

# St. Juliens Creek Annex Restoration Advisory Board Meeting Summary: November 17, 2020 Meeting

MEETING ATTENDEES	Robert Bray, NAVFAC Mid-Atlantic Robert Stroud, EPA Region 3 Weel Lindsay, VDEQ Mike Biffel, APTIM Sara Foxwell, APTIM Megghan Smith, APTIM Dustin Capps, APTIM Jason Scarborough, Norfolk Naval Shipyard Kathryn Smith, CH2M	Laura Cook, CH2M Christian Conover, CH2M Leticia Solaun, CH2M Pam Boatwright, Elizabeth River Project Bracy Parr, Cradock Civic League Barbara Brumbaugh, RAB Community Member Dennis Long, RAB Community Member Robert Mann, RAB Community Member David Jurgens, RAB Community Member
LOCATION	Microsoft Teams Conference Call	
MEETING DATE:	November 17, 2020	
PREPARED BY	Christian Conover/CH2M	
MINUTES DATE:	March 15, 2021	

## Restoration Advisory Board Welcome and Introductions

At 5:05 p.m., Mr. Robert Bray presented opening remarks and introductions to the Restoration Advisory Board (RAB). Mr. Bray thanked everyone for coming and 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. Ms. Smith then provided a brief summary of best practices for virtual meetings including methods to unmute through Microsoft Teams or phone.

## St. Juliens Creek Annex Fiscal Year 2021 Environmental Restoration Program Goals and Schedule

Mr. Robert Bray led the topic and projected a 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 on the SJCA Environmental Restoration Program (ERP) sites and fiscal year (FY) 2021 goals, highlight FY 2020 successes, and solicit questions and comments from the RAB.

Mr. Bray provided a brief overview of the CERCLA process. Mr. Bray explained that the CERCLA process is generally thought of in a linear process but noted that it is not always linear. The Preliminary Assessment (PA) is a document study where sites are identified for potential contamination by looking through past records (e.g., disposal records or spill logs). The Site Inspection (SI) stage is conducted by sampling for presence or absence of any of the contaminants identified in the PA. The next step is the Remedial Investigation/Feasibility Study (RI/FS) where the conceptual site model is being developed and the risk that the contamination poses at the site. The Record of Decision (ROD) is the document that outlines the path forward for the site. The Remedial Design describes the remedy designed for the site, and the Remedial Action (RA) is the implementation of the remedy. The ultimate goal is to get to response complete, where additional sampling is not required.

ERP goals are established on a yearly basis by FYs, which begin on October 1 and end on September 30 of the following year. The goals serve as a budgeting tool for allocating funding and prioritizing sites to be investigated

and remediated based on potential risk to human health and the environment. In addition, the goals help keep projects in the remediation process on schedule and drive the program.

Figures were presented that depicted the 56 no further action ERP sites and the three currently active ERP sites (Sites 2, 4, and 21) at SJCA.

An update on Site 2 was provided. Site 2 (Waste Disposal Area B) is an unlined waste disposal area that operated 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, and metals in the sediment and soil.

Site 2 is currently in the remedial action-operation (RA-O) phase. The RA-O activities currently consist of bi-annual groundwater monitoring, additional as-needed emulsified vegetable oil injections, land use controls (LUCs) maintenance, and compensatory mitigation wetland monitoring. The first Five-Year Review (FYR) was completed for the site in May 2015, and the second review was completed in May 2020. The second FYR concluded that the remedy is protective to human health and the environment. The potential unacceptable risk has been addressed by previous actions and is currently controlled by a soil cover and LUCs, and RA-O maintenance and monitoring.

The recently completed and ongoing activities for Site 2 are:

- RA-O Groundwater Monitoring
  - Conducted Event 9 in November 2019
  - Conducted Event 10 in May 2020
  - Currently conducting Event 11 in November 2020
- Installed additional monitoring wells
- Conducted injection well maintenance and repairs
- Completed the FY 2020 compensatory wetland monitoring
- Conducted the annual LUC inspection

The FY 2021 goals for Site 2 are to:

- Conduct annual LUC inspection and reporting
- Finalize the Wetland Mitigation, Monitoring, and Maintenance Report
- Finalize the RA-O Groundwater Monitoring Event 11 Report
- Finalize the Site 2 Vegetation Maintenance Plan

An update on Site 4 was provided. Site 4 is a sanitary landfill that operated from 1970 to 1981. Soil and sediment contaminated with PAHs, polychlorinated biphenyls, and metals were identified at the site. The RA to address the contamination, consisting of a soil cover, excavation of drainage ditch sediment, and LUCs, was completed in 2005. Site 4 is currently in the response complete phase with ongoing LUCs maintenance and FYRs. The first FYR for Site 4 was completed in May 2010, second FYR in May 2015, and third FYR in May 2020. The third FYR concluded that the remedy is protective.

