

St. Juliens Creek Annex Restoration Advisory Board Meeting Summary: November 18, 2015 Meeting

Meeting Attendees

Walter Bell	NAVFAC Mid-Atlantic	Barbara Brumbaugh	City of Chesapeake
Robert Stroud	EPA Region III	Christopher Hauvell	NAVFAC Mid-Atlantic
Karen Doran	VDEQ	Doug Taylor	NAVFAC Mid-Atlantic
Mary Stuck	NAVFAC Mid-Atlantic	Janna Staszak	CH2M
Robert Mann	RAB Community Member	Adrienne Jones	CH2M
Pat Burns	RAB Community Member		

Location: Major Hillard Library, Chesapeake, Virginia
Meeting Date: November 18, 2015
From: Adrienne Jones/CH2M
Minutes Date: February 4, 2016

Restoration Advisory Board Welcome and Introductions

At 5:00 p.m., Mr. Bell presented opening remarks and introductions to the Restoration Advisory Board (RAB). Mr. Bell explained that he is the Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Remedial Project Manager for St. Juliens Creek Annex (SJCA). The other RAB members and guests introduced themselves. All presentation handouts were distributed.

Fiscal Year 2016 Goals

Mr. Bell led the presentation. The objectives of the presentation were to provide an overview of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process; provide an update of the Environmental Restoration Program (ERP) sites and fiscal year (FY) 2016 goals for the ERP sites and facility-wide ERP activities; and answer any questions. An overview of the CERCLA process was provided.

The ERP goals for SJCA were explained. ERP goals for SJCA are established yearly by FY; FY 2016 started on October 1, 2015, and ends on September 30, 2016. The goals serve as a budgeting tool for allocating funds, as a prioritization tool to determine sequencing of sites to be investigated and remediated based on their potential risk to human health and the environment, and as a tool to keep remediation projects on schedule. To date, 55 sites have been closed with no further action required through desktop audits, investigations, or actions, and four ERP sites are currently active (Sites 2, 4, 5, and 21). A figure showing the locations of the ERP sites at SJCA was projected.

The status of Site 2 was reviewed and the FY 2016 goals for the site were reviewed. Site 2, Waste Disposal Area B, is an unlined, inactive waste disposal area that was used from 1921 to 1942. Investigations conducted at the site identified concerns from waste; chlorinated solvents, one polycyclic aromatic hydrocarbon (PAH), and one pesticide in the shallow aquifer groundwater; chlorinated solvents and metals in the surface water; and PAHs, pesticides, polychlorinated biphenyls (PCBs), and metals in the sediment and soil. The selected remedy to address the concerns consists of enhanced reductive dechlorination (ERD), a permeable reactive barrier contingency, monitored natural attenuation, a soil cover, land use controls, and sediment excavation. The remedial action (RA)-construction phase was completed in June 2014. The site is currently in the RA-operation phase, which consists of groundwater monitoring, land use control maintenance, wetland mitigation monitoring, and Five-Year Reviews. The groundwater monitoring results

have triggered the contingency permeable reactive barrier (PRB) component. The first Five-Year Review was completed in May 2015. The FY 2016 goals established for Site 2 are to finalize the following documents:

- Wetland Mitigation Monitoring Year 1 Report
- Wetland Mitigation Monitoring Years 2 and 3 Report
- RA-operation Groundwater Monitoring Event 3 Report
- PRB Design and Work Plan

The status of Site 4 was reviewed. Site 4, Landfill D, is a landfill that was operated from 1970 to 1981. Investigations conducted at the site identified concerns from waste; metals, PCBs, and PAHs in soil; and mercury in drainage sediment. The selected remedy to address the concerns consists of soil cover installation, drainage ditch sediment removal, and land use controls. The RA was completed in 2005. The first Five-Year Review was completed for the site in 2010. Currently land use controls are maintained, inspections are conducted annually, and Five-Year Reviews are conducted every 5 years. The second Five-Year Review was completed in May 2015. No FY 2016 goals were established for Site 4.

The status of Site 5 was reviewed and the FY 2016 goals for the site were presented. Site 5, Burning Grounds, was used as a burning ground from the 1930s to the 1970s. Various wastes were reportedly disposed of including solvents, paint sludge, pesticides, and refuse. Investigations conducted at the site identified concerns from waste and metals, pesticides, and PAHs in the surface soil and drainage sediment. The selected removal action alternative to address the concerns consisted of excavation and offsite disposal. The removal action was completed in 2012. A supplemental remedial investigation to evaluate metals in the shallow aquifer groundwater was completed in 2015. The site is currently in the Proposed Plan/Record of Decision (ROD) phase with a Proposed Plan identifying no further action as the selected remedy currently undergoing public review. The FY 2016 goals established for Site 5 are to finalize the following documents:

- Site 5 Proposed Plan
- Site 5 ROD

The status of Site 21 was reviewed and the FY 2016 goals for the site were presented. Site 21, Industrial Area, comprises an industrial area of the base. Historically, buildings were used as maintenance and electrical shops and munitions loading facilities, outdoor areas were used for equipment and chemical storage, and a former fuel service station was operated. Investigations conducted at the site identified concerns from chlorinated solvents in the shallow aquifer groundwater and indoor air. The selected remedy to address the concerns consists of in-situ chemical reduction and ERD. The RA is currently in the operation phase and consists of groundwater, storm water, and vapor intrusion monitoring and maintenance of land use controls; and Five-Year Reviews. The first Five-Year Review was completed in May 2015. The FY 2016 goals established for Site 21 are to finalize the following documents:

- 8th RA-Operation Groundwater Monitoring Report
- 8th RA-Operation Vapor Intrusion Monitoring Report
- 9th RA-Operation Groundwater Monitoring Report
- 9th RA-Operation Vapor Intrusion Monitoring Report

The facility-wide goals for FY 2016 were reviewed. The goals are to:

- Draft a Site Management Plan
- Finalize a Preliminary Closeout Report (PCOR).

The Site Management Plan lays out the ERP plan for facility for the next 5 years; it helps with funding and prioritization. The PCOR indicates that the Construction Complete milestone has been met.

The Construction Complete milestone for the facility was explained. Construction Complete is a significant milestone in the Navy ERP. It recognizes completion of all physical remedial construction activities at a facility on the National Priorities List. The Construction Complete milestone for SJCA is anticipated to be

reached in FY 2016 upon signature of the Site 5 ROD, which is the last ROD for SJCA and is anticipated to document that no further action is needed at Site 5. Before the Construction Complete milestone can be achieved, the following hurdles have to be resolved:

- Completion of a 45-day public comment period on the Site 5 Proposed Plan, which is scheduled to end December 31, 2015
- Completion of a public meeting for the Site 5 Proposed Plan, scheduled for December 3, 2015
- Signature of a No Further Action ROD for Site 5 by the Navy and United States Environmental Protection Agency (EPA) in May 2016
- Preparation and signature of the PCOR by the EPA

A ceremony will be held to recognize the construction complete milestone sometime between May 30 and September 30, 2016, depending on the availability of guests. Invitees will include:

- Admirals - Commander, Navy Region Mid-Atlantic; NAVFAC Chief of Civil Engineers
- Office of the Secretary of the Navy - Assistant Secretary of the Navy-Energy, Installations, and Environment, Deputy Assistant Secretary of the Navy-Environment
- EPA Headquarters Administrator, EPA Region III Administrator
- Virginia Secretary of Natural Resources, Director of Virginia Department of Environmental Quality (VDEQ)
- Mid-Atlantic Commanding Officer, Newport News Shipyard Commanding Officer, and Naval Sea Systems Command personnel
- RAB community members

The RAB community members will be recognized during the ceremony. Mr. Mann asked where the ceremony will be held. Mr. Bell responded that the location has not been determined but that it will be local and most likely will be at SJCA. Mr. Taylor asked if local leaders, such as the mayor of Chesapeake, will be invited. Mr. Bell said he and Mary were working on the invitee list and inclusion of local leaders will be considered.

SJCA ERP successes during FY 2015 were highlighted. One success has been the flexibility that was incorporated in Site 2 documents, which has expedited the schedule for the site. The Site 2 ROD identified the potential for site conditions to change as a result of implementing the primary remedy and, therefore, included a contingency remedy to account for the potential changes to allow for quicker implementation if the contingency remedy was triggered. The Site 2 Remedial Design included an evaluation of technologies for the contingency remedy, so the design could quickly be refined if needed. Another success has been the continued progress for the Site 21 RA. The area where the primary site contaminant, trichloroethene (TCE), exceeded the site cleanup goal has been reduced from approximately 8.1 acres to 0.36 acres. Community involvement over the past FY has also been a success based on completion of an update to the Community Involvement Plan, providing a briefing about the ERP to the Chesapeake City Council, and conducting a RAB site visit.

Mr. Bell asked if there were any questions or comments. Ms. Burns asked how the city of Portsmouth fits in to community outreach for the facility. Mr. Bell responded that he had hosted an information table at a community event in the neighboring Portsmouth community of Cradock and attempts had been made to locate civic group leaders of other Portsmouth neighborhoods. Ms. Jones indicated that Portsmouth community members had been included in the interviews and questionnaires for the latest Community Outreach Plan update. Ms. Burns recommended that the Navy reach out specifically to Portsmouth city leaders. Ms. Brumbaugh indicated that she would provide Mr. Bell with the contact information of an employee of the city of Portsmouth (Brian Swetz). Ms. Burns asked what happens when there is a flood near

a landfill. Mr. Bell responded that in the case of the landfill at Site 2, there is a significant elevation increase in that area and the landfill was designed so that water flows around it; if there was a flood that would be the last portion of the area to be covered with water.

