

Air Force Installation & Mission Support Center



Restoration Advisory Board Meeting Former Wurtsmith Air Force Base

February 18, 2026

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Checklist for Virtual Participation



- **If you prefer to join audio by phone, please dial the call-in number and enter the access code to enter the meeting**
- **Phone unmute instructions - *5 to raise your hand, *6 to unmute/mute**
- **RAB Members – mute when not speaking**
- **Use “raise hand” to ask a question or provide a comment**
- **RAB Coordinator will unmute your mic when it’s your turn to speak**
- **To enable closed captions for language support, click “more” – “language and speech” – “turn on live captions”**
- **Use Chat for questions**
- **Contact the RAB Coordinator with access questions wendi.michael@wsp.com**

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Overall Agenda



- **Welcome, RAB roll call, and introduction of senior leaders**
- **RAB member updates**
- **RAB business**
- **RAB member questions**
- **Public comment period**
- **Conclusion – RAB co-chairs’ closing remarks**
- **Adjournment**

(Note: acronym list provided in backup slides)

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RAB Business

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RAB Member Updates

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RAB Member Updates



- **Community**
- **Charter Township of AuSable**
- **Charter Township of Oscoda**
- **Oscoda-Wurtsmith Airport Authority (OWA)**
- **Michigan Environment, Great Lakes, and Energy (EGLE)**
- **Michigan Dept Health & Human Services (MDHHS)**
- **Michigan District Health Department #2 (DHD2)**
- **US Forestry Service (USFS)**
- **Air Force (DAF)**

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DAF Update

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Air Force Installation & Mission Support Center



DAF Update

Former Wurtsmith AFB

**David Iacovone
AFCEC/CZRC
Feb 18, 2026**

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Agenda



- **Organization Updates**
- **Technical Working Group (TWG)**
- **PFAS Remedial Investigation (RI) Data Gap Investigation (DGI)**
- **PFAS Early Actions**
- **Military Munitions Response Program (MMRP)**
- **Legacy Contaminants**
- **Questions**

