



Restoration Advisory Board Biddle Air National Guard Base

Bill Myer NGB/A4VR 8 December 2022



Updates Since 15 Sept 2022



- Environmental Restoration Program Sites:
 - Willow Grove Site 1 (Privet Road):
 - Starting Five Year Review (BB&E) 7 Dec 2022
 - Contract awarded to EA for Final Record of Decision/Long Term Monitoring to support site closure
 - Meet with EPA and PADEP on 21 Nov 2022 to discuss way forward and closure standards
- Coordinating with EPA/PADEP on the transition from SDWA AO to Navy Federal Facility Agreement
- PFAS Remedial Investigation: ٠
 - Submitted Data Gaps Technical Memorandum with hydrogeologic cross sections to EPA and PADEP on 14 October
 - Conducted meetings with EPA/PADEP on 17 October and 2 November to present/discuss Phase II and Phase III RI activities
 - Joint meeting with EPA/PADEP/Navy on 25 October to discuss and collaborate on cross sections, data gaps, and planned activities
 - Submitted Final Surface Water Technical Memorandum for Events 9 and 10 and Draft Final for Round 11
 - Conducted guarterly surface water sampling 5-6 December
 - Conducted joint groundwater gauging event in collaboration with Navy 21 and 22 November
 - Submitted PFAS Remedial Investigation Status Memorandum to EPA/PADEP on 22 Nov 2022



Updates Since 15 Sept 2022



- PFAS Interim Groundwater Action:
 - Scoping meeting held 18 October second meeting scheduled for 19 Dec 2022
- PFAS surface water treatment:
 - 11 August 2021 New Surface Water Treatment System started; as of 30 Nov 2022 treated 146M gallons;
 - Submitted Sep and Oct 2022 NPDES Discharge Monitoring Reports to EPA/PADEP



3 Month Forecast of Activities



- Sign Navy Federal Facilities Agreement:
 - Complete Surface Water Response Action Memorandum
 - Complete Residential Drinking Water Action Memorandum
- Continued drinking water response actions (sampling, bottled water, and coordination with North Wales Water Authority (NWWA) and Warminster
- Prepare UFP QAPP addenda for RI and Pilot Study.
- Surface Water Sampling Event
- Continued storm water treatment operations (Warminster)
- Five Year Review Site 1 Privet Road
- Long Term Monitoring Groundwater Site 1 Privet Road

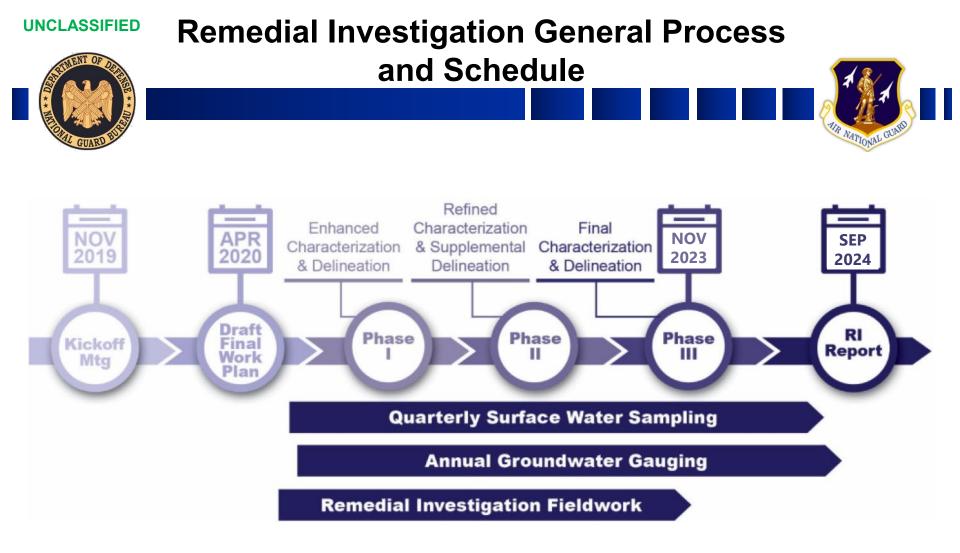


Remedial Investigation Project Objectives



- Delineate the nature and extent of PFAS contamination, the threat to human health and the environment and prepare a Remedial Investigation (RI) Report.
 - Collect soil, sediment, surface water, and groundwater PFAS data on and around Biddle ANGB.
 - Conduct Baseline Risk Assessment (BRA).
 - Investigate link between groundwater and unnamed tributary to Park Creek.
 - Obtain data required to inform future development of a Feasibility Study.
 - Conduct quarterly surface water sampling for PFAS in coordination with the Navy.
 - Conduct annual potentiometric gauging, as needed to support USGS model.









