

# **JFHQ MI ARNG**

## **Army Cleanup Program**

### **Installation Action Plan**

2023

# CONTENTS

|   |    |
|---|----|
| Acronyms.....   | 1  |
| Phase Translation Table.....                                    | 3  |
| Site Alias List.....  | 4  |
| Compliance Cleanup Sites.....                                   | 5  |
| CC_MIA15-001-R-01_NDNODS ALMA ARMORY SAR.....                   | 6  |
| CC_MIHQ-002-R-01_NDNODS_CARPENTER DAM RIFLE RANGE.....          | 7  |
| CC_MIHQ-004-R-01_NDNODS_FLAT ROCK TRAINING AREA.....            | 8  |
| CC_MIHQ-009-R-01_NDNODS_ISLAND LAKE RIFLE RANGE.....            | 9  |
| CC_MIHQ-013-R-01_NDNODS_MANISTIQUE RIFLE RANGE.....             | 10 |
| CC_MIHQ-015-R-01_NDNODS National Mine Biathlon Range.....       | 11 |
| Site Closeout Summary.....                                      | 12 |
| Community Involvement.....                                      | 13 |
| Five-Year / Periodic Review Summary.....                        | 14 |
| Review Summary Table.....                                       | 14 |
| ROD/DDs associated with the last Five-Year/Periodic Review..... | 14 |
| Results, Actions & Plans.....                                   | 14 |
| Land Use Controls (LUC) Summary.....                            | 15 |

## ACRONYMS

| Acronym | Definition   |
|---------|--|
| AEDB-R  | Army Environmental Database - Restoration                                    |
| CC      | Compliance-Related Cleanup   |
| CERCLA  | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD      | Decision Document  |
| DERP    | Defense Environmental Restoration Program                                    |
| 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   |
| MC      | Munitions Constituents   |
| MDEQ    | Michigan Department of Environmental Quality                                 |
| MIARNG  | Michigan Army National Guard   |
| MR      | Munitions Response   |
| MRSPP   | Munitions Response Site Prioritization Protocol                              |
| NDNODS  | Non-DoD Owned, Non-Operational Defense Sites                                 |
| NFA     | No Further Action  |
| PA      | Preliminary Assessment   |
| 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   |

| Acronym | Definition                    |
|---------|-------------------------------|
| ROE     | Right of Entry                |
| RRSE    | Relative Risk Site Evaluation |
| SI      | Site Inspection               |
| 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 |
|-------------|---|------------|
| 6896A.1018  | CC_MIA15-001-R-01_NDNODS ALMA ARMORY SAR    | RRMIA15001 |
| 6896A.1019  | CC_MIHQ-002-R-01_NDNODS_CARPENTER DAM RI    | RRMI000002 |
| 6896A.1020  | CC_MIHQ-004-R-01_NDNODS_FLAT ROCK TRAINI    | RRMI000004 |
| 6896A.1022  | CC_MIHQ-009-R-01_NDNODS_ISLAND LAKE RIFL    | RRMI000009 |
| 6896A.1021  | CC_MIHQ-005-R-01_NDNODS_GRAND HAVEN RIFL    | RRMI000005 |
| 6896A.1023  | CC_MIHQ-013-R-01_NDNODS_MANISTIQUE RIFLE    | RRMI000013 |
| 6896A.1024  | CC_MIHQ-015-R-01_NDNODS_National Mine Biath | RRMI000015 |

# JFHQ MI ARNG

## COMPLIANCE CLEANUP SITES

## CC\_MIA15-001-R-01\_NDNODS ALMA ARMORY SAR

**HQAES ID:** 6896A.1018

**Alias:** RRMIA15001

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 12/31/2037

**RC Date:** 12/31/2037

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/15/2007    | 9/15/2009  |
| <b>SI</b>     | 7/15/2010    | 9/15/2012  |
| <b>RI/FS</b>  | 1/1/2029     | 12/31/2033 |
| <b>RD</b>     | 1/1/2034     | 1/31/2034  |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | 1/1/2035     | 12/31/2037 |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

The 0.59-acre Alma Armory Small Arms Range is located at 710 South State Street, Alma, Michigan in Gratiot County. The site consists of a single MRS located on armory property directly south of the armory's parking and vehicle storage areas. The former small arms range was used for qualification and combat pistol training by both the Michigan Army National Guard (MIARNG) and local law enforcement agencies.

A Site Inspection (SI) was conducted and the final report issued in completed in June 2012. Lead and antimony were detected in soil samples at concentrations above applicable human health screening levels. Two explosives, nitroglycerine and 2,4-dinitrotoluene were also detected, but at concentrations below screening levels. Because impacts to human health via exposure to antimony and lead cannot be ruled out, the SI recommended further investigation in a remedial investigation/feasibility study (RI/FS) for munitions constituents (MC).

Defense Environmental Restoration Program (DERP) funding was used to complete work through the SI at this site. Non-DoD Owned, Non-Operational Defense Sites (NDNODS) moving forward with the RI/FS phase are reprogrammed into Compliance-related Cleanup (CC).

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.



# CC\_MIHQ-002-R-01\_NDNODS\_CARPENTER DAM RIFLE RANGE

**HQAES ID:** 6896A.1019

**Alias:** RRM1000002

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 12/31/2035

**RC Date:** 12/31/2035

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/30/2007    | 9/30/2009  |
| <b>SI</b>     | 7/31/2010    | 9/30/2012  |
| <b>RI/FS</b>  | 1/1/2029     | 12/31/2033 |
| <b>RD</b>     | 1/1/2034     | 1/31/2034  |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | 1/1/2034     | 12/31/2035 |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

## Site Narrative

The former 2.5-acre Carpenter Dam Rifle Range is located east of State Road 440 and south of West Tennant Road, Manistique, Schoolcraft County, Michigan. The former rifle range was used by units of the MIARNG for small arms training from 1949 until approximately 1950. The range was approximately 200 yards in length and included an earthen target berm. Munitions use included .50 caliber, .30 caliber, and 30-06 ammunition.