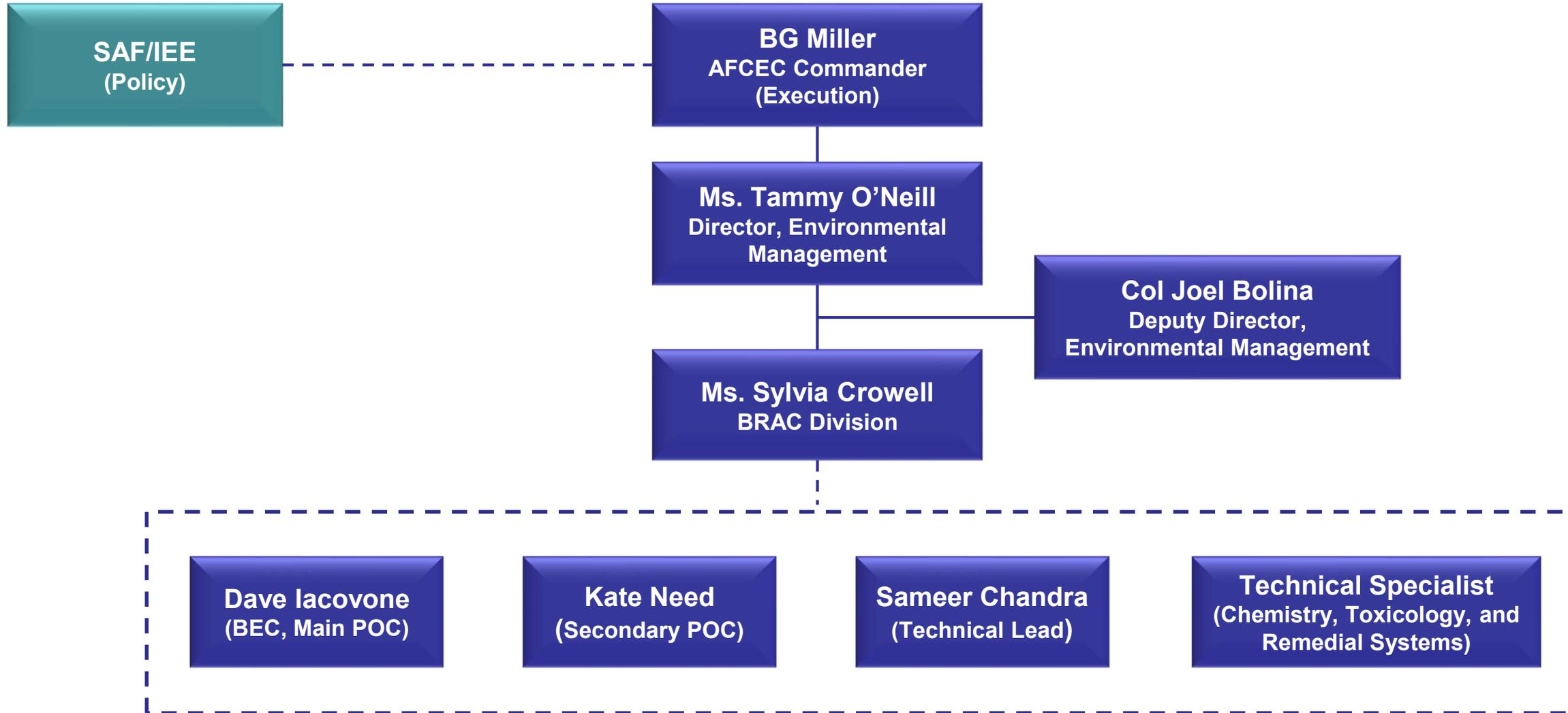


Organization Update

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AFCEC/CZ Wurtsmith Support



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Technical Working Group

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Technical Working Group (TWG)



- **Topic: Data Gap Investigation (DGI) for per- and polyfluoroalkyl substances (PFAS)**
- **Approach:**
 - Divide installation into 4 quadrants containing 23 primary release areas
 - Data gaps for all 23 areas were discussed

■ **TWG Discussion:**

- **18 areas covered in 3 meetings from Aug - Dec 2025**
- **4 areas were discussed Jan 16, 2026**
 - Wastewater Treatment Plant (WWTP) Drying Beds
 - WWTP Lagoons and Disposal Areas
 - Clark's Marsh Area
 - Au Sable River

■ **Next TWG Meeting scheduled Feb 19, 2026**

■ **Agenda**

- DGI wrap up (summarize scope elements discussed to date, review summary table, etc.)
- TWG Charter Discussion

■ **Future potential topics**

- **Comprehensive Cleanup Strategy – Status**
- **Groundwater flow/pathways southeast of Van Etten Lake (VEL)**
- **DRMO & LF030/031 pre-design investigation**

TWG will continue to meet quarterly



PFAS Data Gaps Investigation

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PFAS RI Data Gap Investigation



- **Purpose: Complete delineation of PFAS impacts**
 - **Awarded Sep 17, 2025**
 - **Duration: 5-years**
 - **Field work: Fall 2026 (anticipated)**
 - **Scope:**
 - Sampling quantities for soil, sediment, groundwater, etc.
 - Quantities not tied to specific locations – allows flexibility
 - Refine the conceptual site model

- **Uniform Federal Program-Quality Assurance Project Plan (UFP-QAPP) Addendum underway**
 - **Input from the TWG**
 - **DoD guidance for screening criteria**
 - **DAF receipt of draft est. Apr 2026**
 - **TWG will have opportunity to review**

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PFAS Early Actions

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PFAS Early Actions



Early Action	Date Complete or System Operational
Alternative Water Supply action	2016 (fully complete)
FT002 Soil removal IRA	2021 (fully complete)
FT002 at Clark’s Marsh Pump & Treatment System (PTS) TCRA & IRA	2015 – present; extension in 2022
VEL at Ken Ratliff Park IRA	2022 – present
Central Treatment System 1 (CTS1) TCRA	2018 – present
Mission (MPTS) NTCRA	2019 – present
Alert Aircraft Area (AAA) IRA	2024 – present
DRMO IRA	Pending – pre-design sampling completed Nov 2025 and under DAF review for next steps
LF030/031 IRA	Pending – pre-design sampling completed Nov 2025 and under DAF review for next steps
Three Pipes Source Area (TPSA) IRA	Pending (awarded Sep 17, 2025)
Wastewater Treatment Plant (WWTP) IRA	Pending (awarded Sep 17, 2025)
Three Pipes Stormwater NTCRA	ESA: Township sig Jan 26, 2025; processing DAF sig

