relevant and appropriate requirements. Primary balancing criteria evaluate an alternative's long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; short-term effectiveness; implementability; and cost. Modifying criteria take into consideration the state's and public's preference for remediation and are documented in the Record of Decision (ROD). A table summarizing the scoring for each alternative against the NCP criteria was projected. Ms. Staszak explained that Alternatives 2 through 8 all met the threshold criteria. Alternatives 4 and 5 received the highest ranking for the balancing criteria. The total present value of Alternative 5 is approximately double that of Alternative 4 without much additional benefit; therefore, Alternative 4 was selected as the preferred alternative.

The components of the preferred alternative consist of a soil cover over the waste, soil, and sediment; excavation and offsite disposal of impacted sediment within St. Juliens Creek; ERD of shallow groundwater within the high-concentration target area; MNA of shallow groundwater within the low-concentration chlorinated VOC target, naphthalene, and heptachlor epoxide target areas; and LUCs. A contingency remedy consisting of a permeable reactive barrier (PRB) downgradient of the site has been incorporated into the alternative. The primary components of the remedy should be protective of human health and the environment; however, the contingency was incorporated because there is uncertainty with how site conditions may change as the remedy is implemented (e.g., groundwater flow trending more towards St. Juliens Creek). The PRB would intercept

groundwater and treat it to degrade chlorinated VOCs before they leave the site. Photographs depicting some of the activities that would occur as part of the remedial action were projected.

Ms. Staszak explained the community participation portion of the Proposed Plan process. A public notice was published in the *Virginian-Pilot* on May 14, 2010, to notify the public that the Proposed Plan was ready for public review. This meeting is being held to present the contents of the Proposed Plan and answer community questions about it. The public comment period began today (May 18) and ends July 2. The Proposed Plan is available for review and comment in the Major Hillard Library. The addresses to which comments may be submitted during the public comment period were projected. If comments are received they will be reviewed, recorded, responded to, and incorporated into the responsiveness summary section of the ROD. If comments lead to modifications substantially changing the proposed remedy, additional public comment may be solicited. The Navy and Environmental Protection Agency, in consultation with the Virginia Department of Environmental Quality, will make the final decision on the remedial action after reviewing and considering all information submitted during the public comment period. A ROD documenting the remedy selection will be prepared. The responsiveness summary will be included in the ROD. A public notice will be issued after finalization of the ROD.

Q & A

Ms. Jobst asked if the outfall at Site 2 would be moved as part of the remedial action. Mr. Bell responded that the outfall would need to be altered.

Meeting Adjourned.