

Final Meeting Minutes
Restoration Advisory Board (RAB) Meeting
Former Galena Forward Operating Location (FOL), Alaska
Galena, Alaska
13 April 2016

Time/Place: 7:00 pm, 13 April 2016 – Galena City Hall, Alaska

Attendees:

Approximately 20 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 partial list of people at the meeting.

AL Weilbacher, AFCEC
Donna Kozak, Booz Allen Hamilton (BAH)
Bruce Henry, Parsons
Win Westervelt, CH2M
Dennis Shepard, ADEC
Tim Bodony, Community RAB Member
John Stam, Community RAB Member
Sam Myers, Alaska Department of Transportation and Public Facilities (ADOT&PF)
Diana Osborne, ADOT&PF
Jon Korta, Galena City Mayor
Shanda Huntington, Galena City Manager
Nick Hruby, City of Galena
Chris Reitan, Galena Interior Learning Academy (GILA)
Kenton Moos, US Fish and Wildlife Service
Betty Huntington, Gana-A'Yoo
Shirley Cleaver, Community Member
Erica Frankson, Community Member
Larry Hausman, Community Member
Phil Koontz, Louden Tribal Council
Tim Salane, Bay West

Agenda: See Attachment 1

Introduction:

AL Weilbacher opened the RAB meeting by reviewing the agenda for presentations on Performance-Based Remediation (PBR) Cleanup efforts, the Perfluorinated Compounds (PFCs) Preliminary Assessment and Site Inspection, and the Small Arms Range Time Critical Removal Action (TCRA).

Presentations

Performance-Based Remediation

Bruce Henry started the presentations with an update of the PBR Cleanup contract. He provided a brief overview of the activities that were completed during the 2015 field season (Attachment 2), which included the following:

- Installed four Pilot Test Soil Vapor Extraction (SVE) Systems at SS022 (B400), OW024 (OWS1833), SS019, and SS025
- Excavation at CSS002 (former Building 1812)
- Excavation at CST013 (former Underground Storage Tank [UST] 1770)
- TCRA excavation at DP023 (Disposal Site West of Dike - DSWD)
- Confirmed Abandonment of USTs at CST011 (former Combat Alert Cell hangar)
- Annual Landfarm Operations
- Annual Groundwater Monitoring
- Sampling for Preliminary Design or Risk Calculations

Tim Bodony requested that presenters limit the use of acronyms since the general public is not familiar with them.

Bruce showed the locations of the four SVE pilot test systems and noted that three of them were operated over the winter. The fourth (SS019) was shut down in October 2015 to evaluate emissions levels, and was started back up in March 2016. Additional sampling of the SVE systems is scheduled for later in April. Other activities conducted over the winter of 2015/2016 included sampling of the subsurface depressurization system at Site CB001 (GAVTC Building).

Bruce then summarized the field activities for 2016, which include the following:

- DP023 TCRA Outside Galena Waste Disposal (July)
- Install six bioventing and three SVE systems (June to September)
- Install four vertical air sparge (VAS) systems (July to September)
- Sulfate-Enhanced Bioremediation Injection at CSS002
- CSS001 (AST1569) Excavation (July to August)
- Annual Groundwater Monitoring (August)
- Landfarm Operations (June to September)

Bruce described the waste material from the DP023 TCRA that must be disposed of outside of Galena. Jon Korta asked if the debris indicated the site was used as a landfill, and Bruce replied that it does. AL Weilbacher noted the excavation was done primarily due to accounts that transformers leaking polychlorinated biphenyls (PCBs) were disposed of at the site.

Bruce then discussed how bioventing and SVE work, and presented figures showing the layouts of the systems going in this summer. These include six bioventing systems at SS016, ST010, CPL006, SS014/SS017, and CSS002; and three SVE systems at SS015, ST009, and ST020. Sam Myers asked about depth of the SVE trenches at SS014/SS017 that will cross roadways. Bruce replied they are typically 2.5 feet deep. Sam indicated that road closures would require an ADOT traffic control plan and that he would provide an ADOT contact for processing the plan.

Bruce turned over the presentation to Win Westervelt to present the SVE system layout for Site ST020. Jon Korta asked about the system stacks being located near building intakes, particularly at Site CST014. Win indicated that CH2M would look into the location of air intakes and account for this to avoid vapors from the SVE system from entering the building.

Win then provided a description of how air sparging works and the vertical air sparge (VAS) system layouts for sites CST011 (UST1428), CST014 (UST1859), SS005, and TU001. Win discussed that two of the USTs at CST011 were confirmed in 2015 to have been removed, but another UST was too close to the building to remove and was abandoned in place. A small VAS system will be installed to clean up that site.

Win went on to mention there would be two small excavations in 2017. One excavation will be at Site CSS001 (AST1569) located in the RAPCON Yard, and the other is a shallow excavation of a drainage ditch at Site TU001, located west of the power plant. Win asked if anyone wanted to cut or could use the trees that will need to be cleared at the TU001 site; no responses were forthcoming. Win also mentioned there would be a shallow excavation on the east side of the power plant for soil with elevated metals, and that the metals could be from dumping blast grit or fly ash there. Win asked Shanda Huntington about placing the blower shed for the TU001 air sparge system in the fenced area on the back (west) side of the Power Plant; Shanda indicated she would get with Win later to discuss.

Win and Bruce discussed when field crews will mobilize and the tentative duration for the 2016 field season.

Chris Reitan asked about the excavation that was planned for the area in front of the dining hall. Bruce Henry responded that the site was associated with CPL006 (Old Abandoned Pipeline), but that preliminary risk calculations indicate that the site may not pose a threat to human health and the environment. Therefore, an excavation may no longer be necessary for this location and no work is planned for 2016.

PFC Preliminary Assessment and Site Inspection

Donna Kozak gave a presentation on the Air Force PFCs Preliminary Assessment and Site Inspection projects. Donna noted that PFCs are an emerging contaminant and that cleanup levels have not been universally adopted, and that the Air Force is responding to the potential releases for PFCs since the US Environmental Protection Agency released provisional health advisories for PFCs. She noted that the most common source of PFCs for the Air Force was from Aqueous Film-Forming Foam (AFFF), which is used for fighting aircraft fires and in fire suppression systems for facilities that store fuels.

Donna summarized the Air Force preliminary assessment (PA) for the Former Galena FOL, and indicated that a site inspection (SI) was planned for 2016 that would include soil and groundwater sampling at select sites that may have had historical storage or use of AFFF. Eight potential AFFF locations have been identified for further evaluation, a few of which may not require sampling based on site inspections with ADEC that indicate there was no historic AFFF use or storage. After the SI, the Air Force will conduct an exposure pathway and risk evaluation for confirmed PFC releases.

Jon Korta asked if the Air Force was still responsible for AFFF that was given to the City. AL Weilbacher responded that once the City accepted the product the Air Force was no longer responsible for it. Dennis Shepard stated that ADEC is very interested in potential releases of PFCs and is seeking public input. Tim Bodony indicated that AFFF given to the City by the Air Force was used to fight a fire in New Town. It was discussed that the location was upgradient of the City of Galena water supply well. Jon Korta asked if the Air Force could test the City drinking water well in New Town for PFCs. AL responded that the Air Force could not. Dennis Shepard said that ADEC may have provided for some sampling of private wells for a PFC site at Eielson Air Force Base, and that he would follow up with ADEC to see if they could assist the City in determining if their water supply was impacted by PFCs. The Air Force agreed to take the one remaining container of AFFF that had been given to the City Fire Department by the AF as CH2M requested a sample from the container for laboratory analysis.

Jon Korta asked if there were any private water supply wells downgradient of the FT001 site (where the release of PFCs has been confirmed). Donna replied that there were not (see Figure 3 on slide 8 in Attachment 3). However, it appears there are private wells downgradient of a

former civilian air plane crash site that could potentially be impacted. AL asked if the City could provide current information on where there are private water wells in Old Town Galena. A question was asked whether a single release of PFCs could impact soil and groundwater, or whether several releases (like at a fire training area) were needed to result in a PFC groundwater plume? Donna noted that the Air Force does not have enough information to determine that, but the civilian air crash site would be investigated in 2016. Tim Bodony asked about the mobility and longevity of PFCs. Win Westervelt said that the fluorine-carbon bond in PFC compounds is very strong and does not break easy. Therefore, compared to petroleum and chlorinated compounds, the fluorinated compounds are difficult to treat, recalcitrant (slow to degrade), and migrate with groundwater flow.

Closing Remarks

AL Weilbacher provided an update for the TCRA at the Small Arms Range performed by Ahtna Engineering Services. Additional leveling and restoration of the site will occur this summer.

