

Final Meeting Minutes
Restoration Advisory Board (RAB) Meeting
Former Galena Forward Operating Location (FOL), Alaska
Galena, Alaska
20 May 2021

Time/Place: Thursday at 3:00 pm, 20 May 2021 – Virtual Meeting

Attendees:

Eighteen (18) people attended the RAB meeting including representatives from the Air Force Civil Engineer Center (AFCEC), the Alaska Department of Environmental Conservation (ADEC), the Alaska Department of Transportation (ADOT), the City of Galena, Louden Tribal Council, community members, and Air Force remediation contractors (Parsons and CH2M/Jacobs). The following is a list of those attending the meeting.

Christiana Hewitt, AFCEC
Bruce Henry, Parsons
Ed Heyse, Parsons
Andrea Finlay, Parsons
Win Westervelt, CH2M/Jacobs
Jamie McKellar, ADEC
Eric Breitenberger, ADEC
Margaret Moody, ADOT
Sam Myers, ADOT
Elzbeth Robson, ADOT
Jim Coffelt, Federal Aviation Administration (FAA)
Shanda Huntington, City of Galena Manager
Jim Merriner, Galena School Superintendent
Brooke Sanderson, Louden Tribal Council
Reinhard Mueller, Gana-A'Yoo
Bob Rebarchik, US Fish and Wildlife Service (US FWS)
Wyatt Snodgrass, US FWS
David Zabriskie, US FWS

Agenda: See **Attachment 1**

Introduction:

Christiana Hewitt (AFCEC) opened the RAB meeting by thanking everyone for attending the first virtual RAB meeting for Galena. Bruce Henry (Parsons) and Win Westervelt (CH2M/Jacobs) began with a presentation on the Remedial Process Optimization (RPO) contracts.

Presentation

Remedial Process Optimization (RPO) Evaluation Contracts

Bruce Henry and Win Westervelt gave a presentation (**Attachment 2**) with an update on the RPO contracts. Thirteen (13) of 32 sites were closed under the previous Performance-Based Remediation (PBR) contract and 19 sites remain open. RPO evaluations are being conducted at 18 sites with a remedy in place. The objective of the RPO effort is to evaluate and optimize

operating systems and monitoring programs to ensure they are efficient and effective at meeting the remediation goals. Activities from fall 2020 to date included:

- Annual groundwater performance monitoring and RPO groundwater monitoring in the fall of 2020.
- Bioventing and soil vapor extraction (SVE) systems were operated and monitored monthly at 12 sites.
- Vertical and horizontal air sparging systems were operated and monitored monthly at 4 sites (3 with SVE).
- In April/May 2021 the operating systems were turned off for seasonal shut down (prior to rising groundwater from river breakup) and conducting annual soil vapor monitoring to track cleanup progress.

All operating systems (except Sites SS006/SS019) will be started back up in the fall of 2021 and operated over the winter when groundwater levels are lower. The SVE system at Sites SS006/SS019 have both summer and winter operating configurations.

Operating systems include:

- Six (6) bioventing systems at Sites FT001, CSS002, CPL006, SS016, SS017, and ST010.
- Six (6) SVE systems at Sites ST009, SS006, SS019, SS015, SS022, and ST005 Area C.
- Two (2) vertical air sparge (VAS) systems at Sites CST014 (also SVE) and TU001 (also SVE).
- Two horizontal air sparge (HAS) systems at Sites CG001 (also VAS) and ST005 (also SVE).

Sites SS018 and CST011 Area 1 do not have operating systems but Supplemental Site Characterizations will be performed in 2021 to evaluate the extent of remaining petroleum hydrocarbon contamination. The location of the RPO sites is shown on Slide 5 in **Attachment 2**.

