

10 June 2016

Richard P. McCoy, PE
Branch Chief, Environmental Restoration
NGB/A4OR
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

RE: Review Summary for Final PFC PA Site Visit Report at Volk Field Combat Readiness Training Center (CRTC), Wisconsin Air National Guard, Camp Douglas, Wisconsin

Dear Mr. McCoy:

This letter provides a summary of the comparative review of the findings and recommendations of the *Final Preliminary Assessment Report for Perfluorinated Compounds at Volk Field Combat Readiness Training Center (CRTC), Wisconsin Air National Guard, Camp Douglas, Wisconsin* by CH2M Hill dated June 2015.

BACKGROUND

The National Guard Bureau (NGB) has contracted BB&E to perform Preliminary Assessment (PA) activities at multiple ANG Installations to determine probable environmental releases of Perfluorinated Compounds (PFCs). The PA activities have included site visits, research, interviews, and observations at multiple ANG Installations to determine the historic use and/or release of PFCs, specifically from aqueous film forming foam (AFFF). The result is a PA report documenting identified Areas of Concern (AOCs) and providing recommendations for further actions, as necessary. In addition to the PA activities and reports generated by BB&E, the Air Force Civil Engineer Center (AFCEC) contracted the completion of PA activities at several ANG Installations including the Volk Field CRTC, Camp Douglas, Wisconsin.

PURPOSE

The ANG requested that BB&E conduct a review of the conclusions and recommendations of the AFCEC reports to ensure consistency in the nature of the PFC PA reports results. To that end, this letter summarizes the analysis of the following report: *Final Preliminary*



Assessment Report for Perfluorinated Compounds at Volk Field CRTC, Camp Douglas, Wisconsin completed by CH2M Hill in June 2015.

FINDINGS AND RECOMMENDATIONS

Table 1 provides a summary of the AFCEC and BB&E findings and recommendations.

As shown on Table 1, AFCEC recommended further action at eight of the thirteen identified AOCs. One of the eight sites recommended for SI in the *Final PA Report* included the Treated Wastewater Outfall. BB&E did not concur with this recommendation, as the outfall is located off-Base. This review recommended further site investigation at nine of the thirteen identified AOCs from the *Final PA Report*.

In addition to the AOCs identified in the *Final PA Report*, BB&E also considered the following three areas for further assessment: on-site water supply wells, aircraft parking/apron areas, and on-site stormwater outfalls that drain on-site areas where AFFF was used or stored. *The Final PA Report* indicated the presence of three-four on-site water production wells. Their locations were not specified which will have to be verified during the SI stage. The Aircraft Parking Apron was not included as an AOC in the *Final PA Report*. BB&E recommends including the Aircraft Parking Apron/Ramp as an AOC due to the historic presence of aircraft and aircraft operations. It should be noted that specific on-site stormwater outfall locations were not identified in the *Final PA Report*. BB&E reviewed the October 2010 *Final Stormwater Pollution Prevention Plan* (SWPPP) for the Volk Field CRTC, Camp Douglas, Wisconsin. The drainage basins of the Base discharge through a network of ditches which drain toward the north and east. These drainage ditches lead directly to the Lemonweir River. The SWPPP describes the following drainage basins and outfalls that receive drainage from on-site areas where AFFF was historically used or stored:

- Drainage Basin 001: This basin drains a total of 347 acres. Stormwater Outfall #1 is located southeast of the runway.

- Drainage Basin 002: This basin drains a total of 1,038 acres. Stormwater Basin 002 drains to two outfalls, Outfall #2A and Outfall #2B, located to the north and western end of the runway.

As noted in Table 1, BB&E recommends the inclusion of the on-site water production wells, the Aircraft Parking Apron and all three on-site stormwater outfalls, Stormwater Outfall #1, Stormwater Outfall #2A, and Stormwater Outfall #2B as AOCs. The location of the drainage basins and stormwater outfalls are shown on the attached figures from the *2010 Final SWPPP*.

Sincerely,
BB&E, Inc.

