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

RAB Meeting, 15 April 2015, Galena, Alaska

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Former Galena FOL Performance Based Contract

- Parsons - Prime Contractor
- Partnering Team – CH2M HILL 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 for 2015

- **Installation of four Pilot Test Soil Vapor Extraction Systems:**
  - **SS022 (B400)**
  - **OW024 (OWS1833)**
  - **SS019, and**
  - **SS025**
- **Excavation at CSS002 (former Building 1812)**
- **Excavation at CST013 (former UST 1770) (Ahtna)**
- **Annual Groundwater Sampling**
- **Preliminary Design or Cumulative Risk Sampling**
- **Time Critical Removal Action at DP023 (Disposal Site West of Dike - DSWD)**

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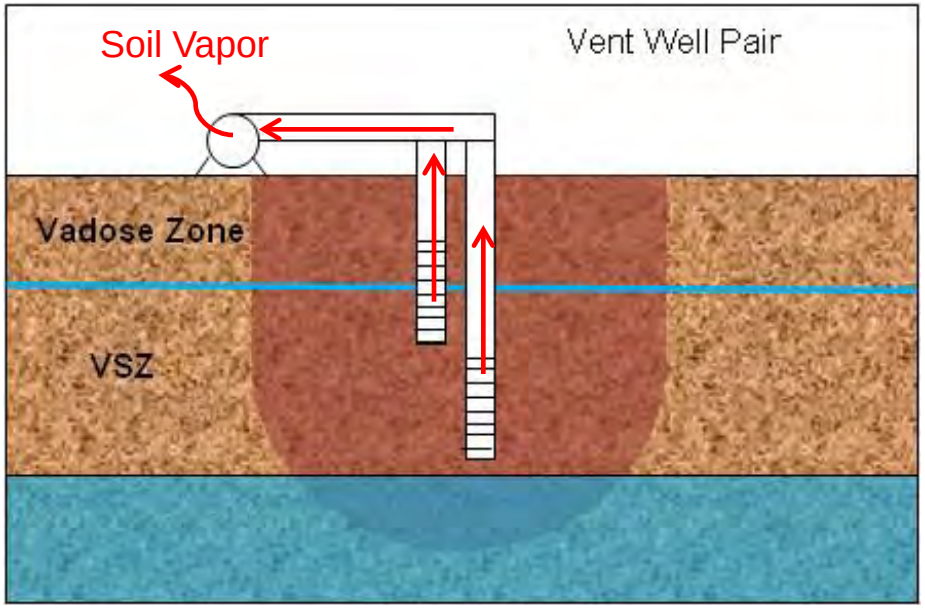
Soil Vapor Extraction (SVE) Pilot Tests

- **Four SVE Pilot Test Systems**
  - **OW024 (OWS1833)**
  - **SS022 (B400)**
  - **SS019**
  - **SS025**
- **Pilot Tests to determine how best to design remediation systems for TCE in unsaturated soil**



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Soil Vapor Extraction

- **Soil Vapor Extraction – Extracts air to remove volatile compounds like TCE or benzene**
- **Common elements:**
  - **Blower in above-ground shed**
  - **Buried piping between blower and vent wells**
  - **Operated from July to April with maintenance in May/June when water levels are high**

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SVE Pilot Test Locations

Legend

ADOT Runway Control Areas

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

- Remedial Investigation Areas
- Building

0 375 750 Feet

Figure 2

Investigation Areas for Remedial Investigation

Former Galena Forward Operating Location, Alaska

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Excavations

Estimated Excavation Volumes		
Site	Schedule	Total Volume (CY)
B1812	August/September	4,000
CST013	July/August	500
DSWD	August/September	4,600

- **Petroleum-contaminated soil goes to landfarm for treatment**
- **Non-petroleum contaminated soil transported out side of Galena for disposal**
- **Clean debris goes to Galena Landfill**
- **Fill excavation with clean backfill material**

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2015 Groundwater Sampling

- Sample groundwater (annually) in August
- Approximately 35 to 40 wells
- New wells may be installed and sampled as remediation systems are installed