A SI was conducted and the final report issued in completed in June 2012. Lead was detected in soil samples at concentrations above applicable human health screening levels. Because impacts to human health via exposure to lead cannot be ruled out, the SI recommended further investigation in an RI/FS for MC.

DERP funding was used to complete work through the SI at this site. NDNODS moving forward with the RI/FS phase are reprogrammed into CC.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

## CC\_MIHQ-004-R-01\_NDNODS\_FLAT ROCK TRAINING AREA

**HQAES ID:** 6896A.1020

**Alias:** RRM1000004

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 12/31/2033

**RC Date:** 12/31/2033

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/30/2007    | 9/30/2009  |
| <b>SI</b>     | 7/30/2010    | 9/30/2012  |
| <b>RI/FS</b>  | 1/1/2029     | 12/31/2033 |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

The 290.42-acre Flat Rock Training Area is located within Oakwood Metro Park west of Flat Rock, Wayne County, Michigan. The site was utilized by the MIARNG Units in 1949 as a Maneuver Training Area. The training event referred to as "Operation Igloo" was a mock prison break involving 1,000 prisoners who had staged a mass break from the Michigan State Penitentiary. The training event included the use of smoke pots, smoke grenades, tear gas hand grenades, 0.30 caliber blank ammunition, 37-millimeter guns, Roman candles, aerial bombs, one-half pound blocks of trinitrotoluene, and one-quarter pound blocks of tetrol (electrically detonated). Based on personnel interviews, the units began the operation along the southern portion of the area and moved in a northerly direction up to the location south of the river. SI field work was conducted in 2011. Metals were detected in soil above their respective background concentrations but below the human health screening criteria. Therefore, an impact to human health is not expected; however, the Michigan Department of Environmental Quality (MDEQ) has reviewed the MC metals concentrations against statistical background values and does not concur with a No Further Action (NFA) recommendation.

DERP funding was used to complete work through the SI at this site. NDNODS moving forward with the RI/FS phase are reprogrammed into CC.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed future actions will be evaluated. At this time there isn't sufficient documentation to plan for future actions.

# CC\_MIHQ-009-R-01\_NDNODS\_ISLAND LAKE RIFLE RANGE

**HQAES ID:** 6896A.1022

**Alias:** RRM1000009

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 12/31/2035

**RC Date:** 12/31/2035

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/15/2007    | 9/15/2009  |
| <b>SI</b>     | 7/15/2010    | 9/15/2012  |
| <b>RI/FS</b>  | 1/1/2029     | 12/31/2033 |
| <b>RD</b>     | 1/1/2034     | 1/31/2034  |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | 1/1/2034     | 12/31/2035 |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

## Site Narrative

The 21.30-acre Island Lake Rifle Range is located within Island Lake State Park southeast of Brighton, Livingston County, Michigan. MIARNG held Encampments from 1882 through 1898 near Island Lake southeast of Brighton, for military training including rifle practice.

An SI was conducted and the final report issued in completed in June 2012. No metals were found in soil samples at concentrations above applicable human health screening levels. However, the MDEQ reviewed analytical results and compared with statistical background values in soil, and did not concur with the no further action conclusion in the SI report. Therefore, further investigation will be conducted in an RI/FS for MC.

DERP funding was used to complete work through the SI at this site. NDNODS moving forward with the RI/FS phase are reprogrammed into CC.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

# CC\_MIHQ-013-R-01\_NDNODS\_MANISTIQUE RIFLE RANGE

**HQAES ID:** 6896A.1023

**Alias:** RRM1000013

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 12/31/2035

**RC Date:** 12/31/2035

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/30/2007    | 9/30/2009  |
| <b>SI</b>     | 7/31/2010    | 9/30/2012  |
| <b>RI/FS</b>  | 1/1/2029     | 12/31/2033 |
| <b>RD</b>     | 1/1/2034     | 1/31/2034  |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | 1/1/2034     | 12/31/2035 |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

## Site Narrative

The former 2.5-acre Manistique Rifle Range is located west of Walters Road in Manistique, Schoolcraft County, Michigan. The site was utilized by Company D of the 107th Engineer Battalion and the 593rd AA Battalion of the MIARNG as a small arms qualification range from 1955 until the late 1970s. Munitions used at the site included .50 caliber machine guns and .20 caliber rifles. The direction of fire was from the south to the north into a large hill. A berm was observed during the 18 December 2008 Modified Site Visit.

An SI was conducted and the final report issued in completed in June 2012. Lead was detected in soil samples at concentrations above applicable human health screening levels. Because impacts to human health via exposure to lead cannot be ruled out, the SI recommended further investigation in an RI/FS for MC.

DERP funding was used to complete work through the SI at this site. NDNODS moving forward with the RI/FS phase are reprogrammed into CC.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

# CC\_MIHQ-015-R-01\_NDNODS National Mine Biathlon Range

**HQAES ID:** 6896A.1024

**Alias:** RRM1000015

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 12/31/2031

**RC Date:** 12/31/2031

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 4/30/2007    | 9/30/2009  |
| <b>SI</b>     | 7/10/2010    | 5/4/2021   |
| <b>RI/FS</b>  | 1/1/2026     | 12/31/2029 |
| <b>RD</b>     | 1/1/2031     | 6/30/2031  |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | 1/1/2031     | 12/31/2031 |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

## Site Narrative

The 1.0-acre National Mine Biathlon Range is transferred and located in Marquette County, Michigan. The former biathlon range was constructed by the local Ishpeming unit of the MIARNG in the 1980s and utilized for training by the MIARNG until the early 1990s. Exact dates of use by MIARNG are unknown. The range was closed to all firing in 2006. Right- of-entry (ROE) was requested from the landowner of this site in 2011/ 2012 and 2016/2017, but was refused. ROE was granted in 2019.