The recently completed and ongoing activities for Site 4 are:

- Conduct vegetation maintenance
- Conduct the annual LUC inspection

The FY 2020 goal for Site 4 is to:

- Conduct annual LUC inspections and reporting

An update on Site 21 was provided. Site 21 is the primary industrial area of the facility, where buildings were historically used for maintenance, electrical shops, and munitions loading, and outdoor areas were used for equipment and chemical storage. The environmental concern at Site 21 is chlorinated volatile organic compounds in the shallow aquifer groundwater. In situ chemical reduction, enhanced reductive dechlorination, and LUCs were the selected remedies to address the contamination at the site. The site is currently in the RA-O phase. The RA-O

activities consist of bi-annual groundwater, storm water, and vapor intrusion monitoring, emulsified vegetable oil (EVO) injections, and LUCs maintenance. Figures presented show the concentrations of constituents of concern in the groundwater over time is ultimately decreasing. The first FYR for Site 21 was completed in May 2015 and the second FYR was completed in May 2020. The second FYR for Site 21 concluded that the remedy is protective of human health and the environment. The potential unacceptable risk has been addressed by previous actions and is currently controlled by LUCs, and RA-O maintenance and monitoring.

The recently completed and ongoing activities for Site 21 are:

- Completed Round 3 injections from October 2019 to September 2020
- Conducted the annual LUC inspection
- RA-O Vapor Intrusion Monitoring
  - Conducted Event 15 in January 2020
  - Conducted Event 16 in August and September 2020
- RA-O Groundwater and Stormwater Monitoring
  - Conducted Event 15 in May 2020
  - Currently conducting Event 16 (November 2020)

The FY 2020 goals for Site 21 are to:

- Conduct annual LUC inspections and reporting
- Finalize the RA-O Groundwater and Storm Water Monitoring Event 16 Report
- Finalize the RA-O Groundwater and Storm Water Monitoring Event 17 Report
- Finalize the Building 81 Vapor Intrusion Technical Memorandum

The facility-wide goals for SJCA for FY 2021 are to:

- Complete the FY 2022 through 2026 Site Management Plan update
- Finalize Per- and Polyfluoroalkyl Substances (PFAS) PA Report
- Finalize PFAS Site Investigation Sampling and Analysis Plan

The successes for SJCA during FY 2020 were:

- Site 2 Well Installation, Maintenance, and Repairs
  - Repaired 7 out of 10 fouled injection wells, and reinstalled the 3 remaining damaged injection wells
  - Installed 3 new monitoring wells
- Site 2 Compensatory Wetlands Monitoring
  - Conducted the FY 2020 monitoring event; results indicated the wetland was healthy and functioning as intended
- Site 21 Injections
  - Completed the round 3 injections of EVO and dehalococoides (DHC) cultures
- LUC Inspections and Maintenance
  - Completed LUC inspections at Sites 2, 4, and 21
- RAB and Community Outreach
  - Hosted RAB meeting in November 2019
  - Kept public website updated throughout COVID-19 pandemic with information regarding canceled RAB meeting

Mr. Lindsay asked if Robert could provide an explanation of the progressive plume for Site 21. Mr. Bray replied that the left side of the figures shown in green and blue are the original plumes. Mr. Bray noted that the green and blue plumes for trichloroethene and chlorinated volatile organic compound plumes show the reduction in plume size.

Mr. Bray asked if there were any additional questions or comments. No additional questions or comments were received.

## Per-and Polyfluoroalkyl Substances Overview

Ms. Kathryn Smith introduced herself as a member of the Partnering Team, and reviewed the topics and objectives of this presentation, which is to give an overview of the PFAS PA that is currently being conducted.

Ms. Smith discussed that PFAS are man-made compounds that have been used in products since the 1950s. PFAS can be found in stain-resistant carpets, nonstick cookware, water-repelling fabrics, food packaging, firefighting foam, and plating shop mist suppression systems. Ms. Smith noted that this may look familiar as it was previously presented by NAVFAC and that this is another brief overview of PFAS. The useful properties of PFAS results in their persistence in the environment. They are heat-resistant/flame-retardant, oil-resistant, and water-resistant. They work by forming a film over surfaces. PFAS are found in the blood of people, wildlife, and fish worldwide.

Ms. Smith described the chemistry and properties of PFAS. PFAS are composed of carbon chains of different lengths. Per-FAS means all carbons are bonded with fluorine, and poly-FAS means some carbons are bonded with fluorine. The hydrophobic and hydrophilic properties of PFAS make it useful as a firefighting compound. The carbon fluorine bond is extremely strong and hard to break, which is why they are very persistent in the environment and last a long time. PFAS are water soluble and partition to interfaces (air-water, soil-water, and product-water).