Douglas J. Barber
Principal/FSO

Enclosures: Table 1 Preliminary Assessment Report Summary and Findings Comparison
Figures from October 2010 Final Stormwater Pollution Prevention Plan

**TABLE 1 – Preliminary Assessment Report Summary and Findings Comparison –
Volk Field CRTC, Camp Douglas, Wisconsin**

Location	Rationale/Notes	AFCEC Recommendation	Comments
Site 1 - Former FTA	Flat grass-covered area Use as FTA from 1940s to 1980. Unknown amount or frequency of AFFF use. No known engineered containment. Drainage through ground surface.	Initiate SI.	Concur. Focus on soil and groundwater.
Current FTA (Building 630)	Constructed in 1996. Asphalt covered with a concrete berm draining to a vinyl-lined gravel pit. Pit drains to on-site WWTP. Several accidental discharges of AFFF, all contained to pit.	Closeout – NFA.	Initiate SI. Focus on soil and groundwater.
Current Fire Station (Building 510)	Current Fire Station, since 1987. AFFF stored and used in fire response vehicles and containers. Washing of vehicles and AFFF transfer operations. Drains inside Fire Station to onsite WWTP.	Initiate SI.	Concur. Focus on soil and groundwater.
Former Fire Station (Building 517)	Former fire station, demolished in 1987. Used as fire station from 1943. AFFF stored and transferred, vehicles washed. No known releases.	Initiate SI.	Concur. Focus on soil and groundwater.
Site 5 – 1978 KC97 Crash Location	Vegetated, low-lying area. One time response incident using AFFF, discharged to ground (no pavement). North end of site is an emergent freshwater wetland.	Initiate SI.	Concur. Focus on soil and groundwater.
Site 8 – 1964 F84 Crash Location	One-time event. Crash predates AFFF use (1970).	Closeout – NFA.	Concur.

**TABLE 1 – Preliminary Assessment Report Summary and Findings Comparison –
Volk Field CRTC, Camp Douglas, Wisconsin (Continued)**

Location	Rationale	AFCEC Recommendation	Comments
Spray Nozzle Test Area (Primary Location)	Annual spray nozzle testing directly into sandpit. No more than 20 gallons of AFFF per annual event. Left to dissipate into sand.	Initiate SI.	Concur. Focus on soil and groundwater.
Spray Nozzle Test Area (Alternate Location)	Annual spray nozzle testing directly into sandpit. No more than 20 gallons of AFFF per annual event. Left to dissipate into sand.	Initiate SI.	Concur. Focus on soil and groundwater.
Oil-Water Separator (Building 510)	Potential for AFFF within the OWS for Building 510 (floor drains discharge to OWS).	Closeout – NFA.	Initiate SI. Coordinate with SI activities at Current Fire Station (Building 510)
Current WWTP (Building 650)	Built in 1995, includes lift station and three lined settling ponds. Discharge from third settling pond to unnamed tributary via pipe.	Closeout – NFA.	Concur. Location is off-Base.
Treated Wastewater Outfall	Off-Base outfall from on-site WWTP.	Initiate SI.	NFA. Location is off-Base.
Former Primary and Secondary Wastewater Settling Ponds	Unlined settling ponds in use from pre-1970 until 1995. Likely received AFFF discharges from Base.	Initiate SI.	Concur.
Base Supply Building (Building 10)	Storage of approximately 1,800 gallons of AFFF in 5-gallon containers. One < 1-gallon contained spill.	Closeout – NFA.	Concur.
On-site Water Production Wells	On-site water production wells.	Not listed as an AOC.	Sample wells.

**TABLE 1 – Preliminary Assessment Report Summary and Findings Comparison –
Volk Field CRTC, Camp Douglas, Wisconsin (Continued)**

Location	Rationale	AFCEC Recommendation	Comments
Aircraft Parking Apron	Historic presence of aircraft operations.	Not listed as an AOC.	Initiate SI. Focus on soil and groundwater.
Stormwater Outfall #1 ²	Drainage from site areas that released or stored AFFF.	Not listed as an AOC.	Initiate SI. Focus on surface water and sediment.
Stormwater Outfall #2A ²	Drainage from site areas that released or stored AFFF.	Not listed as an AOC.	Initiate SI. Focus on surface water and sediment.
Stormwater Outfall #2B ²	Drainage from site areas that released or stored AFFF.	Not listed as an AOC.	Initiate SI. Focus on surface water and sediment.

1. Table adapted from *Air Force Civil Engineer Center, Final Preliminary Assessment Report for Perfluorinated Compounds at Volk Field CRTC, Camp Douglas, Wisconsin* completed by CH2M Hill in June 2015.
2. On-Site Stormwater Outfalls – the specific location of this outfall was not provided in the CH2MHill Report. BB&E reviewed the *2010 Final SWPPP* to assess which outfalls drain on-site areas where AFFF was historically used or stored.