Remedial Investigation Progress



- EPA, PADEP, ANG, and Leidos are developing the path forward for the RI. A UFP-QAPP addendum will be developed to address revised scope
- Held scoping meetings with EPA and PADEP on 17 October and 2 November to present and discuss proposed activities for Phase 2.
- Held joint technical meeting with EPA, PADEP, Navy, and USGS on 25 October to review CSM and discuss proposed activities.
- Prepared draft UFP-QAPP Addendum to present planned activities and methodologies.
- Field work tentatively planned for Feb 2023
- Conducted joint gauging event with Navy on 21-22 November





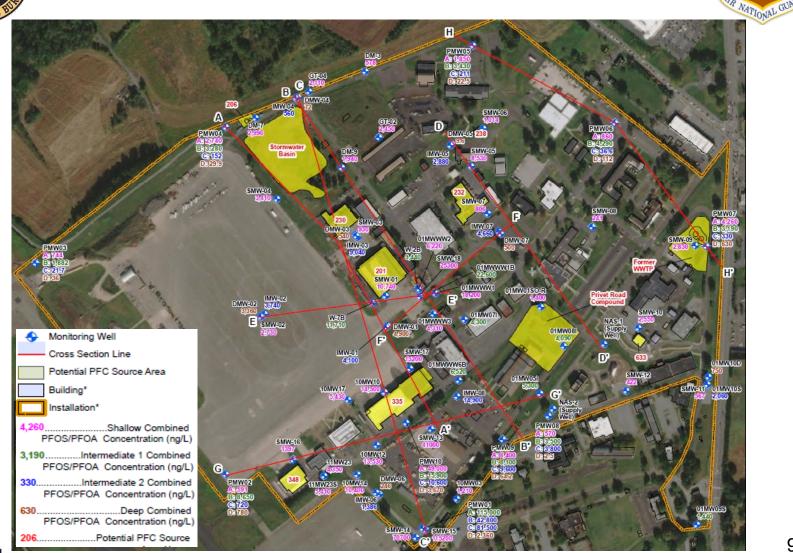
Remedial Investigation Progress



- Planned activities for the remainder of Phase 2 include:
 - 4 Shallow Wells
 - 12 Intermediate/Deep wells (up to 285 ft)
 - Borehole geophysical surveying at all intermediate/deep wells
 - Packer testing at all intermediate/deep wells
 - Real-time data review and decision making with EPA/PADEP
 - Sampling of all new wells
 - Results, conclusions, and recommendations to be presented in Phase 2 Memorandum



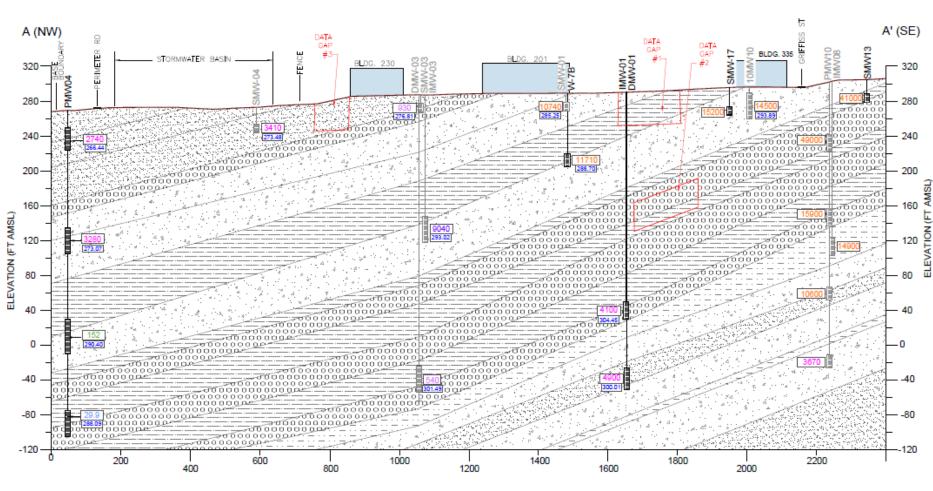
Remedial Investigation Progress



leidos

Remedial Investigation Progress







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Quarterly Surface Water Sampling



- Performed Round 13 Surface Water Sampling with Navy and USGS in September 2022. Round 14 in December 2022
- Submitted Final Sampling Memo for Rounds 9 and 10
- Submitted Draft Final Sampling Memos for Rounds 11 and 12.
- Preparing Sampling Memo for Round 13.





