

# **FRANKFORT/BOONE CENTER**

**Army Cleanup Program**

**Installation Action Plan**

2023

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## ACRONYMS

| Acronym | Definition   |
|---------|--|
| AASF    | Army Aviation Support Facility   |
| AEDB-R  | Army Environmental Database - Restoration                                    |
| AFFF    | Aqueous Film Forming Foam  |
| AOI     | Area of Interest   |
| CC      | Compliance-Related Cleanup   |
| CERCLA  | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD      | Decision Document  |
| DERP    | Defense Environmental Restoration Program                                    |
| DoD     | Department of Defense  |
| ENV     | Environmental  |
| FS      | Feasibility Study  |
| HQAES   | Headquarters Army Environmental System                                       |
| IR      | Installation Restoration   |
| IRA     | Interim Remedial Action  |
| KYARNG  | Kentucky Army National Guard   |
| LTM     | Long-Term Management   |
| LUC     | Land Use Control   |
| µg/kg   | micrograms/kilogram  |
| MRSP    | Munitions Response Site Prioritization Protocol                              |
| NGC     | National Guard Center  |
| ng/L    | nanograms/Liter  |
| PA      | Preliminary Assessment   |
| PFAS    | Per- and Polyfluoroalkyl Substances  |
| PFHxS   | Perfluorohexanesulfonic acid   |
| PFNA    | Perfluorononanoic acid   |
| PFOA    | Perfluorooctanoic acid   |
| PFOS    | Perfluorooctanesulfonic acid   |
| RAB     | Restoration Advisory Board   |

| Acronym | Definition                                    |
|---------|---|
| RA(C)   | Remedial Action (Construction)                |
| RA(O)   | Remedial Action (Operations)                  |
| RC      | Response Complete                             |
| RCRA    | Resource Conservation and Recovery Act        |
| RD      | Remedial Design                               |
| RI      | Remedial Investigation                        |
| RIP     | Remedy-In-Place                               |
| ROD     | Record of Decision                            |
| RRSE    | Relative Risk Site Evaluation                 |
| SI      | Site Inspection                               |
| SL      | Screening Level                               |
| TAPP    | Technical Assistance for Public Participation |
| TRC     | Technical Review Committee                    |
| UST     | Underground Storage Tank                      |
| WBS     | Work Breakdown Structure                      |

## PHASE TRANSLATION TABLE

| HQAES Phase ID | CERCLA Phase                                      | RCRA Phase  | RCRA UST Phase                         |
|----------------|---|---|--|
| .01            | Preliminary Assessment (PA)                       | RCRA Facility Assessment (RFA)                                  | Initial Site Characterization (ISC)    |
| .02            | Site Inspection (SI)                              | Confirmation Sampling (CS)                                      | Investigation (INV)                    |
| .03            | Remedial Investigation/ Feasibility Study (RI/FS) | RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) | Corrective Action Plan (CAP)           |
| .04            | Remedial Design (RD)                              | Design (DES)  | Design (DES)                           |
| .05            | Interim Remedial Action (IRA)                     | Interim Measure (IM)  | Interim Remedial Action (IRA)          |
| .06            | Remedial Action (Construction) (RA(C))            | Corrective Measures Implementation (Construction) (CMI(C))      | Implementation (Construction) (IMP(C)) |
| .07            | Remedial Action (Operation) (RA(O))               | Corrective Measures Implementation (Operation) (CMI(O))         | Implementation (Operation) (IMP(O))    |
| .08            | Long-Term Management (LTM)                        | Long-Term Management (LTM)                                      | Long-Term Management (LTM)             |

## SITE ALIAS LIST

| WBS Element | AEDB-R Reference                         | Site Alias |
|-------------|--|------------|
| 3491A.1002  | KY2020-01-P_BOONE NGC AASF PFAS CONTAMIN | --         |

