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SIXTH QUARTERLY STATUS REPORT FOR ADMINISTRATIVE ORDER SDWA-03-2014-
0230-DS WITH TRANSMITTAL LETTER NAWC WARMINSTER PA
2/10/2016
BRAC PMO EAST



DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE EAST
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PHILADELPHIA, PA 19112-1303

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Ser BPMOE/16-069
February 10, 2016

Mr. Roger Reinhart
U.S. Environmental Protection Agency
Region III (3WP22)
1650 Arch Street
Philadelphia, PA 19103

Dear Mr. Reinhart:

SUBJECT: QUARTERLY REPORT REGARDING ADMINISTRATIVE ORDER DATED
JULY 7, 2014, EFFECTIVE JULY 13, 2014, DOCKET NO.
SDW-03-2014-0230-DS

In accordance with Section VI, Paragraph 40 of the subject
Order, the attached Sixth Quarterly Report is submitted.

If you have any questions regarding this matter, please
contact me at 215-897-4904.

Sincerely,

A handwritten signature in blue ink, appearing to read "Willington Lin", is written over a horizontal line.

WILLINGTON LIN, P.E.
BRAC Environmental Coordinator
By direction of BRAC PMO

Enclosure: Sixth Quarterly Report

Copy to:
EPA Region III (S. Kloss)
PADEP Southeast (C. Wade)
BRAC PMO Files

Sixth (6th) Quarterly Status Report
Period: October 1, 2015 through December 31, 2015

Administrative Order Dated July 7, 2014
(Effective July 14, 2014)
Docket No. SDWA-03-2014-0230-DS

This quarterly status report provides a summary of the work performed by the Navy, associated entities, and U.S. EPA [via an Interagency Agreement (IA) with the Navy] over the period of **October 1, 2015 through December 31, 2015**. The next report will cover January 1, 2016 through March 31, 2016.

SUMMARY OF ACTIVITIES

During this Administrative Order (AO) reporting period, the private water systems sampling program was continued under an agreement for technical support with EPA under the IA, which extends through FY 2016. Public water system sampling for PFCs is performed regularly at well WMA-26 by Warminster Township Municipal Authority (WTMA) under an Environmental Service Cooperative Agreement (ESCA) grant awarded to them by the Navy in March 2015. Private and Public Water actions provided through this agreement will be discussed within the appropriate sections of the status report.

The Areas A, C, and D extraction wells continue to provide capture/containment of PFCs originating from these areas, with treatment provided by the groundwater treatment plant located in Area A, which has been modified to provide PFC removal through carbon polishing. During the reporting period, the treatment system continued to effectively remove PFCs along with volatile organic compounds (VOCs) from the groundwater.

The Unified Federal Policy Sampling and Analysis Plan (UFP SAP) for a Remedial Investigation of Perfluorinated Compounds was finalized during the reporting period, and activities were initiated to obtain access to planned drilling locations. Additional vapor intrusion-related activities were performed at Gilda's Club.

The following provides additional detail regarding the quarter's activities.

PUBLIC WATER SUPPLIES

Monitoring: No public water supply (PWS) well sampling was performed by the Navy during this time period. WTMA performs PFC sampling of well WMA-26 on a regular basis, under the ESCA with the Navy.

Treatment/Alternate Water Supply: The Navy is currently in the process of implementing the approved Water Treatment Plan for WTMA public water supply wells WMA-10, WMA-13, and WMA-26, which is being executed through the ESCA with WTMA. In accordance with the plan and the ESCA, these three PWS wells will be provided with carbon treatment.

A temporary carbon treatment system was installed on WMA-26 in July 2014, and this well has been pumped to waste since then for plume containment. The treated waste water is discharged to the WTMA Log College wastewater treatment plant.