Site 2 Remedial Action

Ms. Staszak led the presentation. The objectives of the presentation were to provide background information on Site 2; review the RA components for the site; present the RA-operation groundwater monitoring results to-date; introduce the PRB contingency remedy component; and answer questions.

The conceptual site model and RA components were summarized. The RA-construction phase was completed in 2014. The site is currently in the RA-operation phase, which includes groundwater monitoring. Two rounds of groundwater monitoring have been completed to-date. The monitoring results have indicated that the primary volatile organic compound contaminant, TCE, has decreased in concentration; the area of contamination has decreased, indicating a decrease in contaminant mass; and the remedy is working effectively. Figures showing contamination reduction from before the RA to current conditions were projected.

The PRB design and implementation was explained. The PRB was included in the ROD as a contingency remedy because it was expected that placement of the soil cover would change the groundwater flow direction and, resultantly, contaminant migration over time. Per the ROD, if the potential for offsite migration was identified, the PRB would be implemented. Including the PRB as a contingency remedy in the ROD should help reduce the amount of time it will take to implement the PRB. The PRB will be a vertical "wall" constructed to treat groundwater that passes through it. There are several substrate options for use in PRBs. Emulsified vegetable oil has been selected as the substrate to use in the Site 2 PRB since emulsified vegetable oil was used in the ERD injections at the site and has been successful. An investigation to refine site understanding and determine the target length and depth interval for the PRB was scheduled for December 2015. Cross sections showing how the layers of sand and clay in the subsurface are influencing groundwater contamination migration were projected. In the summer of 2016, a row of emulsified vegetable oil injection wells will be installed perpendicular to St. Juliens Road to form the PRB and the injections will be conducted. The PRB area will be incorporated into the groundwater monitoring program in the fall of 2016 to evaluate the PRB's effectiveness.

Ms. Staszak asked if there were any questions or comments. Ms. Brumbaugh asked how long it will take for the PRB to start working. Ms. Staszak responded that results are typically seen within 1 to 3 months. She explained that bacteria will be injected into the PRB after the emulsified vegetable oil is injected to enhance the contamination reduction. Ms. Brumbaugh asked if there will be surface water sampling to make sure contamination is not releasing to the surface water. Ms. Staszak responded that surface water sampling is not currently planned but that groundwater data from the vicinity of St. Juliens Creek are compared to surface water quality criteria.

Five-Year Review

Ms. Jones led the presentation. The objectives of the presentation were to explain the purpose and process of Five-Year Reviews, provide the conclusions of the second Five-Year Review for SJCA, and answer any questions about the Five-Year Review.

The purpose of Five-Year Reviews was explained. Five-Year Reviews are required by CERCLA when RAs result in hazardous substances, pollutants, or contaminants remaining at a site. The objective is to determine if the selected remedy remains protective of human health and the environment. If it is determined that the remedy is no longer protective, the remedy may be modified. Five-Year Reviews should identify any issues that prevent the remedy from being protective, recommend follow-up actions to address any issues identified, and conclude with a protectiveness statement (e.g., protective, will be protective when the remedy is complete, protective in the short-term, not protective, protectiveness cannot be determined). The Five-Year Review process includes identifying sites where RAs resulted in waste remaining in place,

evaluating protectiveness of human health and the environment, involving the community, and developing a report to present the evaluations, findings, and protectiveness determinations. Site 2, Site 4, and Site 21 were identified for inclusion in the Five-Year Review because they each had a RA that resulted in waste or contamination remaining in place.

A brief background on Site 2 and its selected remedy was provided. The issues identified for Site 2 during the Five-Year Review and the recommendations/follow-up actions, milestone dates for achieving the recommendations/follow-up actions, and whether the issues affect current or future protectiveness were reviewed as shown in the following table.

Issue	Recommendation/ Follow-up Action	Milestone Date	Affects Protectiveness	
			Current	Future
Cleanup level for naphthalene in groundwater is not protective of potential future use	Calculate new cleanup level Document in a ROD Memo to File	May 2016	No	Yes
Emerging contaminants perchlorate and 1,4-dioxane potentially present in groundwater but never evaluated	Sample for emerging contaminants to determine if they are contaminants of concern If warranted, revise remedy, land use control boundary, and treatment system	May 2017	No	Yes
Groundwater data not yet available to determine if remedy is functioning	Collect and evaluate data	May 2016	No	Yes
Successful restoration of compensatory mitigation wetland not yet demonstrated	Develop a wetland monitoring plan, conduct monitoring, report, and conduct any necessary maintenance	May 2016	No	No

The protectiveness determination for Site 2 is that the remedy is protective in the short-term; however, in order for the remedy to be protective in the long-term, follow-up actions need to be taken. The basis for the protectiveness determination was that human and ecological exposures that could result in an unacceptable risk are being controlled through land use controls and in order for the remedy to be protective in the long-term, the issues identified that affect protectiveness need to be resolved to ensure continued protectiveness.