AL Weilbacher concluded the RAB meeting by reviewing the schedule for the next proposed RAB meeting in October 2016. Based on input from the community, the October RAB meeting was scheduled for the evening of October 26th. The October meeting will include a formal Proposed Plan presentation with a public review period.

Attachments:

1. RAB Meeting Agenda
2. Performance Based Remediation at Former Galena FOL
3. Perfluorinated Compounds (PFCs) Preliminary Assessment and Site Inspection

Attachment 1
RAB Meeting Agenda

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Galena Restoration Advisory Board (RAB)

Meeting Agenda

April 13, 2016

7:00 p.m. – 9:00 p.m.

Galena City Hall

Galena, Alaska

Welcome

AL Weilbacher, AFCEC

- Introductions

Overview of Environmental Restoration

- Performance-Based Remediation (PBR) Contract

Bruce Henry, PARSONS

Win Westervelt, CH2M

- Activities Completed in 2015
- Proposed 2016 Field Activities

- Other Contracts

AL Weilbacher

- Small Arms Firing Range Time Critical Removal Action (TCRA)
- Perfluorinated Compounds (PFCs) Preliminary Assessment and Site Inspection

Remarks from ADEC

Dennis Shepard, ADEC

Remarks from ADOT

Sam Myers, ADOT

Questions from the Public

Bruce Henry/Win Westervelt (Facilitators)

Closing Remarks

AL Weilbacher

Campion RAB Presentation (USACE)

- Campion MMRP TCRA

Tim Salane, Bay West

For more information about the Galena Environmental Cleanup program, please contact the AFCEC Public Affairs hotline at 1-866-725-7616 or via email at AFCEC.PA@us.af.mil.

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Attachment 2

Performance Based Remediation at Former Galena FOL

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***PERFORMANCE-BASED REMEDIATION (PBR)
AT FORMER GALENA FORWARD OPERATING
LOCATION (FOL), ALASKA***

RAB Meeting, 13 April 2016, Galena, Alaska

Integrity - Service - Excellence



Former Galena FOL PBR Contract

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- **Parsons - Prime Contractor**
- **Partnering Team – CH2M and Ahtna Engineering Services**
- **Remediation of 31 sites contaminated primarily with fuels and solvents**
- **Installation of remediation systems from 2015 to 2018**





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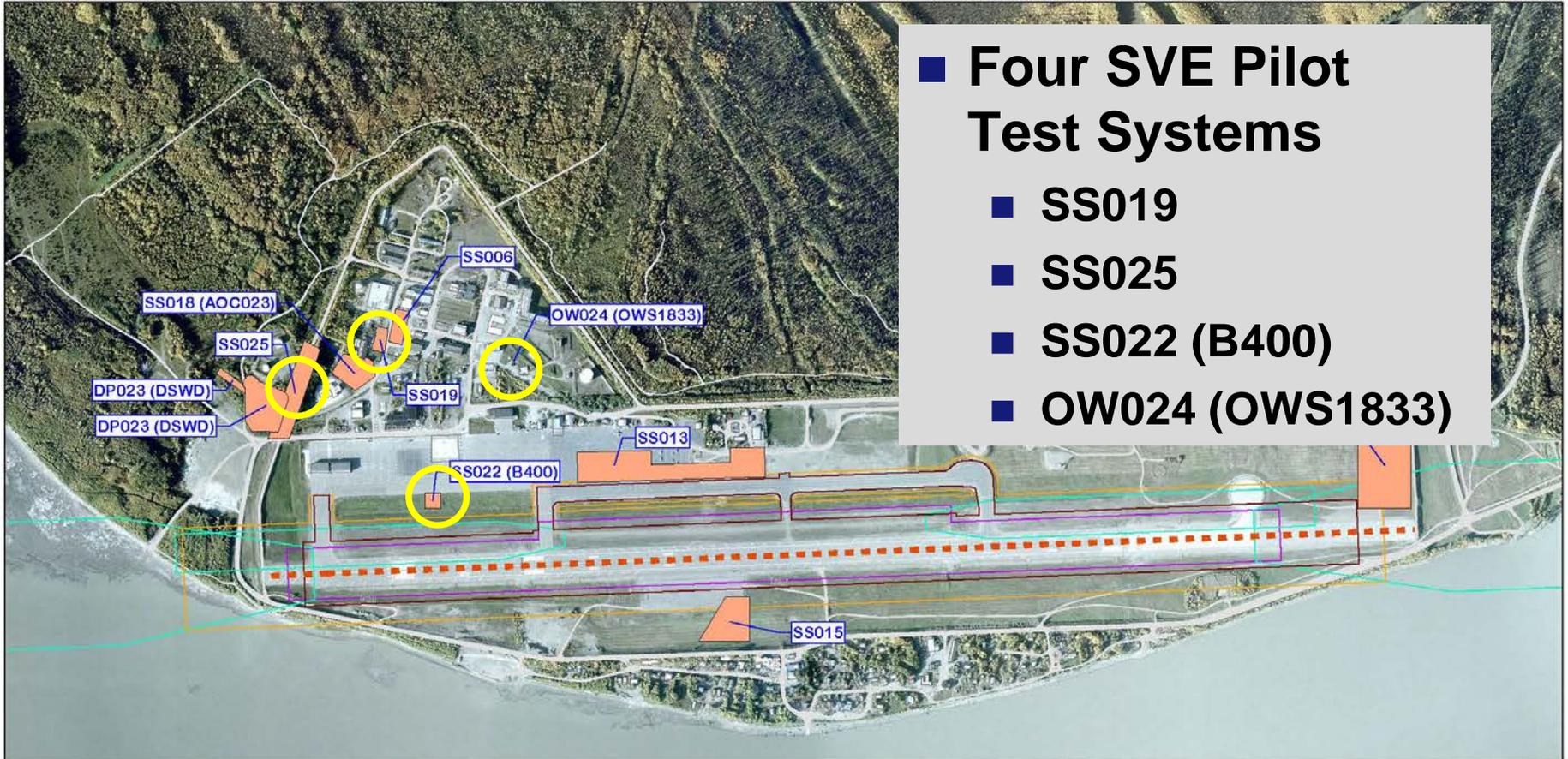
Field Activities Completed in 2015 (reviewed at October 2015 RAB)

- **Installed four Pilot Test Soil Vapor Extraction (SVE) Systems at SS022 (B400), OW024 (OWS1833), SS019, and SS025**
- **Excavation at CSS002 (former Building 1812)**
- **Excavation at CST013 (former UST 1770)**
- **Time Critical Removal Action (TCRA) excavation at DP023 (Disposal Site West of Dike - DSWD)**
- **Confirmed Abandonment of USTs at CST011 (former Combat Alert Cell hangar)**
- **Annual Landfarm Operations**
- **Annual Groundwater Monitoring**
- **Sampling for Preliminary Design or Risk Calculations**



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SVE Pilot Test Locations



- Four SVE Pilot Test Systems
 - SS019
 - SS025
 - SS022 (B400)
 - OW024 (OWS1833)



Legend

ADOT Runway Control Areas

- Approach (TERPS)
- OFA
- CFZ
- Safety Area
- Runway Centerline

Remedial Investigation Areas

Building



Figure 2
Investigation Areas
for Remedial Investigation



Winter 2015/2016 Activities

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- **SS002, SS025, and OW024 Pilot SVE Systems running all winter – monitored monthly**
- **SS019 SVE System shut down in October to evaluate emissions data - started back up in March**
- **Sampling of GAVTC Subsurface Depressurization System (Site CB001)**
- **Late April – Pilot SVE Systems shut down for annual static soil vapor sampling**



Galena PBR 2016 Schedule Overview

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■ 2016 Field Work

- DP023 TCRA Outside Galena Waste Disposal (July)**
- Install six Bioventing and three SVE Systems (June to September)**
- Install four Vertical Air Sparge Systems (July to September)**
- Sulfate-Enhanced Bioremediation Injection at CSS002**
- CSS001 (AST1569) Excavation (mid July/August)**
- Annual Groundwater Monitoring (August)**
- Landfarm Operations (June to September)**

■ 2017 – Implement remaining remedies

- Operate remedies and prepare close out reports, as appropriate (through 2020)**



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DP023 TCRA Waste Disposal Summary

Soil and Debris Removed from Excavation

- Total of 300 supersacks of soil with potential PCBs (7 of 8 samples collected from supersacks had PCBs not detected (ND or <1.0 mg/kg))
- 200-300 drums of tar waste
- 40 overpack drums with leaking drums and oil stained soil
- 6 drums of batteries
- 5 drums with transformers
- 20 cy of asbestos containing material
- About 10 cy of porous debris
- 48 truck loads of clean debris to landfill





