Air Force Real Property Agency

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Galena Restoration Advisory Board

Mr. Greg Gangnuss
Strategic Communications Chief,
AFRPA/CIOC
26 Apr 2012

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Overview

- Welcome
- Overview of Environmental Restoration Strategy
  - 2011 Accomplishments
  - Plans for winter 2011-2012
  - Planned field activities for 2012
- Remarks from ADEC
- Real Estate Update
- Public Involvement Update
- Remarks from Stakeholders
- General Discussion and Closing Remarks
- Suggested Agenda Items for next RAB
- Adjournment

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Overview of Environmental Restoration Strategy

- 2010-2011 Investigation Results
- Planned Field Activities for 2012
  - Road Repair
  - Landfarm
  - Military Munitions Response Program Investigation
- Performance-based Remediation Contract Update

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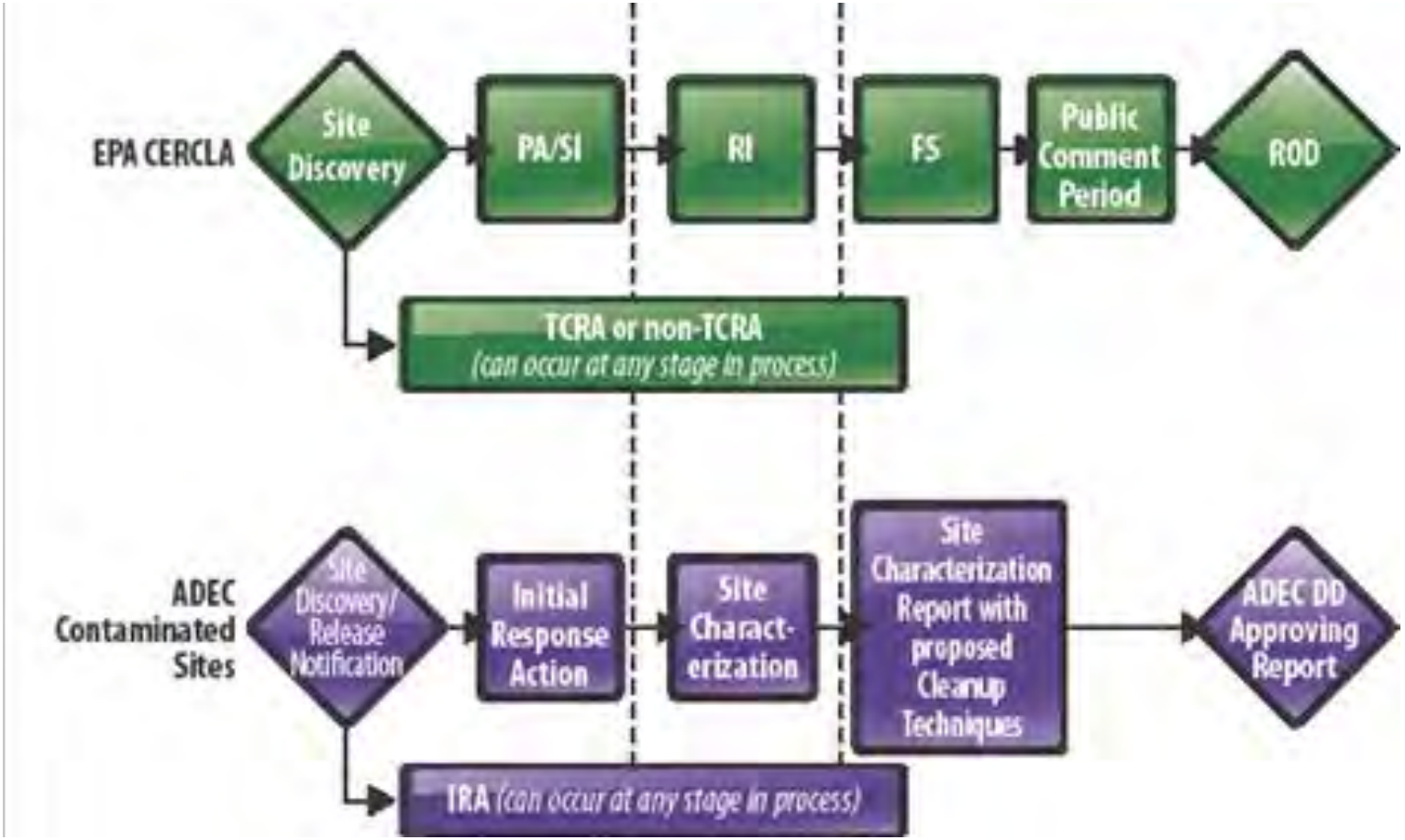
Program Overview



