



July 7, 2017

File No. 14-08015

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

Reference: Perfluoroalkyl Substances; Phase II Remedial Investigation Workplan

Dear Ms. O'Rourke:

On behalf of the Horsham Water and Sewer Authority (HWSA), we provide this letter with comments based on our review as discussed. G&A reviewed the following report pertaining to the Naval Air Station Joint Reserve Base (NASJRB):

- Phase II Remedial Investigation Workplan (RIWP), Perfluorinated Compound Investigation Activities, NAS JRB Willow Grove, PA, Draft Version 2, prepared by Resolution Consultants for Naval Facilities Engineering Command, Mid-Atlantic (Navy), dated May 4, 2017.

RIWP Overview:

The stated objective of the RIWP is to address data gaps identified in the remedial investigation performed to date. The following summarizes the RIWP:

- Groundwater - The RIWP proposes the addition of seven (7) boreholes with up to three (3) monitoring wells nested within each borehole, assessment of a former water supply well (Well 8 – located near the “Agricultural Pad”), aquifer testing, and sampling.
- Soil - The RIWP proposes collection of soil samples at 16 locations within the former Naval Air Station Joint Reserve Base (NASJRB) site. Soil sampling locations include the “hangar area” in the northeastern portion of the NASJRB site, Site 5 in the southern portion of the NASJRB site, and the area near Building 177 in the southern portion of the NASJRB site (west of Site 5). Soil will be sampled at the surface (0-2 ft depth) and subsurface (below 2 ft depth). Soil borings will extend from the ground surface to the water table and/or the bedrock surface.
- Surface Water and Stream Sediment - The RIWP proposes additional sampling of surface water and sediment in Park Creek, Pennypack Creek and tributaries. The sampling will include some new locations as well as some locations where previously only surface water was sampled. Sampling of outfalls during a rain event is also proposed. The additional surface water and sediment sampling will aid in evaluating the “loading” of contaminants into surface water as well as identifying locations where sediment may be a continuing source of contamination.

- Project Screening Levels - The RIWP notes several revisions to project screening levels (PSLs). The revisions reflect published changes to reference doses made by the EPA in May of 2016, as well as updated methodology. The RIWP notes that the PSLs are intended to be used as targets for the lowest concentrations to be detected during laboratory analysis, as well as initial screening for areas of concern. The PSLs consider direct contact and ingestion of soil and water, as well as ecological concerns. The RIWP indicates that the soil-to-groundwater pathway (i.e. "leaching") will be evaluated in a future work plan.

G&A Comments on the RIWP (provided for consideration by the Navy):

1. The RIWP does not discuss an updated conceptual site model. We continue to recommend that the Navy's investigation consider how contamination may spread from the source material into area drinking water supplies, and how the contamination may ultimately be mitigated at the source.
2. The RIWP reports that screening levels were developed in accordance with EPA methodology. We defer to EPA for review of the calculations of the screening levels.
3. The RIWP does not discuss the surface-water-to-groundwater pathway. In the recent Restoration Advisory Board meeting on May 10, 2017, the Navy indicated that the USGS would be evaluating this pathway. The RIWP does not indicate how the USGS study will be incorporated into the overall Navy investigation.
4. A schedule of October 2017 to complete the proposed work plan was provided at the recent Restoration Advisory Board meeting on May 10, 2017. We appreciate being kept informed of the schedule for proposed investigation and remediation.

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

Sincerely,



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

TJK/sl

cc: Willington Lin, P.E., NAVFAC BRAC Program Management Office East
Michael Shannon, Resolution Consultants (AECOM/Ensafe Joint-Venture)
Lisa Senior, P.G., USGS
Alexander Dyke, P.E., Gilmore & Associates, Inc.
Theresa A. Funk, P.E., Gilmore & Associates, Inc.
Michael Bedard, P.E., Arcadis
William Walker, Horsham Township