Ms. Smith indicates a brief history of PFAS, when they were developed, and some of the typical uses over the past decades. At Navy facilities, the most common source of PFAS to the environment is the use of aqueous film-forming foam (AFFF) in past firefighting training activities and emergency response. The Navy's use of AFFF started in the late 1960s and early 1970s following issuance of the military specification (MILSPEC) for a fluorocarbon-based AFFF in 1969. MILSPEC are performance-based, and there are different formulations. The MILSPEC is not a recipe, but it must meet certain criteria.

Ms. Smith indicated that the Navy is conducting a PA specifically for PFAS at St. Juliens Creek Annex. The PA is being conducted to assess the potential PFAS source areas, and determine what areas warrant further investigation. Areas that warrant further investigation will be carried forward into the SI phase (next stage in the next CERCLA phase). The objectives of the PFAS PA are to:

- Identify and catalog all potential or actual PFAS sources
- Eliminate from further consideration those areas where there is no evidence of a PFAS release or suspected release and document the rationale for their elimination
- Identify areas requiring further PFAS investigation
- Identify receptors and migration pathways
- Determine whether an emergency response action is warranted because of current complete exposure pathways (e.g. on- or off-Base drinking water source within 1 mile downgradient of potential source area)
- Set priorities for a Basewide SI (if necessary)

Examples of PFAS source areas evaluated in the PA consist of AFFF releases and other sources. Examples of AFFF releases are firefighting training areas, crash sites, crash truck testing, cleaning or refilling areas, hangars, buildings, or bulk fuel storage with fire suppression systems, and areas used for firetruck and fueller maintenance. Types of other sources consist of plating shops with certain mist suppression systems, wastewater sprayfields, and wastewater sludge disposal areas.

As part of the PA process, the following document review was conducted to identify and characterize potential PFAS releases:

- Current and historical environmental program documents
- Environmental liabilities databases
- Virginia Department of Environmental Quality (VDEQ) databases and records

- Base records, such as hazardous waste inventories, compliance reports, spill logs, National Archives, internet and database searches, and historical mapping

After document review, interviews were conducted with current and former Base employees to verify data collected or receive supplemental information. Site visits were also conducted to identify any evidence of PFAS releases and potential receptors and migration pathways to fill in data gaps from document reviews and interviews.

The PFAS PA is currently ongoing and identified 49 areas for initial evaluation, of which the following four areas have been identified to move forward to the SI phase of investigation:

- Regional Fire Training Academy
- Site 5 – Burning Grounds Group
- Site 15 – Fire Training Area Group (includes Building 271 – Former Fire Station)
- Site 21 – Industrial Area including Site 9, Building 249, and Building 104

The path forward for PFAS at SJCA, an SI will be conducted to confirm environmental releases and determine if any further investigation is warranted.

Ms. Smith posted the following resources that provide information for PFAS and indicated that the slides are posted on the SJCA website for reference.

- Secretary of the Navy
  - <https://www.secnav.navy.mil/eie/Pages/pfc-pfas.aspx>
- VDEQ
  - <https://www.deq.virginia.gov/ConnectWithDEQ/EnvironmentalInformation/PFAS.aspx>
- Agency for Toxic Substances and Disease Registry (Division of the Centers for Disease Control)
  - <https://www.atsdr.cdc.gov/pfas/index.html>
- United States Environmental Protection Agency (EPA)
  - <https://www.epa.gov/pfas>
- Interstate Technology Regulatory Council
  - <https://pfas-1.itrcweb.org/fact-sheets/>

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

## St. Juliens Creek Annex Third Five-Year Review

Mr. Robert Bray led the topic and projected a presentation. The objectives of the presentation are to review the purpose and process of the FYR, provide a summary of the sites included in the SJCA Third FYR, present the findings and conclusions of the Third FYR. The FYR is required under CERLCA when remedial actions result in any hazardous substances, pollutants, or contaminants remaining at the site. An example was presented where a remedy such as a soil cover is implemented at a site. The first FYR is required 5 years after the first RA is initiated at a facility; for SJCA, the first FYR was completed in 2010 following initiation of the first RA at Site 4. The objective is to determine if the selected remedy remains protective of human health and the environment. If the remedy is no longer protective at the site, the remedy may be modified.

FYRs identify the following for each site reviewed:

- Any issues that currently prevent the remedy from being protective or may do so in the future
- Recommendations and follow-up actions to address any issues identified
- Determination of protectiveness of human health and the environment, from one of the following:
  - Protective
  - Will be protective once the remedy is complete
  - Protective in the short term; however, for the remedy to be protective in the long term, follow-up actions need to be taken

- Not protective, unless the following action(s) are taken to ensure protectiveness
- Protectiveness cannot be determined until additional information is obtained

The process for the FYR begins by identifying sites where remedial actions resulted in waste remaining in place. The second stage is to evaluate protectiveness of human health and the environment by reviewing requirements of RODs, reviewing post remedy documents and findings, and conducting site inspections. The community is then notified in the local newspaper and RAB is included in meetings. Lastly, the FYR report is developed to present the protectiveness evaluation, potential issues, recommendations, and follow-up actions, and summarize protectiveness determinations.