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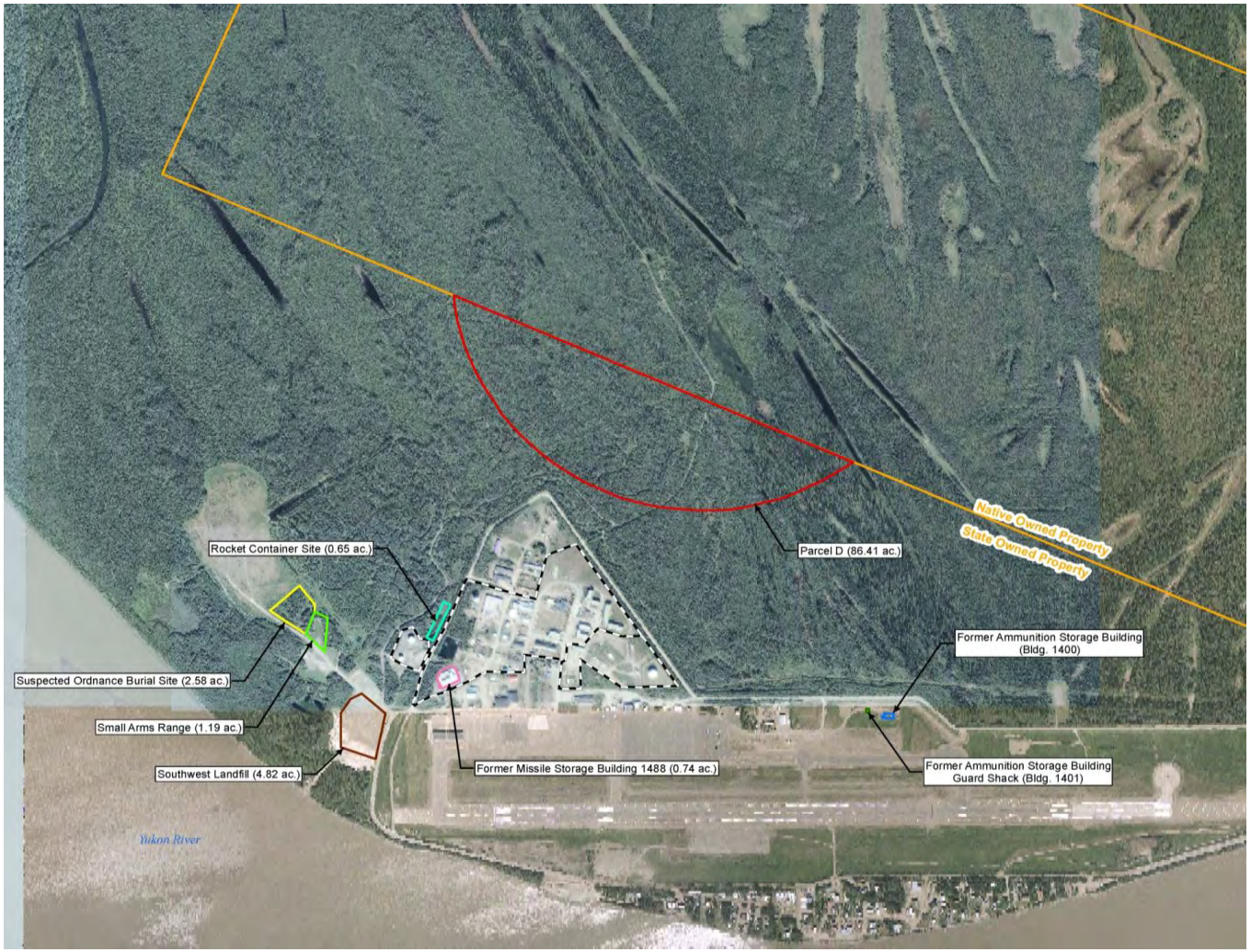
MMRP Sites