RPO activities also include evaluating sample methodologies for diesel-range organics (DRO) in groundwater; evaluating dissolved manganese in groundwater; evaluating the progress of bioventing, SVE, and air sparge systems to meet cleanup goals; and evaluating petroleum hydrocarbon weathering (from treatment). The RPO will also optimize bioventing, SVE, and air sparge system operations; optimize injection remedies; optimize bioventing, SVE, and air sparge system performance monitoring programs; and optimize groundwater monitoring.

2021 Field Activities for Parsons includes the following:

- April/May 2021: Bioventing/SVE Performance Monitoring; Static Soil Vapor Monitoring at Sites SS015 and SS022
- July/August 2021: Site SS006 SVE Summer Operations; Site SS018 Supplemental SC Investigation; Annual Groundwater Monitoring: RPO Groundwater and Soil Sampling
- August/September 2021: Soil Vapor Monitoring; RPO Bioventing/SVE Evaluations; Bioventing/SVE Startup

2021 Field Activities for CH2M are similar and include the following:

- April 2021: Air Sparge/SVE Performance Monitoring
- July/August 2021: Site CST011 Supplemental SC Investigation; Site SS005 Pilot Test; Annual Groundwater Monitoring; RPO Groundwater and Soil Sampling
- October 2021: Air Sparge/SVE Annual Performance Monitoring and System Startup

A Supplemental Site Characterization will be performed at Site SS018, which was a waste accumulation area south of the steam plant. A fuel pipeline leak impacted approximately 1,000 cubic yards (cy) of soil. Soil was excavated in 2019 and treated at the Galena landfarm. However, soil above cleanup levels remains to the east, underneath a concrete pad. Soil samples will be collected in 2021 to determine the extent of remaining contamination.

A Supplemental Site Characterization will also be performed at Site CST011 Area 1. Approximately 380 cy of fuel-contaminated soil from a former underground storage tank release was excavated in 2019 at the northwest corner of the former Combat Alert Cell (CAC) hangar. Some contaminated soil remains beneath the concrete pavement in front of the northwest hangar door. Additional soil borings are planned for 2021 to delineate the extent of the remaining soil contamination.

Bob Rebarchik (US FWS) commented (to Win Westervelt) that the US FWS is planning on having a contractor install a man door on the west side of the former CAC building (northwest corner at Bay 4). The contractor will put in a concrete pad that will be approximately 4 feet by 5 feet wide. The US FWS will need to coordinate the work schedule with CH2M's work at Site CST011. Win responded that the CH2M investigation will occur in late July. Win provided Bob with a map of the drilling locations following the meeting and will coordinate with US FWS. Win noted that boring locations are flexible.

A groundwater treatment Pilot Test will be conducted at Site SS005 (Former Wilderness Hall Dormitory). The pilot test will evaluate treatment of low concentrations of 1,2-dichloroethane (1,2-DCA) in groundwater. Historically, 1,2-DCA was used as an anti-knock additive in leaded gasoline to scavenge lead from the engine cylinders and valves and prevent buildup. Current groundwater concentrations are just above the ADEC groundwater cleanup level of 1.7 micrograms per liter. Approximately 100 gallons of vegetable oil with zero-valent iron will be injected near a Site SS005 groundwater monitoring well to stimulate chemical breakdown and biodegradation of 1,2-DCA.

Additional information on Air Force remediation at Galena can be obtained from the Galena Administrative Record (<http://afcec.publicadmin-record.us.af.mil/>), and questions submitted to Air Force Installation and Mission Support Central (AFIMSC) Public Affairs office (afimsc.pa.workflow@us.af.mil).

BRAC Environmental Construction and Optimization Services (BECOS) Contract

Christiana Hewitt gave an update on the BECOS contract. Work on the contract is awarded as task orders. Task Order 2 of the contract was awarded this week for operation of the Galena landfarm.

Sam Myers (ADOT) asked for an update on the removal of the ADOT soil stockpile located north of the runway in the airfield area. Christiana responded that moving the soil stockpile to the Galena landfarm is part of the BECOS task order for this summer. Christiana will provide ADOT more detail after a kickoff meeting for the task order next Monday.