Sampling to Collect Data for Preliminary Design or Cumulative Risk

- Selective sampling of soil and/or groundwater to support remedial designs
- Selective sampling of soil and/or groundwater to support calculations of cumulative risk or for establishing alternative cleanup levels
- May include analysis for contaminant , hydrogeological, geochemical , or geotechnical data

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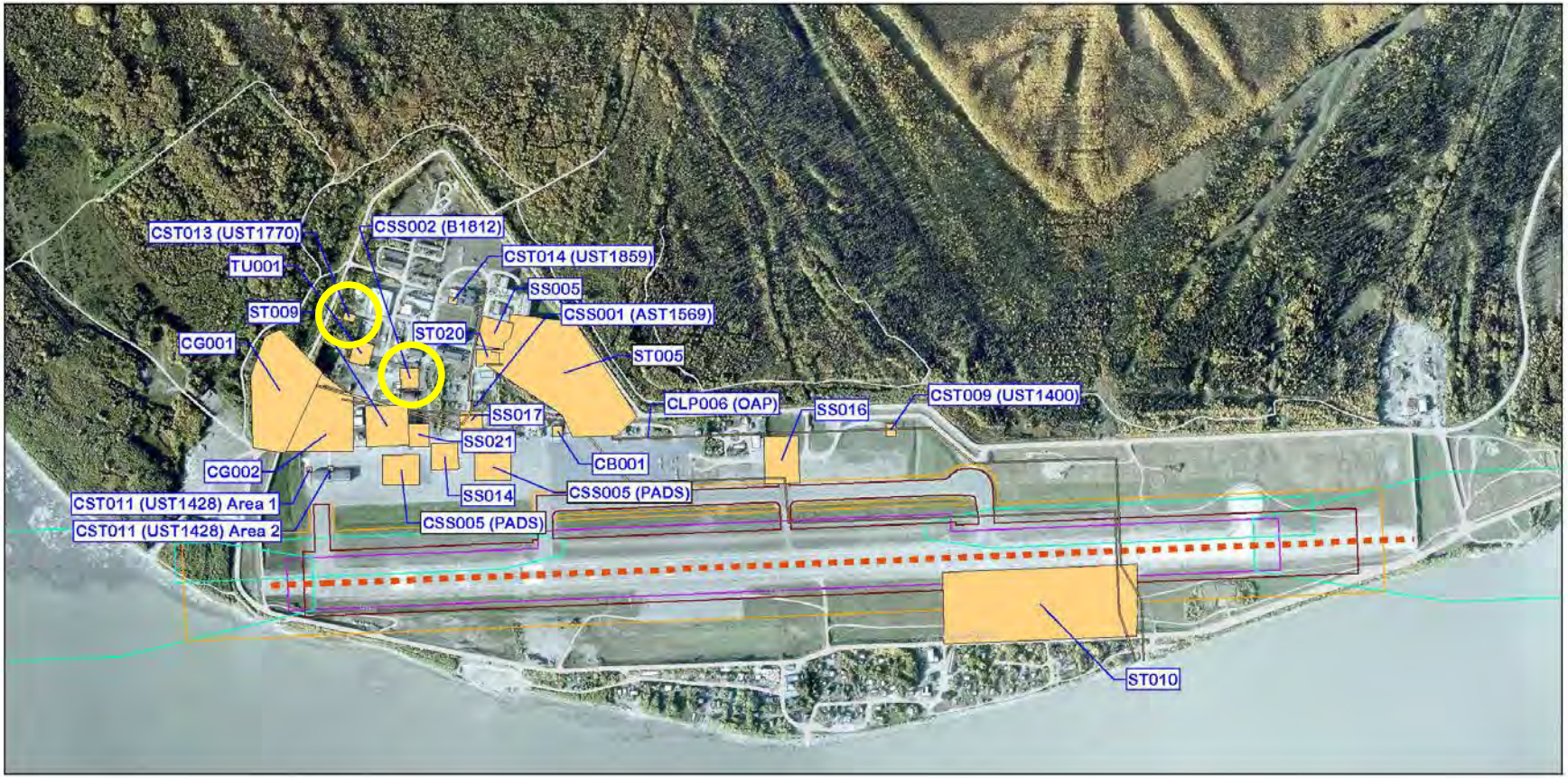
Location of CST013 and B1812 Excavations (fuels)