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Landfarm

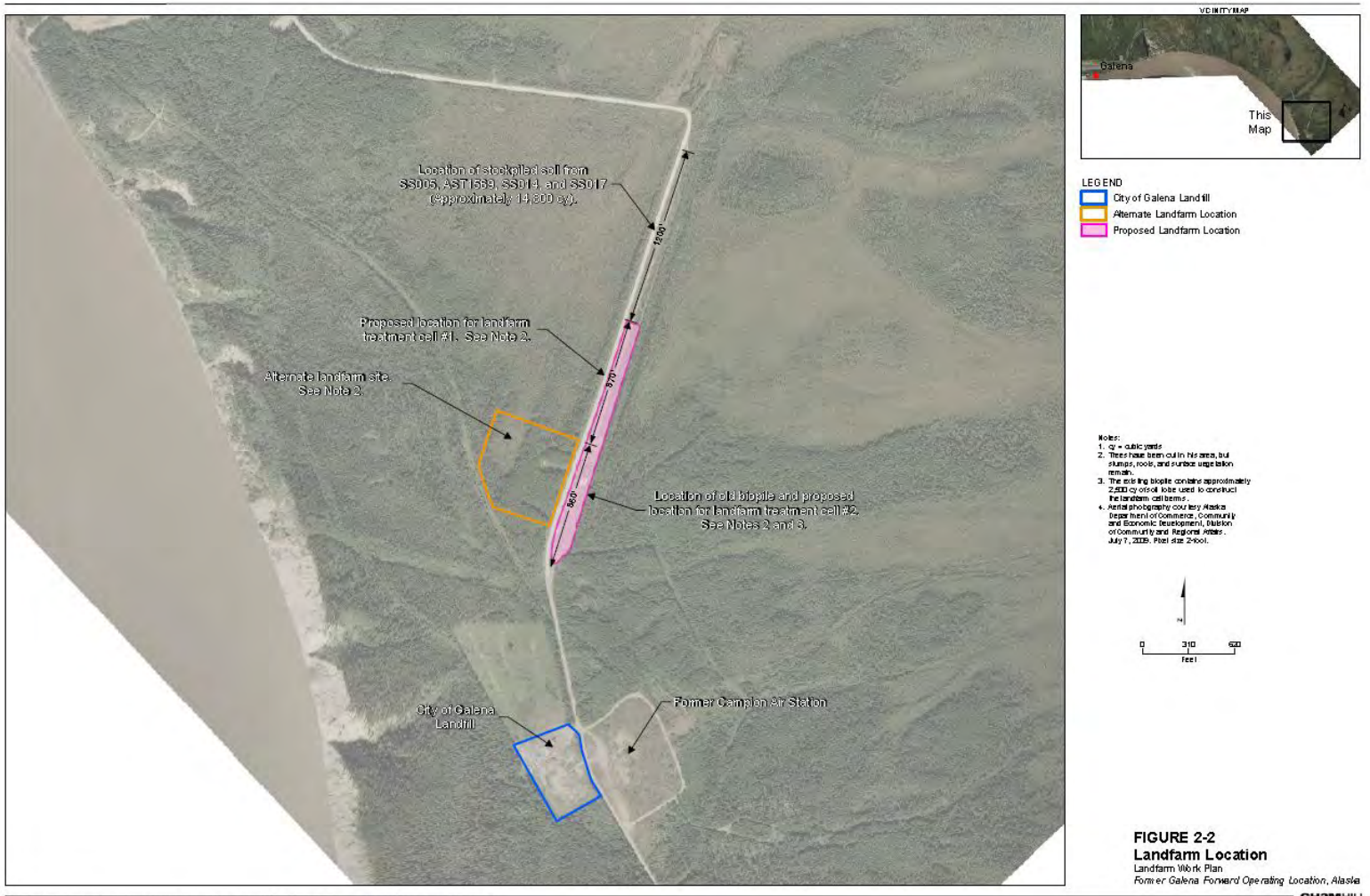

FIGURE 2-2
Landfarm Location
Landfarm Work Plan
Former Galena Forward Operating Location, Alaska

CH2MHILL

Landfarm Activity & Road Reconstruction

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Overview

- Landfarm Construction
  - Location, Construction
- Landfarm Operation
  - Details
- Road Reconstruction
  - Details