Relative Risk Site Evaluation (RRSE) for Per-and Polyfluoroalkyl Substances (PFAS)

Christiana Hewitt gave a presentation on the RRSE for PFAS (**Attachment 3**). The RRSE is used by the Department of Defense (DoD) as method to sequence environmental restoration work. It is used to evaluate the relative risk posed by an environmental restoration site in relation to other sites. The goal of the RRSE is to establish sequencing of sites with the premise

of a “worst first” scenario. The RRSE should not be confused with a CERCLA risk assessment. An example of an RRSE Worksheet is shown on Slide 3.

The two PFAS sites at Galena are Site CG109 (AFFF Release Areas) in the “Triangle” area and Site FT001 (former Fire Protection Training Area) at the east end of the airfield (site locations shown on Slide 4). Slide 5 shows groundwater sampling locations and results for PFAS at Site CG109. Sample results shaded yellow exceed US Environmental Protection Agency (USEPA) Lifetime Health Advisory (HA) limits, while sample results shaded orange exceed both the USEPA Lifetime HA and ADEC cleanup levels. Sample locations and results for Site FT001 are shown on Slide 6.

The evaluation of the two sites using the RRSE method indicates that both sites are considered high priority. A Remedial Investigation (RI) contract is planned for award in Fiscal Year 2021 to determine the nature and extent of PFAS contamination in soil and groundwater.

A Public Notice for the RRSE was issued in the Fairbanks Daily News-Miner on May 17, 2021. There is a 30-day comment period and comments can be provided to:

Air Force Installation Mission Support Center, Public Affairs
1-866-725-7617 or AFIMSC.PA.workflow@us.af.mil

Comments can also be provided directly to Christiana Hewitt at christiana.hewitt.1@us.af.mil. Hardcopies of the RRSE will also be available at the Galena City Hall.

Jamie McKellar (ADEC) asked if Christiana could provide more detail on where the Site CG109 PFAS release locations are. Christiana added that CG109 PFAS locations are mainly by the fire station and close to the ADOT building vehicle maintenance area. There is also a release area at the former fire training area on the east end of the airfield. Jamie further clarified that the ADEC Contaminated Sites Program tracks all the PFAS sites at Galena under Site CG109, which consists of the Old Fire Station, the New Fire Station, the Vehicle Maintenance Facility, the Sanitary, and the Fire Protection Training Area at the end of the runway (Site FT001).

Brooke Sanderson (Louden Tribal Council) asked Christiana how the Air Force prioritizes sites that are categorized as high risk against one another. Christiana responded that each site has a rating that determines its priority. If a site receives a high-risk rating, then that site is funded before sites that do not have a high rating. Christiana clarified that the rating indicates a priority for receiving funding; the rating is not a health or ecological rating for risk. Higher risk sites receive funding before lower risk sites.

Bob Rebarchik asked if the portion of Site CG109 that is directly across (south) from the ADOT building is in Parcel P, which is US FWS jurisdiction. He asked if there would be work there this summer. Christiana confirmed yes, the site extends into Parcel P and that the Air Force can provide more information to the US FWS during the RI. Christiana added that most likely the work will occur during the 2022 summer field season. Christiana said that she would notify everyone once the contract gets awarded and will send Bob a copy of the RRSE fact sheet.

Sam Myers asked if there will be additional step out sample locations. Christiana responded that the nature and extent of contamination will be determined during the RI contract. The Site Investigation (SI) only determined that PFAS are present in soil and groundwater. The next stage, the RI, will include step out sample locations to define nature and extent.

Closing Remarks

Jamie McKellar spoke to the RAB and community members and thanked the Air Force for the presentation. Jamie let the RAB and community members know that ADEC is always available to answer questions.

Sam Myers commented that there has been great progress made in Galena over the years and has enjoyed working with Parsons and CH2M/Jacobs.

Bob Rebarchik and Jim Merriner (Galena School Superintendent) thanked everyone for all their hard work and the presentation.