An SI was performed, with the final SI report issued in May 2021. The SI recommends an RI to address lead in soil. DERP funding was used to complete work through the SI at this site. NDNODS moving forward with the RI/FS phase are reprogrammed into CC.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Once the RI/FS is completed it is assumed a soil excavation will be required.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 6896A.1001 | MIHQ-002-R-01_NDNODS Carpenter Dam Rifle | 9/15/2012          |
| 6896A.1002 | MIHQ-004-R-01_NDNODS Flat Rock Training  | 9/15/2012          |
| 6896A.1003 | MIHQ-006-R-01_NDNODS Grosse Pointe Rifle | 9/30/2012          |
| 6896A.1004 | MIHQ-007-R-01_NDNODS Hickory Shade Farm  | 9/30/2012          |
| 6896A.1005 | MIHQ-009-R-01_NDNODS Island Lake Rifle R | 9/15/2012          |
| 6896A.1006 | MIHQ-010-R-01_NDNODS Kearsley Park Train | 9/30/2012          |
| 6896A.1007 | MIHQ-014-R-01_NDNODS Orchard Beach State | 9/30/2012          |
| 6896A.1008 | MIHQ-001-R-01_NDNODS Camp Black Rifle Ra | 9/30/2012          |
| 6896A.1009 | MIHQ-003-R-01_NDNODS Cheboygan Rifle Ran | 9/15/2012          |
| 6896A.1011 | MIHQ-008-R-01_NDNODS Ishpeming Silver La | 9/30/2012          |
| 6896A.1012 | MIHQ-011-R-01_NDNODS Kingsford-Merriman  | 10/31/2012         |
| 6896A.1013 | MIHQ-012-R-01_NDNODS Manistee Rifle Rang | 2/13/2019          |
| 6896A.1017 | MIHQ-005-R-02_NDNODS Grand Haven Rifle R | 9/15/2012          |
| 6896A.1021 | CC MIHQ-005-R-01_NDNODS Grand Haven Rifl | 1/31/2021          |
| 6896A.1015 | MIHQ-015-R-01_NDNODS National Mine Biath | 5/4/2021           |

## 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>          | None. When a site has progressed to the RI/FS phase, the installation will determine interest in establishing a RAB.                                |
| <b>RAB Adjournment Date:</b>   | N/A   |
| <b>RAB Adjournment Reason:</b>                                       | N/A   |
| <b>Additional Community Involvement:</b>                             | When a site has progressed to the RI/FS phase, a RAB solicitation will be posted in local papers and a Community Involvement Plan will be prepared. |
| <b>Administrative Record is located at:</b>                          | RFSC Building 30<br>3423 N. Martin Luther King Blvd.<br>Lansing, MI 48906   |
| <b>Information Repository is located at:</b>                         | RFSC Building 30<br>3423 N. Martin Luther King Blvd.<br>Lansing, MI 48906   |
| <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

# **CAMP GRAYLING ARMY AIRFIELD**

**Army Cleanup Program**

**Installation Action Plan**

2023

# CONTENTS

|   |    |
|---|----|
| Acronyms.....   | 1  |
| Phase Translation Table.....                                    | 3  |
| Site Alias List.....  | 4  |
| Installation Restoration Program Sites.....                     | 5  |
| MI2019-02-P CAMP GRAYLING AIRFIELD PFAS.....                    | 6  |
| MI2019-03-P CAMP GRAYLING CANTONMENT PFA.....                   | 7  |
| MI2019-04-P CAMP GRAYLING RANGE 30/MATES.....                   | 9  |
| Compliance Cleanup Sites.....                                   | 11 |
| CCMI2019-02-P CAMP GRAYLING AIRFIELD PF.....                    | 12 |
| CCMI2019-03-P CAMP GRAYLING CANTONMENT P.....                   | 13 |
| CCMI2021-01-P CAMP GRAYLING OTHER AOIs.....                     | 15 |
| Site Closeout Summary.....                                      | 17 |
| Community Involvement.....                                      | 18 |
| Five-Year / Periodic Review Summary.....                        | 19 |
| Review Summary Table.....                                       | 19 |
| ROD/DDs associated with the last Five-Year/Periodic Review..... | 19 |
| Results, Actions & Plans.....                                   | 19 |
| Land Use Controls (LUC) Summary.....                            | 20 |

## ACRONYMS

| Acronym | Definition   |
|---------|--|
| AASF    | Army Aviation Support Facility   |
| AEDB-R  | Army Environmental Database - Restoration                                    |
| AFFF    | Aqueous Film Forming Foam  |
| AOI     | Area of Interest   |
| ARNG    | Army National Guard  |
| CC      | Compliance-Related Cleanup   |
| CERCLA  | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD      | Decision Document  |
| DERP    | Defense Environmental Restoration Program                                    |
| ENV     | Environmental  |
| FOB     | Forward Operating Base   |
| FS      | Feasibility Study  |
| FTA     | Fire Training Area   |
| FY      | Fiscal Year  |
| GAAF    | Grayling Army Airfield   |
| HQAES   | Headquarters Army Environmental System                                       |
| IR      | Installation Restoration   |
| IRA     | Interim Remedial Action  |
| LTM     | Long-Term Management   |
| LUC     | Land Use Control   |
| MATES   | Maneuver Area Training Equipment Site  |
| MR      | Munitions Response   |
| MRSPP   | Munitions Response Site Prioritization Protocol                              |
| PA      | Preliminary Assessment   |
| PFAS    | Per- and Poly-fluoroalkyl Substances   |
| PP      | Proposed Plan  |
| RA(C)   | Remedial Action (Construction)   |
| RA(O)   | Remedial Action (Operations)   |

| Acronym | Definition                             |
|---------|--|
| 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                        |
| UST     | Underground Storage Tank               |
| WBS     | Work Breakdown Structure               |
| WWTP    | Waste Water Treatment Plant            |