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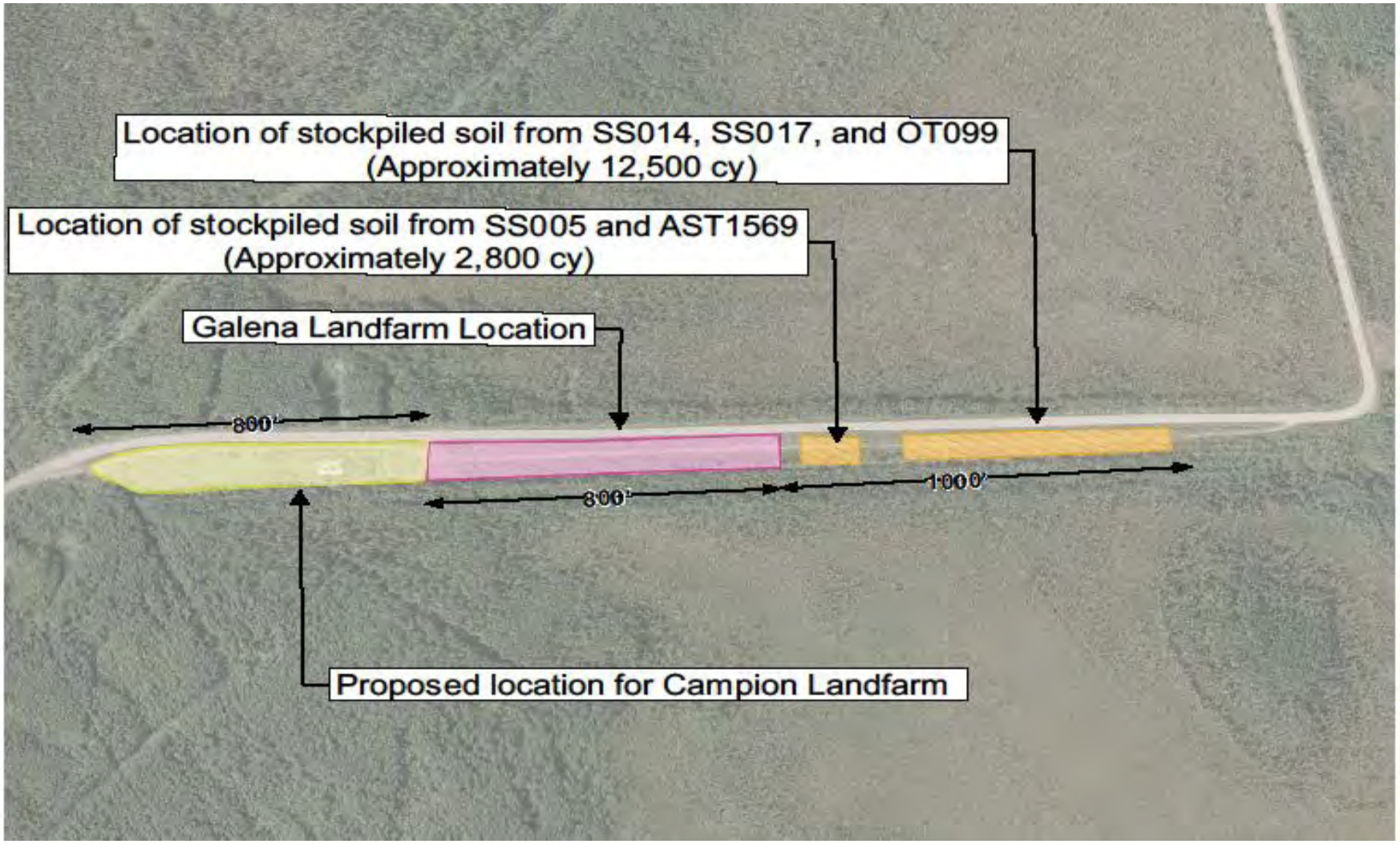
Landfarm and Stockpile Location



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South Contaminated Soil Stockpile

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North Contaminated Soil Stockpile

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Landfarm Area after Tree Clearing

READ

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Landfarm Construction Activities

- Landfarm area approx. 800’ x 90’ with a 12’ wide access road
- Landfarm area will be grubbed to 6” depth
- 3’ high silty soil berms constructed from previous grubbings
- Most construction activity will be performed off public roadways
- Potential traffic impacts:
  - Grubbed material to Landfill, ~ 150 trucks
  - Gravel from Galena stockpile, ~ 40 trucks
  - Sand from borrow pit, ~ 80 trucks
  - Berm material from Landfill grub pile, ~ 150 trucks
- Landfarm construction activities during July
- 2,600 cy of contaminated soil placed 18” deep in landfarm -- end of July

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Landfarm Operation Activities

- **Conduct baseline sampling in August**
- **Till the soil once per week for 7 weeks beginning in early August 2012**
- **Amend soil with commercial grade fertilizer during 1st week of tilling**
- **Moisten the soil if necessary**
- **Winterize the Landfarm end of September**

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Road Reconstruction

- Road reconstruction required at the intersection of Birchwood Avenue, Airport Road, and Levy Road
  - Delayed until 2012 to maximize the time available to excavate contaminated soil in 2011
  - Will be performed according to ADOT requirements and will include CaCl treatment
- Traffic routing similar to 2011 will be required during the road reconstruction (see following slides)
  - Roads will be closed 1 to 3 weeks
  - Work to occur after school is out