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FT002 at Clark's Marsh IRA and VEL at Ken Ratliff Memorial Park IRA



- **Hydraulic Assessment to determine flow rate and pathway of the PFAS migration to optimize the groundwater capture effectiveness**
 - **Multiple types of testing were conducted (see Glossary slide):**
 - Pump tests – determine sustainable groundwater extraction rate/volume
 - Pneumatic slug tests – how easy/hard is it for water to be removed from the subsurface
 - Permeameter – how easy/hard will water naturally move into the subsurface
 - **DAF receipt of Draft Hydraulic Assessment Report est. late Feb 2026**

- **Interim Response Action (IRA) Performance Monitoring**
 - **2025 Fall event completed Sep 9-17, 2025**
 - Groundwater samples collected from 114 monitoring wells
 - DAF receipt of the Performance Monitoring Memorandum est. late Feb 2026
 - **2026 Spring event scheduled March 2026**

DAF undertaking efforts to optimize performance

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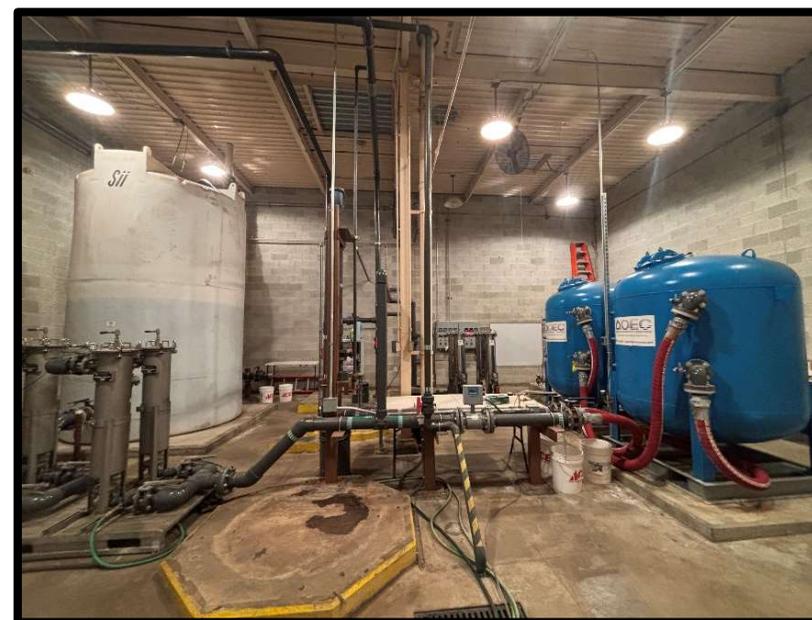
Central Treatment System 1 TCRA and Mission Pump & Treat System NTCRA



- Continues to operate as designed; average uptime over 99%
- Effluent sampling results continue to be below discharge limits
- Granular activated carbon and ion-exchange resin will continue to be replaced as needed based on operational data



Central Treatment System 1



Mission Pump and Treatment System

Treatment systems continue to be effective for removal of PFAS



Alert Aircraft Area IRA



- **Continued operation/maintenance of the groundwater pump and treat system**
 - Bi-weekly and monthly samples collected for PFAS analysis
 - 100% effluent samples met discharge criteria
- **Quarterly sampling**
 - Next quarterly sampling late Feb 2026
 - Validated data shared with RAB
 - Feb-Jul 2025 data shared Sep 2025
 - Aug 25-Jan 26 data shared Feb 2026
- **IRA construction completion report**
 - Est. Fall 2026
 - Will include analytical data and analysis of hydraulic data collected quarterly during first year of operation