Christiana Hewitt thanked the Galena community for attending and contributing to the meeting, and to contact her or Public Affairs if they have any questions. Christiana asked if there were any additional questions (there were none) and closed the RAB meeting.

Attachments:

1. RAB Meeting Agenda
2. Presentation: Remedial Process Optimization Evaluation Contracts
3. Presentation: Relative Risk Site Evaluation for Per-and Polyfluoroalkyl Substances

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Attachment 1
RAB Meeting Agenda

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Galena RAB Meeting Agenda

May 20, 2021

3:00 pm – 4:30 pm AKT

Teleconference

Galena, Alaska

Welcome

Christiana Hewitt, AFCEC

- Introductions

Overview of Environmental Restoration

- Remedial Process Optimization Evaluation (RPO) Contracts (Bruce Henry, Parsons, and Win Westervelt, Jacobs)
 - Summary of Fall 2020 and Spring 2021 Field Operations
 - Activities Planned for 2021 Field Season
- BRAC Environmental Construction and Optimization Services (BECOS) Contract (Christiana Hewitt, AFCEC)
 - Activities Planned for 2021 Field Season
- Relative Risk Site Evaluation (RRSE) for Per- and Polyfluoroalkyl Substances (PFAS) (Christiana Hewitt, AFCEC)

Remarks from ADEC

Jamie McKellar, ADEC

Remarks from ADOT

Sam Myers, ADOT

Questions from the Public

Christiana Hewitt (Facilitator)

Schedule for Next RAB and Closing Remarks

Christiana Hewitt

For more information about the Galena Environmental Cleanup Program, please contact the AFCEC Public Affairs hotline at 1-866-725-7617 or via email at afimsc.pa.workflow@us.af.mil

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Attachment 2

**Remedial Process Optimization (RPO) at the Former Galena Forward
Operating Location (FOL), Alaska**

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Air Force Civil Engineer Center



Remedial Process Optimization (RPO) at the Former Galena Forward Operating Location (FOL), Alaska

Restoration Advisory Board (RAB) Meeting
20 May 2021

Battle Ready...Built Right!



Former Galena FOL Remedial Process Optimization (RPO) Contracts



- CH2M and Parsons (through EA Engineering) - Separate Contracts
- 13 of 32 sites have been closed under the PBR contract and 19 sites remain open
- RPO evaluations are being conducted at 18 sites with a remedy in place
- Objective is to evaluate and optimize operating systems and monitoring programs
- CH2M and Parsons will maintain operating systems through April 2022



2019 Excavation at Site DP023
(Disposal Site West of Dike)



Activities from Fall 2020 to Date



- Annual groundwater performance monitoring and RPO groundwater monitoring fall of 2020
- Bioventing and soil vapor extraction (SVE) systems running and monitored monthly at 12 sites
- Vertical and horizontal air sparging systems running and monitored monthly at 4 sites (3 with SVE)
- April/May 2021 – The operating systems have been shut down for annual soil vapor monitoring to track cleanup progress
- All operating systems (except Sites SS006/SS019) will be started back up in the fall of 2021 and operated over the winter when water levels are lower
- SVE system at Sites SS006/SS019 has both summer and winter operating configurations

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Summary of Operating Systems