Road Closure and Signage

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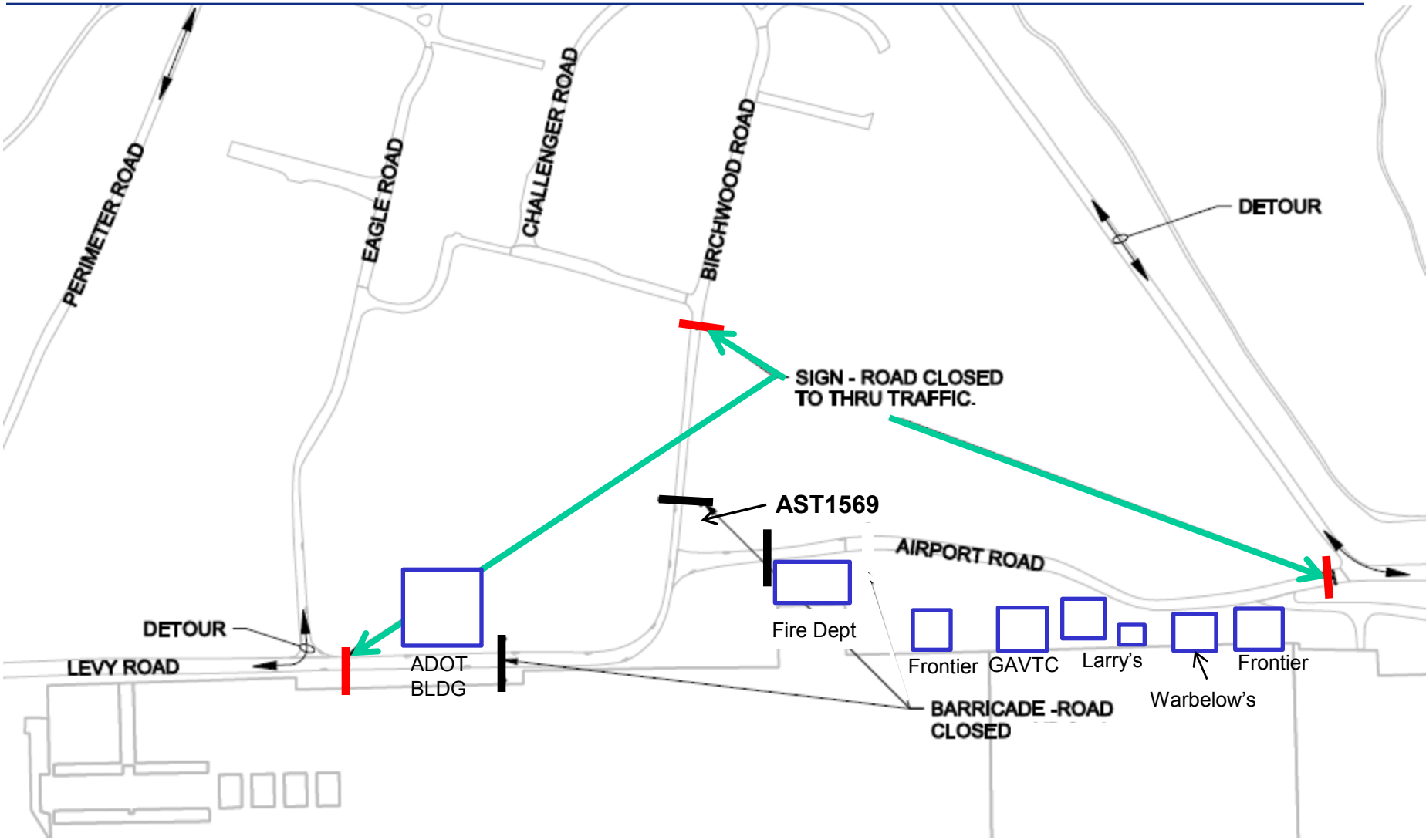

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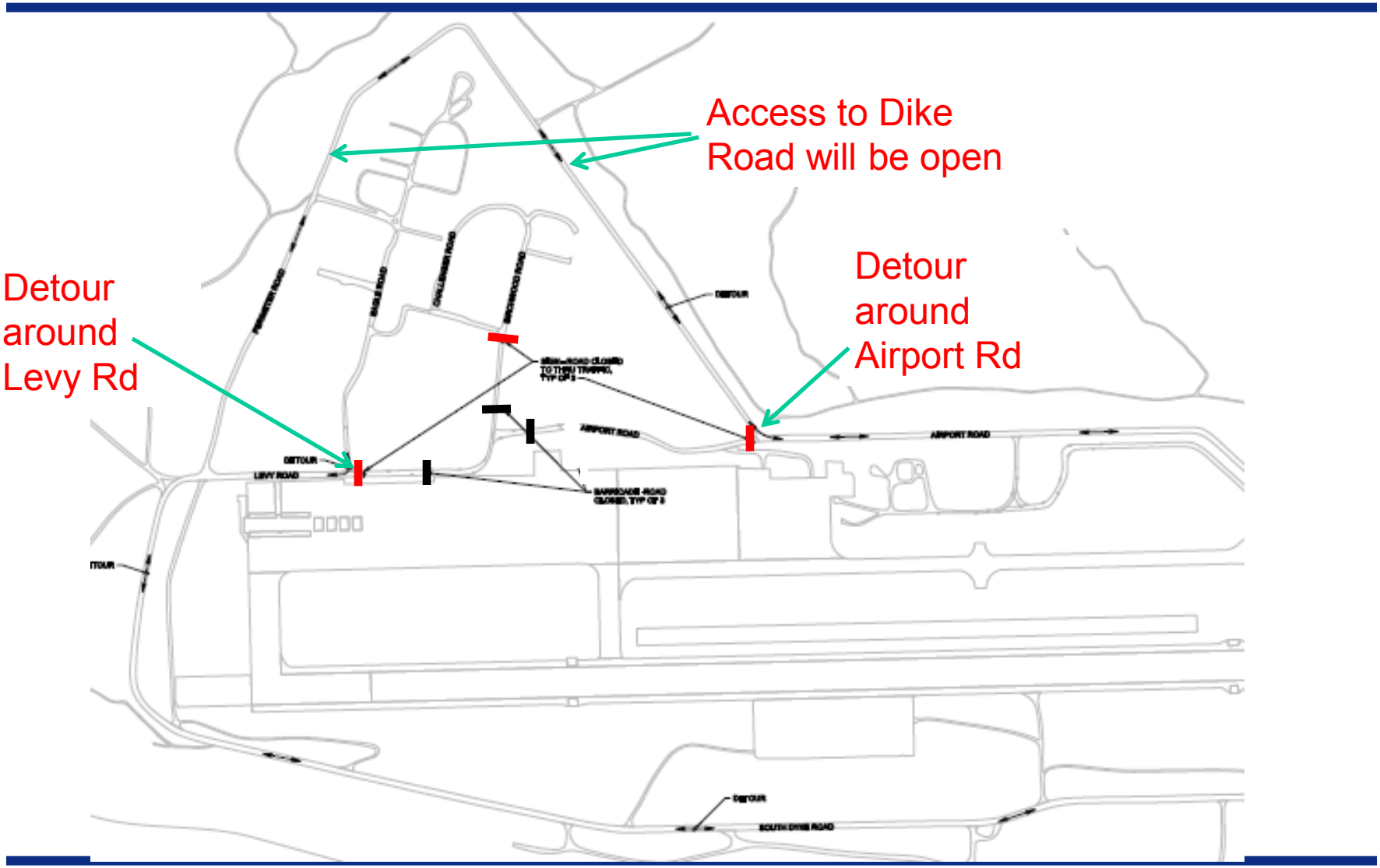
Traffic Control Plan