Changeout of two 20,000-pound carbon units completed Jan 13-23, 2026

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DRMO and LF030/031 IRAs



■ Pre-design data collection to optimize potential IRA(s) location

- Completed between Jul 14 and Nov 12, 2025
- Hydraulic profiling and Vertical Aquifer Sampling at 49 locations, both on- and off-site
 - Four samples collected from each location
 - Analyzed for PFAS, iron, and manganese

■ Analytical results

- Third-party data validation complete
- DAF is conducting a Critical Process Analysis (CPA) to determine an appropriate path forward
- Results will be discussed in a future TWG Meeting

■ Greensand pilot study (completed Aug 2025)

- Purpose: Analyze influent groundwater to determine removal efficiency of inorganics and potential chlorine load rates to prevent biofouling
- DAF received Greensand Study Technical Memorandum Dec 18, 2025; currently under review



Vertical aquifer sampling (VAS), November 2025

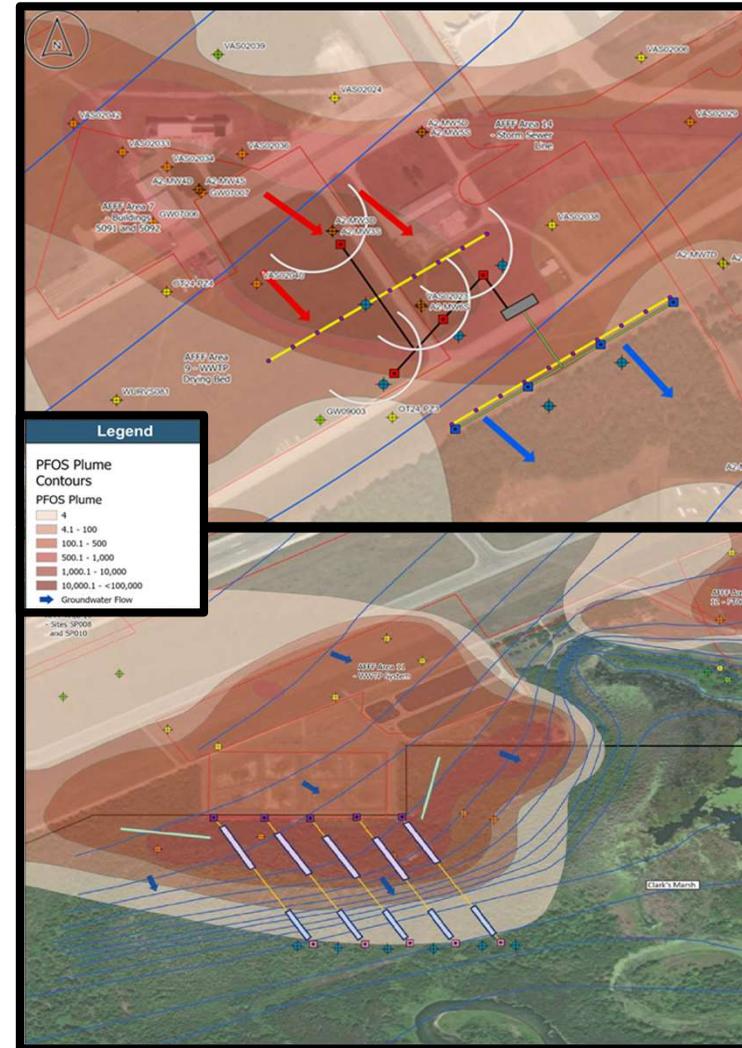
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Three Pipes Ditch Source Area and Wastewater Treatment Plant Area IRAs



- **Purpose:** Remove highest concentrations of PFAS from groundwater in source areas and mitigate off-site migration into the Au Sable River
 - **Award:** Sep 17, 2025
 - **Duration:** 4-years
 - **Field work:** Summer 2026 (anticipated)
 - **Scope includes** treatability studies, pilot tests, and bench-scale tests to optimize the design and effectiveness