# FRANKFORT/BOONE CENTER

INSTALLATION RESTORATION PROGRAM SITES

# KY2020-01-P\_BOONE NGC AASF PFAS CONTAMIN

**HQAES ID:** 3491A.1002

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/15/2027

**RC Date:** 9/15/2027

**RC Reason:** Not assigned

**Program:** ENV Restoration, Army

**Subprogram:** IR

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 8/11/2017    | 5/1/2020   |
| <b>SI</b>     | 8/17/2020    | 4/15/2023  |
| <b>R/FS</b>   | 9/30/2022    | 9/15/2027  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

## Site Narrative

The Boone National Guard Center (NGC) is located in a semi-urban setting approximately 1.5 miles west of the State Capital Building in Frankfort, Kentucky. It was established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining Capital City Airport. The facility consists of 373.6 acres and approximately 71 buildings of various sizes and functions (e.g., aviation, training, logistical, administrative, and maintenance support). The facility is the headquarters for the Kentucky National Guard and is surrounded by a mixture of developed areas and open land in a natural state. The entire property is fenced with personnel and vehicular access restricted to two, manned entrance gates. The former Army Aviation Support Facility (AASF) at Boone NGC is located on the northern edge of the property. It consists of a 31,184-square foot (ft) building constructed in 1972; an aircraft maintenance hangar, comprising 10,560 square ft, was added in 1997. Other facilities serving the AASF include a 985-square ft covered storage area, fuel storage and dispensing facilities, storage, parking aprons, and a landing pad. The Kentucky Army National Guard (KYARNG) aviation unit's Readiness Center is also located at Boone NGC. A New AASF was completed in 2015 to increase hangar space and accommodate all aircraft types operated and maintained by the KYARNG. The New AASF is located on approximately 30 acres of land in the western area of the Site. When the New AASF was completed, all aviation activities and assets were transferred to the New AASF. The Old AASF was converted into an Armory Building.

A Preliminary Assessment (PA) was completed at Boone NGC AASF to assess potential per- and poly-fluoroalkyl substances (PFAS) release areas and exposure pathways to receptors. Three Areas of Interest (AOIs) related to potential PFAS releases were identified at the Boone NGC during the PA. Based on documented potential aqueous film forming foam (AFFF) releases at these AOIs, there is potential for exposure to PFAS contamination in surface soils to site and construction workers, and recreational users/trespassers, and in subsurface soils to site and construction workers via inhalation and ingestion. There is also the potential for exposure to PFAS contamination in surface water and sediment for all receptors via ingestion.



The Site Inspection (SI) was finalized April 2023 and recommended all three AOIs proceed to Remedial Investigation (RI). The SI assessed soil, groundwater and surface water media. At AOI 1 (Old AASF), perfluorooctanesulfonic acid (PFOS) was detected in surface soil above the screening level (SL) of 13 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) with a concentration of 14  $\mu\text{g}/\text{kg}$ . Samples collected from surfacing groundwater (seep) downgradient of AOI 1, within AOI 3 (Unnamed Tributary), exceeded SLs for Perfluorohexanesulfonic acid (PFHxS; SL of 39 nanograms per liter [ $\text{ng}/\text{L}$ ]), Perfluorononanoic acid (PFNA; SL of 6  $\text{ng}/\text{L}$ ), Perfluorooctanoic acid (PFOA; SL of 6  $\text{ng}/\text{L}$ ), and PFOS (SL of 4  $\text{ng}/\text{L}$ ) at concentrations of 480  $\text{ng}/\text{L}$ , 11  $\text{ng}/\text{L}$ , 35  $\text{ng}/\text{L}$ , and 630  $\text{ng}/\text{L}$ , respectively. AOI 1, as the source area, was recommended to proceed to RI, along with AOI 3. Additionally, groundwater at AOI 2 (New AASF) exceeded the SL for PFOA (6  $\text{ng}/\text{L}$ ) at an observed concentration of 6.4  $\text{ng}/\text{L}$ . AOI 2 was also recommended for RI.

The contract for the RI was awarded at the end of FY22 and is currently underway. The subject site was tracked as 3491A.1001 under the Compliance-related Cleanup (CC) program. In June 2022, the site became Defense Environmental Restoration Program (DERP)-eligible.