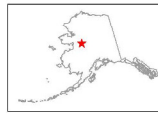
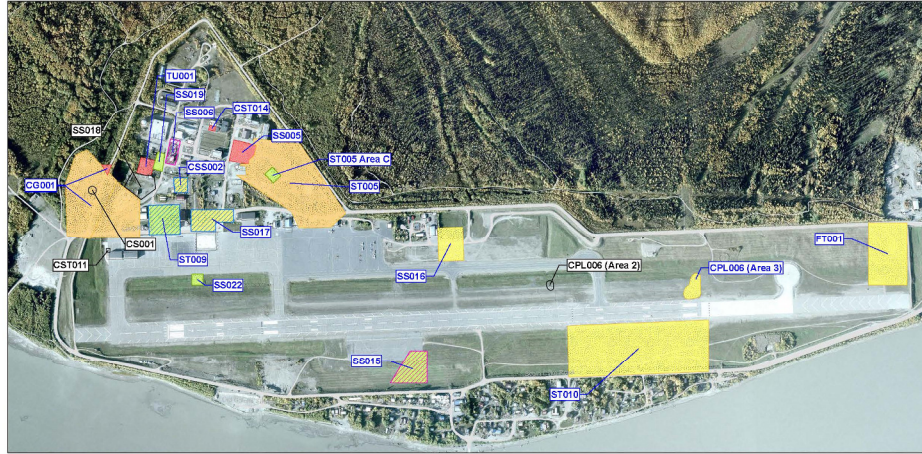


- **Bioventing Systems (6)**
 - Sites FT001, CSS002, CPL006, SS016, SS017, ST010
- **SVE Systems (6)**
 - Sites ST009, SS006, SS019, SS015, SS022, ST005 Area C
- **Vertical Air Sparge (VAS) Systems (2)**
 - Sites CST014 (also SVE) and TU001 (also SVE)
- **Horizontal Air Sparge (HAS) Systems (2)**
 - Sites CG001 (also VAS) and ST005 (also SVE)
- **Other – Supplemental Site Investigations (2)**
 - Sites SS018 and CST011 Area 1 (do not have operating systems)

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Remedial Systems in Operation



Legend	
	Bioventing System
	SVE System
	Horizontal Air Sparge System
	Sulfate Enhanced Bioremediation Injection
	Vertical Air Sparge System/SVE
	Enhanced Anaerobic Bioremediation/ Enhanced Biogeochemical Transformation Injection

Note: Sites CPL006 (Area 2), CS001, CST011 and SS018 do not have an operating remediation system at this time.

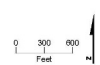


Figure 1
Remedial Systems in Operation as of 2021
at the Former Galena FOL
Former Galena Forward Operating Location, Alaska
PARSONS



Summary of RPO Activities



- **Evaluate**
 - Sample Methodologies for DRO in Groundwater
 - Dissolved Manganese in Groundwater
 - Progress of Bioventing, SVE, and Air Sparge Systems to meet Cleanup Goals
 - Petroleum Hydrocarbon Weathering
- **Optimize**
 - Bioventing, SVE, and Air Sparge System Operations
 - Injection Remedies
 - Bioventing, SVE, and Air Sparge System Performance Monitoring
 - Groundwater Monitoring
- **Pilot Test at Site SS005**
- **Supplemental SC at Sites SS018 and CST011 Area 1**



Galena RPO Proposed 2021 Field Work



■ Parsons

- April/May 2021: Bioventing/SVE Performance Monitoring; Static Soil Vapor Monitoring at Sites SS015 and SS022
- July/August 2021: Site SS006 SVE Summer Operations; Site SS018 Supplemental SC Investigation; Annual Groundwater Monitoring: RPO Groundwater and Soil Sampling
- August/September 2021: Soil Vapor Monitoring; RPO Bioventing/SVE Evaluations; Bioventing/SVE Startup

■ CH2M

- April 2021: Air Sparge/SVE Performance Monitoring
- July/August 2021: Site CST011 Supplemental SC Investigation; Site SS005 Pilot Test; Annual Groundwater Monitoring; RPO Groundwater and Soil Sampling
- October 2021: Air Sparge/SVE Annual Performance Monitoring and System Startup

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Supplemental Site Characterization at Site SS018



- Site SS018 was a waste accumulation area south of the steam plant
- Fuel pipeline leak impacted approximately 1000 cy of soil
- Soil excavated in 2019 and treated at landfarm
- Soil above Cleanup Levels remains to the east, underneath concrete pad
- Soil samples will be collected in 2021 to determine extent of remaining contamination



2019 Site SS018 Excavation

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Supplemental Site Characterization at Site CST011 Area 1



- Approximately 380 cy of fuel-contaminated soil from a former underground storage tank release was excavated in 2019 at the northwest corner of the former Combat Alert Cell (CAC) hangar building.
- Some contaminated soil remains beneath the concrete pavement in front of the NW hangar door.
- Additional soil borings are planned for 2021 to delineate the extent of the remaining soil contamination.



