Final Meeting Minutes
Restoration Advisory Board (RAB) Meeting
Former Galena Forward Operating Location (FOL), Alaska
Galena, Alaska
25 October 2017

Time/Place: 7:00 pm, 25 October 2017 – Larson Charlie Hall, Galena, Alaska

Attendees:

Approximately eighteen (18) people attended the meeting including representatives from the Air Force Civil Engineer Center (AFCEC), the Alaska Department of Environmental Conservation (ADEC), and the Galena Restoration Advisory Board (RAB). The following is a list of people attending the meeting.

Greg Gangnuss, AFCEC
Donna Kozak, Booz Allen Hamilton (BAH)
Bruce Henry, Parsons
Ed Heyse, Parsons
Dennis Shepard, ADEC
Jamie McKellar, ADEC
Sam Myers, Alaska Department of Transportation (ADOT)
Tim Bodony, Community RAB Member (Chairman)
Shanda Huntington, Galena City Manager
Lee DeWilde, City of Galena
Cherrie Sullivan, Gana-A'Yoo
Kenton Moos, US Fish & Wildlife Service
Phil Koontz, Louden Tribal Council
Robert Thompson, CH2M
Russell Cavanah, Khotol Services
Dick Evans, Community Member
Ron Burgett, Community Member
Ranch Burgett, Community Member

Agenda: See Attachment 1

Introduction:

Greg Gangnuss opened the RAB meeting by introducing himself as representing AFCEC on behalf of Christiana Hewitt (who could not attend), and introducing the presentation on Performance-Based Remediation (PBR) Cleanup efforts.

Presentations

Performance-Based Remediation

Bruce Henry (Parsons) gave a presentation (Attachment 2) with an update of the PBR contract. The PBR contract is for the cleanup of 32 sites at the Former Galena Forward Operating Location (FOL). To date five sites have been closed. Installation of remedial systems started in 2015 and will continue until 2018. Operation of the remedial systems under the PBR will continue through the summer of 2020.

Bruce went through a list of the remedies installed in 2017, and showed the locations of the remedial systems on a map of the Former Galena FOL. He then provided the following overview of the activities that were completed during the 2017 field season.

Horizontal Well Air Sparging

- Million Gallon Hill/Missile Storage Area (Sites CG001/CG002)
- POL Tank Farm Area/GAVTC (Sites ST005/CB001)

Bruce showed pictures, plan views, and cross sections of the two horizontal well air sparge systems installed by CH2M in 2017. Each system consists of four wells approximately 1,000 feet in length and about 40 to 45 feet in depth. Bruce explained that the systems will run over the winter when the water table is low, and will be shut down during the summer months when the water table is high. This is because the air sparge systems can only overcome a certain height of water.

Lee DeWilde asked whether the horizontal wells would plug up when not being operated in the summer. Robert Thompson (CH2M) explained that the wells have very thin screen slots and were developed to remove fine sediments from the well bore; therefore, there is a low probability the wells will plug. Robert also mentioned they have a way to re-develop and clean out the wells through a knock out in the well vault, if necessary.

Soil Vapor Extraction

- South Apron Maintenance Area (Site SS015)

Bruce proceeded to describe the installation of a soil vapor extraction (SVE) system at Site SS015. SVE pulls air out of the subsurface, and removes volatile organic compounds like trichloroethene (TCE) by stripping them from the subsurface soil. The SVE system was designed to remove TCE from shallow unsaturated soil.

Phil Koontz asked how bioremediation worked at the bioreactor that was installed at Site SS015. Bruce replied that there were some issues with the water table dropping below the bioreactor where TCE in groundwater was not in contact with the bioreactor media, but that biodegradation of TCE occurred in groundwater. Bruce also mentioned that a bioaugmentation culture was injected in 2013, and sampling the following year confirmed that the culture survived the winter and was active.

Phil said his understanding was that TCE degraded either aerobically or anaerobically, but it was not good to go between the two conditions. Bruce replied that TCE is recalcitrant (slow to degrade) under aerobic conditions, unless a substrate like methane was added to induce co-metabolic degradation. Anaerobic degradation is a more robust process and the most common method to degrade TCE in groundwater.

Phil asked about how TCE would be treated in the Triangle Area at Site SS006. Bruce replied that the bulk of TCE was hung up in fine grained sediments to a depth of about 10-12 feet below ground surface. Because those sediments are unsaturated, TCE would be removed by SVE like at Site SS015. TCE in groundwater in the permanently saturated zone would be treated by injecting amendments to stimulate anaerobic biodegradation. Bruce explained that two different technologies were being used for TCE in unsaturated versus saturated soil.

Sulfate-Enhanced Bioremediation Injections

- Former Building 1812 Hazardous Waste Satellite Accumulation (Site CSS002)
- Former Birchwood Hangar and Truck Fill Stands (Sites SS014/SS017)
- Former JP-4 Fuel Stands at ADOT Maintenance Building (Site ST009)

Bruce described how the sulfate injections treat deeper fuel contamination in saturated soil at the bottom of the smear zone, and that injection was through Geoprobe rods. Maps showing the injection point locations at Site ST009, Sites SS014/SS017, and Site CS002 were presented. Bruce explained that approximately 196,000 pounds of gypsum was injected into approximately 330 injection points.