Three Pipes Ditch Source Area

IRA: groundwater pumping with foam fractionation and reinjection

Wastewater Treatment Plant Area

IRA: Slurry wall and horizontal reactive treatment (HRX) wells

DAF undertaking efforts to mitigate impacts and protect Au Sable River



Three Pipes Ditch Source Area and Wastewater Treatment Plant Area IRAs



- **Draft Quality Program Plan (QPP)**

- **QPP includes multiple parts**

- Sampling and Analysis Plan in UFP-QAPP / Field Sampling Plan
- Project-Specific Investigation-Derived Waste Management Plan
- Treatability Study work plans for each IRA

- **DAF received Draft QPP on Dec 22, 2025; currently under review**

- **Clark's Marsh Wildlife Area:**

- Working with local, state and federal officials to evaluate potential impacts to the Marsh due to system installation
- Completed wetland delineation survey, threatened/endangered species evaluation, and raptor survey week of Nov 3, 2025
- DAF received survey Nov 21, 2025; currently under review



Three Pipes Stormwater NTCRA



- **Purpose: Cut off PFAS infiltration into stormwater pipe joints**
- **Engineering Evaluation and Cost Analysis (EE/CA) is underway**
 - **Required by CERCLA for NTCRAs**
- **DAF entering Environmental Services Agreement (ESA) with Oscoda Township**
 - **Township will complete effort with DAF funding**
 - **ESA terms negotiated with Oscoda Township**
 - **Board approved on Jan 26, 2026**
 - **Processing for DAF signature (est. mid-March 2026)**

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Military Munitions Response Program

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Military Munitions Response Program



- RI for 2 MMRP sites
 - OT049 – Demolition and Burn Facility (6.5 acres)
 - XU402 – Grenade Launch Area Munition Response Site (20.0 acres)



Work team mobilized to the site Oct 2, 2025, to begin clearing activities

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Military Munitions Response Program



- **Purpose: Determine nature and extent of munitions related materials and conduct removal**
 - **Award: Aug 31, 2022**
 - **Duration: 5-years**
 - **Scope: Includes survey for 26.5-acres and artifact removal**

- **Field Work:**
 - **Fall 2025 Mobilization**
 - Professional land surveyor Boundary and Grid Stakeout
 - Munitions of explosives of concern (MEC) surface clearance
 - Removal of non-munitions related debris (NMRD) – tires, concrete, rubble, metal trash and debris
 - Removal of obstacles for planned Digital Geophysical Mapping
 - Complete brush/tree clearing
 - Complete Quality Assurance and Quality Control seeding
 - **Spring 2026 mobilization to complete removal of subsurface artifacts**

Clearance of former munitions areas provides protectiveness



Legacy Contaminants

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Legacy Contaminants



■ Vapor intrusion (VI) RI

■ Purpose: Determine potential impacts of volatile chemicals migrating from contaminated soil/groundwater

- Award: Sep 2022
- Duration: 5-years
- Scope: Passive soil gas sampling and flux meters at multiple locations

■ Field work:

- Obtained access agreement with YMCA Sep 20, 2025
- 32 passive soil gas samplers retrieved Nov 4, 2025
- 2 passive flux meters retrieved Oct 15, 2025
- DAF received the YMCA Phase 1 Passive Soil Gas Data Jan 6, 2026; under review

■ Next step:

- Document the results of Phase 2 soil and groundwater sample results at Sites WP004, OT024, LF030/031, SS057, ST069, and SS072
- Propose Phase 3 activities at the sites that warrant additional investigation (sites LF030/031, SS057, and SS072)
- QAPP Addendum 5 under development

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Legacy Contaminants



■ Annual Groundwater Sampling Event

- Collected from 109 monitoring wells associated with 11 sites (Sep 2 – 23, 2025)
- Measured depth to groundwater at 557 monitoring wells/extraction wells (EW) (Oct 20 – 23, 2025)
- DAF receipt of 2025 Systems and LTM RA-O Reports est. Apr 2026

■ Annual land use control (LUC) Inspection

- Inspections and interviews completed in Jan 2026
- DAF receipt of LUC Summary Report est. Feb 2026

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Legacy Contaminants



- **11 Extraction Well (EW) removals and 7 vault demolitions**

- **Part of the Arrow Street, Benzene Plant, and Mission Street treatment systems**