Legend

ADOT Runway Control Areas

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

- Site Characterization Areas
- Building

0 375 750
Feet

Figure 1

Investigation Areas for Site Characterization

Former Galena Forward Operating Location, Alaska

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S:\ES\Alaska\748917 Galena FOL\Database\GIS\RI-WholeSite\2014\Galena_2014SCLocation_July_2014.mxd fch 7/28/2014

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Time Critical Removal Action (TCRA) for Site DP023 (DSWD)

- CERCLA Site contaminated with petroleum hydrocarbons, VOCs, PAHs, PCBs, and pesticides
- TCRA Documentation and Decision Documents (2015)
  - Supplemental RI Report
  - Preliminary Design Report
  - TCRA Fact Sheet with Public Review (April 13 to May 14, 2015)
  - TCRA Action Memorandum
  - TCRA Work Plan and Report
- CERCLA Documentation and Decision Documents (2016)
  - Feasibility Study
  - Proposed Plan / Record of Decision
  - Remedial Action Work Plan

DP023 (Disposal Site West of Dike)

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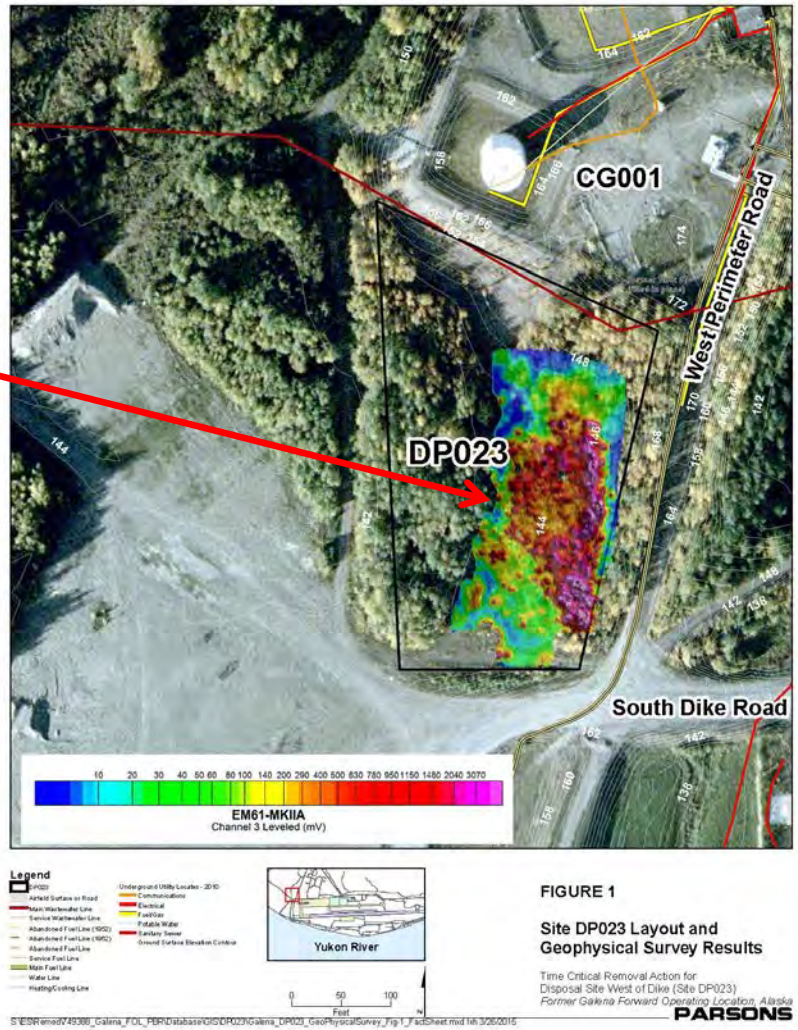
- **The DP023 site will have a TCRA removal action to remove debris and contamination in the disposal area identified by a geophysical survey and soil sampling**



Drums with Potential Hazardous Waste at DP023

- **Steel drum and oil-contaminated soil recovered during 2013 Test Pit sampling**