Excavations

- Old Abandoned Pipeline (Site CPL006) Area 3
- Former Birchwood Hangar (Site SS014)
- Former Truck Fillstands (Site SS017)

Three small excavations were conducted in 2017. The excavations at Site CPL006 Area 3 and at Site SS017 were to remove shallow petroleum hydrocarbon contamination that could not be treated effectively by bioventing. This soil was taken to the landfarm for treatment. The excavation at Site SS014 was to remove contaminated soil that potentially contains polychlorinated biphenyls (PCBs), around an old floor drain at the former Birchwood Hangar. This soil was supersacked pending further characterization for proper disposal.

Dennis Shepard asked how much soil was left to be excavated and treated at the landfarm. Bruce replied that in 2018 there will be approximately 1,000 cubic yards (cy) from the DP023 excavation and 1,200 cy from the SS018 excavation that will be added to the landfarm stockpiles. There is currently about 15,000 cy in soil stockpiles and 3,000 cy in the landfarm treatment area at the landfarm, so there will be at least 20,000 cy to treat, plus soil that may come from ADOT runway improvement excavations (estimated up to 1,000 cy). Bruce thought it will take another 5 to 6 years of tilling to treat all the soil at the landfarm.

Tim Bodony asked about the area to the south of the landfarm that was previously cleared, and whether it will be used for landfarming. Bruce replied it will not be used since it is too wet and swampy, and that the land is owned by the City of Galena.

Bruce described other activities that occurred in 2017 including the following:

- Annual landfarm operation and soil treatment (transitioned to windrows using a Brown Bear tiller)
- Annual groundwater sampling of monitoring wells

A list of field activities for 2018 was presented, along with a figure showing the locations of the sites where remedial systems will installed. Bruce then summarized the field activities planned for 2018, which include the following:

Bioventing

- Former Fire Protection Training Area (Site FT001)

Bruce explained that bioventing was chosen for Site FT001 (former fire fighting training area). Tim Bodony asked about PFCs (perfluorinated compounds) at FT001 and asked what is the current science is for treating them. Bruce replied that the bioventing system at FT001 is not intended to treat PFCs, only fuel hydrocarbons, and that bioventing was selected so soil with PFCs would not be disturbed. Donna Kozak explained that the Air Force was preparing a Site Investigation (SI) report for PFCs at Galena for ADEC review. After the SI, sources of PFCs at Galena would be delineated in a process like the Site Characterization/Remedial Investigation process used for other contaminants. That delineation will take 2-3 years, and in the meantime a lot of research is being performed to find treatment alternatives. Greg Gangnuss noted that

PFCs are typically removed by granular activated carbon (GAC), at least for drinking water supplies.

Soil Vapor Extraction

- Install system at TCE Spill Site/Building 1700 (Sites SS006/SS019)
- Complete Former South Apron Maintenance Area (Site SS015)
- Expand West Perimeter Road TCE Site (Site SS025)
- Install system at Former Fuel Storage Tank Area (Site ST005 Area C)

Bruce explained that Parsons will install a SVE system at Sites SS006/SS019, complete installation of the SVE system at Site SS015 (trenching and piping), and expand the SVE system at Site SS025 (West Perimeter Road). CH2M has one more SVE system to install in the POL yard at the location of former fuel storage tanks.

Shanda Huntington asked for more information about TCE, what it is, how it is removed, etc. Bruce replied that TCE is used as a solvent, often used to clean machine parts. It is a suspected carcinogen (cancer causing) and has similar cleanup levels to benzene (found in fuels). Shanda asked about soil that was excavated from the area by the Water Treatment Plant. Bruce replied that only the western edge of the excavation in 2015 at Site CS002 had low concentrations of TCE, and that this soil was staged at Million Gallon Hill pending further treatment. Bruce noted that this soil does not exceed ADEC human health criteria, and is only of concern for potential migration to groundwater. Shanda asked that further information regarding TCE contamination and how it is treated be provided. The Air Force agreed TCE contamination will be discussed further at the next RAB meeting. ***Post Meeting Note:*** *Shanda Huntington contacted ADEC on 03 November 2017 and requested information on TCE and health effects. ADEC provided the SS006/SS019 Risk Assessment and TCE fact sheets from the Agency for Toxic Substances & Disease Registry (ATSDR). ADEC also provided the 2007 ATSDR Galena Public Health Assessment.*

Enhanced Anaerobic Bioremediation Injections

- TCE Spill Site (Site SS006)
- Former South Apron Maintenance Area (Site SS015)

Bruce explained that amendments would be injected at two sites in 2018 to treat TCE in groundwater, and that the injections would take a couple months to complete.

Excavation

- Former Disposal Area West of Dike (Site DP023)
- Former Waste Accumulation Area South of Building 1499 (Site SS018)
- Old Abandoned Pipeline Area 2 (Site CPL006)

Bruce mentioned other activities that will occur in 2018, including operation and maintenance of remediation systems (systems are typically checked once a month), annual groundwater monitoring, and landfarm reconstruction and operation. The landfarm reconstruction is to accommodate greater volumes of soil to be treated with the Brown Bear tiller.

Galena PBR Newsletter

Donna Kozak (BAH) presented an updated Galena PBR newsletter and site status (hand outs; Attachments 3 and 4) that summarize the status of the 27 open sites at the Former Galena FOL. The newsletter shows maps of soil and groundwater contamination, summarizes the cleanup technologies being applied, and lists Air Force contact information for further information.