- Used to extract groundwater from Sites SS017/021, SS006, and OT024 for legacy contaminant (i.e., TCE, Benzene, etc.) treatment
- 7 extraction wells were housed in underground concrete vaults

- **Shut down between 2004 - 2014**

- **Rationale for removal**

- EW not needed to treat legacy contaminants based on analytical data
- Repurposing for PFAS treatment not viable due to locations, depth, etc.
- Remove unnecessary hazards and encumbrances from private and commercial properties



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Legacy Contaminants



- **Extraction well removal and vault demolition (cont.)**
 - **Field work**
 - Michigan-licensed drilling contractor removed 11 EWs following state regulations (Oct 27, 2025 - Nov 14, 2025)
 - Demolished 7 reinforced concrete vaults (Nov 2025)
 - **DAF receipt of Summary Report Jan 27, 2026; under review**



Concrete debris and associated materials were removed and transported for off-site disposal

DAF removed obstructions from private properties



Next RAB

May 20, 2026

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Supplemental Information

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Acronyms



AAA	Alert Aircraft Area	NMRD	Non-munitions related debris
ACM	Asbestos containing material	O&M	Operation and maintenance
AFB	Air Force Base	PFAS	Per- and poly fluoroalkyl substances
AFCEC	Air Force Civil Engineer Center	PFM	Passive Flux Meter
BECOS	BRAC Environmental Construction Optimization Services	PLS	Professional land surveyor
BRAC	Base Realignment and Closure	PP	Proposed Plan
CPA	Critical Process Analysis	PSG	Passive Soil Gas
CTI	CTI and Associates	PTS	pump and treat system
CZOM	Environmental Operation Midwest	QA	Quality Assurance
DGI	Data Gap Investigation	QAPP	Quality Assurance Project Plan
DGM	Digital Geophysical Mapping	QC	Quality Control
DRMO	Defense Reutilization and Marketing Office	RAB	Restoration Advisory Board
FS	Feasibility Study	RA-O	Remedial Action Operation
HRX	Horizontal reactive treatment	RI	Remedial Investigation
IRA	Interim Remedial Action	ROD	Record of Decision
IRP	Installation Restoration Program	TPSA	Three Pipes Ditch Source Area
IVS	Instrument Verification Strip	TWG	Technical Working Group
JV	Joint Venture	UFP	Uniform Federal Policy
LATA	Los Alamos Technical Associates	USACE	United States Army Corps of Engineers
LF	Landfill	VAS	Vertical aquifer sampling
LUC	Land use control	VEL	Van Etten Lake
MEC	Munitions of explosive concern	VI	Vapor Intrusion
MMRP	Military Munitions Response Program	WWTP	Wastewater Treatment Plant

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Glossary



- **Permeability (k)** is a measure of a porous material's ability to transmit a fluid, depending only on the properties of the medium like pore size and tortuosity.
- **Hydraulic conductivity (K)** is a property of porous materials, such as soil and rock, that describes the ease with which a fluid (usually water) can move through the pore spaces or fracture networks.
- **Passive soil gas (PSG) sampler** a device, often a sealed vial with absorbent material, placed in the ground to collect soil vapors over time (days to weeks) without pumping, using natural pressure gradients to capture volatile chemicals migrating from contaminated soil/groundwater
- **Passive flux meter (PFM)** for vapor intrusion is a device, usually a nylon tube with sorbents, placed in the ground (well screen or borehole) that passively collects contaminants and tracers from soil gas or groundwater over time to measure the rate (flux) of contaminants movement.



Resources



- DoD policies on PFAS can be found on the PFAS Task Force website <https://www.acq.osd.mil/eie/er/ecc/pfas/tf/policies.html>
 - *Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program, Jan 17, 2025*
- Administrative Record - <https://ar.cce.af.mil/>
- RAB Website - <https://www.afcec.af.mil/What-We-Do/BRAC/Restoration-Advisory-Boards/>

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RAB Member Questions

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Public Comment Period

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RAB Co-Chairs' Closing Remarks

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