## 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 |
|-------------|--|------------|
| 26B15.1012  | CCMI2019-02-P CAMP GRAYLING AIRFIELD PFA | - -        |
| 26B15.1013  | CCMI2019-03-P CAMP GRAYLING CANTONMENT P | - -        |
| 26B15.1015  | CCMI2021-01P CAMP GRAYLING OTHER AOIs    | - -        |
| 26B15.1016  | MI2019-02-P CAMP GRAYLING AIRFIELD PFAS  | - -        |
| 26B15.1017  | MI2019-03-P CAMP GRAYLING CANTONMENT PFA | - -        |
| 26B15.1018  | MI2019-04-P CAMP GRAYLING RANGE 30/MATES | - -        |

# **CAMP GRAYLING ARMY AIRFIELD**

**INSTALLATION RESTORATION PROGRAM SITES**



## MI2019-02-P CAMP GRAYLING AIRFIELD PFAS

**HQAES ID:** 26B15.1016

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/30/2026

**RC Date:** 9/30/2026

**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    | 9/26/2018  |
| <b>SI</b>     | 3/1/2018     | 9/11/2019  |
| <b>RI/FS</b>  | 10/15/2019   | 9/30/2026  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Camp Grayling is in the north-central portion of the Lower Peninsula, approximately 200 miles northwest of Detroit and 80 miles south of Michigan's Upper Peninsula. Adjacent to the City of Grayling, Michigan, Camp Grayling covers portions of Crawford, Kalkaska, and Otsego counties. The camp is divided by Interstate Highway 75 and is bisected by the Au Sable River. Camp Grayling is the National Guard's largest training post, encompassing over 147,000 acres, and it provides training facilities and support services for the U.S. Army National Guard (ARNG), Air National Guard, U.S. Army, U.S. Army Reserve units, and allied forces.

Camp Grayling is divided into two geographic areas: the North Post and South Post. The subject site is a part of the North Post and is located immediately west and northwest of the City of Grayling, at the intersection of I-75 and West North Down River Road. The site is an approximately 921-acre active public- and military-operated airfield with two runways: Runway 5/23 and Runway 14/32.

During the Preliminary Assessment (PA) for per- and poly-fluoroalkyl substances (PFAS), nine potential PFAS release areas were grouped into five areas of interest (AOIs) (AOI 1 through 5). Each of these areas were investigated during the Site Inspection (SI). The final SI report was issued in September 2019, and recommended a remedial investigation (RI) at all five AOIs.

The RI/feasibility study (FS) was awarded at the end of Fiscal Year (FY) 18 and the RI is currently underway under the Compliance-related Cleanup (CC) program, tracked in HQAES under WBS # 26B15.1012. Preparation of an FS, proposed plan (PP) and decision document (DD) were part of the original FY18 award, but have since been descoped. These actions will be funded in the future under the Defense Environmental Restoration Program (DERP), and the costs are captured under the subject site.

**Cleanup/Exit Strategy** Following completion of the RI, an FS, PP and DD will be prepared. Future actions will be determined based on the results of the RI/FS.

## MI2019-03-P CAMP GRAYLING CANTONMENT PFA

**HQAES ID:** 26B15.1017

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 12/1/2027

**RC Date:** 12/1/2027

**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    | 9/26/2018  |
| <b>SI</b>     | 6/4/2018     | 12/1/2021  |
| <b>RI/FS</b>  | 12/1/2021    | 12/1/2027  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Camp Grayling is in the north-central portion of the Lower Peninsula, approximately 200 miles northwest of Detroit and 80 miles south of Michigan's Upper Peninsula. Adjacent to the City of Grayling, Michigan, Camp Grayling covers portions of Crawford, Kalkaska, and Otsego counties. The camp is divided by Interstate Highway 75 and is bisected by the Au Sable River. Camp Grayling is the National Guard's largest training post, encompassing over 147,000 acres, and it provides training facilities and support services for the ARNG, Air National Guard, U.S. Army, U.S. Army Reserve units, and allied forces.

Camp Grayling is divided into North and South Post operational areas. The Cantonment site is a part of the South Post of Camp Grayling. The Cantonment borders the southern end of Lake Margrethe within the northeastern portion of the South Post, located approximately 3 miles southwest of Grayling Army Airfield (GAAF). The Cantonment contains support facilities including barracks, range control, officers club, Post Exchange, parade grounds, athletic fields, waste water treatment plant (WWTP), and administrative buildings. Recreational areas and cabins are also present along the shore of Lake Margrethe, within the Cantonment. Access to the area is controlled by guarded gate entry. Several Fire Training Areas (FTAs) within the Cantonment were identified by former Camp Grayling firefighters. For each FTA, the frequency of training, concentration of aqueous film forming foam (AFFF), and volume used are not known.

During the PA, 11 potential PFAS release areas were grouped into five AOIs (AOI 14 through 18), and an additional AOI 20 was identified after the PA was completed in 2018. Another potential release area was identified near the Main Gate. Each of these areas were investigated during the SI. The final SI report was issued in December 2021, and recommended an RI at AOI 14, AOI 15 and the Main Gate area.

The RI/FS was awarded at the end of FY18 and the RI is currently underway under the CC program, tracked in HQAES under WBS # 26B15.1013. Preparation of an FS, PP and DD were part of the original FY18 award, but have since been descoped. These actions will be funded in the future under the DERP, and the costs are captured under the subject site.

**Cleanup/Exit Strategy** Following completion of the RI, an FS, PP and DD will be prepared. Future actions will be determined based on the results of the RI/FS.

