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ENGINEERING & CONSULTING SERVICES

March 27, 2015

File No. 14-08015

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

Reference: PFOS and PFOA in Groundwater – Comments to Draft USGS report

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 reports:

- USGS DRAFT Report, "Geophysical Logs, interpreted depths of water-bearing zones, and results of vertical sampling of Horsham Water Authority Well 26 and packer testing of Horsham Water Authority Well 40 – Prepared by U.S. Geological Survey, February 17, 2015 (includes logging summary from draft results prepared by U.S. Geological Survey, November 18, 2014)."

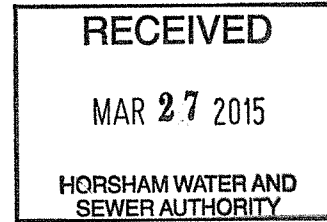
The following provides our comments relevant to the above report.

General

- The study and report are very informative and helpful in gathering useful information relative to hydrogeology, water quality, and factors affecting the design and construction of treatment systems for these wells.
- HWSA plans to resume pumping of Wells 26 and 40 with treatment design specific to these wells, which we understand to be consistent with EPA and Navy direction. Treatment of these wells will provide public water supply, and as per EPA, will help contain the migration of PFCs in groundwater. Consideration of source removal, the ability to contain the contamination, and long term cost will continue to be studied. We understand that the Navy has engaged USGS and AECOM to continue to assist with the study and we appreciate that effort.
- We suggest that the USGS include a statement in the report that the testing of Wells 26 and 40 was performed by Accutest (modified Method 537) and does not report the UCMR sample results.

Well 26

- The draft report makes a comparison between the well sample collected in July 2014 and the sample from the upper portion of the well in December 2014 as being "similar in magnitude." We suggest that the USGS note in the report that the December 2014 analytical results were less



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than the July 2014 analytical results, although close in magnitude.

- The draft report does not discuss the possibility of longer flowpaths to different parts of the Well 26 borehole. The possibility of longer flowpaths was included in the report section for Well 40 and we suggest including this possibility in the text for Well 26.

#### Well 40

- The portion of the well borehole shallower than 89 feet, identified as Zone 1 in the draft report, is reported to have high turbidity. We suggest adding discussion in the report that the portion of the well borehole between the depth of 96 and 117 feet (Zone 2) appears to have intermediate water quality with respect to turbidity and total organic carbon at the time of the December 2014 packer testing.
- The draft report discusses an "estimated land surface altitude of 272 feet above NAVD 88." HWSA records for Well 40 site plans indicate a top of casing elevation of 259.12 ft (datum based on historic survey of sewage treatment plant). We suggest re-checking how the elevation of 272 feet was estimated and revising in the report if necessary.

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

Sincerely,



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

TJK/dmk

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