2016 Remediation System Installations



Legend

- Bioventing System Installation
- SVE System Installation
- Vertical Air Sparge/SVE System Installation
- Sulfate Enhanced Bioremediation Injection

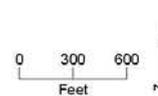


Figure 1

Installation of 2016 Remediation Systems
at the Former Galena FOL

Former Galena Forward Operating Location, Alaska

PARSONS

S:\ES\Remed\0749398_Galena_FOL_PERP\atbase\GIS\WholeSite\2016\Galena_2016RemedSys_Location_2016_Fig1_11x17.mxd lrb: 12/7/2015



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Bioventing and SVE System Installations

Bioventing – Injects air to stimulate aerobic biodegradation of petroleum hydrocarbons

- Six (6) Sites (SS016, ST010, CPL006, SS014/SS017, and CSS002)

SVE – Extracts air to remove VOCs like GRO, benzene, and TCE

- Three (3) Sites (SS015, ST009, and ST020)

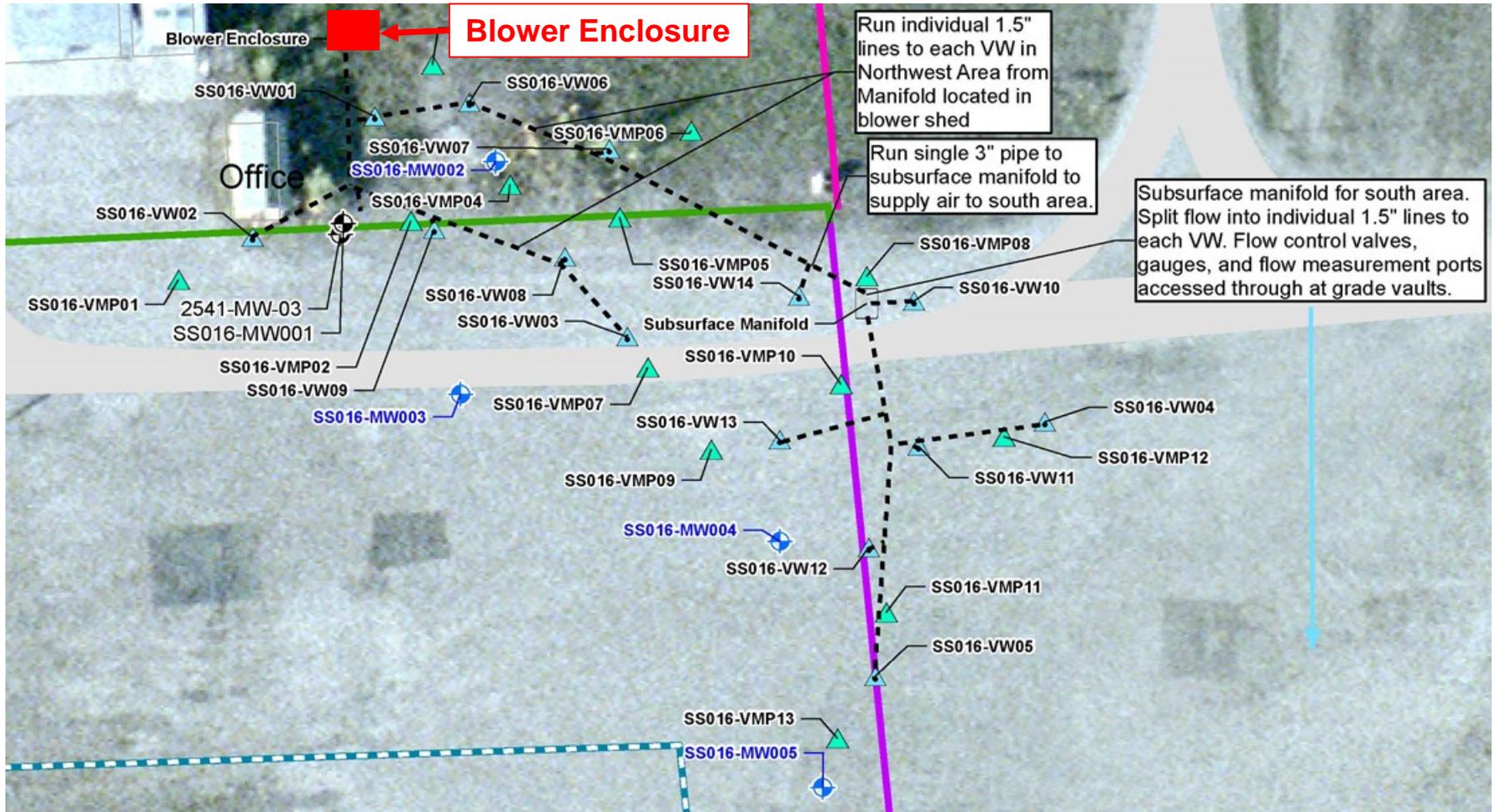




SS016 - Former POL Fuel Lab

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Total of 5 shallow and 9 deep vent wells