Mr. Taylor asked where the compensatory mitigation wetland was constructed. Ms. Jones responded that it was near former Site 19. Ms. Stuck asked if there were any concerns with vapor intrusion at Site 2. Ms. Jones explained that there is a land use control in place at Site 2 extending approximately 100 feet beyond the groundwater plume; there are currently no buildings within that 100 foot buffer zone, and according to the

land use controls for the site no buildings can be constructed without vapor intrusion investigation. Ms. Stuck asked if the land use control boundaries are included in the NAVFAC's GeoReadiness Explorer (GRX). Mr. Bell responded that he had not verified whether the land use control boundaries are in the GRX since resuming his position but that there is a process in place to obtain approval to initiate projects at the facility, which includes his review. Ms. Jones indicated that the boundaries are all updated annually with the Site Management Plan, and the geographic information system boundaries are provided on compact disc to NAVFAC.

A brief background on Site 4 and its selected remedy was provided. No issues were identified for Site 4 during the Five-Year Review. The protectiveness determination for Site 4 is that the remedy is protective of human health and the environment. The basis for the protectiveness statement is that the soil cover is in good condition and prevents direct contact with landfill contents; land use controls are in place and prevent intrusive activities and unauthorized site use; groundwater monitoring data indicate a release has not occurred from the landfill; and there have been no changes in the physical conditions or use of the site that would affect the protectiveness of the remedy.

A brief background on Site 21 and its selected remedy was provided. One issue was identified for Site 21 during the Five-Year Review: the emerging contaminants 1,4-dioxane and perchlorate had not previously been investigated but could be present in the groundwater based on historical site use. The recommendation/follow-up action identified to address the issue is to sample for the emerging contaminants to determine if they are contaminants of concern, and if warranted, revise the remedy to be protective. The milestone date for completion of the action was set as May 2017. The protectiveness determination for Site 21 is that the remedy is protective in the short-term; however, in order for the remedy to be protective in the long term, follow-up actions need to be taken. The basis for the protectiveness determination was that human exposures that could result in an unacceptable risk are being controlled through land use controls and in order for the remedy to be protective in the long-term, the issues identified that affect protectiveness need to be resolved to ensure continued protectiveness.

The Five-Year Review report is available for review at the SJCA Information Repository in Major Hillard Library and on the SJCA ERP public web site: <http://go.usa.gov/Dyn4>. Questions regarding the Five-Year Review results can be addressed to:

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The next Five-Year Review will be completed in 2020.

Ms. Brumbaugh asked how long Five-Year Reviews are required. Ms. Jones responded that they must be conducted as long as waste remains in place. Ms. Brumbaugh asked what would happen if the SJCA property was ever transferred to another use. Mr. Bell responded that the details would be worked out in land transfer documentation. He indicated he would review the land use control documentation and requirements and provide additional information to the RAB members. Mr. Mann indicated that a meeting was held years ago when the facility was considered for Base Realignment and Closure (BRAC), and that the city of Chesapeake had a plan for future development, including mixed use, in the event the facility was ever closed. He indicated he was not aware of whether or not the plan had been updated, or who controls it. Ms. Brumbaugh asked if the land use controls would prevent a land use transfer; Mr. Bell responded that it would not, but that they could restrict use in certain areas. Mr. Taylor clarified that the land use controls

would essentially be deed restrictions that would move with the property. Mr. Bell indicated that he will provide information to the RAB about how land transfers are managed.

Ms. Jones asked if there were any questions or comments. No questions or comments were received.

Roundtable / Question and Answer

Mr. Bell asked if there were any general questions or comments for discussion. Mr. Mann asked if the RAB would continue after construction complete. Mr. Bell responded that the RAB would continue, as the remedies will still be operational. Ms. Stuck indicated that the SJCA ERP team is preparing a submittal for the Chief of Naval Operations Award for FY 2015.

Next Meeting

Mr. Bell indicated that the next RAB meeting is scheduled for May 2016. He asked if the RAB would prefer to do a site visit instead of a meeting; the RAB members responded that they would. The RAB site visit will be scheduled in mid-May 2016 around lunch time. Mr. Bell indicated that he would send emails to the RAB members to coordinate access. Ms. Burns indicated she is interested in a site visit if personal information is not required to obtain access.

Meeting Adjourned