Wells WMA-10 and WMA-13 are shut down and will remain so until the PFC treatment systems have been installed. WTMA is in the process of permitting, design, and procurement activities for the treatment systems. Specific activities associated with this work that were performed during the reporting period include:

- Zoning Board approvals were obtained for construction of the treatment units at all three PWS wells
- Procurement of the treatment vessels was initiated - anticipated timeframe of 3-4 months for delivery
- Treatment system construction activities were initiated - anticipated summer 2016 completion

PRIVATE WATER SYSTEMS

Monitoring: Approximately 189 samples have been collected from 115 wells to date. Samples collected during the October - December 2015 reporting period included 13 previously sampled locations that had PFC detections at or above 25% of the PHAL (collected in October). Under the IA, the EPA collected the samples, provided for analysis, validation and reporting of initial results to the private well owners. The private well owner contact information and analytical results are excluded from this public document. Private wells that have analytical results for PFCs (exceedances have been limited to PFOS) at or above the provisional health advisory (PHA) levels were provided

with alternate water supply (bottled water) by the EPA until being hooked up to a permanent alternate supply (see below). To date, no detections of PFOA in private water systems meet or exceed the associated PHA levels.

The next round of private water systems sampling is scheduled for January 2016, and will include the 13 locations sampled during the October 2015 sampling event that had PFC concentrations at or above 25% of the PHAL. During the November Base Closure Team (BCT) meeting it was agreed that quarterly sampling will be continued until concentration trends can be identified.

Treatment/Alternate Water Supply: The ESCA with WTMA provides for public water connections for private water systems in WTMA's service area that have PFCs at or above the PHAL. Thirteen property owners were offered permanent connection to the PWS system. Under the ESCA, WTMA has completed connections of all twelve residential private water systems to the PWS system, with the final two systems connected during this reporting period. The remaining private well is used for industrial purposes and to date the owners have not been receptive to the Navy's offer for a PWS connection. The facility is being supplied with bottled water.

As discussed between the Navy, EPA, and PADEP at the BCT meeting on November 19, the Navy intends to close the residential wells at locations where public connections were made will be abandoned by the Navy. New monitoring wells will be constructed for the remedial investigation.

NAVY PFC INVESTIGATION STATUS

The UFP SAP for a PFC Remedial Investigation (RI) and vapor intrusion investigation was finalized on November 10, 2015. Initial RI implementation-related work during the reporting period consisted primarily of activities related to the negotiation of access agreements for planned drilling locations. In addition, the Navy submitted a vapor intrusion technical memo to EPA and PADEP on October 8, 2015, summarizing the results of VI-related work performed at Gilda's Club. The Navy plans to seal a hand dug well, in the sub-basement, to remove a potential exposure pathway for PFCs in groundwater.

The BCT reviewed the results of the May 2015 geophysical logging and packer sampling of Area C wells OB-11 and OB-13 during the

November meeting. A consensus agreement was reached to convert OB-11 to a multi-level well nest, and to add a shallow extraction well for PFC capture and containment near this location. A work plan is currently being prepared for this work.

The Navy is working with Warminster Township to mitigate potential conflicts between planned athletic fields at Warminster Community Park and PFC RI activities that are planned for the park area.

A report of PFC sampling at extraction wells in Areas A, C, and D from the November 2014 LTM sampling round was submitted in November, 2015. The LTM report for the spring 2015 LTM sampling event (which included PFC sampling/analyses of the extraction wells) is currently under preparation.

UPCOMING ACTIVITIES FOR THE NEXT REPORTING PERIOD

Over the next 3 months, the Navy plans to perform the following activities:

- Continue with implementation of public well activated carbon treatment system installations for wells WMA-10, WMA-13, and WMA-26 through the ESCA with WTMA.
- Continue with periodic sampling of select private water systems (through the IA with EPA) and public water supply wells (through the ESCA with WTMA). Based on consultation with EPA, private wells with PFOS concentrations greater than 25% of the PHA levels will be resampled quarterly to monitor that concentrations remain below the PHA levels.
- Finalize access for monitoring well drilling and begin the associated PFC remedial investigation field work.
- Complete the hand-dug groundwater well sealing work at Gilda's Club.
- Hold a Technical Review Committee (TRC) meeting in late January, which is open to the public.