The sites requiring review were presented. At Site 2 – Waste Disposal Area B, an Action ROD was written, and RA is ongoing to address contaminants remaining at the site and waste is still in place. At Site 4 – Landfill D, an Action ROD was written, the RA was completed, and waste was left in place. At Site 21 – Industrial Area, an Action ROD was written, and the RA is ongoing to address contaminants remaining onsite. Therefore, the FYR is required for the three sites. Protectiveness statements have been issued for the three sites. Community involvement is a key aspect of the FYR process. Public notices are placed in the local newspaper at the initiation of the FYR and a second notification is placed in the local newspaper to inform the public that the FYR has been completed. The third FYR was conducted from May 2015 to May 2020. The first public notice was placed in the local newspaper in March 2019 and the completion notice was included in May 2020. The final FYR will be stored in the information repository at the Major Hillard Library.

The Site 2 background was presented. Site 2 was historically used to openly burn refuse and is currently maintained as a closed landfill with a vegetated soil cover. Site 21 was historically utilized as an industrial area with maintenance and electrical shops, munitions loading facilities, and a filling station with former petroleum underground storage tanks. Site 21 is currently used for storage and maintenance activities. An overview of the plume at Site 2 was presented. The current status of RA-O activities includes bi-annual groundwater monitoring, EVO injections, LUC maintenance, and compensatory mitigation wetland monitoring. The previous FYR found three issues that needed to be addressed to ensure long-term protectiveness:

- The cleanup level for naphthalene in groundwater was not protective of potential future use
- Emerging contaminants perchlorate and 1,4-dioxane were potentially present in groundwater but were not evaluated
- Groundwater was not yet available to determine if the remedy was functioning

These issues were addressed in FY 2017. The third FYR concluded that there were no issues, recommendations, or follow-up actions identified and the site was determined to be protective.

The Site 4 background was presented. Site 4 was historically a landfill operating from 1970 to 1981. The media of concern were soil and sediment. Site 4 is in the response complete phase and LUC maintenance is the current ongoing activities. There were no issues, recommendations, or follow-up actions, and the site was determined to be protective.

The Site 21 background was presented. Site 21 is an industrial area where buildings historically were used as maintenance and electrical shops and munitions loading facilities; and outdoor area used for equipment and chemical storage. The media of concern was shallow aquifer groundwater. The current plume and injections at Site 21 was presented in a figure. Site 21 is currently in the RA-O phase. The third FYR indicated there were no issues, recommendations, or follow-up actions, and the site was determined to be protective.

Other findings of the FYR was that PFAS is a current emerging contaminant at SJCA. A PA/SI is scheduled to be completed for PFAS. The PA for PFAS at SJCA is currently being conducted.

The summary of the third FYR indicated that SJCA is protective of the environment. The third FYR will be available on the public website: <http://go.usa.gov/xGmmW>, and at the Major Hillard Library in Chesapeake, Virginia. Questions can be addressed to Mr. Jason Scarborough, the Public Affairs Specialist. The next FYR will be completed in FY2025.

Mr. Bray asked if there were any questions or comments. Mr. Dennis Long asked what was happening on the Base regarding the current replacement of water mains being installed at the Base. Mr. Bray indicated these are coordinated with the Base and an environmental checklist is completed for any work. The checklist is submitted and then comments are provided followed by a discussion with the project manager to ensure all requirements are met for the sites. Mr. Long understood and also questioned if there is any oversight of the contractor or if it is expected for the project manager to report the status. Mr. Bray indicated does not have control over the contractor unless they are intending to go through one of his sites. He then could tell the contractor if he believes something needs to be altered in the current plans.

Mr. Bray asked if there were any additional questions. No additional questions or comments were received.

### Roundtable/Question and Answer

Mr. Bray asked if there were any additional question or comments, or if there were any potential future agenda topics the RAB was interested in hearing about. Ms. Smith asked if the RAB would like another virtual meeting held in May 2021 if it cannot be held in person due to COVID-19. The general consensus was yes, the virtual meeting was sufficient if in person was not feasible. Ms. Pam Boatwright asked what the future land use of the Base will be. Mr. Bray and Mr. Scarborough stated that the current and expected future land use is that SJCA will remain as an asset of Norfolk Naval Shipyard. No additional questions were received.

### Next Meeting

Mr. Bray indicated the next RAB meeting is scheduled for May 2021.

### Meeting Adjourned