## MI2019-04-P CAMP GRAYLING RANGE 30/MATES

**HQAES ID:** 26B15.1018

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 6/15/2024

**RC Date:** 6/15/2030

**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    | 8/31/2018  |
| <b>SI</b>     | 6/4/2018     | 10/22/2020 |
| <b>RI/FS</b>  | 6/15/2021    | 6/15/2024  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Camp Grayling is divided into two geographic areas: the North Post and South Post. The Range 30 Complex and Maneuver Area Training Equipment Site (MATES) are located in the southern part of North Post in Camp Grayling. The site includes a fenced area of approximately 5,260 acres that contains the Multi-Purpose Range Complex. During the PA for PFAS, the Range 30 Complex was identified as a single AOI, referred to as AOI 8.

The MATES area was not identified as a potential PFAS release area during the PA; however, it was investigated further based on the results of Mobilization 1 and is now included as part of AOI 8. The MATES is approximately 60-acres and was designed to provide materials storage and maintenance and repair areas for ARNG equipment. MATES consists of seven buildings ranging in use from hazardous waste and compressed gas storage to tank washing platforms, a wash water treatment area including rapid sand filters, and two gravel and concrete motor pool areas. Spent vehicle wash water at the wash rack is directed to an oil water separator. Gray water from maintenance operations within MATES is also passed through a pre-treatment system consisting of activated carbon and organo-clay carbon before releasing into the oil water separator. The oil water separator discharges into a 172-foot by 52-foot settling pond, and the treated water is discharged to an adjacent 140-foot by 114-foot Rapid Infiltration Bed under Groundwater Discharge Permit number GW1810156. Based on the Integrated Contingency Plan, no fire suppression systems exist in any of the MATES buildings. No known releases of AFFF have occurred in this area.

An SI was conducted, and the final SI report was issued in October 2020. The results of the SI indicate exceedances of the screening levels (SLs) in groundwater at the Source Area and Near Boundary, and detected below the SL in soil in the Source Area at MATES. There were no detections from SI samples collected at the Range 30 Complex. Based on the SI results, no further action is required at Range 30 and a RI was recommended at MATES.

The subject site was tracked as 26B15.1014 under the CC program. In FY 23, this site was determined to be eligible under the DERP. The RI/FS for MATES were originally awarded in FY21 under the CC program, but the RI/FS task was descoped. The RI was funded under DERP during FY23, and the FS will be awarded in the future.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. The RI will be awarded in FY23. Further actions cannot be determined until after the RI/FS is complete.

# **CAMP GRAYLING ARMY AIRFIELD**

## **COMPLIANCE CLEANUP SITES**

## CCMI2019-02-P CAMP GRAYLING AIRFIELD PF

**HQAES ID:** 26B15.1012

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/30/2024

**RC Date:** 9/30/2024

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 8/11/2017    | 9/26/2018  |
| <b>SI</b>     | 3/1/2018     | 9/11/2019  |
| <b>RI/FS</b>  | 9/30/2018    | 9/30/2024  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Camp Grayling is in the north-central portion of the Lower Peninsula, approximately 200 miles northwest of Detroit and 80 miles south of Michigan's Upper Peninsula. Adjacent to the City of Grayling, Michigan, Camp Grayling covers portions of Crawford, Kalkaska, and Otsego counties. The camp is divided by Interstate Highway 75 and is bisected by the Au Sable River. Camp Grayling is the National Guard's largest training post, encompassing over 147,000 acres, and it provides training facilities and support services for the ARNG, Air National Guard, U.S. Army, U.S. Army Reserve units, and allied forces.

Camp Grayling is divided into two geographic areas: the North Post and South Post. The subject site is a part of the North Post and is located immediately west and northwest of the City of Grayling, at the intersection of I-75 and West North Down River Road. The site is an approximately 921-acre active public- and military-operated airfield with two runways: Runway 5/23 and Runway 14/32.

During the PA for PFAS, nine potential PFAS release areas were grouped into five AOIs (AOI 1 through 5). Each of these areas were investigated during the SI. The final SI report was issued in September 2019, and recommended an RI at all five AOIs.

The RI/FS was awarded at the end of FY18 and the RI is currently underway under the CC program. Preparation of an FS, PP and DD were part of the original FY18 award, but have since been descope. These actions will be funded in the future under the DERP, and the costs are captured under WBS # 26B15.1016.

**Cleanup/Exit Strategy** Following completion of the RI this site will close. Preparation of an FS, PP and DD will be funded under DERP and cost requirements tracked under site 26B15.1016. Future actions will be determined based on the results of the RI/FS.

## CCMI2019-03-P CAMP GRAYLING CANTONMENT P

**HQAES ID:** 26B15.1013

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSPP:** Not assigned

**RIP Date:** 10/1/2024

**RC Date:** 6/15/2030

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 8/11/2017    | 9/26/2018  |
| <b>SI</b>     | 6/4/2018     | 12/1/2021  |
| <b>RI/FS</b>  | 12/1/2021    | 10/1/2024  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Camp Grayling is in the north-central portion of the Lower Peninsula, approximately 200 miles northwest of Detroit and 80 miles south of Michigan's Upper Peninsula. Adjacent to the City of Grayling, Michigan, Camp Grayling covers portions of Crawford, Kalkaska, and Otsego counties. The camp is divided by Interstate Highway 75 and is bisected by the Au Sable River. Camp Grayling is the National Guard's largest training post, encompassing over 147,000 acres, and it provides training facilities and support services for the ARNG, Air National Guard, U.S. Army, U.S. Army Reserve units, and allied forces.