Hardcopies were provided and extra copies will be placed at City Hall and the High School library. [Note that copies were placed at the Post Office and not the High School library.] Donna also had hardcopies of a site table that also summarizes the status of the remaining 27 open sites at Galena.

Closing Remarks

Dennis Shepard spoke on behalf of ADEC saying he was pleased progress is being made on cleanup activities at the Former Galena FOL, and that ADEC would continue to support the cleanup efforts. Dennis also introduced Jamie McKellar, who would be supporting Dennis on environmental issues in Galena. Dennis also mentioned that ADEC would be involved until all sites are treated and cleanup is achieved.

Sam Myers of ADOT also provided closing remarks, stating that ADOT was pleased with the progress made on the PBR effort. Sam noted that a land use control (LUC) agreement had been reached in 2017 between ADOT and the Air Force, and that ADEC has been showing LUC boundaries on their website. Phil Koontz asked about the digging that was performed in the airfield and runway areas. Sam replied that it was part of the runway shortening program, and that they dug out soft spots that had settled and backfilled with compacted soil. Next year ADOT will shorten the runway from 7500 to 6000 feet. Pavement and asphalt will be milled and left in place. No further soil excavations are planned. New runway lighting will also be installed.

Phil Koontz also mentioned that it was his understanding that LUCs at Site SS006 excluded digging trenches, and that hot water piping for the biomass project had to be placed above ground in the area of SS006. Phil asked if that would ever change. Dennis indicated that as sites were cleaned up the LUC boundaries would be updated. Eventually the LUCs would go away as sites meet unrestricted criteria for cleanup complete.

Dick Evans spoke up about past road oiling practices where they mixed ethylene glycol and waste oil and sprayed it on the roads. Dennis Shepard replied that the dike road has been adequately investigated, and that road oiling has not resulted in contamination that poses a health hazard.

Next RAB Meeting

The next RAB meeting is tentatively scheduled for April 2018, and is anticipated to include a Proposed Plan meeting for public review of final remedies for Site DP023 (Disposal Site West of Dike) and Site SS006 (TCE Spill Site)/Site SS019 (Building 1700). Shanda mentioned that the third Wednesday of the month is a good date.

Meeting Adjourned at 8:30 pm

Attachments:

1. RAB Meeting Agenda
2. Presentation: Performance Based Remediation at Former Galena FOL
3. Galena Newsletter
4. Galena PBR Open Sites

This page left intentionally blank

Attachment 1

RAB Meeting Agenda

This page left intentionally blank

Galena Restoration Advisory Board (RAB)

Final Meeting Agenda
October 25, 2017
7:00 p.m. – 8:30 p.m.
Larsen Charlie Hall
Galena, Alaska

Welcome — **Christiana Hewitt, AFCEC**
- Introductions

Overview of Environmental Restoration
- Galena News Letter – Summary of Open Sites — **Christiana Hewitt, AFCEC**
- Performance-Based Remediation (PBR) Contract — **Bruce Henry, PARSONS**
  - Activities Completed in 2017
  - Proposed 2018 Field Activities

Remarks from ADEC — **Dennis Shepard, ADEC**

Remarks from ADOT — **Sam Myers, ADOT**

Questions from the Public — **Bruce Henry (Facilitator)**

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 AFCEC.PA@us.af.mil.

This page left intentionally blank

Attachment 2

Performance Based Remediation at Former Galena FOL

This page left intentionally blank

Air Force Civil Engineer Center

Performance-Based Remediation (PBR) at the Former Galena Forward Operating Location (FOL), Alaska

Restoration Advisory Board (RAB) Meeting
25 October 2017

Battle Ready … Built Right!

1

Former Galena FOL Performance Based Contract

- **Parsons - Prime Contractor**
- **Partnering Team – CH2M and Ahtna Engineering Services**
- **Remediation of 32 sites contaminated primarily with fuels and solvents**
- **To date, five sites have achieved Cleanup Complete**
- **Installation of remediation systems from 2015 to 2018**
- **Operation through Summer 2020**

2

2017 Field Activities

- **2017 Field Work (June through September)**

  Subsurface Aeration (Horizontal Well) Air Sparging
  - Million Gallon Hill/Missile Storage (Sites CG001/CG002)
  - POL Tank Farm Area/GAVTC Building (Site ST005/CB001)

  Soil Vapor Extraction
  - Former South Apron Maintenance Area (Site SS015)

  Sulfate-Enhanced Bioremediation Injections
  - Former Bldg 1812 Hazardous Waste Satellite Accumulation (Site CSS002)
  - Former Birchwood Hangar and Truck Fillstands (Sites SS014/SS017)
  - Former JP-4 Fuel Stands at ADOT Maintenance Bldg (Site ST009)

  Excavations
  - Old Abandoned Pipeline (Site CPL006) Area 3
  - Former Birchwood Hangar (Site SS014)
  - Former Truck Fillstands (Site SS017)

3

2017 Field Activities (continued)

- **2017 Field Work (June through September)**

  Site CS001 (Tank 27 Biocell) – DDT Contaminated Soil
  - Investigation to evaluate concentrations of contaminants in soil and water in the biocell, and to evaluate tank integrity

  Other Field Work
  - System modifications (e.g., expand SVE systems)
  - Install new groundwater monitoring wells
  - Annual groundwater monitoring

