BULLET BACKGROUND PAPER

ON

PFOS/PFOA/PFAS ACTIVITIES AT THE 139TH AIRLIFT WING, MOANG

PURPOSE

To inform military and/or civic leaders of the current status of all PFAS sampling and remediation activities at the 139AW of the Missouri Air National Guard.

BACKGROUND

- Aqueous Film-Forming Foam (AFFF) used for fire suppression at the 139th AW, both in the aircraft hangar and in the fire trucks, contains Per- and Polyfluoroalkyl Susbstances (PFAS) which include Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)

- Military fire department established at Rosecrans Air National Guard base in the mid-1980s, and at that time AFFF was already in use by the Department of Defense

- Prior to the mid-2000s the fire department would test foam equipment and foam concentrations by spraying the foam at various locations on or around the airfield

- After that timeframe, the fire department moved away from testing the foam in the open and started testing equipment and foam concentrations in a more controlled manner

- The following timeline of events describes some of the main activities that have occurred at the 139th in regards to AFFF and PFAS testing in the last few years

  -- April 2013: programming documentation approved for a hangar renovation project that would remove the AFFF system and convert it to High Expansion Foam (HEF)

  -- August 2015: Authority for design issued on hangar renovation project

  -- March 2016: Members from NGB/A4 as well as the contractor Leidos visited the base for a site visit and preliminary assessment for a contract to test the soil and ground water for PFAS

  -- November 2016: Pumped and drained all legacy C8 AFFF from all Fire Dept. trucks and trailers and replaced it with C6 AFFF as directed by National Guard Bureau (NGB)

  -- February 2017: Disposed of all Fire Station C8 legacy AFFF through Defense Logistics Agency

  -- July 2018: Removed C8 legacy AFFF from the Hangar and replaced with C6 AFFF as directed by NGB

-- August 2018: Contractor Leidos performed initial PFOS/PFOA survey. Sampling and monitoring wells were set up at various points at the 139AW and samples were taken

-- February 2019: Contractor draft report was received. The report gave all sample readings. Leidos recommended that further sampling was needed both upgradient and downgradient of the base in order to determine if there was background contamination from outside the installation

-- February 2019: Removed all AFFF from the former AFFF Retention Building 9 and demolished Bldg.9 as part of the Hangar renovation project

-- August 2019: Removed all AFFF at the Hangar as part of a remodeling project and replaced it with High Expansion Foam

-- October 2019: Disposed of AFFF from the Hangar per remodeling contract as part of hangar renovation project

-- December 2019: At this time, there is no more legacy C8 AFFF at the 139AW. The Fire Station carries C6 AFFF in their mobile equipment. It is used for real world emergencies only. Per conversation with Mr. Greg Wills, Restoration Project Manager at NGB/A4 on 3 December 2019, any further sampling and/or remediation efforts are awaiting government funding

CONTRACTOR FINDINGS AND RECOMMENDATIONS

- The following information is from the report provided by the contractor Leidos for the initial PFOS/PFOA survey that was conducted in August of 2018:

-- Findings:

--- PFOS/PFOA compounds were detected in the soil, groundwater, sediment, and surface water above the laboratory detection limits

--- Evaluation of groundwater and surface water results at sample locations adjacent to the Installation boundary indicates PFOS/PFOA compounds are likely migrating offsite given their presence and magnitude at the Installation boundary

-- Recommendations:

--- Additional investigations are recommended for soil and groundwater at each of the eight potential release locations assessed during this site investigation due to detections of PFOS and PFOA compounds in soil, groundwater, surface water, and sediment

---- Further investigation is necessary to determine the nature and extent of PFOS/PFOA contamination due to detectable levels of PFOS/PFOA at the potential release locations

---- Develop an expanded conceptual site model that considers localized groundwater and surface water flow paths to select future sampling locations

---- Complete the delineation of nature and extent of PFAS as part of an expanded site investigation or a remedial investigation

---- Building 302 – Current Fire Station and an offsite Fire Training Area were not investigated during the 2018 site investigation sampling activities. These two areas are recommended for investigation for the presence of PFOS and PFOA during the expanded site investigation or remedial investigation based on potential releases associated with the storage and use of AFFF at Building 302 – Current Fire Station and likely AFFF use at the offsite Former FTA (ERP Site 1).

---- Conduct preliminary site-specific risk assessment calculations in order to identify chemicals of potential concern (COPCs) in every medium and establish preliminary remedial goals for screening purposes.

SUMMARY

Through the use of AFFF on base for testing activities and other potential release locations there is the potential that the 139th has contaminated both the soil and groundwater with PFAS. Several steps have taken place through the years to change the way in which testing is completed as well as removing AFFF from the hangar and changing out the formulation of AFFF that is used in our fire and emergency services vehicles. In addition to these steps, Guard Bureau also awarded a contract to test the soil and groundwater at these potential release locations to determine the concentration of PFAS. The 139th has received the results of that survey and are now awaiting direction from National Guard Bureau for following testing or remediation.

*****NOTE

The 139AW Environmental Office received the 2020 Annual Water Quality Report from Missouri American Water in March 2021. Test results indicated that there was no presence of PFAS contaminants in the St. Joseph community drinking water.