- **Steel drum uncovered near the ground surface during the 2014 test pit sampling. The drum is partially buried adjacent to wood and roofing material debris.**

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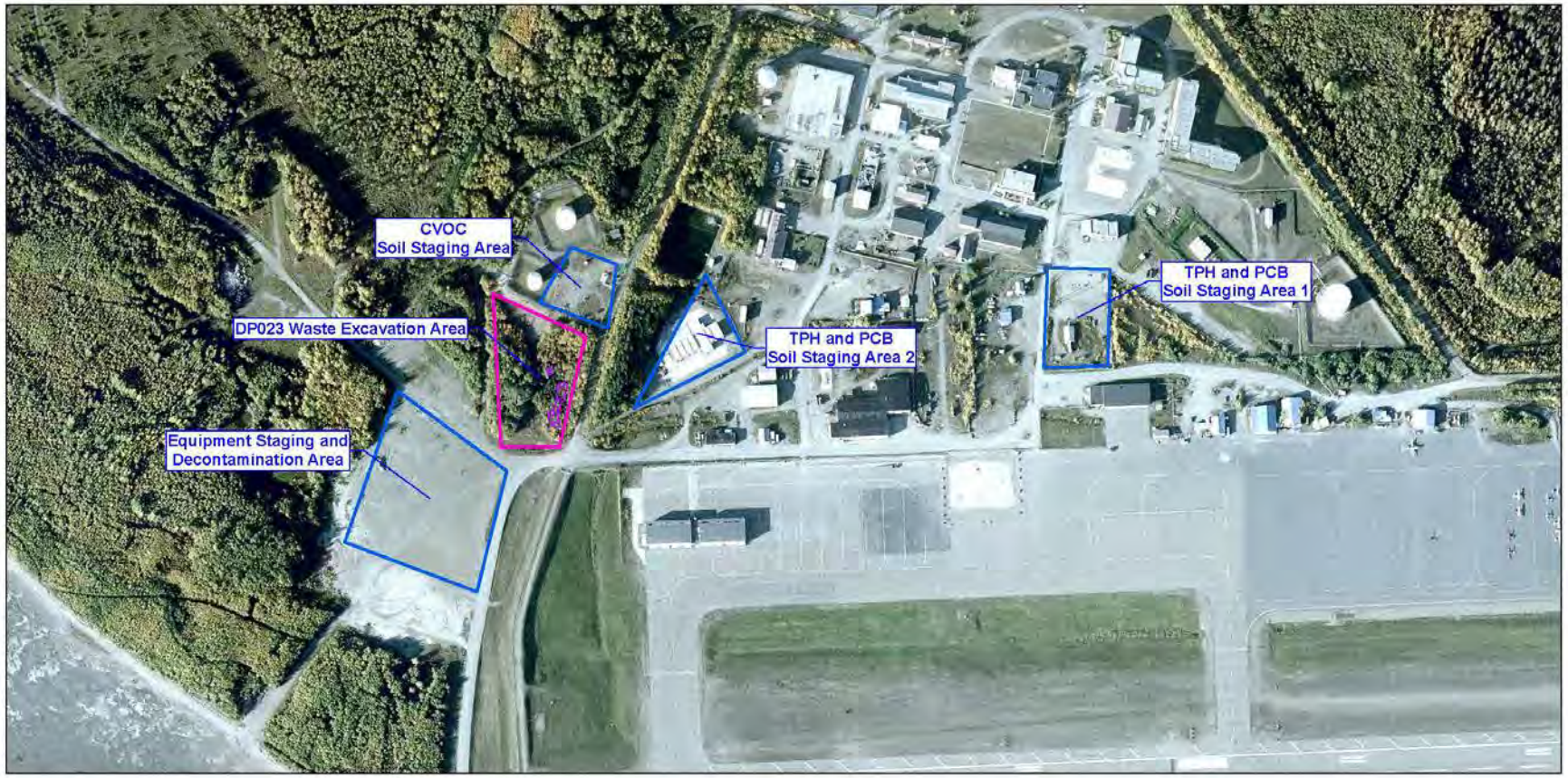
Location of DSWD Excavation and Staging Areas



