

March 3, 2016

U.S. Environmental Protection Agency, Region 3
Attn: Ms. Lisa Cunningham, Remedial Project Manager
1650 Arch Street
Mail Code: 3HS11
Philadelphia, PA 19103-2029

Pennsylvania Department of Environmental Protection
Environmental Cleanup Program
Attn: Mr. Colin Wade, Project Officer
2 East Main Street
Norristown, PA 19401

**RE: Response to Comments
Draft Evaluation of Potential Sources of Perfluorinated Compounds
Naval Air Station Joint Reserve Base Willow Grove, Pennsylvania**

Dear Ms. Cunningham and Mr. Wade:

On behalf of the Naval Facilities Engineering Command (NAVFAC), Resolution Consultants is pleased to provide this Response to Comments (RTCs) for comments received regarding the Draft Evaluation of Potential Sources of Perfluorinated Compounds for the Naval Air Station Joint Reserve Base (NAS JRB) Willow Grove, Pennsylvania. The Navy's responses to all comments are as follows. The Pennsylvania Department of Environmental Protection indicated that the agency had no comments on the draft report in their letter dated 29 June 2015.

Comments dated 1 July 2015 from Lisa Cunningham, USEPA:

1. *Please include a list of acronyms after the Table of Contents.*

Navy Response: The Navy will add a list of acronyms.

2. *Please show the four plane crash locations on the figures.*

Navy Response: The Navy will add the plane crashes to all of the figures.

3. *A separate search should be conducted for fire stations, fire training areas and chrome plating manufacturers off the base property.*

Navy Response: The nearest fire station located within the vicinity of NAS JRB Willow Grove is Horsham Township's station located approximately 0.5-mile southeast at 315 Meetinghouse Road. The next nearest stations are Horsham Township's fire station located at 1023 Horsham Road approximately 0.75-mile west-northwest, and Warminster Fire Station 92 located

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approximately 1.25 miles east of NAS JRB Willow Grove. Other local fire station locations are present two or miles from NAS JRB in Warrington and Warminster Townships.

On 4 and 5 November 2014, Resolution contacted Mr. George Fida, Director of Code Enforcement and Fire Marshal for Horsham Township. According to Mr. Fida, the fire department does not and has not historically utilized AFFF for fire training or fighting fires. Typically Class A and other Class B foams are used. AFFF is considered a Class B foam. Some Class B foams are known to contain PFCs. Resolution also contacted Mr. Lee Greenberg who serves as both Horsham Township's Fire Chief and Warrington Township's Emergency Management Services (EMS) to determine the type of Class B foam utilized by the Horsham Fire department, the type of firefighting foams used by Warrington Township, and whether any Horsham or Warrington Township firefighting practices are performed within the vicinity of the NAS JRB. On 5 February 2016, Mr. Greenberg indicated that Horsham Fire Company has used Class B foam on an extremely limited basis in the past. They are in the process of phasing it out and going with a Class A wetting agent for use in the future. To the best of Mr. Greenberg's memory based on his 24 years with Horsham Fire Company, Class B foam has only been used one time; for a vehicle fire at County Line Road and Easton Road. The only Class B foam in Horsham Fire Company's possession is located in the foam tank of Squad 15. Squad 15 is stationed at Station 15-B on Horsham Road. There is no Class B foam stored at the Meetinghouse Road Station. In addition, no live fire training exercises are performed within the township. Mr. Greenberg also added that Class B foam is essentially not used by Warrington Township as well.

Resolution also attempted to contact Mr. Joe Velten, Director of EMS of Warminster Township (which includes the three Warminster Fire Department locations), with respect to the same questions presented to Mr. Greenberg. To date, Resolution has not received a response from Mr. Greenberg or Mr. Velten.

Resolution Consultants obtained an environmental database report from Environmental Data Resources (EDR) and performed a site reconnaissance to determine whether any chrome plating manufacturers had been located within the vicinity of NAS JRB. No chrome plating facilities were identified. Flexible Circuits, which is a copper and lead tin plating facility located at located approximately 0.5-miles northeast of NAS JRB Willow Grove at 222 Valley Road, is identified in the EDR Report on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) No Further Action Planned (CERC-NFRAP) and Historical Landfill (HIST LF) databases. According to the CERC-NFRAP database, a PA was performed at the site in 1988 and the site was subsequently archived. The database listing also indicates a removal assessment was conducted and completed on 8 June 2009. This is likely related to a large fire that occurred at the site on 7 June 2009, which involved response from both the Warrington Fire Company and USEPA. No details are provided in the HIST LF database listing.