**Cleanup/Exit Strategy** The RI is funded and underway. Feasibility Study (FS) costs will require future funding. Further actions cannot be determined until after the RI/FS is complete.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 3491A.1001 | CCKY2020-01-P_BOONE NGC AASF PFAS CONTAM | 6/16/2022          |

## COMMUNITY INVOLVEMENT

|  |   |
|--|---|
| <b>Technical Review Committee (TRC) Establishment Date:</b>          | N/A   |
| <b>Community Involvement Plan (Date Published):</b>                  | TBD   |
| <b>Restoration Advisory Board (RAB) Establishment Date:</b>          | N/A   |
| <b>RAB Adjournment Date:</b>   | N/A   |
| <b>RAB Adjournment Reason:</b>                                       | N/A   |
| <b>Additional Community Involvement:</b>                             | Community Involvement Plan, Administrative Record and Information Repository will all be developed as the project progresses. |
| <b>Administrative Record is located at:</b>                          | TBD   |
| <b>Information Repository is located at:</b>                         | TBD   |
| <b>Current Technical Assistance for Public Participation (TAPP):</b> | N/A   |
| <b>TAPP Title:</b>   | N/A   |
| <b>Potential TAPP:</b>   | N/A   |

## **FIVE-YEAR / PERIODIC REVIEW SUMMARY**

### **Review Summary Table**

None

### **ROD/DDs associated with the last Five-Year/Periodic Review**

None

### **Results, Actions & Plans**

None

## LAND USE CONTROLS (LUC) SUMMARY

None

# **W.H. FORD REGIONAL TNG CTR**

**Army Cleanup Program**

**Installation Action Plan**

2023

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## ACRONYMS

| Acronym            | Definition   |
|--------------------|--|
| AEDB-R             | Army Environmental Database - Restoration                                    |
| AOI                | Area of Interest   |
| CC                 | Compliance-Related Cleanup   |
| CERCLA             | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD                 | Decision Document  |
| DERP               | Defense Environmental Restoration Program                                    |
| DoD                | Department of Defense  |
| ENV                | Environmental  |
| FS                 | Feasibility Study  |
| HQAES              | Headquarters Army Environmental System                                       |
| IR                 | Installation Restoration   |
| IRA                | Interim Remedial Action  |
| LTM                | Long-Term Management   |
| LUC                | Land Use Control   |
| MRSPP              | Munitions Response Site Prioritization Protocol                              |
| NGC                | National Guard Center  |
| PA                 | Preliminary Assessment   |
| PFAS               | Per- and Polyfluoroalkyl Substances  |
| PFBA               | Perfluorobutanoic acid   |
| PFH <sub>x</sub> S | Perfluorohexanesulfonic acid   |
| PFNA               | Perfluorononanoic acid   |
| PFOA               | Perfluorooctanoic acid   |
| PFOS               | Perfluorooctanesulfonic acid   |
| RAB                | Restoration Advisory Board   |
| RA(C)              | Remedial Action (Construction)   |
| RA(O)              | Remedial Action (Operations)   |
| RC                 | Response Complete  |
| RCRA               | Resource Conservation and Recovery Act                                       |



| Acronym | Definition                                    |
|---------|---|
| RD      | Remedial Design                               |
| RI      | Remedial Investigation                        |
| RIP     | Remedy-In-Place                               |
| RTC     | Regional Training Center                      |
| ROD     | Record of Decision                            |
| RRSE    | Relative Risk Site Evaluation                 |
| SI      | Site Inspection                               |
| SL      | Screening Level                               |
| TAPP    | Technical Assistance for Public Participation |
| TRC     | Technical Review Committee                    |
| UST     | Underground Storage Tank                      |
| WBS     | Work Breakdown Structure                      |