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Groundwater Treatment Pilot Test at Site SS005 (Former Wilderness Hall Dormitory)



- Conducting a pilot test to evaluate treatment of low concentrations of 1,2-dichloroethane (1,2-DCA) in groundwater.
- Historically, 1,2-DCA was used as an anti-knock additive in leaded gasoline to scavenge lead from the engine cylinders and valves and prevent buildup.
- Current groundwater concentrations are just above the ADEC groundwater cleanup level of 1.7 micrograms per liter, but have been relatively persistent.
- Will inject approximately 100 gallons of vegetable oil with iron near a Site SS005 groundwater monitoring well to stimulate chemical breakdown and biodegradation and monitor changes in 1,2-DCA concentrations.

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Communications



- Semi-annual RAB Meetings (April/October) to continue
- Air Force maintains Administrative Record for Final Documents at:
<http://afcec.publicadmin-record.us.af.mil/>

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Questions?



Air Force Installation and Mission Support Central (AFIMSC) Public Affairs

AFIMSC/Public Affairs
2261 Hughes Ave., Suite 155
JBSA Lackland, TX 78236-9853
Toll Free (866) 725-7617

afimsc.pa.workflow@us.af.mil



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Attachment 3

**Relative Risk Site Evaluation (RRSE) at the Former Galena Forward
Operating Location (FOL), Alaska**

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Air Force Civil Engineer Center



Relative Risk Site Evaluation (RRSE)

**Former Galena
FOL, Alaska**


Christiana Hewitt
AFCEC/CIBW
20 May 2021

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What is the Relative Risk Site Evaluation (RRSE)?

- **Used by the DoD as methodology to sequence environmental restoration work**
- **Used to evaluate the relative risk posed by an environmental restoration site in relation to other sites**
- **Goal of RRSE is to establish sequencing of sites with the premise of “worst first”**
- **RRSE is not a CERCLA risk assessment**



RRSE Worksheet Example

Installation Map

Soil Worksheet

Contaminant Hazard Factor				Select Rating based on Total
Contaminant	Max. Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio	

Groundwater Worksheet

Contaminant Hazard Factor				Select Rating based on Total
Contaminant	Max. Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio	

Relative Risk Site Evaluation Worksheet

Site Background Information

Installation: _____ **Date:** _____
Location (City, State): _____ **Media Evaluated (e.g., Groundwater, Soil):** _____
Site Name and ID: _____ **Phase of Execution (e.g., RI, FS or RCRA equivalent):** _____
Point of Contact (Name): _____ **Agreement Status (e.g., Federal Facility Agreement (FFA) date signed):** _____

OVERALL SITE CATEGORY: _____

Site Summary
(Attach map view)


Brief Site Description: _____

Brief Description of Pathways: _____


Brief Description of Receptors: _____

Rating					
Site Rating					

DoD, Relative Risk Site Evaluation Primer, Summer 1997 Revised Edition 3



Installation Map



Galena FOL Relative Risk Site Evaluation (RRSE) Figure
 United States Air Force
 Galena Forward Operating Location, Alaska