AFFF = aqueous film forming foam
AOC = area of concern
FTA = fire training area

NFA = no further action
OWS = oil/water separator
PA = preliminary assessment
SI = Site Investigation
WWTP = wastewater treatment plant

Attachment
Figures from October 2010 Final Stormwater Pollution Prevention Plan

GATE #11

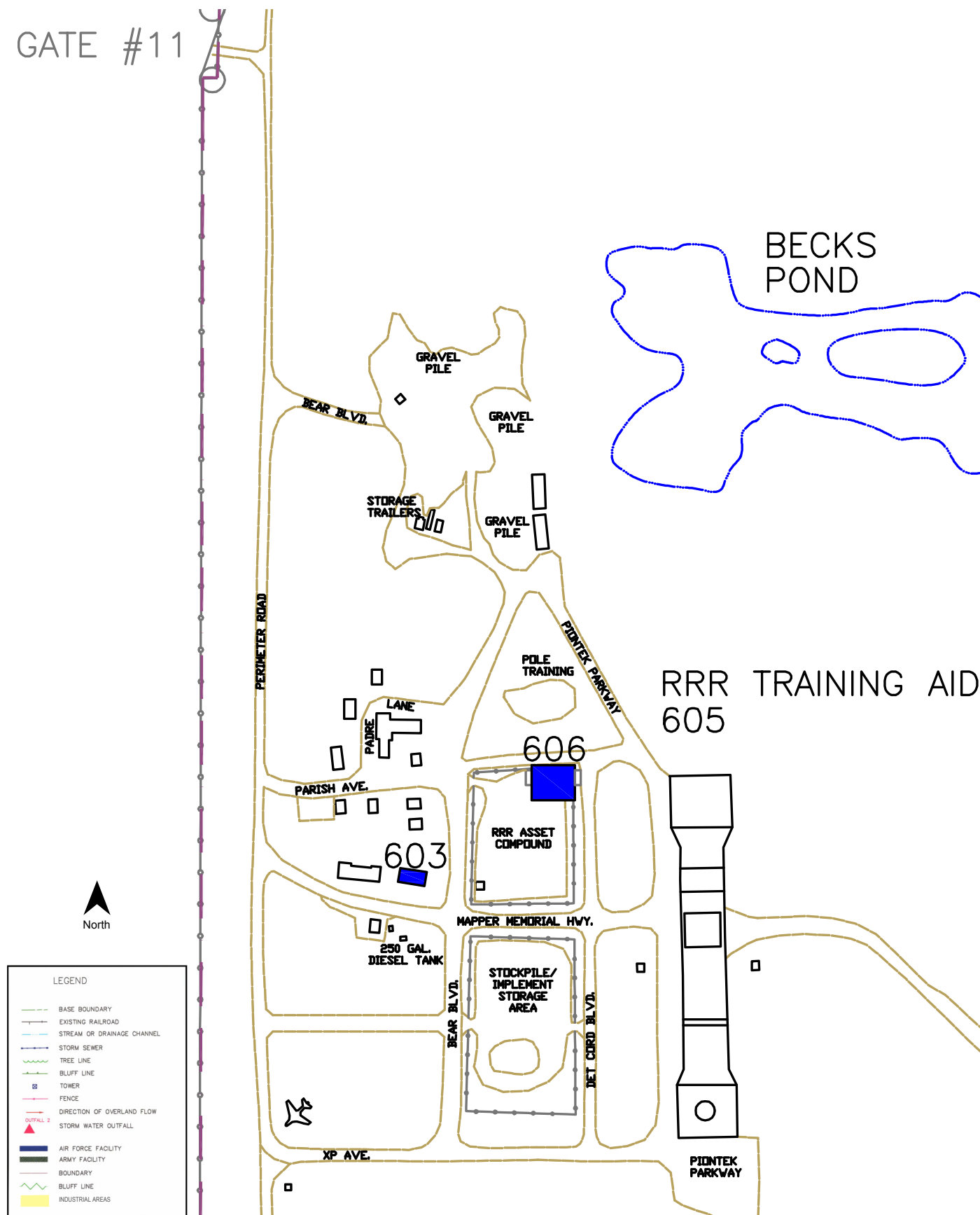


FIGURE 4
Drainage Basin 2
Wisconsin Air National Guard
Volk Field Combat Readiness Training Center