



November 1, 2017

File No. 14-08015

Tina M. O'Rourke, Business Manager
Horsham Water & Sewer Authority
617 Horsham Road
Horsham, PA 19044

Reference: 14-08015 - CERCLA Time-Critical Removal Action Memoranda

Dear Ms. O'Rourke:

On behalf of the Horsham Water and Sewer Authority (HWSA), we provide this letter with comments based on our review of the following reports:

- *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Time-Critical Removal Action Memorandum, Municipal Connections for Private Drinking Water Wells, NASJRB Willow Grove, PA, dated September 27, 2017.*
- *CERCLA Time-Critical Removal Action Memorandum, Municipal Drinking Water Well Filtration, NASJRB Willow Grove, PA, dated September 27, 2017.*

Previously Reviewed

On July 13, 2017, G&A provided a review of the following document, which pertains to the documents listed above and reviewed below.

- *Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action, NASJRB Willow Grove, PA, prepared by Resolution Consultants, Internal Draft Version 1, dated June 28, 2017.*

The purpose of the Draft June 28, 2017 document was to illustrate potential actions in response to the perfluorinated compound (PFC) contamination related to Naval Air Station Joint Reserve Base of Willow Grove (NASJRB). "Alternative #3" (installation of permanent treatment systems in Horsham supply wells) was recommended. The total cost of Alternative #3 was estimated at \$18,969,000 including the cost of maintaining the systems. The HWSA supply wells included were identified as: Well 10, Well 17, Well 21, Well 26 and Well 40. The June 28 Draft document identified that treatment systems had already been installed at Wells 26 and 40 and temporary treatments systems were currently in place at wells 10, 17 and 21.

Summary of Time-Critical Removal Action Memoranda

The Department of the Navy Base Realignment and Closure (BRAC) has provided two CERCLA compliant Time-Critical Removal Action (TCRA) memoranda. These pertain to a proposed course of actions to respond to PFC contamination in 1) private drinking water wells and 2) HWSA public water supply wells. Both memoranda are dated September 27, 2017, and are reported to comply with CERCLA. Each of the two memoranda include the following information:

- a statement of purpose;
- a thorough site description, including the location and results of previous groundwater sampling, a potential contaminant source (usage of Aqueous Fire Fighting Foam (AFFF) on the NASJRB site), physical location, groundwater flow;
- a statement that indicates the site is currently on the National Priorities List;
- a description of the role of the Navy, HWSA and Horsham Township in the remediation efforts;
- a description of the threats to public health or welfare, including a potential increase of risk if actions are delayed;
- compliance with regulations, including the Federal Safe Drinking Water Act, CERCLA, and the Pennsylvania Safe Drinking Water Act.

G&A has summarized the two TCRA memoranda below.

1) **Municipal Connections for Private Drinking Water Wells**

The Navy has proposed a TCRA to manage contamination in Horsham Township private drinking water wells. The proposed actions include the following:

- Identify locations of private wells with contamination, conduct groundwater sampling and analysis and then validate the data. This began in September of 2014; results must be validated within 90 days of sampling.
- Upon validation of results, the Navy must provide temporary bottled water service. This began in September 2014. The bottled water service must be provided immediately upon validation of sampling results.
- Install a permanent drinking water connection from the property with a contaminated private well to HWSA municipal water service, then close the borehole of the private well where possible. This began in July 2015 and must be completed within 1 year of validated results.
- Monitor private wells with concentrations of PFCs greater than 0.04 parts per billion (ppb) on a quarterly interval; details may be adjusted as needed during monitoring.

The cost of these actions was reported to be \$9,000,000, which includes \$4,000,000 for the connection of private wells to the HWSA system.

2) **Municipal Drinking Water Well Filtration**

The TCRA for Municipal Drinking Water Well Filtration and the estimated cost appears to be in "Alternative #3" derived from the previously reviewed EE/CA report. It appears that the status has changed from "Non-Time Critical" to "Time Critical" due to a limited time frame of less than 6-months until action must be taken, as established by CERCLA. The proposed actions for drinking water well treatment systems are included below.

- Identify HWSA drinking water supply wells above the LHA for PFCs "due to sources at the Site". This began in July 2015.
- Provide and maintain a filtration system to reduce PFC contamination to levels below the LHA levels at the identified wells. This began in July 2015 and will be reevaluated when PFC contaminant levels are below the LHA levels.

The cost of these actions was reported to be \$19,000,000 including maintenance costs over 30 years of \$12,000,000.

Comments

On behalf of HWSA, G&A provides the following comments:

1. The Navy describes groundwater flow in Horsham Township as generally to the North and the West of the NASJRB and notes that surface water also flows south and east to the Pennypack Creek. The Navy provides a map of the private wells, which appear to have been impacted from the NASJRB in all directions around the site. In addition, public supply wells have been affected in all directions around the NASJRB.
2. The Navy has reported that they have performed time-critical actions to eliminate exposure to PFCs in drinking water, and will continue to investigate through their remedial investigation. We note that the Navy's remedial investigation is ongoing, and will further evaluate the extent of contamination and long term solutions. We appreciate the ongoing communication.

Should you have any questions please do not hesitate to contact me.

Sincerely,



Toby J. Kessler, P.G.
Hydrogeologist
Gilmore & Associates, Inc.

TJK/dmk

cc (by email): Willington Lin, P.E., NAVFAC BRAC Program Management Office East
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