Legend

DP023

Estimated Extent of Constituents in Soil with Concentrations Greater than Human Health Method Two CULs

0 150 300
Feet

Figure 4

Site DP023 Excavation and Equipment and Soil Waste Staging Areas

Time Critical Removal Action for
Disposal Site West of Dike (Site DP023)
Former Galena Forward Operating Location, Alaska

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S:\ES\Remedl\749388_Galena_FOL_PBR\Database\GIS\DP023\Galena_DP023_SiteLayout_Fig 4.mxd tih 4/1/2015

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Galena PBR Schedule Overview

- **2015 Field Work**
  - **Install SVE Pilot Test Systems (July/September)**
  - **CST013 Excavation (mid July/August)**
  - **CSS002 Excavation (mid-August/early September)**
  - **DP023 TCRA (August/September)**
  - **Annual Groundwater Monitoring (late August/September)**
  - **Landfarm Operations (June/September)**
- **2016 to 2018 – Implement remaining remedies**
- **Operate Remedies, Prepare close out reports as appropriate (through 2020)**

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Communications

- **Public Review Period for Proposed TCRAs**
  - **Review Period April 13 to May 14, 2015**
  - **Updated DVDS of the Administrative Record have been placed at the library**
- **Semi-annual RAB Meetings (April/October)**
- **Air Force maintains Administrative Record for Final Documents at:**

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

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Questions?

- **Public Comments will be taken until May 11, 2015**
- **Please send comments to:**

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Air Force will confirm receipt of comments with an e-mail (call if you do not get a receipt). See the newsletter for additional information on submitting comments.

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Attachment 4

Status of Former Galena FOL Military Munitions Response Program (MMRP)

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Status of Former Galena FOL Military Munitions Response Program (MMRP)

RAB Meeting

15 April 2015

Overall Status of MMRP

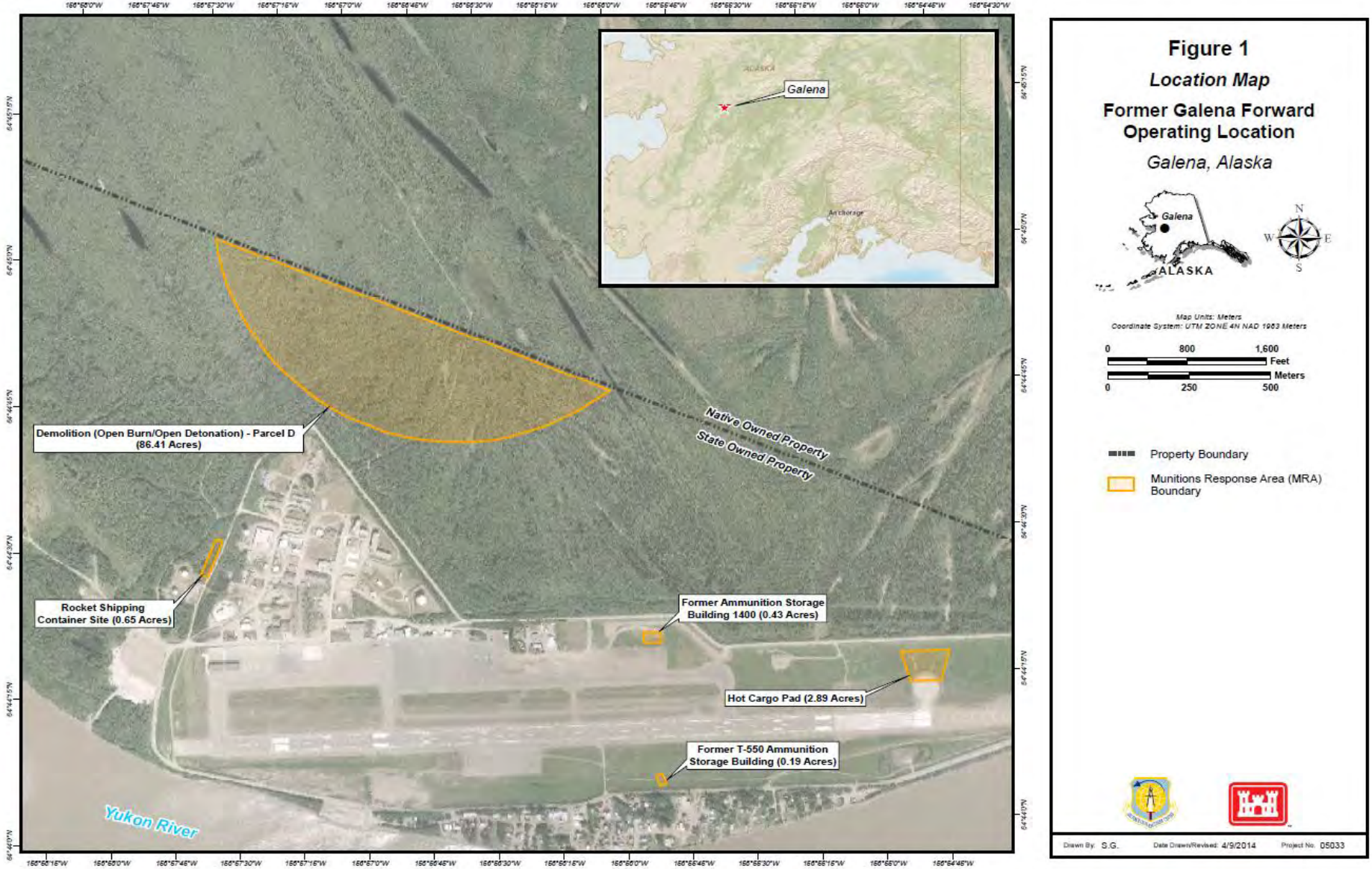
- Recently, the United States Air Force (USAF) completed a Supplemental Comprehensive Site Evaluation (CSE) Phase II
- The purpose of which was to:
  - Determine absence/presence of munitions and explosives of concern (MEC) and munition constituents (MC)
  - Provide recommendation for future response actions
  - Provide defensible data to support no further action (NFA)