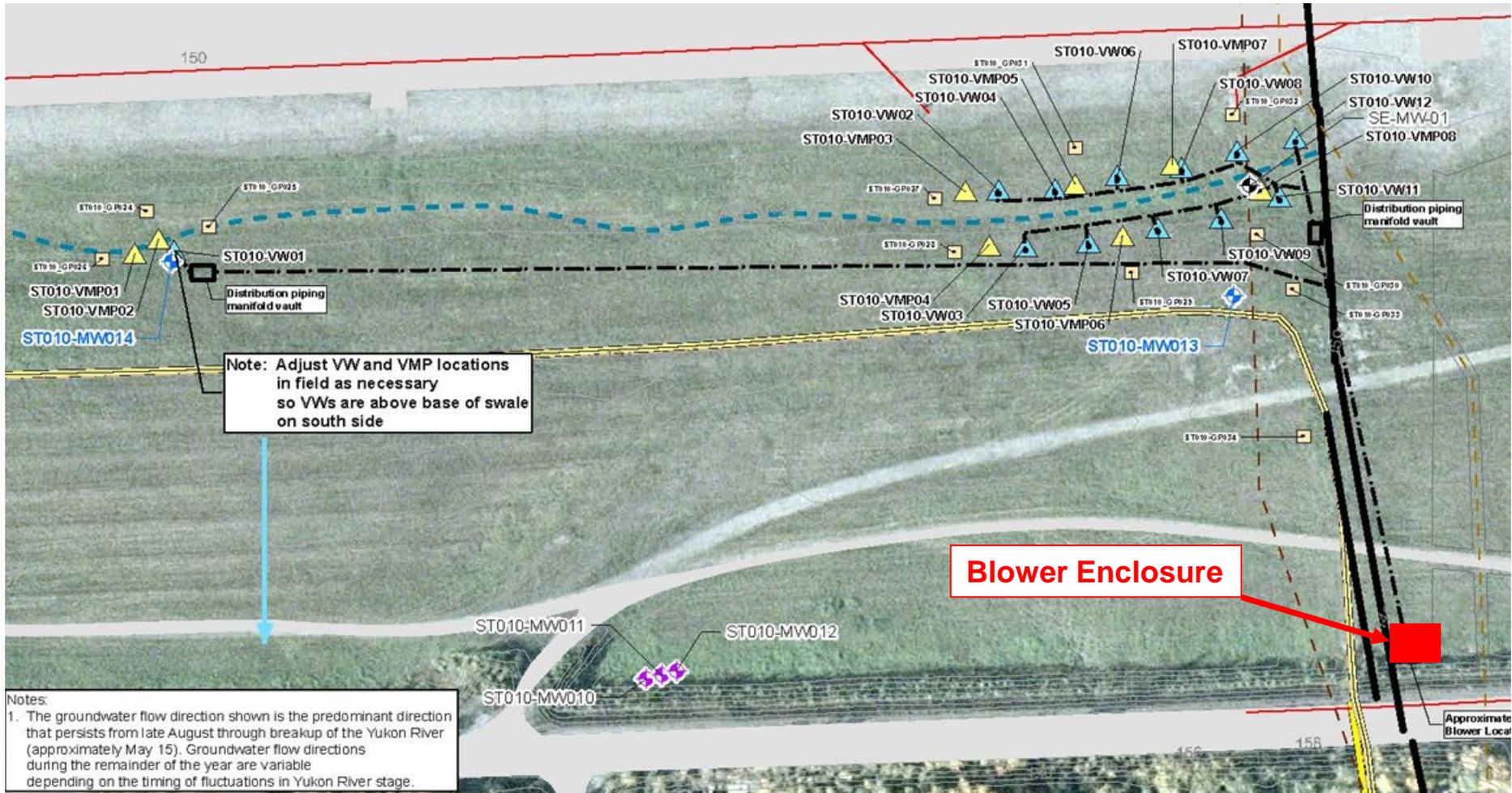




ST010 - Southeast Runway Fuel Spill

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Total of 12 vent wells

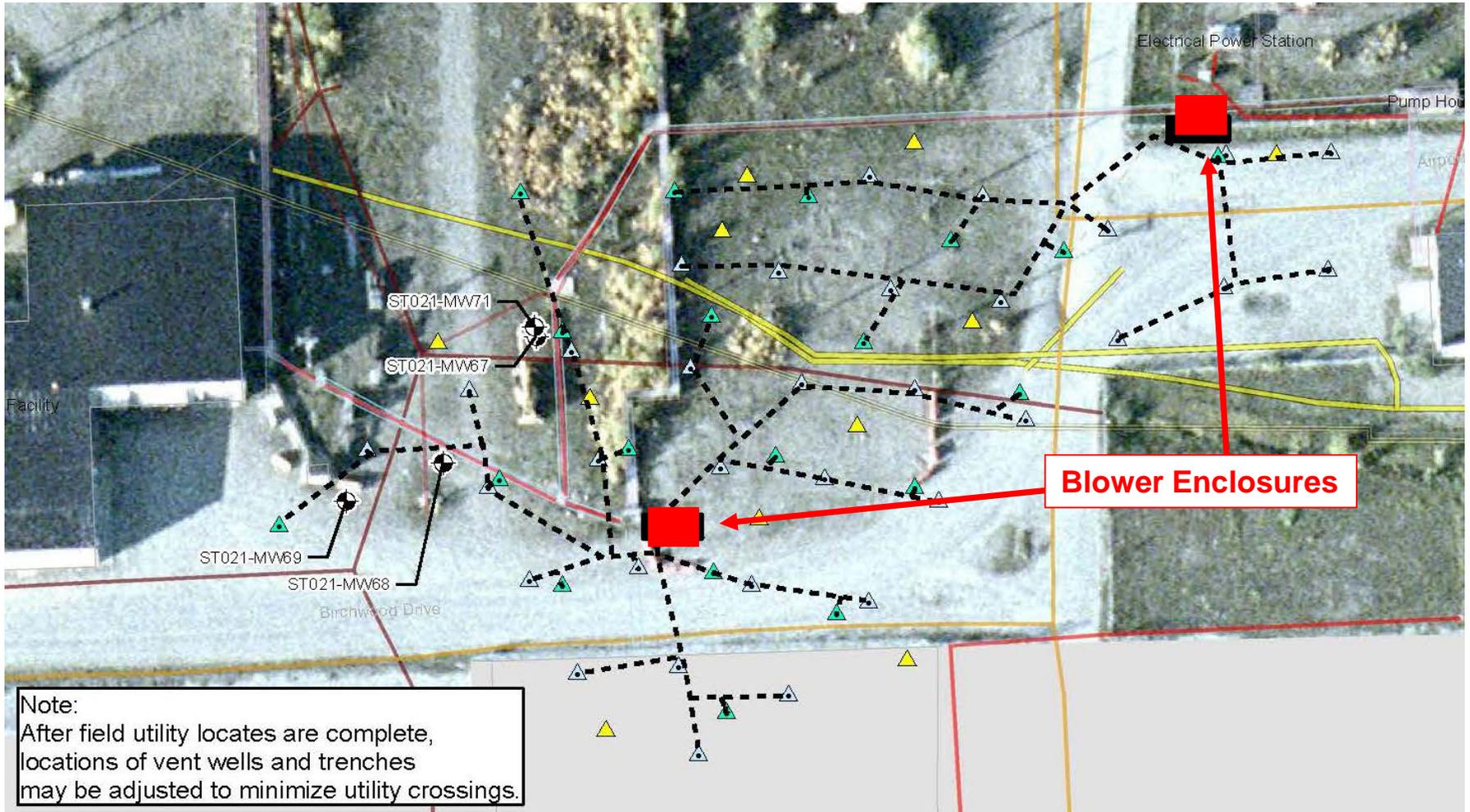




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SS014/SS017 – Former Birchwood Hangar/Former Fuel Stands

Total of 32 shallow and 19 deep vent wells





CSS002 – Former Building 1812

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Total of 4 shallow vent wells and 25 sulfate injection points