Legend

● Site Location

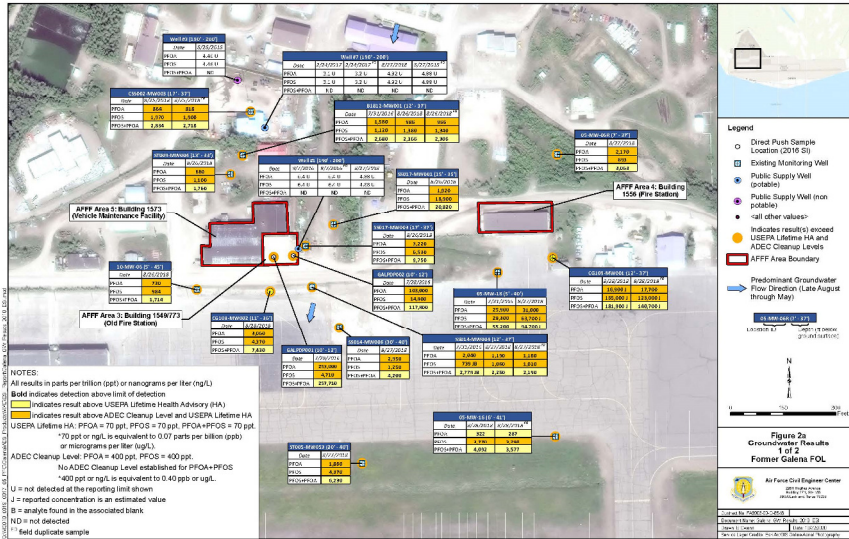
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Air Force Civil Engineer Center
 2261 Hughes Avenue
 Building 171, Suite 155
 JBSA Lackland, Texas 78236

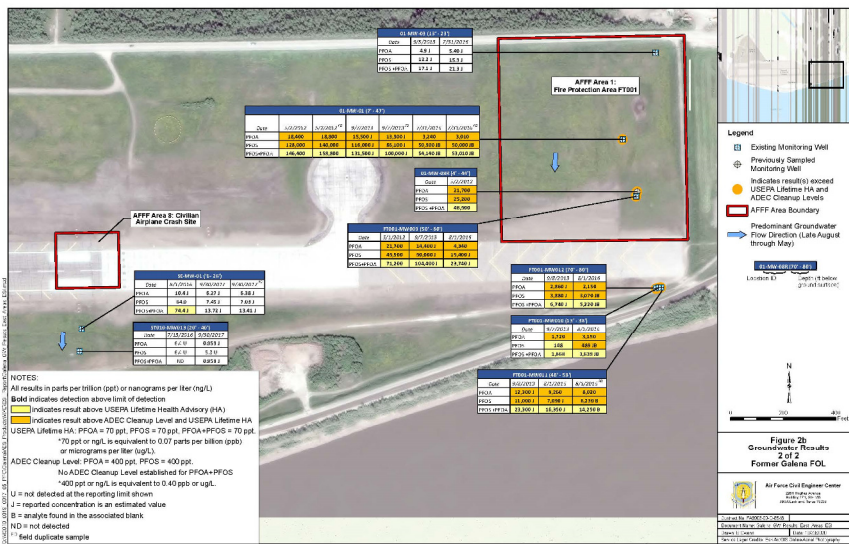
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Site CG109 Area



Site FT001 Area





Relative Risk Evaluation Summary

- Evaluated two (2) sites in the RRSE

Former Galena FOL Sites in RRSE	OVERALL SITE CATEGORY		
	High	Medium	Low
CG109 – AFFF Release Areas	✓		
FT001 – Fire Protection Training Area	✓		

- Remedial investigation contract planned for award in FY21

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Public Participation

- **Public Notice issued in Fairbanks Daily News-Miner on May 17, 2021**
 - 30 day comment period
- **Comments can be provided to:**
 - Air Force Installation Mission Support Center, Public Affairs
 - 1-866-725-7617 or AFIMSC.PA.workflow@us.af.mil
 - **Christiana Hewitt at christiana.hewitt.1@us.af.mil**
- **Hardcopies available at City Hall**
- **Any comments or questions?**

RRSE is located on the Administrative Record (AR)

<https://ar.afcec-cloud.af.mil/>

Select “BRAC”, then select “Galena AFB” and enter “608274” in the AR # search field.

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