Results of 2010 and 2011 Investigation (Soil Source Areas)

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Site Results Recommendations

- A total of 20 sites that require no further action
  - 19 sites recommended for non-qualifying site designation or cleanup complete in the Site Inspection Report
  - 1 site recommended for Cleanup Complete after soil removal (OT099)
- A total of 32 sites that will require a remedy
  - 24 sites with POL contamination in the Site Characterization Report
  - 8 sites with POL and/or non-POL contamination in the Remedial Investigation Report
- Numbers may vary based on ADEC review of reports

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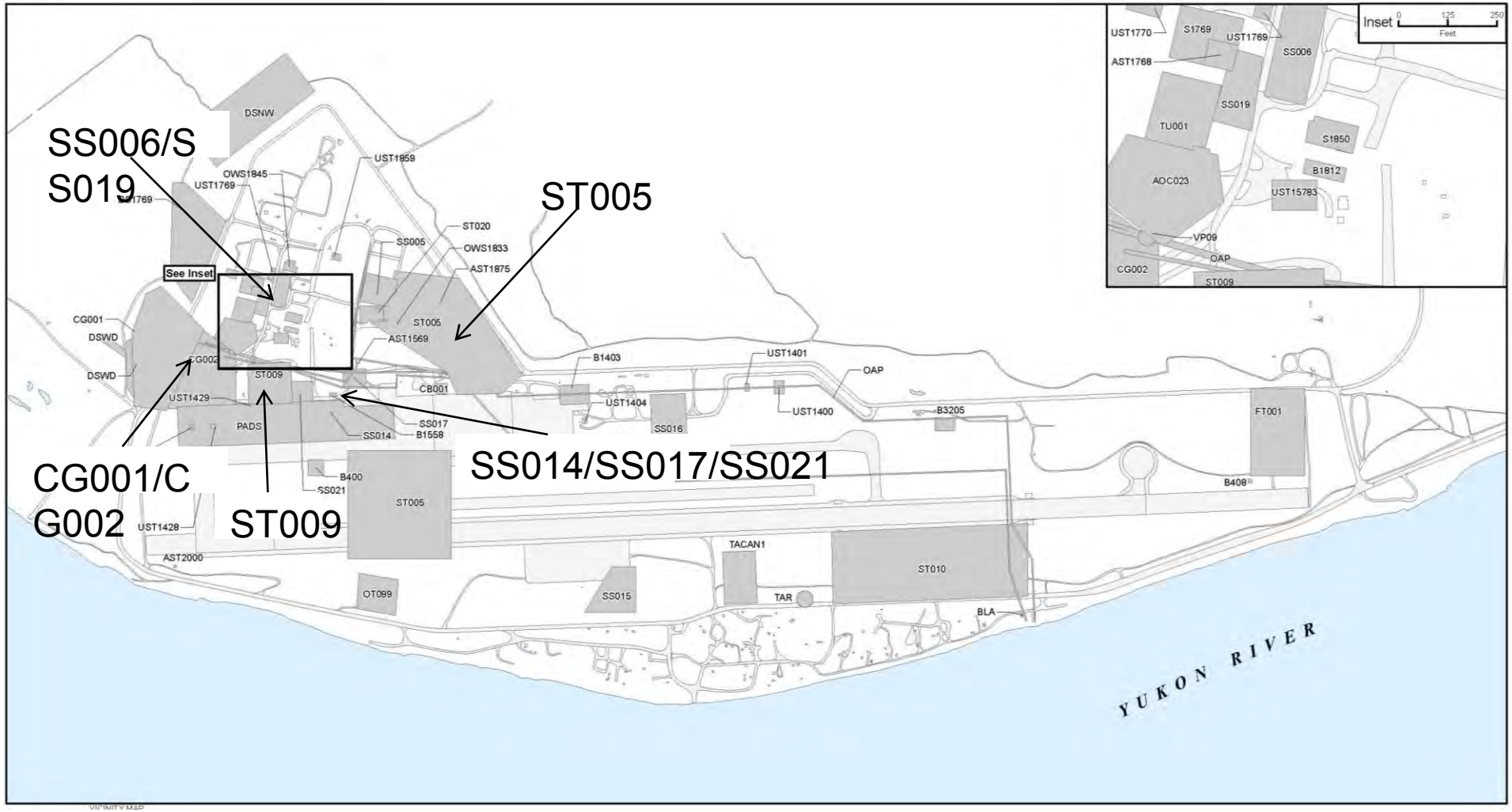
Investigation Areas