However, based on information provided by NAS JRB representatives, this facility reportedly has not used PFC-containing materials on site. The location of this facility has been added to Figure 1 of the PFC Source Study report.

Merit Metals, which is a metal hinge and hardware manufacturing facility is located at 242 Valley Road, adjacent to the north-northeast of Flexible Circuits, is identified in the EDR Report on the CERCLIS, Resource Conservation and Recovery Act Small Quantity Generator (RCRA SOG), Manifest, Act 2 Deed, and Voluntary Cleanup Program (VCP) databases. According to the CERCLIS database, a PA and a site inspection (SI) were performed in 1988 and 1990, respectively, and the site is listed with a priority level of "Higher priority for further assessment". The facility initially filed as a RCRA SGQ in 1980 and has no reported violations. The Manifest database indicates that hazardous waste generated at the site has included various metals, solvents, and ignitable wastes. A voluntary cleanup under the PA Act 2 program was performed at the site for metals, solvents, PCBs and pesticides, which was completed in 2001. It is undetermined whether plating is performed and/or PFC-containing materials are used at this facility; however, based on its location relative to NAS JRB, it is an unlikely source of the PFC impacts in the Navy's area of responsibility. The location of this facility has been added to Figure 1 of the PFC Source Study report.

Based on correspondence with Mr. Greenberg, he is not aware of any local facilities that utilize PFCs in their operations.

4. *Section 2.4, Area Groundwater Users. The reports states: "The highest concentration of PFOS was detected in groundwater collected from monitoring well 10MW20 (10.4ug/L)." However, according to Figure 2, the highest PFOS detection is at 10MW25 (12.1 ug/L).*

Navy Response: The Navy will make the correction in the text.

Comments dated 15 April 2015 from Tom Ames, Horsham Township:

1. *The Source Study map (Figure 1) could be improved by adding additional information. For example, Building 78 is mentioned as a potential source due to spills/releases but it is not shown on the map. Same for Kellett Aircraft. Insure all locations mentioned in the text are shown on the location map. Also it appears that n stormwater outfall (at Horsham Road, south of Norristown Road) is not shown on the map.*

Navy Response: The Navy will make the corrections on the figures.

2. *The July/August 2014 Sample Result are shown on Figure 2. However, the information in the text is not consistent with the information shown on Figure 2. For example, Figure 2 shows "NA" for results of sampling at HWSA Wells #10 and #26, but the text references apparent results. Recommend Figure 2 be revised to be consistent with the text.*

Navy Response: The Navy will make the corrections on the figure.

3. *Section 3.1 contains a section on 'Historical Plane Crashes'. There are at least three incidents which seem to fit into the criteria (i.e. occurred since the 1960's and on or within ½ mile of the base) but are not shown/discussed. There was a 1963 aircraft crash north of Keith Valley Road (Green Hill Day Camp); a March 1976 CH-53A helicopter crash at the end of Privet Road (between Jarrett Road & Herman Road). Also south of the base (the old "Bazzar Store" location) was the site of an August 1961 crash.*

Navy Response: The three plane crashes referenced occurred prior to the reported dates of AFFF use at Willow Grove (1970s). They were not considered as part of our list of historical plane crashes because of that information. However, the paragraph regarding the plane crashes will be reworded to reflect that although AFFF was developed in the 1960s by the Navy; reported use at NAS JRB Willow Grove has been since the 1970s.

Comments dated 30 April 2015 from Toby Kessler, Gilmore and Associates:

1. *The sampling of private wells began with a search of 1-mile around HWSA public supply wells 26 and 40, and was later modified to include a 1-mile search around the NAS JRB property.*

Navy Response: The Navy will clarify the text to reflect the expanded search area.

2. *Figure 1 shows the Pennypack Creek. However, this figure omits the portion of the Creek flowing to the East, where the drainage from the NAS JRB site flows into the Pennypack. The way the map shows the Pennypack it appears that the creek flows to the south, whereas the Creek actually flows to the east.*

Navy Response: The Navy will make the change to the figure.

We appreciate the agencies input and collaboration with the Navy on this project. The Navy will issue a final version of the report once concurrence is received from the EPA on these proposed revisions to the report.

The Resolution Consultants contact for this project is Mike Shannon, CTO Manager (609.720.2032). Please direct formal correspondence to Brian Helland (215.897.4912), and feel free to contact any of us with questions or clarifications.

Distribution:

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