Camp Grayling is divided into North and South Post operational areas. The Cantonment site is a part of the South Post of Camp Grayling. The Cantonment borders the southern end of Lake Margrethe within the northeastern portion of the South Post, located approximately 3 miles southwest of GAAF. The Cantonment contains support facilities including barracks, range control, officers club, Post Exchange, parade grounds, athletic fields, WWTP, and administrative buildings. Recreational areas and cabins are also present along the shore of Lake Margrethe, within the Cantonment. Access to the area is controlled by guarded gate entry. Several FTAs within the Cantonment were identified by former Camp Grayling firefighters. For each FTA, the frequency of training, concentration of AFFF, and volume used are not known.

During the PA, 11 potential PFAS release areas were grouped into five AOIs (AOI 14 through 18), and an additional AOI 20 was identified after the PA was completed in 2018. Another potential release area was identified near the Main Gate. Each of these areas were investigated during the SI. The final SI report was issued in December 2021, and recommended an RI at AOI 14, AOI 15 and the Main Gate area.

The RI/FS was awarded at the end of FY18 and is currently underway under the CC program and is expected to continue through FY24. Preparation of an FS, PP and DD were part of the original FY18 award, but have since been descope. These actions will be funded in the future under the DERP, and the costs are captured under DERP site WBS # 26B15.1017.



**Cleanup/Exit Strategy** Following completion of the RI this site will close. Preparation of an FS, PP and DD will be funded under DERP and cost requirements tracked under site 26B15.1017. Future actions will be determined based on the results of the RI/FS.

## CCMI2021-01-P CAMP GRAYLING OTHER AOIs

**HQAES ID:** 26B15.1015

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 12/31/2025

**RC Date:** 12/31/2025

**RC Reason:** Not assigned

**Program:** Compliance Cleanup

**Subprogram:** CC

| <i>Phases</i> | <i>Start</i> | <i>End</i> |
|---------------|--------------|------------|
| <b>PA</b>     | 8/11/2017    | 9/26/2018  |
| <b>SI</b>     | 12/6/2019    | 12/31/2025 |
| <b>RI/FS</b>  | --           | --         |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

The Camp Grayling – Other AOIs site comprises eight Areas of Interest (AOIs), spread across North and South Post not covered by prior Site Inspections at Camp Grayling.

AOI 6 Range 40 Complex: AFFF “wet water” was reportedly routinely used along the fence line of the Range 40 Complex to control wildfires and maintain fire breaks by Camp Grayling firefighters. The term “wet water” is a colloquial term used by firefighters for an aqueous solution that has been reportedly mixed using different formulations and wetting agents (e.g., AFFF concentrate, Class A foam concentrate, or dish washing soap). Additionally, AFFF was reportedly used by the Camp Grayling Fire Department to respond to at least one fire on range during the 1970s or early 1980s.

AOI 7 Former North Forward Operating Base: AFFF “wet water” was reported to have been used for dust suppression within the area identified as the historic Former North Forward Operating Base (FOB). This area is currently inactive, open land that is well vegetated with the exception of a few small dirt roadways. The AOI is located approximately 1 mile east of KP Lake and 2 miles west of the North Branch Au Sable River.

AOI 9 Lewiston Grade Road: AFFF “wet water” was reportedly used as dust suppression along a 1.8-mile unpaved stretch of Lewiston Grade Road from I-75 Business Loop (immediately east of GAAF) to the I-75 overpass until the late 1980s. The road is unpaved, and fugitive dust from surface soil is possible from normal use; however, given the time of initial application to the road surface, the potential release from fugitive dust is unlikely.

AOI 10 Range 8: AFFF “wet water” was reportedly used in an emergency response capacity to control fires that resulted from normal training activities with tracer ammunition. The approximate 109-acre range is mostly vegetated, with interspersed un-vegetated areas within; no habitable structures are located within the range. Located in the northern portion of the South Post, Range 8 drains to the northwest towards large forested/shrub wetland area that ultimately drains to Portage Creek, a tributary of the Manistee River.

AOI 11 Small Arms Ranges: AFFF “wet water” was reportedly used in an emergency response capacity to control fires that resulted from normal training activities with tracer ammunition at Ranges 3A and 3B. The ranges are predominantly vegetated, with the exception of berm backstops. The Small Arms Ranges AOI is less than 1 mile to the west of Lake Margrethe and is located within a topographical low point between two hill systems to the north and south that have an approximate 100-feet of elevation difference from their peaks down to AOI 11.

AOI 12 Light Demolition Ranges: AFFF “wet water” was used to control occasional fires that resulted from light demolition training activities at Ranges 20 and 21. The active portions of the ranges are predominantly un-vegetated. Kings Ponds are located roughly 0.5 miles to the west of the AOI area. Groundwater flows in a northwestern direction towards Portage Creek, located approximately 3 miles to the northwest, and the Manistee River. Shallow groundwater originating from the southern Light Demolitions Range potentially flows towards and discharges to Kings Ponds.

AOI 13 Range 15 Area: AFFF “wet water” was reportedly used to control occasional fires that resulted from training activities predominantly at Range 15 within the Range 13 Complex; emergency response may have been conducted within other areas of the 13 Complex on a less regular basis. The closest surface water body located downgradient of Range 15 is Beaver Creek, which is approximately 5 miles to the southeast. Due to the distance to the potential source area, the ingestion exposure pathway for surface water and sediment pathways are incomplete for the Range 15 AOI. Based on aerial imagery, scattered residential homes and/or businesses are located approximately 0.5 miles east of the Range 15 AOI, along W Beaver Road.

AOI 19 Howes Lake: Camp Grayling historically conducted training activities at Howes Lake; however, it is not known if such activities included fire training or required emergency response with AFFF. The AOI is located along the southwestern shore of Howes Lake. Because Camp Grayling firefighters reportedly used AFFF “wet water” for different applications during the 1970’s and early 1980’s, there is a possibility that AFFF may have been released. The area identified as the potential training area is sparsely vegetated with grasses and some small stands of trees.