## PHASE TRANSLATION TABLE

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| .03            | Remedial Investigation/ Feasibility Study (RI/FS) | RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) | Corrective Action Plan (CAP)           |
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| .06            | Remedial Action (Construction) (RA(C))            | Corrective Measures Implementation (Construction) (CMI(C))      | Implementation (Construction) (IMP(C)) |
| .07            | Remedial Action (Operation) (RA(O))               | Corrective Measures Implementation (Operation) (CMI(O))         | Implementation (Operation) (IMP(O))    |
| .08            | Long-Term Management (LTM)                        | Long-Term Management (LTM)                                      | Long-Term Management (LTM)             |

## SITE ALIAS LIST

| HQAES ID   | AEDB-R Reference                         | Site Alias |
|------------|--|------------|
| 3493A.1002 | KY2020-02-P_WH FORD REG TC PFAS CONTAMIN | --         |

# **W.H. FORD REGIONAL TNG CTR**

**INSTALLATION RESTORATION PROGRAM SITES**

## KY2020-02-P\_WH FORD REG TC PFAS CONTAMIN

**HQAES ID:** 3493A.1002

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/15/2037

**RC Date:** 9/15/2037

**RC Reason:** Not assigned

**Program:** ENV Restoration, Army

**Subprogram:** IR

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 8/11/2017    | 1/17/2019  |
| <b>SI</b>     | 8/17/2020    | 7/12/2023  |
| <b>RI/FS</b>  | 9/15/2030    | 9/15/2037  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

A Preliminary Assessment (PA) was completed at Wendell H. Ford Regional Training Center (RTC) to assess potential per- and poly-fluoroalkyl substances (PFAS) release areas and exposure pathways to receptors. One Area of Interest (AOI) related to potential PFAS releases was identified at the W.H. Ford RTC during the PA. Based on the potential for aqueous film forming foam releases at AOI 1 Fire Station, there is potential for exposure to PFAS contamination in surface soils to site and construction workers, and trespassers, and in subsurface soils to site and construction workers via inhalation and ingestion. There is also the potential for exposure to PFAS contamination in surface water and sediment for site and construction workers.

A Site Inspection (SI) was conducted and the final SI report was issued in July 2023. The SI indicated perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorobutanoic acid (PFBA), Perfluorohexanesulfonic acid (PFHxS), and Perfluorononanoic acid (PFNA) were detected in groundwater at AOI 1, with PFOA and PFOS detected at concentrations above their respective screening levels (SLs). The groundwater analytical results indicate that a remedial investigation (RI) is warranted for AOI 1.

The subject site was tracked as 3493A.1001 under the Compliance-related Cleanup (CC) program. In FY23, this site was determined to be eligible under the Defense Environmental Restoration Program (DERP) and the RI/Feasibility Study (FS) will proceed under DERP.

**Cleanup/Exit Strategy** A Remedial Investigation RI/FS will be completed at this site. Once the RI/FS is completed, future actions will be evaluated.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 3493A.1001 | CCKY2020-02-P_WH FORD REG TC PFAS CONTAM | 7/12/2023          |

## COMMUNITY INVOLVEMENT

|  |   |
|--|---|
| <b>Technical Review Committee (TRC) Establishment Date:</b>          | N/A   |
| <b>Community Involvement Plan (Date Published):</b>                  | TBD   |
| <b>Restoration Advisory Board (RAB) Establishment Date:</b>          | N/A   |
| <b>RAB Adjournment Date:</b>   | N/A   |
| <b>RAB Adjournment Reason:</b>                                       | N/A   |
| <b>Additional Community Involvement:</b>                             | Community Involvement Plan, Administrative Record and Information Repository will all be developed as the project progresses. |
| <b>Administrative Record is located at:</b>                          | TBD   |
| <b>Information Repository is located at:</b>                         | TBD   |
| <b>Current Technical Assistance for Public Participation (TAPP):</b> | N/A   |
| <b>TAPP Title:</b>   | N/A   |
| <b>Potential TAPP:</b>   | N/A   |

## **FIVE-YEAR / PERIODIC REVIEW SUMMARY**

### **Review Summary Table**

None

### **ROD/DDs associated with the last Five-Year/Periodic Review**

None

### **Results, Actions & Plans**

None



## LAND USE CONTROLS (LUC) SUMMARY

None