  Galena Landfarm
  - Landfarm tilling operations

4

2017 Remediation System Locations

5

Horizontal Air Sparge Systems

Injects air below the fuel-contaminated soil to remove volatiles (e.g., benzene) and stimulate aerobic biodegradation of petroleum hydrocarbons

Drilling and well screen installation at Site ST005

6

Horizontal Air Sparge Systems

Drilling and monitoring at Site CG001

Blower enclosure installation

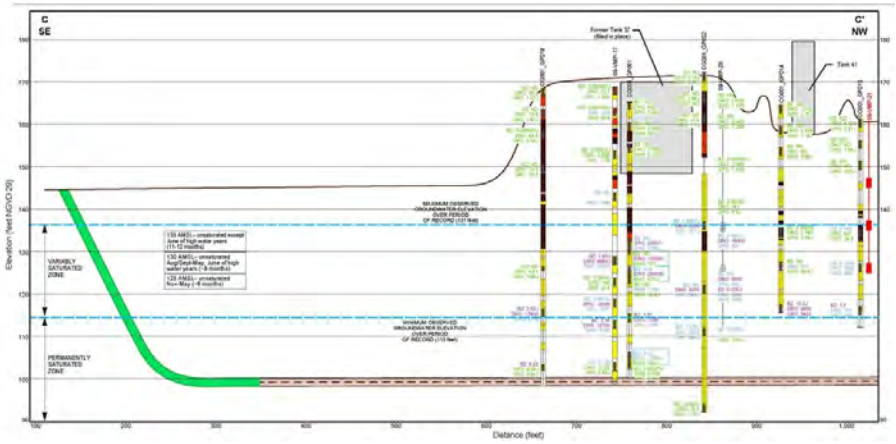
7

Horizontal Air Sparge System at CG001/CG002

8

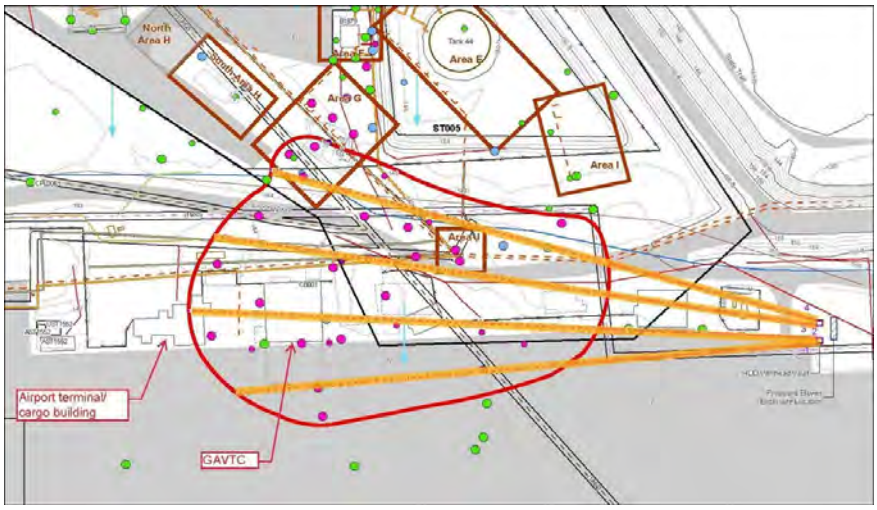
Horizontal Air Sparge System at CG001/CG002

Horizontal wells were installed 45 to 75 feet beneath Million Gallon Hill so that injected air passes upwards through the contaminated soil.



9

Horizontal Air Sparge System at ST005/CB001



10

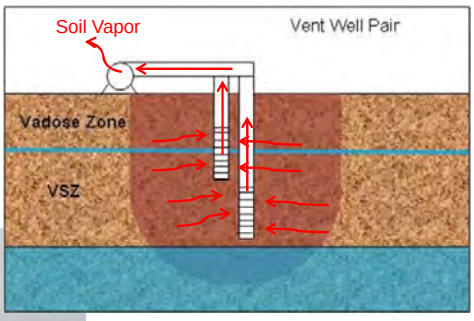
Horizontal Well System Operation

- **Air sparging will startup in November 2017 and operate during the winter time (November – April) when groundwater levels are lower**
- **Systems may operate for 10 years or more, depending on annual groundwater monitoring results meeting cleanup objectives**

11

Soil Vapor Extraction (SVE) System

- **SVE removes volatile contaminants in unsaturated soil**
- **System installed at Site SS015 will remove TCE from soil**