A supplemental SI was awarded in FY23 and will continue into FY25.

**Cleanup/Exit Strategy** A supplemental SI is underway at the site. At this time, no other actions are planned. Once validated sampling results are received future actions will be evaluated.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 26B15.1001 | CGTS-01_PCE PLUME AREA                   | 10/31/1996         |
| 26B15.1002 | CGTS-02_DRYWELL SITE                     | 6/30/1997          |
| 26B15.1003 | CGTS-03_WASTE OIL PIT                    | 6/30/1997          |
| 26B15.1004 | CGTS-04_CFR BURN AREA                    | 6/30/1997          |
| 26B15.1005 | CGTS-05_BLDG 1100 DRAIN                  | 6/30/1997          |
| 26B15.1006 | CGTS-06_BATTERY DUMP                     | 10/31/1997         |
| 26B15.1007 | CGTS-07_LANDFILL                         | 6/30/1997          |
| 26B15.1008 | CGTS-08_UST REMOVALS                     | 1/31/1997          |
| 26B15.1009 | CGMTC-001-R-01_RIFLE RANGE               | 3/31/2009          |
| 26B15.1010 | CGMTC-002-R-01_FORMER TRAINING AREA NEAR | 3/31/2009          |
| 26B15.1011 | CCMI115002_CAMP GRAYLING ARMY AIRFIELD   | 1/10/2022          |
| 26B15.1014 | CCMI2019-04-P CAMP GRAYLING RANGE 30/MAT | 4/25/2023          |

## COMMUNITY INVOLVEMENT

|  |  |
|--|--|
| <b>Technical Review Committee (TRC) Establishment Date:</b>          | N/A  |
| <b>Community Involvement Plan (Date Published):</b>                  | 199601   |
| <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>                             | The installation has a Community Council that meets annually. Community interest is minimal. |
| <b>Administrative Record is located at:</b>                          | Camp Grayling Environmental<br>Office Building 30<br>Camp Grayling, MI<br>49739 989-344-6176 |
| <b>Information Repository is located at:</b>                         | Crawford County<br>Library 201 Plum<br>Street<br>Grayling, MI 49738<br>989-348-9214          |
| <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

# **GRAND LEDGE**

## **Army Cleanup Program**

### **Installation Action Plan**

2023



# CONTENTS

|   |    |
|---|----|
| Acronyms.....   | 1  |
| Phase Translation Table.....                                    | 3  |
| Site Alias List.....  | 4  |
| Installation Restoration Program Sites.....                     | 5  |
| MI2021-02-P GRAND LEDGE PFAS CONTAMINATI .....                  | 6  |
| Site Closeout Summary.....                                      | 7  |
| Community Involvement .....                                     | 8  |
| Five-Year / Periodic Review Summary.....                        | 9  |
| Review Summary Table .....                                      | 9  |
| ROD/DDs associated with the last Five-Year/Periodic Review..... | 9  |
| Results, Actions & Plans .....                                  | 9  |
| Land Use Controls (LUC) Summary.....                            | 10 |

## ACRONYMS

| Acronym | Definition   |
|---------|--|
| AASF    | Army Aviation Support Facility   |
| AEDB-R  | Army Environmental Database - Restoration                                    |
| AFFF    | Aqueous Film Forming Foam  |
| AOI     | Area of Interest   |
| ARNG    | Army National Guard  |
| CC      | Compliance-Related Cleanup   |
| CERCLA  | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD      | Decision Document  |
| DERP    | Defense Environmental Restoration Program                                    |
| ENV     | Environmental  |
| FS      | Feasibility Study  |
| FY      | Fiscal Year  |
| HQAES   | Headquarters Army Environmental System                                       |
| IR      | Installation Restoration   |
| IRA     | Interim Remedial Action  |
| LTM     | Long-Term Management   |
| LUC     | Land Use Control   |
| MR      | Munitions Response   |
| MRSP    | Munitions Response Site Prioritization Protocol                              |
| PA      | Preliminary Assessment   |
| PFAS    | Per- and Poly-fluoroalkyl Substances   |
| PP      | Proposed Plan  |
| 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   |

| Acronym | Definition                    |
|---------|-------------------------------|
| RIP     | Remedy-In-Place               |
| RRSE    | Relative Risk Site Evaluation |
| SI      | Site Inspection               |
| SL      | Screening Level               |
| 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 |
|-------------|--|------------|
| 3768A.1002  | MI2021-02-P GRAND LEDGE PFAS CONTAMINATI |            |

# GRAND LEDGE

## INSTALLATION RESTORATION PROGRAM SITES

## MI2021-02-P GRAND LEDGE PFAS CONTAMINATI

**HQAES ID:** 3768A.1002

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/28/2028

**RC Date:** 9/28/2028

**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    | 10/31/2019 |
| <b>SI</b>     | 9/18/2018    | 2/15/2021  |
| <b>RI/FS</b>  | 6/15/2021    | 9/28/2028  |
| <b>RD</b>     | --           | --         |
| <b>IRA</b>    | --           | --         |
| <b>RA(C)</b>  | --           | --         |
| <b>RA(O)</b>  | --           | --         |
| <b>LTM</b>    | --           | --         |

### Site Narrative

Grand Ledge Army Aviation Support Facility (AASF) and Armory in Grand Ledge, Michigan, provides training and maintenance for the various aviation units that support the Michigan Army National Guard. The facility includes several buildings associated with AASF and Armory functions including maintenance and office related buildings, hangars, an unheated “cold” storage building, and a storage annex. Prior to 2007, the AASF facility was located in what is today the current Armory facility. Historical aerial photography indicates that the current Armory building was constructed between 1974 and 1981.