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Overview

- Focus on the results of the site investigations from 2010 and 2011 in reference to the ADEC Regulatory Levels for soil (Method Two Cleanup Levels)
- Primary contaminants:
  - Diesel Range Organics (DRO)
  - Trichloroethene (TCE)
  - Benzene

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ADEC Method Two Cleanup Levels

- Site soils below lowest ADEC regulatory level (Method Two Cleanup Level) do not require further action
- ADEC Method Two Cleanup Levels for primary contaminants:

Analytes	Migration to Groundwater	Direct Contact (Ingestion value for DRO)	Outdoor Inhalation
Benzene	0.025 mg/kg	150 mg/kg	11 mg/kg
Diesel Range Organics (DRO)	250 mg/kg	10250 mg/kg	12500 mg/kg
Trichloroethene (TCE)	0.02 mg/kg	21 mg/kg	0.57 mg/kg

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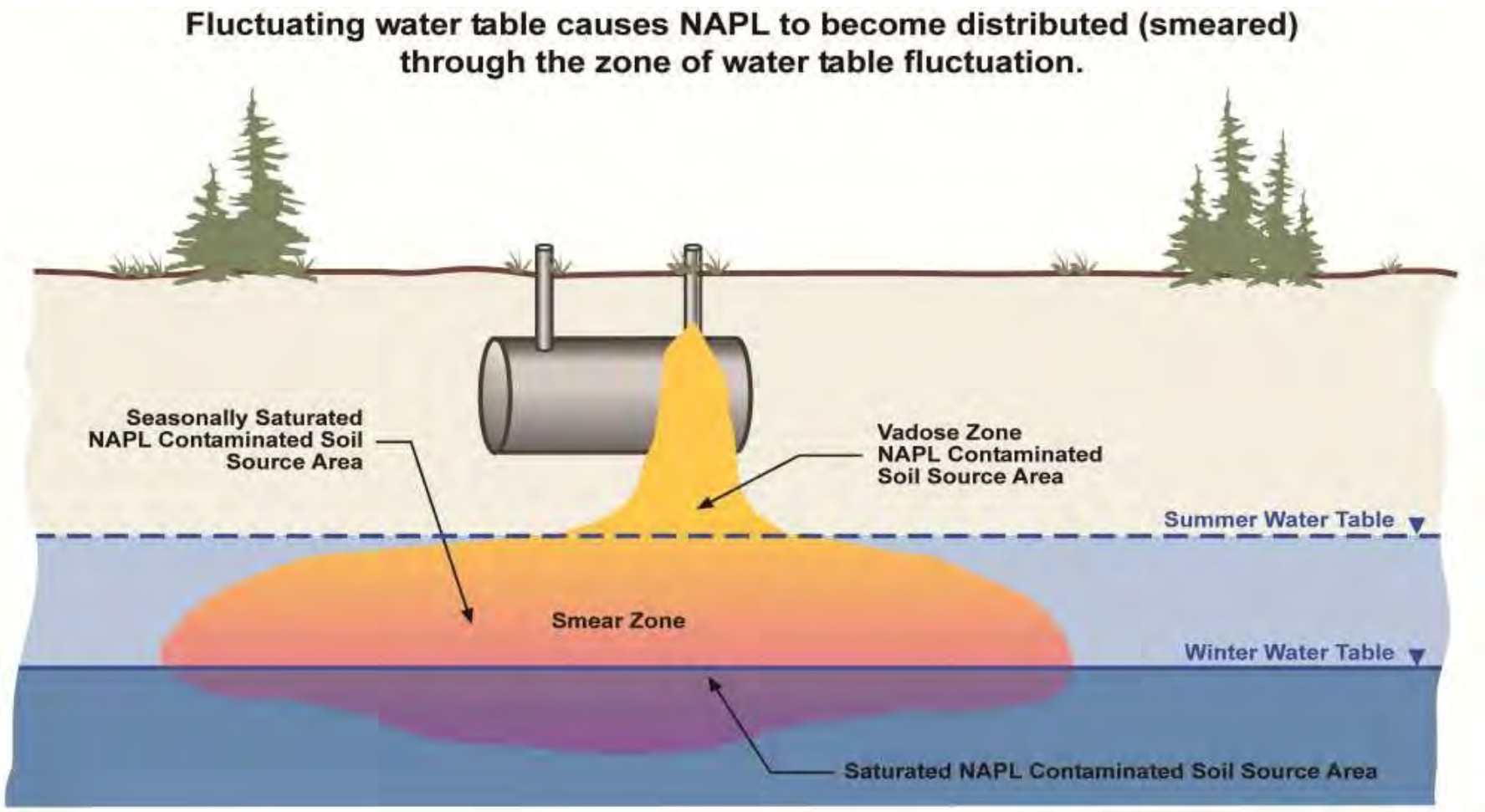
Groundwater Level Fluctuations