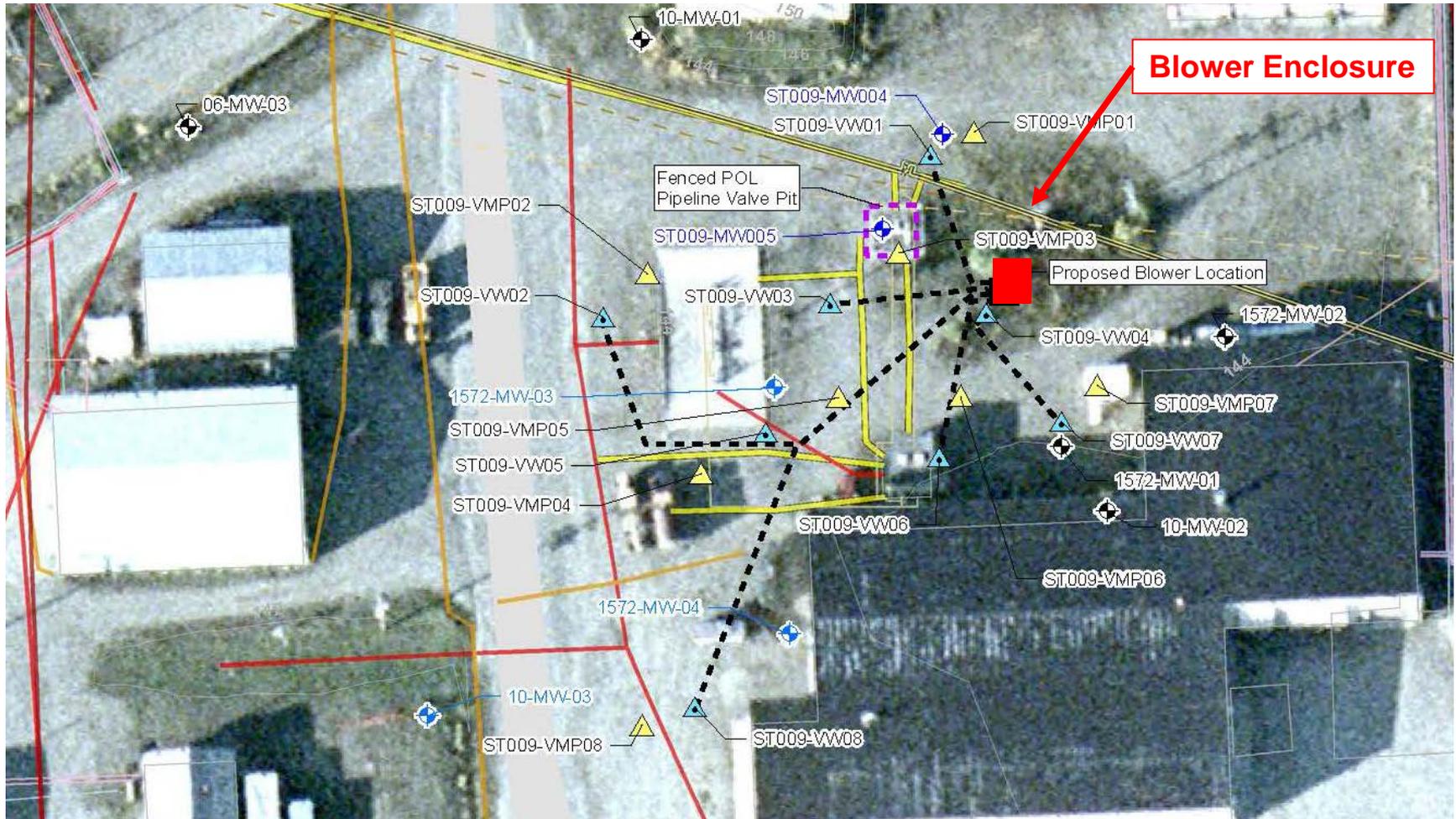




ST009 – West Unit JP-4 Fuel Stands SVE Layout

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Total of 8 deep vent wells

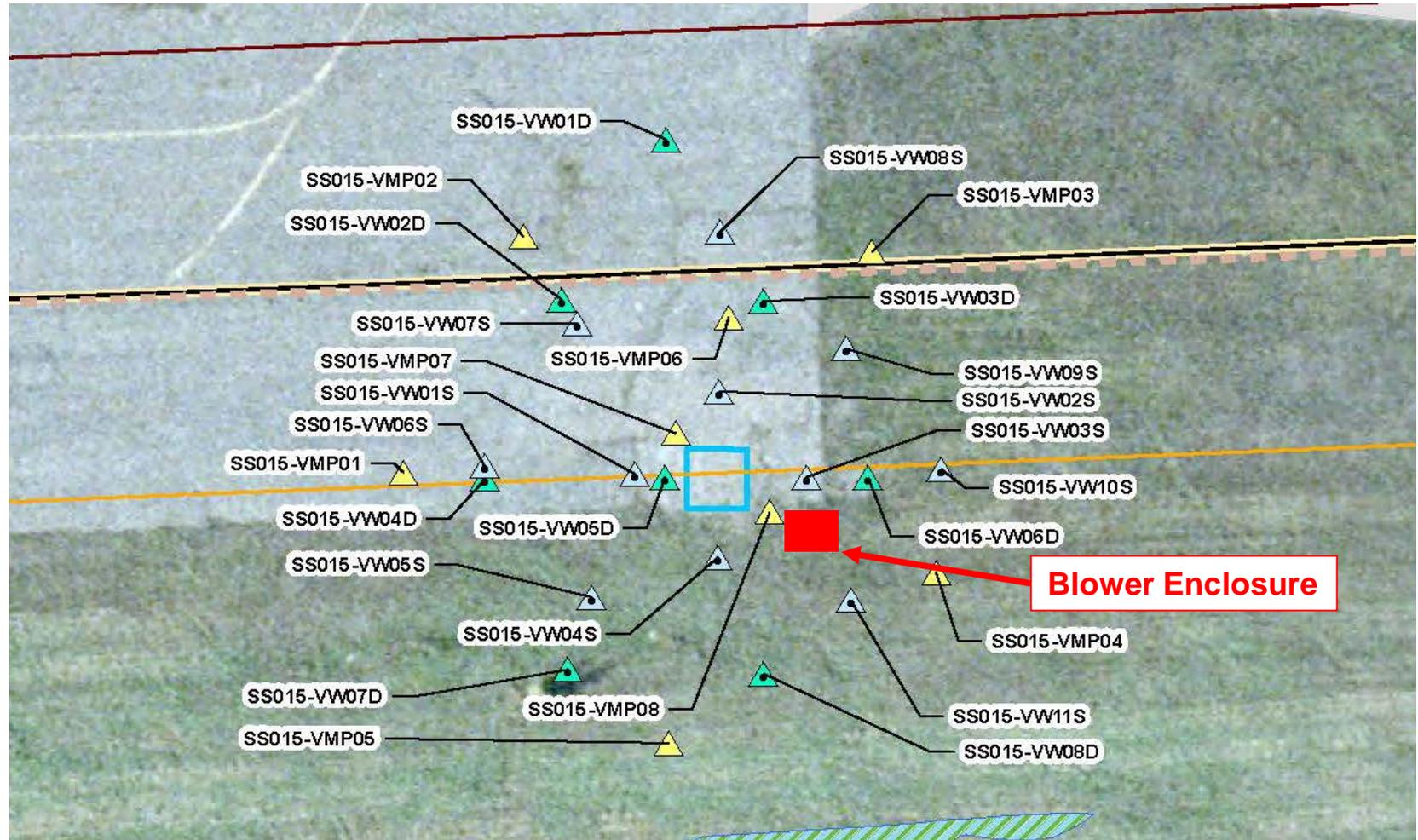




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SS015 – South Maintenance Apron Area SVE Layout

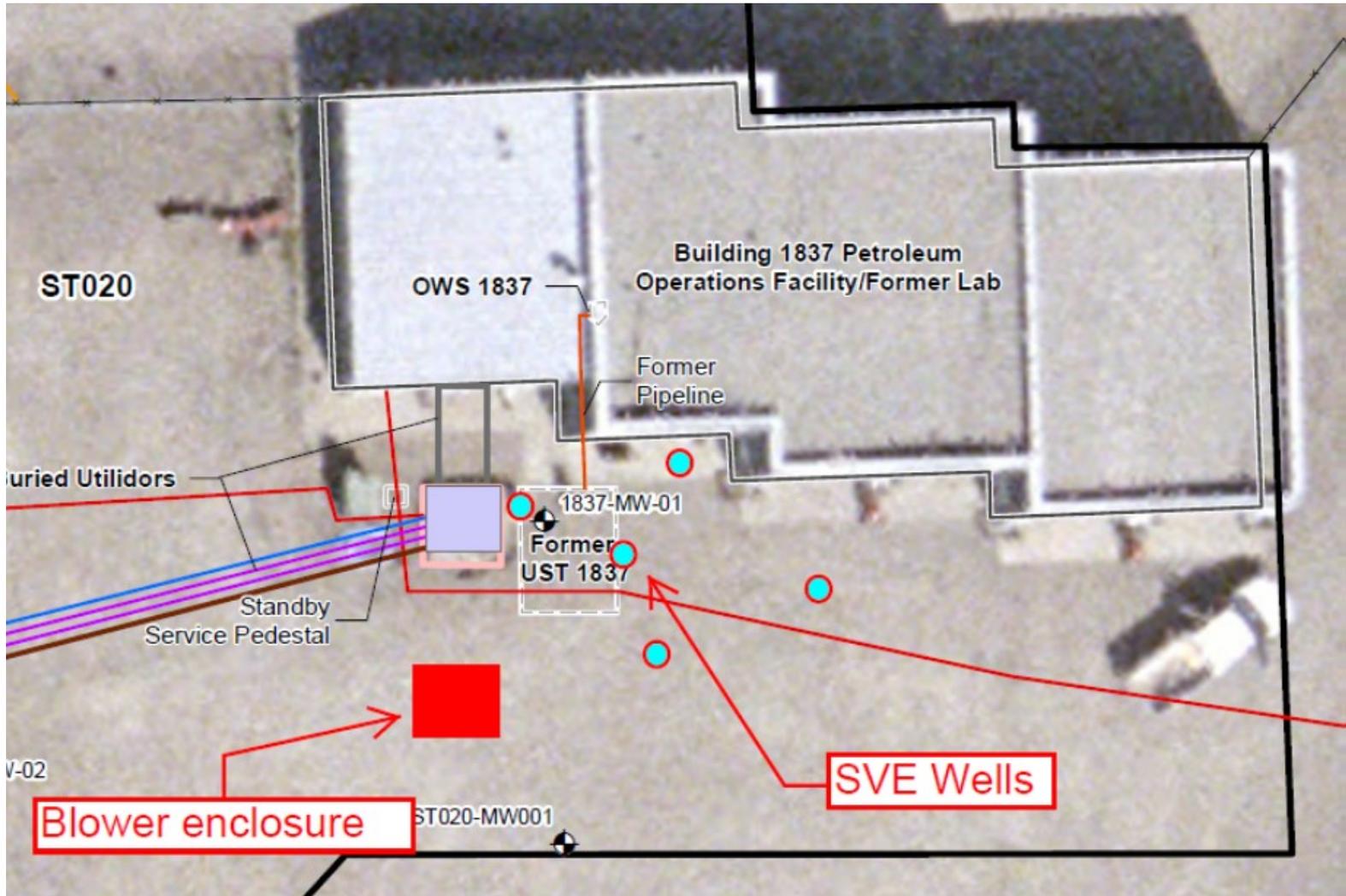
Total of 11 shallow and 8 deep vent wells