The Army National Guard (ARNG) is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS) (a suite of related chemicals), primarily in the form of aqueous film forming foam (AFFF) released during firefighting activities or training, although other PFAS sources are possible. A preliminary assessment (PA) was completed at the Grand Ledge AASF and Armory in 2019, which identified two areas of interest (AOIs) related to potential releases of PFAS: AOI 1 – AASF Hangar and Armory (Former AASF); and AOI 2 – Annex Building. A site inspection (SI) was performed to investigate potential PFAS releases at these two AOIs, and the SI report was completed in February 2021. The SI concluded that PFAS compounds were present above screening levels (SLs) in groundwater at the AOI 1 source area, but not at AOI 2. The SI recommended a remedial investigation (RI) to determine the nature and extent of PFAS in groundwater from sources at AOI 1. The RI and feasibility study (FS) tasks were awarded at the end of fiscal year (FY) 2021, and are underway under the Defense Environmental Restoration Program (DERP).

**Cleanup/Exit Strategy** Following completion of the RI/FS, a Proposed Plan (PP) and Decision Document (DD) will be prepared. Future actions will be determined based on the results of the RI/FS.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 3768A.1001 | CCMI2019-01-P GRAND LEDGE PFAS CONTAMINA | 8/11/2021          |



## 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

# **LANSING AIRPORT HANGAR**

**Army Cleanup Program**

**Installation Action Plan**

2023

# CONTENTS

|   |    |
|---|----|
| Acronyms.....   | 1  |
| Phase Translation Table.....                                    | 3  |
| Site Alias List.....  | 4  |
| Installation Restoration Program Sites.....                     | 5  |
| CCMI2020-03-P_LANSING ARPT HANGAR PFAS C .....                  | 6  |
| Site Closeout Summary.....                                      | 7  |
| Community Involvement .....                                     | 8  |
| Five-Year / Periodic Review Summary.....                        | 9  |
| Review Summary Table .....                                      | 9  |
| ROD/DDs associated with the last Five-Year/Periodic Review..... | 9  |
| Results, Actions & Plans .....                                  | 9  |
| Land Use Controls (LUC) Summary.....                            | 10 |

## ACRONYMS

| Acronym | Definition   |
|---------|--|
| AEDB-R  | Army Environmental Database - Restoration                                    |
| AFFF    | Aqueous Film Forming Foam  |
| AOI     | Area of Interest   |
| ARNG    | Army National Guard  |
| CC      | Compliance-Related Cleanup   |
| CERCLA  | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| DD      | Decision Document  |
| DERP    | Defense Environmental Restoration Program                                    |
| ENV     | Environmental  |
| FS      | Feasibility Study  |
| FY      | Fiscal Year  |
| HQAES   | Headquarters Army Environmental System                                       |
| IR      | Installation Restoration   |
| IRA     | Interim Remedial Action  |
| LTM     | Long-Term Management   |
| LUC     | Land Use Control   |
| MR      | Munitions Response   |
| MRSPP   | Munitions Response Site Prioritization Protocol                              |
| ng/L    | nanograms/Liter  |
| PA      | Preliminary Assessment   |
| PFAS    | Per- and Poly-fluoroalkyl Substances   |
| PFOA    | Perfluorooctanoic Acid   |
| 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   |

| Acronym | Definition                    |
|---------|-------------------------------|
| RIP     | Remedy-In-Place               |
| RRSE    | Relative Risk Site Evaluation |
| SI      | Site Inspection               |
| SL      | Screening Level               |
| 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 |
|-------------|--|------------|
| 26B77.1002  | MI2020-03-P_LANSING ARPT HANGAR PFAS CON |            |

# LANSING AIRPORT HANGAR

INSTALLATION RESTORATION PROGRAM SITES

# CCMI2020-03-P\_LANSING ARPT HANGAR PFAS C

**HQAES ID:** 26B77.1002

**Alias:** None

**Regulatory Driver:** CERCLA

**RRSE:** Not assigned

**MRSP:** Not assigned

**RIP Date:** 9/15/2031

**RC Date:** 9/15/2031

**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    | 1/30/2019  |
| <b>SI</b>     | 11/24/2020   | 5/15/2022  |
| <b>RI/FS</b>  | 9/15/2024    | 9/15/2031  |
| <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 Lansing Airport Hangar to assess potential poly-fluoroalkyl substances (PFAS) release areas and exposure pathways to receptors. During the interview process, a limited number of personnel were available to be interviewed. Additionally, their tenure at the Lansing Hangar dates back to 2003. The use or storage of aqueous film forming foam (AFFF) at the Lansing Hangar between 1992 and 2003 is unknown. In addition, the use or storage of AFFF at the Capital Region International Airport (adjacent source) is unknown.

A Site Inspection (SI) is was conducted in 2022, with the final SI report issued in May 2022. At Area of Interest 1 (AOI 1), Perfluorooctanoic Acid (PFOA) in groundwater at the C-12 Hangar exceeded the screening level (SL) of 40 nanograms per liter (ng/L), at a concentration of 80.1 ng/L at the most downgradient temporary well location, AOI01-03. Based on the results of the SI, further evaluation of AOI 1 is warranted in the Remedial Investigation (RI)

The subject site was tracked as 26B77.1001 under the Compliance-related Cleanup (CC) program through the SI phase. In June 2022, this site was determined to be eligible for the Defense Environmental Restoration Program (DERP), and the RI will be conducted under DERP.

A contract was awarded at the end of FY22 to conduct RIs at multiple PFAS sites. The subject site is included in this contract, with the RI under an optional task to be funded in the future.

**Cleanup/Exit Strategy** An RI/FS will be completed at this site. Further actions cannot be determined until after the RI/FS is complete.

## SITE CLOSEOUT SUMMARY

| HQAES ID   | Site Name                                | Site Closeout Date |
|------------|--|--------------------|
| 26B77.1001 | CCMI2020-03-P_LANSING ARPT HANGAR PFAS C | 5/15/2022          |

## 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