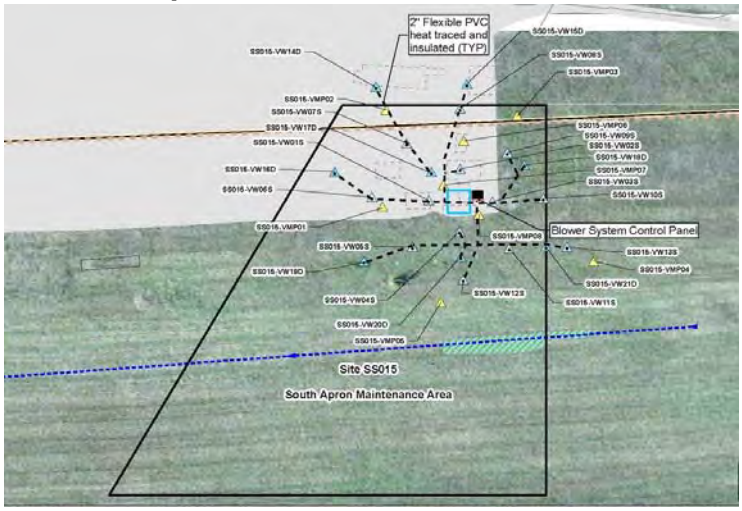
Note: VSZ = variably saturated zone

12

SS015 – South Maintenance Apron Area SVE Layout

Installed 13 shallow and 8 deep vent wells in 2017

System will be plumbed and started in 2018



13

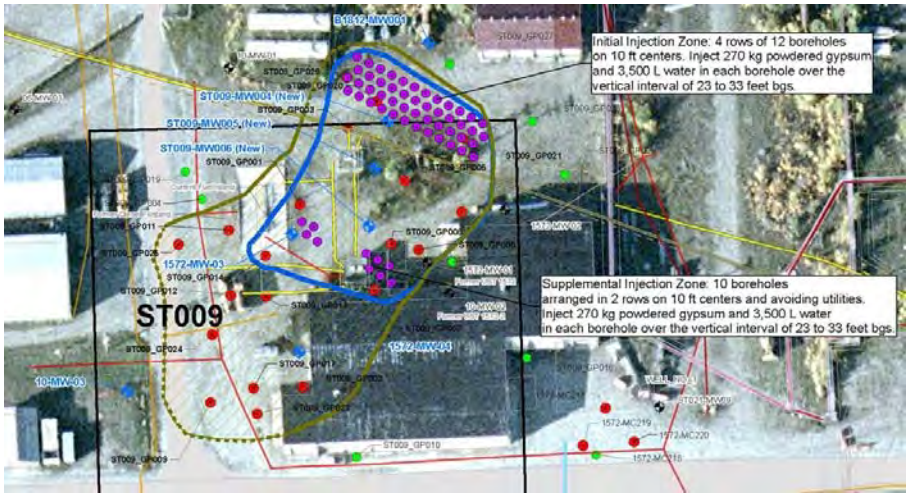
Sulfate Enhanced Bioremediation for Petroleum Hydrocarbons

- **Inject sulfate (gypsum) to biodegrade petroleum hydrocarbons by sulfate reduction**
- **Direct injection of a gypsum slurry through direct-push drill rods**
- **Injected a total of *196,000 lbs* of gypsum at three sites**
- **Boreholes are grouted up with bentonite after injection**

14

ST009 – Injection Point Layout

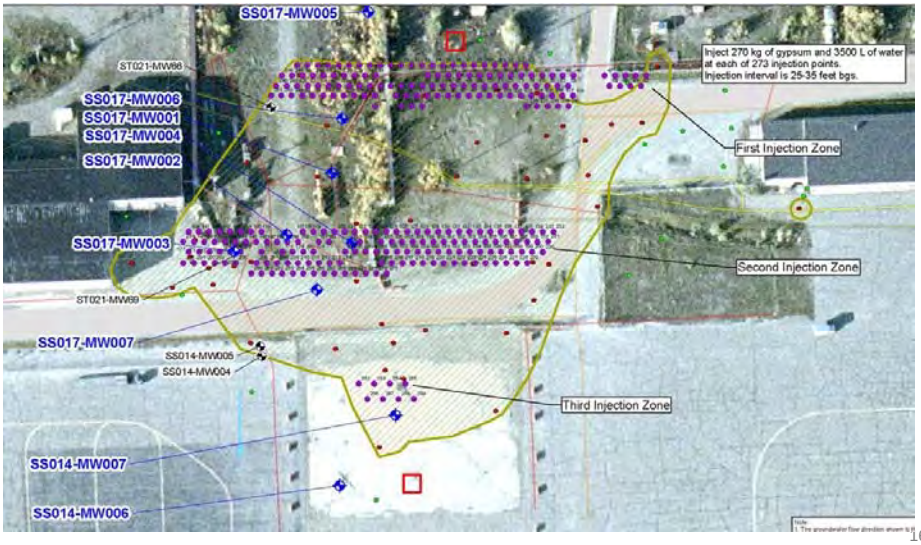
Total of 58 injection points at 23-33 feet



15

SS014/SS017 – Injection Point Layout

Total of 273 injection points at 25-35 feet



16

CSS002 (B1812) – Injection Point Layout

Total of 10 injection points at 27-37 feet

17

2017 Excavations

- **CPL006 Area 3 – Excavated approximately 132 cubic yards (cy) of petroleum contaminated soil and transported to landfarm**
- **CPL006 Area 4 – excavated approximately 12 cy of petroleum contaminated soil from pipeline test pit and transported to landfarm**
- **SS017 - Excavated approximately 70 cubic yards of petroleum contaminated soil and transported to landfarm**
- **SS014 – Excavated approximately 26 cubic yards of PCB and petroleum contaminated soil and staged in supersacks for pending characterization and disposal**

Excavation at Site SS014

18

Galena PBR Schedule

- **Planned 2018 Remediation Systems (April through October)**

Bioventing System Installation

- Former Fire Protection Training Area (Site FT001)

Soil Vapor Extraction System Installation

- Complete Former South Apron Maintenance Area (Site SS015)
- Trichloroethene (TCE) Area (Site SS006/SS019)
- Former Fuel Storage Tank Area (Site ST005 Area C)