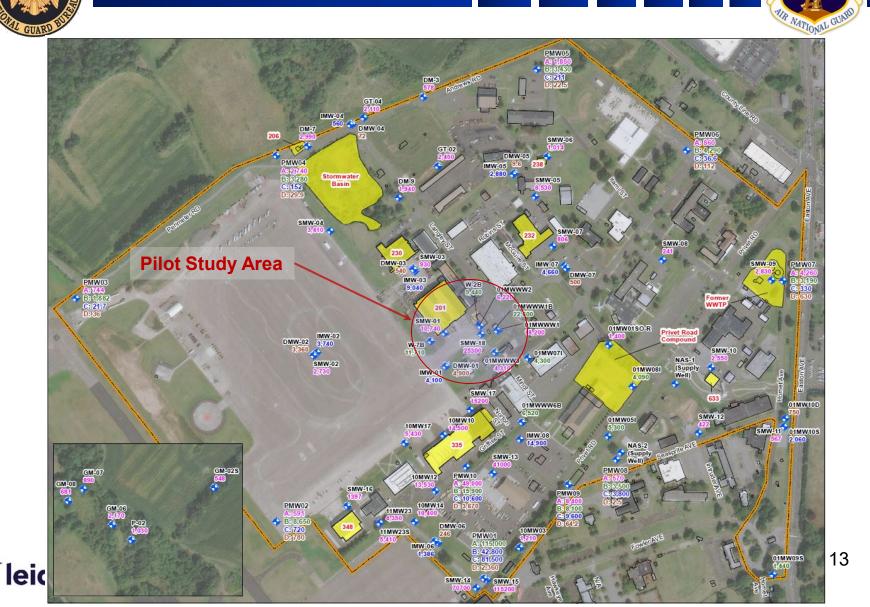
Groundwater Pilot Study



- Design, construction, operation of 30-day pilot test to evaluate feasibility of hydraulic containment of source area near Building 201
- Results, conclusions, and recommendations to be compiled in Technical Memorandum
- Estimated 3 extraction wells with combined 50-75 gpm extraction rate
- Pilot Study will inform plans for full-scale interim action(s)
- Currently developing UFP-QAPP addendum in collaboration with EPA and PADEP



Groundwater Pilot Study





Actions Planned for Next 3 Months



- Submit UFP-QAPP Addenda for RI and Pilot study
- Finalize quarterly Surface Water Memos for Rounds 11 and 12
- Prepare Surface Water Memo for Round 13
- Begin RI Phase 2 field work



PFOS/PFOA Water Treatment Biddle ANGB





- PFOS/PFOA has been detected in surface water leaving Biddle. This
 water is primarily groundwater that discharges to a storm water
 detention basin on the northwest boundary of the Base and flows to
 Park Creek which flows to the Little Neshaminy Creek.
- 500 gallon per minute treatment plant began operations on 11 August 2021. 146M gallons treated through Nov 2022.
- Treatment train #1 media change out in July/August 2022.
- Treatment train #2 media change out in Oct/Nov 2022.
- Used media staged on base until final disposal.
- Upgrades made to allow manual backwash of vessels B and C. Experimenting with various media combinations to remove sediment.
- Treatment plant effluent PFOS+PFOA < 2ppt (<70 ppt required)
- Construction and O&M through Warminster Cooperative Agreement



NWWA Activities



- North Wales Water Authority assumed responsibility for Warrington water service area. Cooperative agreement for water system actions.
- GAC treatment for Wells 1, 2 and 6 is complete. Working to get the wells back on line.
- GAC treatment for Well 9 is complete with start up procedure to take place in December. Working to get the well back on line.
- GAC treatment for Well 3 is complete. This well is getting a new pump and will be put online after the pump is replaced and startup is completed.
- Main extensions and services are complete.

Private Well Sampling





- ANG has contract in place with Weston to provide PFOS/PFOA testing of private drinking water wells and supply bottled water to properties with PFOS/PFOA at or above the EPA Health Advisory level (HA*) for residents within our area of responsibility in Horsham, Warminster, and Warrington.
 - Horsham:
 - 6 wells sampled
 - 5 were above HA
 - 4 have been connected to municipal water
 - 1 well abandoned by Wood
 - Warrington:
 - 150 well sampled
 - 53 are above HA
 - 55 have been connected, NWWA has 13 signed agreements to connect this summer UNCLASSIFIED



Private Well Sampling (cont.)



- Warminster: 12 wells** sampled
 - 11 are above HA
 - 8 have been connected municipal water

* ANG is using the US EPA 2016 Health Advisory standards, 70 part per trillion (ppt) for PFOA and PFOS
** Some of these properties are on Valley Road with Warminster mailing addresses but are located in Warrington Township

Sampling contact for ANG area of responsibility: Transitioning to Weston, Mr. Bob Wagner,570-466-4026, r.wagner@westonsolutions.com





Private Well Sampling Map