ST020 – Former Fuels Lab

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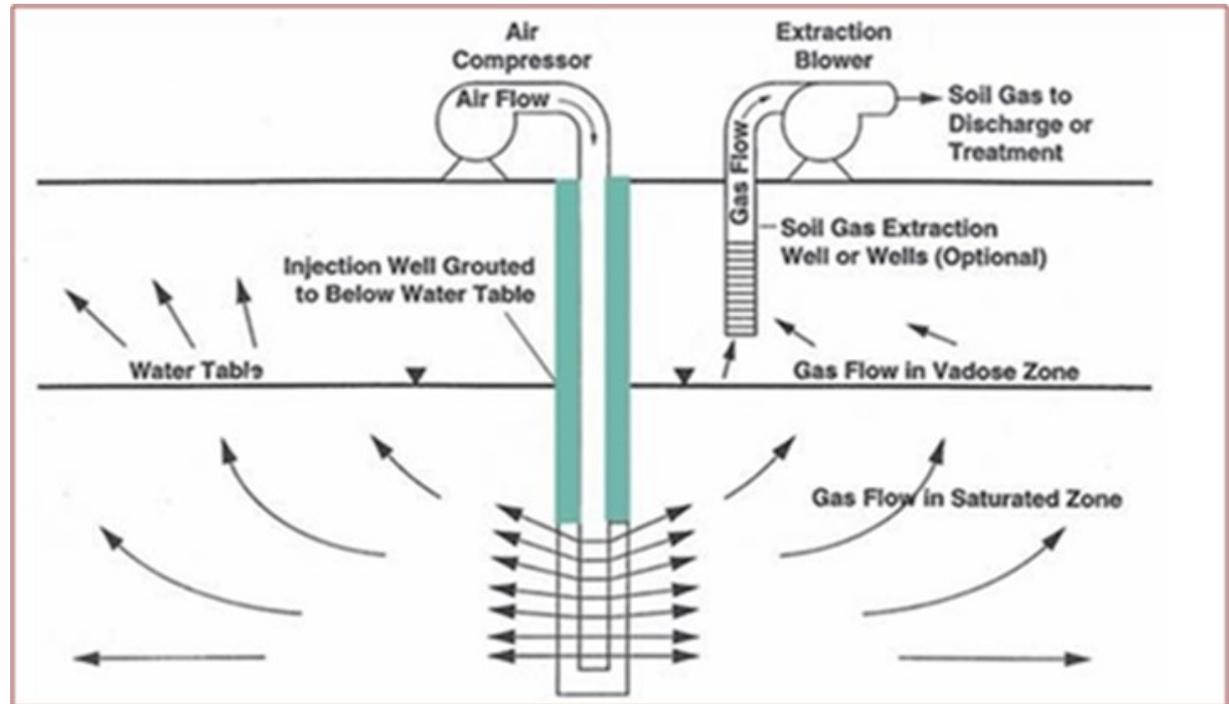


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Vertical Air Sparge Systems

Vertical Air Sparge - Injects air *below the water table* to remove VOCs and stimulate aerobic biodegradation of petroleum hydrocarbons. May be combined with SVE.

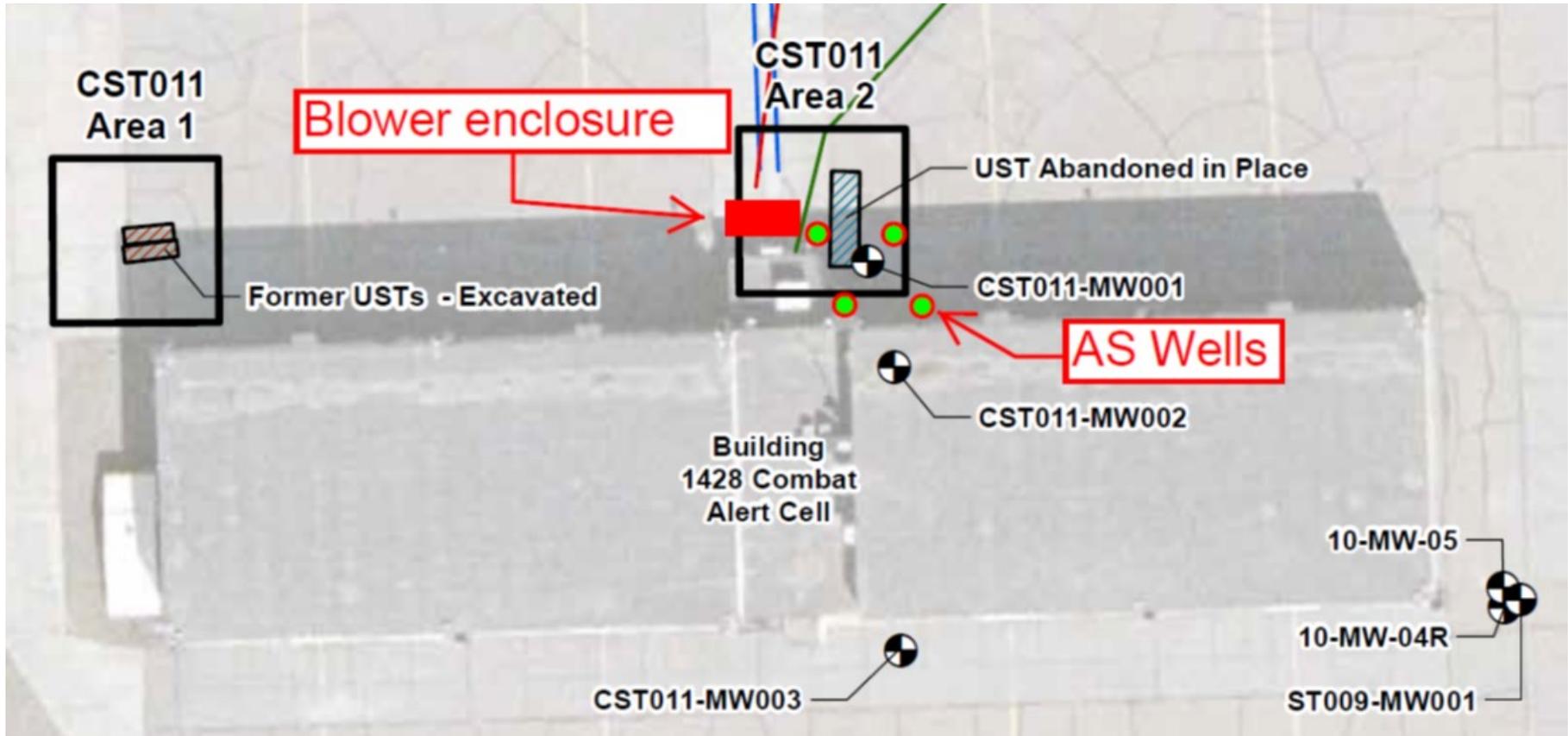
- CST011 (UST1428)
- CST014 (UST1859)
- SS005
- TU001





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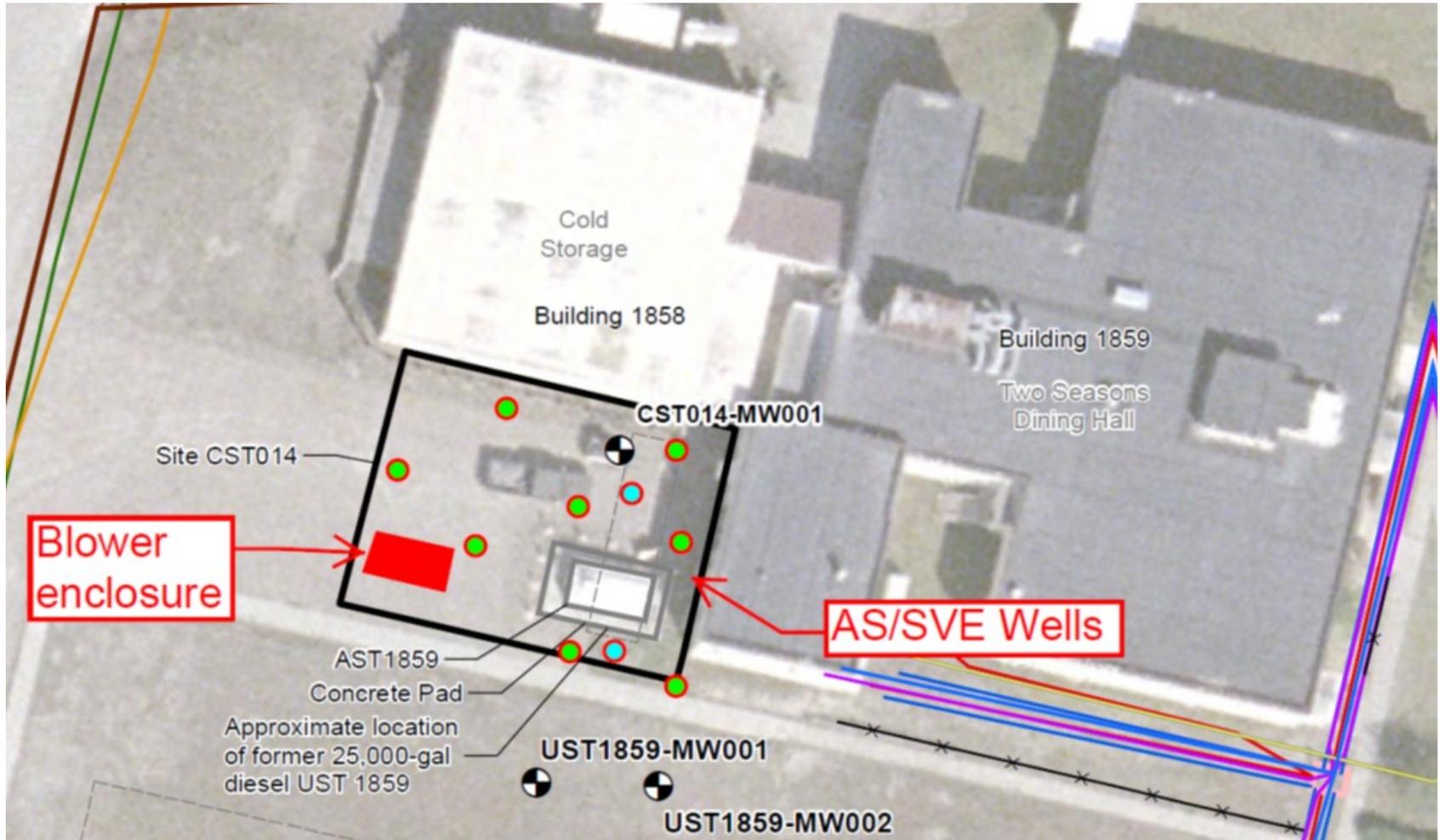
CST011 – Former Combat Alert Cell Hangar