Enhanced Anaerobic Bioremediation Injections

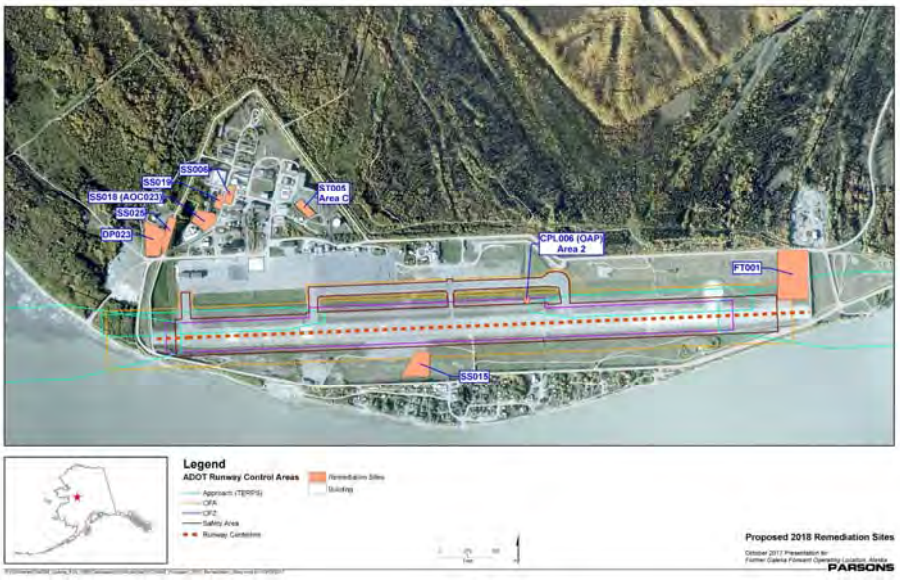
- Former South Apron Maintenance Area (Site SS015)
- Trichloroethene (TCE) Area (Site SS006)

Excavations

- Former Waste Accumulation Area South of Bldg 1499 (Site SS018)
- Disposal Site West of Dike (Site DP023)
- CPL006 Area 2

19

2018 Field Work Locations



20

Galena PBR Schedule (cont'd)

- Operation and maintenance of remediation systems
- Annual groundwater monitoring
- Landfarm reconstruction and operation
- 2019 to 2020 – Operate and monitor remedies

21

Communications

- Semi-annual RAB Meetings (April/October)
- Air Force maintains Administrative Record for Final Documents at:

  http://afcec.publicadmin-record.us.af.mil/

Excavation at Site SS017

Excavation at Site CPL006 Area 3

22

Questions?

Air Force Public Affairs Office

AFCEC/Public Affairs
2261 Hughes Ave., Suite 155
JBSA Lackland, TX 78236-9853
Toll Free (866) 725-7617
AFCEC.PA@us.af.mil

23

Attachment 3

Former Galena FOL Newsletter

This page left intentionally blank

THE FORMER GALENA FOL ENVIRONMENTAL UPDATE

Published to keep the Galena, Alaska community informed of the Air Force's cleanup progress | Oct 2017

Galena Performance Based Remediation Contract Nearing Halfway Mark

In March 2014, the Air Force awarded a Performance Based Remediation, or PBR, contract for the former Galena Forward Operating Location, or FOL, to Parsons Government Services. Parsons along with CH2M are responsible for implementing cleanup remedies at 32 sites through September 2020.

Three and a half years into the contract and the PBR team has made great progress towards cleaning up the sites. The overall approach for site cleanup is to focus on the most contaminated soil, which is a continuing source of contamination to groundwater. Once the source is reduced, remediation of soil and groundwater will occur naturally over time. Cleanup can take as little as a few years or up to several decades. Contamination at Galena is mainly from old spills or leaks of fuel from pipelines and storage tanks or spills of cleaning solvents and degreasers.

The PBR contractor has implemented several remedial systems such as bioventing, soil vapor extraction and air sparging which typically operates over the winter when groundwater is at its lowest. This ensures that the greatest area of soil is treated to remove contamination. Air sparging, or injecting air below the water table, is also a key component in cleaning up groundwater.

A few sites have also included excavation of contaminated soil with treatment at the landfarm or off-site disposal. The addition of treatment amendments to groundwater (gypsum for petroleum contamination and emulsified vegetable oil for chlorinated solvents) for larger sites will accelerate cleanup.

Parsons and CH2M have already closed several sites and the last few systems are scheduled to be installed next summer. Alaska Department of Environmental Conservation, Alaska Department of Transportation & Public Facilities, and others, are working closely with the Air Force and PBR contractor to meet the aggressive cleanup schedule.

Galena PBR by the Numbers

32 sites in the PBR contract

ACTIONS COMPLETED	REMAINING ACTIONS
5 sites closed	**3** SVE systems
20 remediation systems installed	**3** Excavations
2000 cubic yards of contaminated soil removed	**1** Biovent system
196,000 pounds of treatment amendments injected	**1** Site with treatment amendment injections

Horizontal Well Air Sparging System Installed

Air Force contractors installed remediation systems at the two largest petroleum contaminated sites this summer and will begin operating this winter, 2017-18. These systems use horizontal wells that were installed just below the groundwater surface over a large area. Air will be injected into the wells to accelerate bioremediation of petroleum contamination in the soil and groundwater. The Air Force selected horizontal wells over vertical wells in order to cover a larger area of contamination.