Supplemental CSE Phase II Project Overview

5 Munitions Response Areas (MRA) were Investigated

MRA Name	Acreage	DoD Site Identifier
Former Ammunition Storage Building T-550	0.19	ML103
Former Ammunition Storage Building 1400	0.43	ML102
Hot Cargo Pad	2.89	ML104
Rocket Shipping Container Site	0.65	ML101
Demolition Open Burn/Open Detonation [OB/OD] – Parcel D	86.41	XE100

Supplemental CSE Phase II Project Location Map



Supplemental CSE Phase II Conclusion

- Since no MEC or significant munitions debris were encountered at any site, all MRAs were approved for a NFA determination
- NFA has been agreed to by the Alaska Department of Environmental Conservation (ADEC), Department of Defense Explosives Safety Board (DDESB), and Air Force Safety Center/Weapons Safety Division (AFSEC/SEW)
- Property is scheduled for transfer in the Summer of 2015, which include Demolition (OB/OD) – Parcel D and the Rocket Shipping Container Site

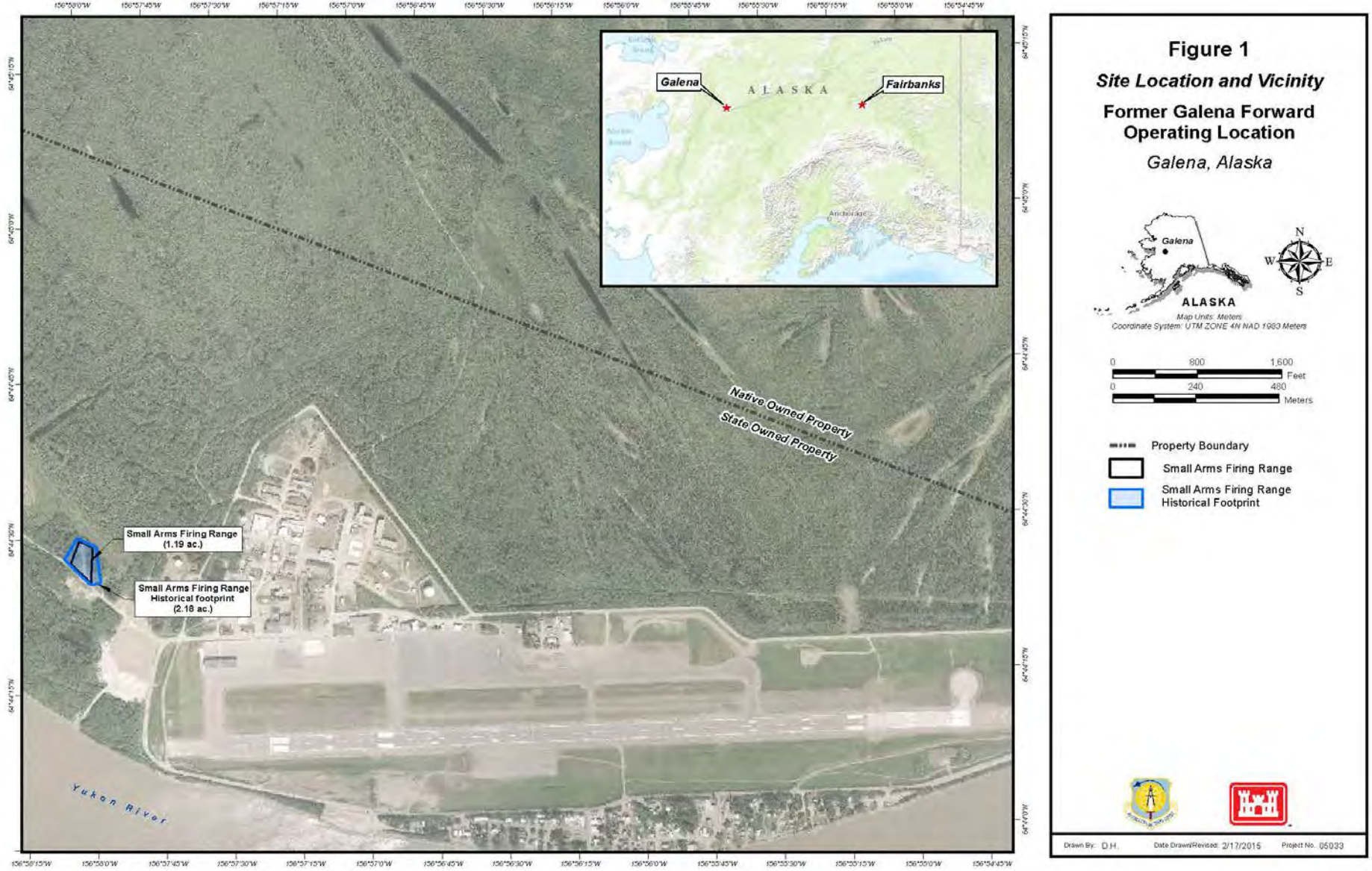
Munitions Response Site Prioritization Protocol (MRSPP)

- The MRSPP assigns a relative priority to each defense site in the MMRP inventory for response activities
- Based on the overall conditions and results of the Supplemental CSE Phase II, all sites:
  - Received an explosive hazard evaluation module rating of "No Known or Suspected Explosive Hazard"
  - Received a chemical warfare materiel (CWM) hazard evaluation module rating of "No Known or Suspected CWM Hazard"
  - Received a human health evaluation module rating of "No Known or Suspected MC Hazard"
  - Received a MRS Priority of 0
- The public is encouraged to review and comment on the MRSPP

Small Arms Firing Range
Time Critical Removal Action

- Goal: Remove contaminated soil impacted by SAFR activities and decommission the range, at the request of the landowner (State of Alaska)
- To be conducted in accordance with:
  - USAF Environmental Restoration Program (ERP);
  - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);
  - National Oil and Hazardous Pollution Contingency Plan (NCP); and
  - ADEC regulations

SAFR Site Location and Vicinity



SAFR Description

- Approximately 2.19 acres
  - This includes the footprint of all historical configurations
  - Current footprint is 1.19 acres
- Located several hundred feet west of the runway
- Consists of a backstop and two lateral berms
  - Lateral berms and backstop have been reconfigured throughout the years
    - Currently, each berm is ~12 feet tall
    - The range is oriented north-south
      - With the line of fire to the north of the firing line
      - The distance from the firing line to the backstop is ~250 feet