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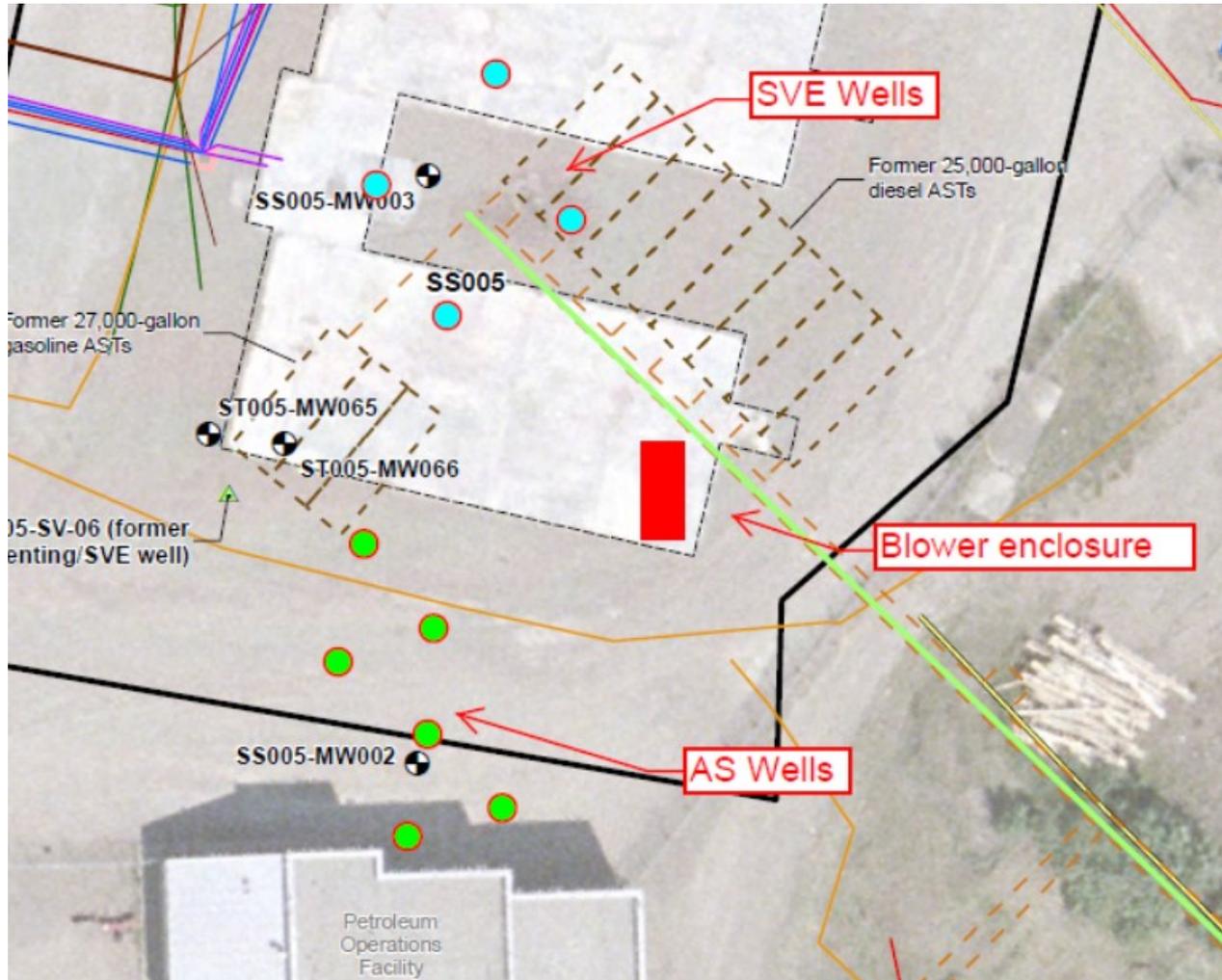
CST014 – Dining Hall





SS005 – Former Wilderness Hall

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TU001 – Power Plant

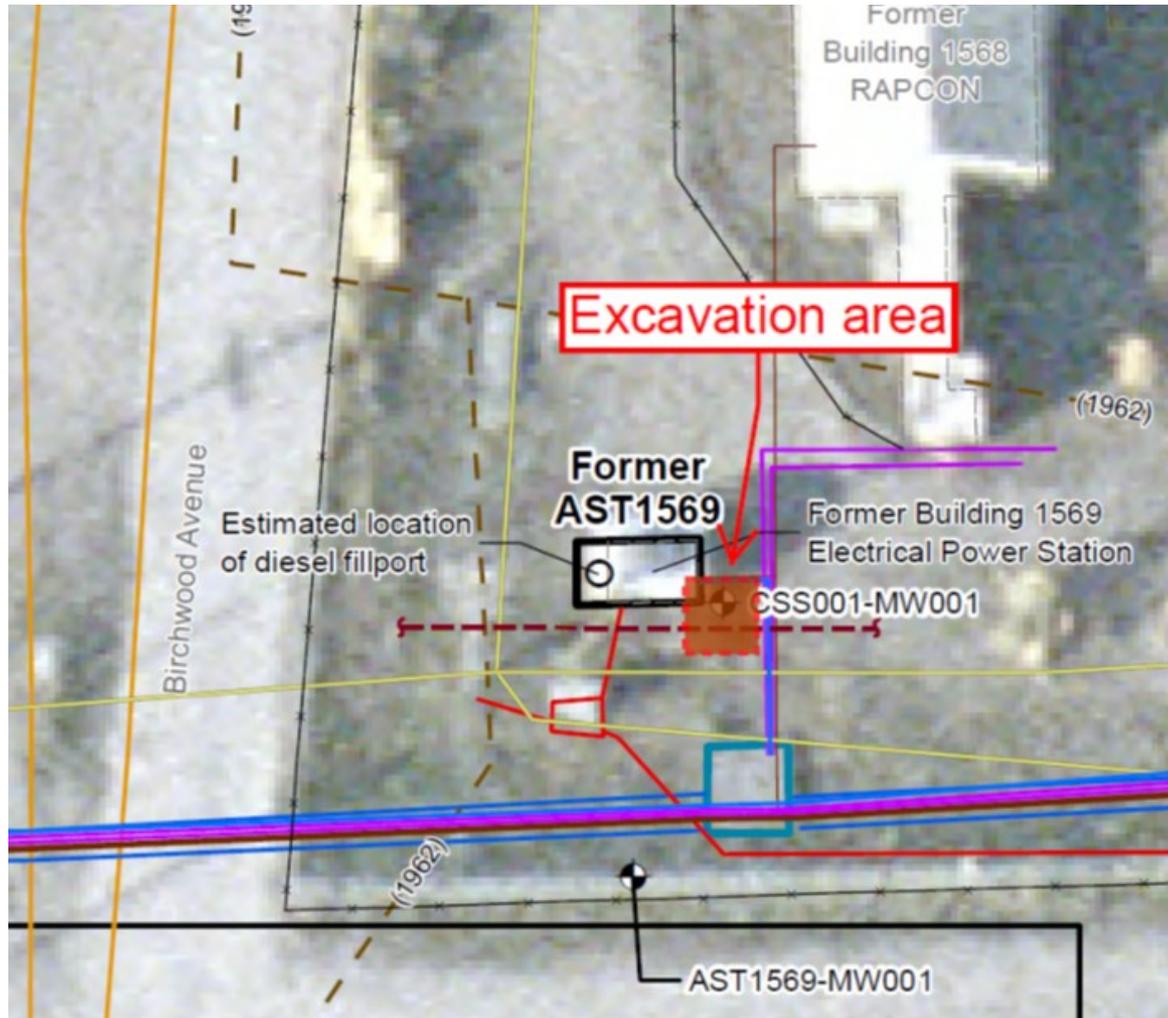
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CSS001 – Former RAPCON Building/Storage Yard





Communications and Questions

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- **Semi-annual RAB Meetings (April/October) – What schedule works best for the Galena Community?**
- **Fall 2016 RAB will include a Proposed Plan Meeting for CERCLA Sites**
- **Questions and comments can also be directed to AFCEC Public Affairs, Toll Free (866) 725-7617, or via email at AFCEC.PA@us.af.mil.**
- **Air Force maintains Administrative Record for Final Documents at:**
<http://afcec.publicadmin-record.us.af.mil/>

Questions?