AF contractors conduct horizontal well drilling at the former Galena FOL. Photo Courtesy: AF Contractor

Overview of Site Remedies

Triangle Area Sites

Legend: Soil Contamination above Cleanup Level and Type of Cleanup

Bioventing. Soil was excavated from some of these sites and treatment amendments have been added to groundwater to enhance bioremediation.

Horizontal Air Sparging. A small area of ST005 also will have an SVE system.

Soil Vapor Extraction (SVE). Soil was excavated from some of these sites and treatment amendments have been added to groundwater to enhance bioremediation.

Vertical Air Sparging and Soil Vapor Extraction (SVE). CST011 did not need an SVE system.

Excavation

Legend: Groundwater Contamination above Cleanup Level

Trichloroethene

Diesel

Benzene

Structure

Airfield or Road

Overview of Site Remedies (cont'd)

Eastern Portion of Airport

Defining Former Galena FOL Cleanup

Soil Vapor Extraction

Soil Vapor Extraction removes volatile fuels such as gasoline or solvents from the ground by creating a vacuum that draws soil vapors into the wells. The low level volatiles are discharged to the air. Emissions are treated if needed prior to discharge.

Injecting Treatment Amendments

At several Galena sites, amendments will be injected into the ground to enhance or accelerate biological activity or transforms fuel and chlorinated solvent contamination to a less hazardous end-product in groundwater. The amendments are pumped into the ground through a temporary borehole. When done, the borehole is grouted up. Injection locations are typically 20 feet apart to ensure that the amendments cover the entire area.

Bioventing/Air Sparging

Bioventing and Air Sparging are types of subsurface aeration systems. Air is injected into the ground either into soil (bioventing) or groundwater (sparging) to add oxygen. Naturally occurring microbes in the ground need the oxygen to degrade petroleum hydrocarbons. Fuels are broken down over time.

Land Use Controls

Land use controls are placed on areas where contamination may present a risk to people. For excavation and construction work this generally involves working with Alaska Department of Environmental Conservation on preparing a work plan to ensure that any contaminated soil or groundwater is handled properly. The installation of drinking water wells is prohibited in areas with groundwater contamination. New buildings must be constructed in areas where vapor intrusion is not a concern or can be mitigated. For a map of the current land use controls at the former Galena FOL, refer to the Galena LUC Map at: http://dec.alaska.gov/spar/csp/galena_land_use_control.htm Instructions on how to use the LUC map are provided on the website.

Air Force Administrative Record, or AR, Website

Remedial Action Work Plans and Cleanup Plans can be found online at: http://www.afcec.af.mil/Home/BRAC/Galena.aspx or directly at: http://afcec.publicadmin-record.us.af.mil/Search.aspx

To search for Galena documents, select BRAC at the top of the page and then select Galena from the Installation List. There are several different search fields that can be used to find documents. One method is to use the "Subject or Title" field and type in the site ID or type of report. You can also add dates for "Documents After" and/or "Documents Before". If you know the AR number for a document, you can enter that number into the "Full Metadata Search" field for easy access.

In addition to the AR website, the Air Force has placed a DVD of the entire AR in a binder behind the librarian's desk at the library: **The Charles Evans Community Library**
(Inside Galena High School)
Antoski Street, Galena, AK 99741
(907) 656-1205

This Department of Defense Air Force Civil Engineer Center Environmental Update Newsletter is an authorized publication for members of the DoD and surrounding communities. Contents of this newsletter are not necessarily the official views of, or endorsed by, the U.S. Government, the DoD, or AFCEC. The editorial content of this publication is the responsibility of the AFIMSC Public Affairs Office. Published by Cherokee Nation Businesses, a private firm in no way connected with the DoD, U.S. Army, U.S. Navy, U.S. Air Force or U.S. Marine Corps, under exclusive written contract with AFCEC.

Newsletter maintained by:

AFIMSC Public Affairs
2261 Hughes Ave
JBSA Lackland, TX 78236
Ph: Comm (866) 725-7617
Email: afcec.pa@us.af.mil

AFIMSC & AFCEC Staff:

Col. Matthew Benivegna, *AFCEC Deputy Director*

Dr. Stephen TerMaath, *BRAC Program Director*

Mark Kinkade, *Division Branch Chief, AFIMSC PA*

Deb Aragon, *Branch Chief, PA Operations*

Former Galena FOL Restoration Contacts:

General Questions:
AFCEC Public Affairs
2261 Hughes Avenue
JBSA Lackland, TX 78236-9853
Toll Free (866) 725-7617
AFCEC.PA@us.af.mil

BRAC Environmental Coordinator:
Ms. Christiana Hewitt
Air Force Civil Engineer Center
2261 Hughes Ave., Suite 155
JBSA Lackland, TX 78236-9853
Phone: (210) 395-9426

Feedback, comments, and more information

☐ I would like more information about the environmental cleanup of the former Galena FOL.

☐ I would like more information about the Restoration Advisory Board for the former Galena FOL.

Please let us know how we are doing. Your comments and opinions are welcomed and assist the Air Force in providing the most accurate and up-to-date information regarding the cleanup for the former Galena FOL. Fill out this form and send it to the address listed below or email information to afcec.pa@us.af.mil .