SAFR Site History

- Constructed between 1952 and 1963
- Appears to have been used jointly by the USAF, other agencies, and the public
- Following closure of the Former Galena FOL in 2008, the SAFR continued to be used for fire arm training by local residents and law enforcement

SAFR Historical Configurations

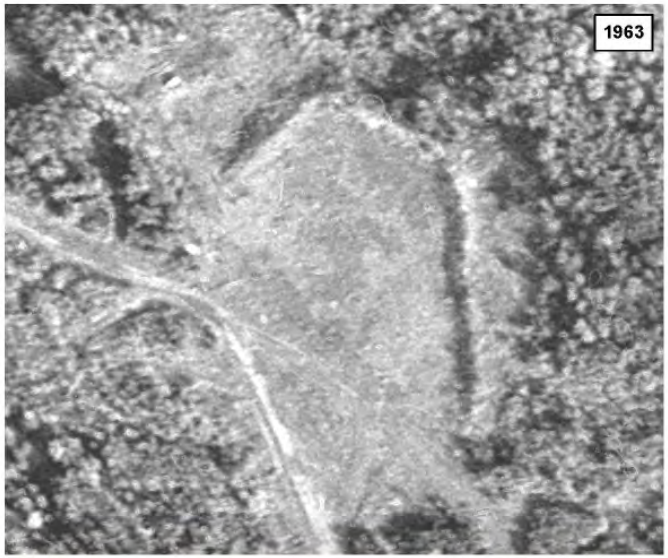


Figure 1

Site Location
Historical Aerials

Small Arms Range

Galena, Alaska

Map Units: Meters
Coordinate System: UTM ZONE 4N NAD 1983 Meters

0 100 200 Feet

0 30.5 61 Meters

Note:
1. 2012 Image credit: Aerometric
2. 1963, 1985, 2002 Image credit: USAF

Drawn By: D.F. Date Drawn/Revised: 12/31/2014 Project No. 05033

SAFR Previous Investigations

- A CSE Phase II was conducted in 2008
  - Visual Survey
  - X-ray fluorescence (XRF) screening
  - Analytical surface soil sampling
    - Lead and antimony exceeded the associated human health screening criteria in four (lead) and one (antimony) of the 15 samples collected
    - Exposure point concentrations for lead and antimony also exceeded the most conservative ecological risk criteria
    - The highest concentrations of lead were detected in the center of the backstop, along with the one antimony result exceeding human health screening criteria

SAFR TCRA General Project Objectives

- A TCRA is necessary when less than six months exist before onsite removal activity must begin
- The following factors were considered in determining a TCRA was warranted:
  - Concentrations of lead and antimony in soils pose a potential threat to human health and the environment
  - Contaminants in surface soils may migrate off site
  - The landowner requested the AF remove the SAFR
- A TCRA will achieve a NFA status and allow for unlimited use/unrestricted exposure at the site
- The project action levels are 3.6 milligrams/kilograms (mg/kg) for antimony and 400 mg/kg for lead

SAFR TCRA Actions

- **Vegetation Removal** – Prior to preliminary field screening/sampling activities and excavation, vegetation will be removed
- **Preliminary Sampling** – Preliminary sampling of the current and historical configurations of the berms, backstop, and target area will be conducted
  - Visual inspections
  - XRF field screening
  - analytical sampling
- **Removal Action** – The excavation will begin within the boundaries identified during the preliminary sampling
  - Approximately 260 cubic yards of soil will be excavated and disposed of at an appropriate facility
  - XRF meter will be used in the field as a screening tool to aid the excavation
  - Stockpiled soil will be sampled to ensure proper disposal
  - Confirmation samples will be collected from the excavation area to ensure no contaminated soils are left behind
  - Once confirmation samples indicate no contaminants of concern remain in the excavation above the project action levels, the site will be restored to natural grade

SAFR TCRA Project Schedule

- Field work is anticipated to begin in July 2015 and is expected to be completed by August 2015

Former Galena FOL Restoration Contact

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All comments must be received by May 14, 2015

Questions?