Attachment 3
**Perfluorinated Compounds (PFCs) Preliminary Assessment and Site
Inspection**

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Air Force Civil Engineer Center



Perfluorinated Compounds (PFCs) Release Determination Former Galena Forward Operating Location

AL Weilbacher
BRAC Environmental Coordinator
13 April 2016



Evaluation for Possible Releases of PFCs

- PFCs are used in a variety of industrial and commercial products such as leather products, paper and packaging, cookware, and firefighting foams
- Aqueous Film-Forming Foam (AFFF) containing PFCs has been used since 1970 by the Air Force for fire fighting purposes



Evaluation for Possible Releases of PFCs

- PFCs are considered an Emerging Contaminant (EC) by the U.S. Environmental Protection Agency (USEPA) because they:
 - Have possible pathways to enter the environment
 - Are persistent in the environment and resistant to typical environmental degradation processes
 - Present a potential unacceptable risk to human health or the environment
- Air Force is responding to these ECs since USEPA has released Provisional Health Advisories for PFCs



Evaluation for Possible Releases of PFCs

- USEPA established Provisional Health Advisories (PHAs) for two PFCs to protect humans from potential risk of exposure to these compounds through drinking water
 - PFOS – 0.2 micrograms per liter ($\mu\text{g/L}$)
 - PFOA – 0.4 $\mu\text{g/L}$
- The Air Force calculated soil screening levels for the residential direct contact scenario (oral and dermal)
 - PFOS – 5 milligrams per kilogram (mg/kg)
 - PFOA – 12 mg/kg



Evaluation for Possible Releases of PFCs

- Actions beginning in 2014 include:
 - Determine if releases of PFCs have occurred at former Fire Training Areas (FTAs) by sampling soil and groundwater
 - Identify other potential PFC release locations including storage locations, aircraft crash sites, fire stations, and fire suppression systems
- For confirmed releases, the Air Force will determine if a pathway exists for PFCs to reach drinking water
- If the exposure pathway and risk evaluation results indicate an issue, the Air Force will work with Alaska Department of Environmental Conservation (ADEC) to initiate mitigation measures



PFC Evaluation at Former Galena FOL

- Soil and groundwater samples were collected at the former fire training area
- Preliminary Assessment (PA) of AFFF use was conducted for other locations
 - Interviewed former installation base personnel
 - Reviewed historical records
 - Reviewed installation drawings and blueprints
- Site Inspection (SI) planning will complete the PA to identify potential AFFF locations for further investigation
- SI sampling planned for Summer 2016

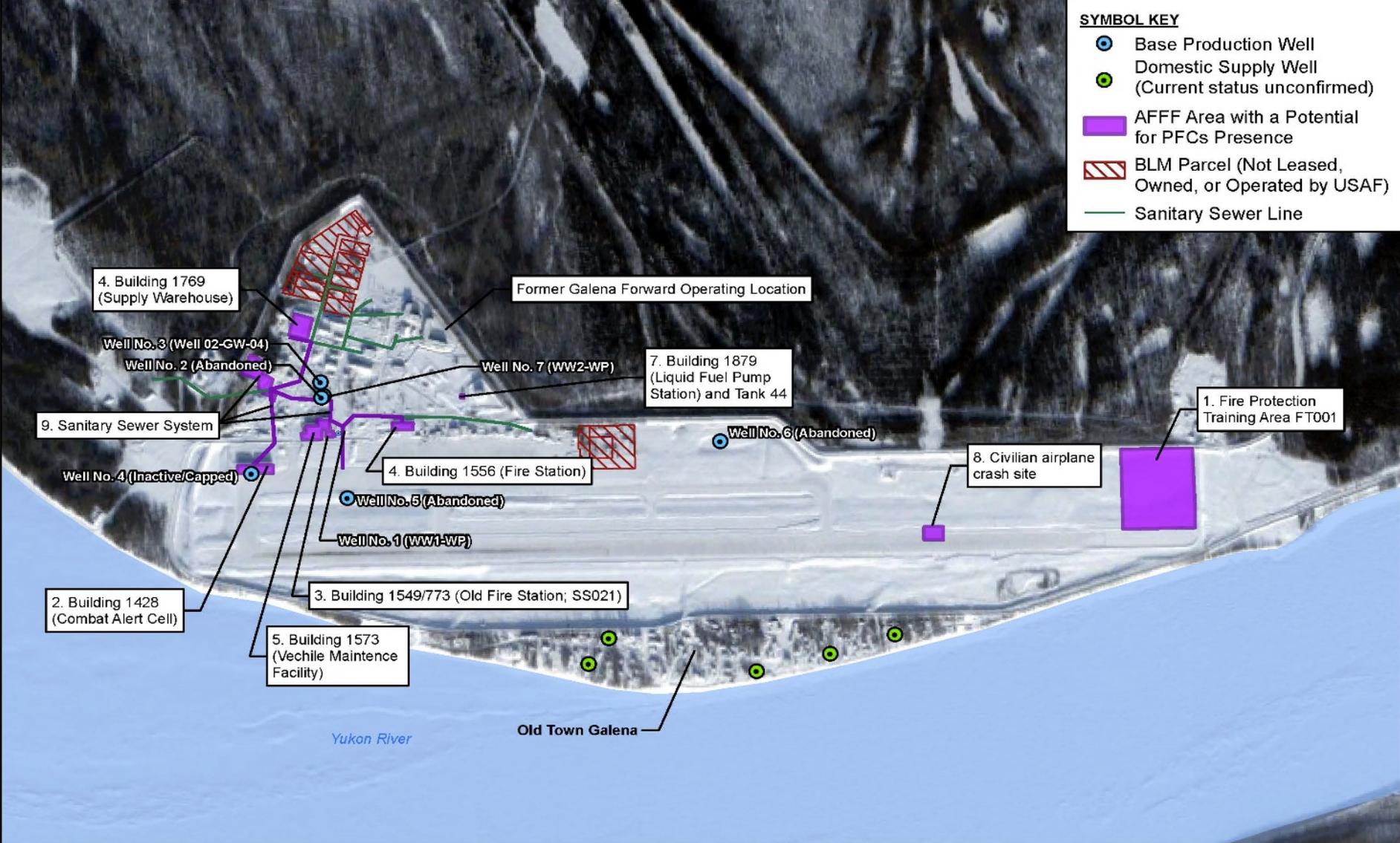


PFC Release Evaluation Findings for Former Galena FOL

- Data collected from former FTA indicate presence of PFCs
 - PFOS and PFOA were detected in soil and groundwater
 - Groundwater concentrations of PFOS and PFOA exceeded the USEPA PHAs
 - Soil concentrations of PFOS exceeded the Air Force screening level
- Eight (8) potential AFFF locations identified for further evaluation:
 - Buildings with dry fire suppression systems (B1428, B1573, B1879)
 - Fire stations (B1549, B1556)
 - AFFF Storage (B1769)
 - Civilian Plane Crash Site
 - Sanitary Sewer System

SYMBOL KEY

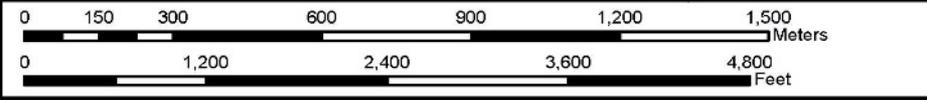
-  Base Production Well
-  Domestic Supply Well (Current status unconfirmed)
-  AFFF Area with a Potential for PFCs Presence
-  BLM Parcel (Not Leased, Owned, or Operated by USAF)
-  Sanitary Sewer Line



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



FIGURE 3
Potential AFFF Areas
 PFC Preliminary Assessment
 Former Galena Forward Operating Location
 Galena, Alaska



Notes:
 Imagery Data Sources: Google Earth, AFCEC

12/18/2015
 PROJ: 775290177

Galena_FOL_AFFF_Areas_PPA
 Drawn: JNR



PFC Summary for Former Galena FOL

- PFCs detected in soil and groundwater at former FTA above USEPA PHAs and Air Force Residential Soil Screening Levels
- SI field work for AFFF areas planned for the Summer 2016
- After the SI, Air Force will conduct an exposure pathway and risk evaluation for confirmed PFC releases