Name (Mr./Mrs./Ms.) _____

Organization _____

Street Address _____State_____Zip_____Phone_____

Additional Comments _____

_____

_____

Detach and mail this section in a stamped envelope to: AFCEC/Public Affairs, 2261 Hughes Ave., JBSA Lackland, TX 78236-9853

Attachment 4

Galena PBR Open Sites

This page left intentionally blank

Former Galena Forward Operating Location
Performance-based Contract - Open Sites

Site ID	Previous Site ID	Site Name	Primary Contamination	Impacted Media	Remedy	Status
CB001	--	Galena Aviation Vocation Technical Center	Petroleum	Soil and Groundwater	Horizontal Well Air Sparging	System installed in 2017 and startup underway (combined with ST005)
CG001	--	Million Gallon Hill	Petroleum	Soil and Groundwater	Horizontal and Vertical Well Air Sparging	Systems installed in 2017 and startup underway (combined with CG002)
CG002	--	Missile Storage Area	Petroleum	Soil and Groundwater	Horizontal Well Air Sparging	System installed in 2017 and startup underway (combined with CG001)
CPL006	OAP	Old Abandoned Pipeline	Petroleum	Soil and Groundwater	Bioventing and Excavation	System installed in 2016 and operating; excavations completed in 2017
CSS002	B1812	Building 1812 Former Hazardous Waste Satellite Accumulation Point	Petroleum	Soil and Groundwater	Excavation, Bioventing and Injecting Treatment Amendments	Excavation completed in 2015; system installed in 2016 and operating; sulfate injections to enhance bioremediation completed in 2017
CST011	UST1428	Combat Alert Cell USTs	Petroleum	Soil and Groundwater	Vertical Well Air Sparging	System installed in 2016 and operating
CST014	UST1859	Dining Facility UST	Petroleum	Soil and Groundwater	Vertical Air Sparging with Soil Vapor Extraction (SVE)	Systems installed in 2016 and operating
DP023	DSWD	Former Disposal Site West of Dike	Polychlorinated Biphenyls (PCBs) and Petroleum	Soil	Excavation	Removal action completed in 2016 (partially complete); additional action planned for 2018
FT001	--	Fire Protection Training Area	Petroleum and Solvents	Soil and Groundwater	Bioventing	System installation planned for 2018; perfluorinated compounds (PFCs) are being addressed under a separate project
OW024	OWS1833	MWR Storage OWS	Solvents	Soil	SVE	System installed in 2015 and operating
SS005	--	Wilderness Hall (Bldg 1872)	Petroleum	Soil and Groundwater	Vertical Air Sparging with SVE	Systems installed in 2016 and operating
SS006	--	TCE Area (Bldg 1845)	Solvents (small area of petroleum)	Soil and Groundwater	SVE and Injecting Treatment Amendments	SVE and treatment amendment injections to enhance bioremediation planned for 2018
SS014	--	Birchwood Hangar	Petroleum	Soil and Groundwater	Bioventing, Excavation, and Injecting	System installed in 2016 and operating; sulfate injections to enhance bioremediation

Site ID	Previous Site ID	Site Name	Primary Contamination	Impacted Media	Remedy	Status
					Treatment Amendments	completed in 2017; small area excavated in 2017
SS015	--	South Apron Maintenance Area	Solvents (small area of petroleum)	Soil and Groundwater	SVE and Injecting Treatment Amendments	SVE and treatment amendment injections to enhance bioremediation planned for 2018
SS016	--	Building 2541 – Former POL Fuel Lab	Petroleum	Soil and Groundwater	Bioventing	System installed in 2016 and operating
SS017	--	Former Truck Fillstands	Petroleum	Soil and Groundwater	Bioventing, Excavation, and Injecting Treatment Amendments	System installed in 2016 and operating; sulfate injections to enhance bioremediation completed in 2017; small area excavated in 2017
SS018	AOC023	Waste Accumulation Area - South of Bldg 1499	Petroleum and Solvents	Soil and Groundwater	Excavation	Excavation planned for 2018
SS019	--	Building 1700 – Refueler Maintenance Shop	Petroleum and Solvents	Soil and Groundwater	SVE followed by Bioventing	SVE system installed in 2015 and operating
SS022	B400	Building 400 Former CAA- Air Force Weather Station	Solvents (small area of petroleum)	Soil and Groundwater	SVE	System installed in 2015 and operating; expansion planned for 2018
SS025	--	West Perimeter Road TCE Spill	Solvents	Soil	SVE	System installed in 2015 and operating; expansion planned for 2018
ST005	--	POL Tank Farm	Petroleum	Soil and Groundwater	Horizontal Well Air Sparging and SVE	Air sparge system installed in 2017 and startup underway; SVE for one additional area planned for 2018
ST009	--	West Unit JP-4 Fuel Stands	Petroleum	Soil and Groundwater	SVE followed by Bioventing and Injecting Treatment Amendments	SVE system installed in 2016 and operating; sulfate injections to enhance bioremediation completed in 2017
ST010	--	Southeast Runway Fuel Spill	Petroleum	Soil and Groundwater	Bioventing	System installed in 2016 and operating
ST020	--	Building 1837 – Former UST	Petroleum	Soil	SVE	System installed in 2016 and operating
TU001	--	Power Plant Tank 49	Petroleum and Metals	Soil and Groundwater	Vertical Well Air Sparging with SVE and Excavation	Systems installed in 2016 and operating; excavation of blast grit media completed in 2016