CG001/CG002
(Million Gallon Hill and Missile Storage Area)

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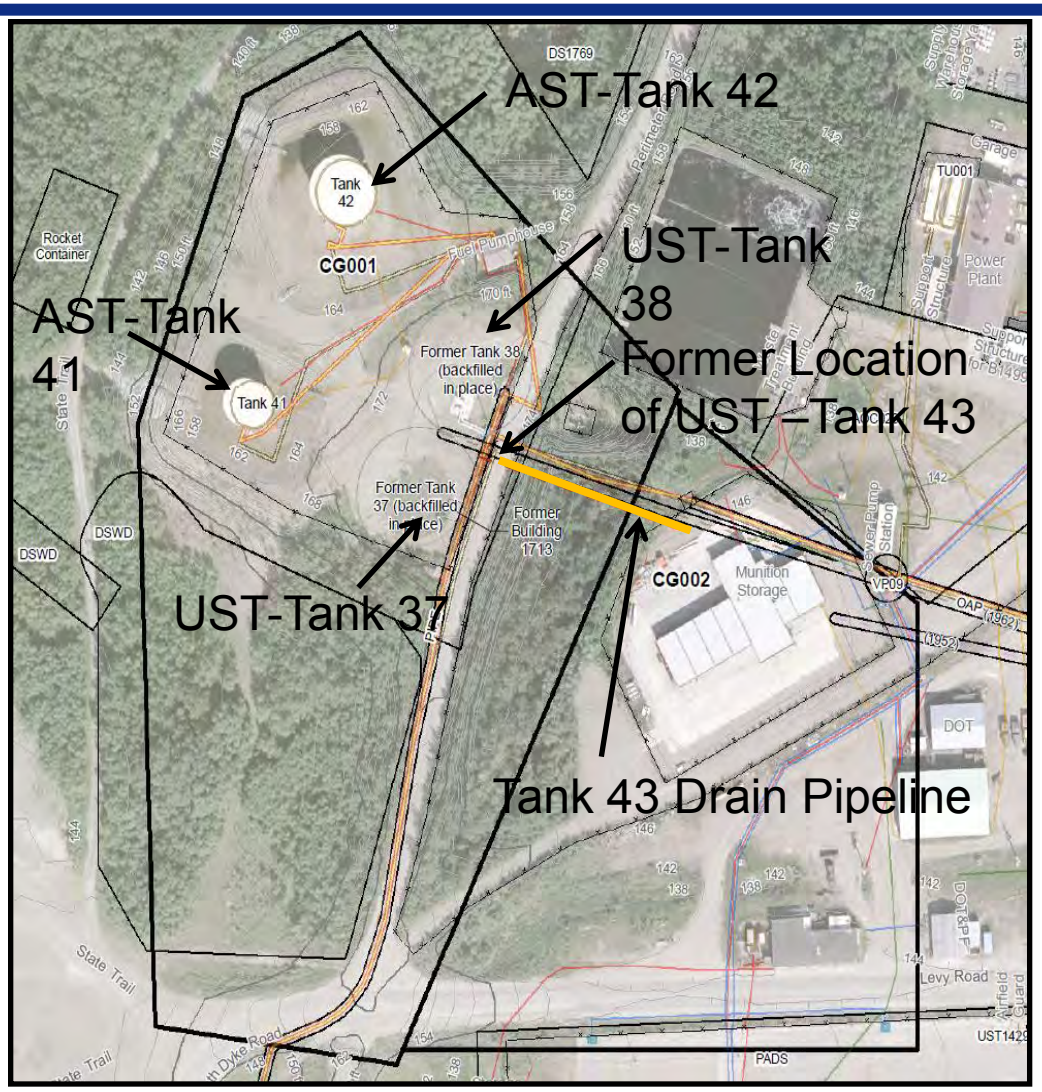
CG001/CG002 – Site Layout



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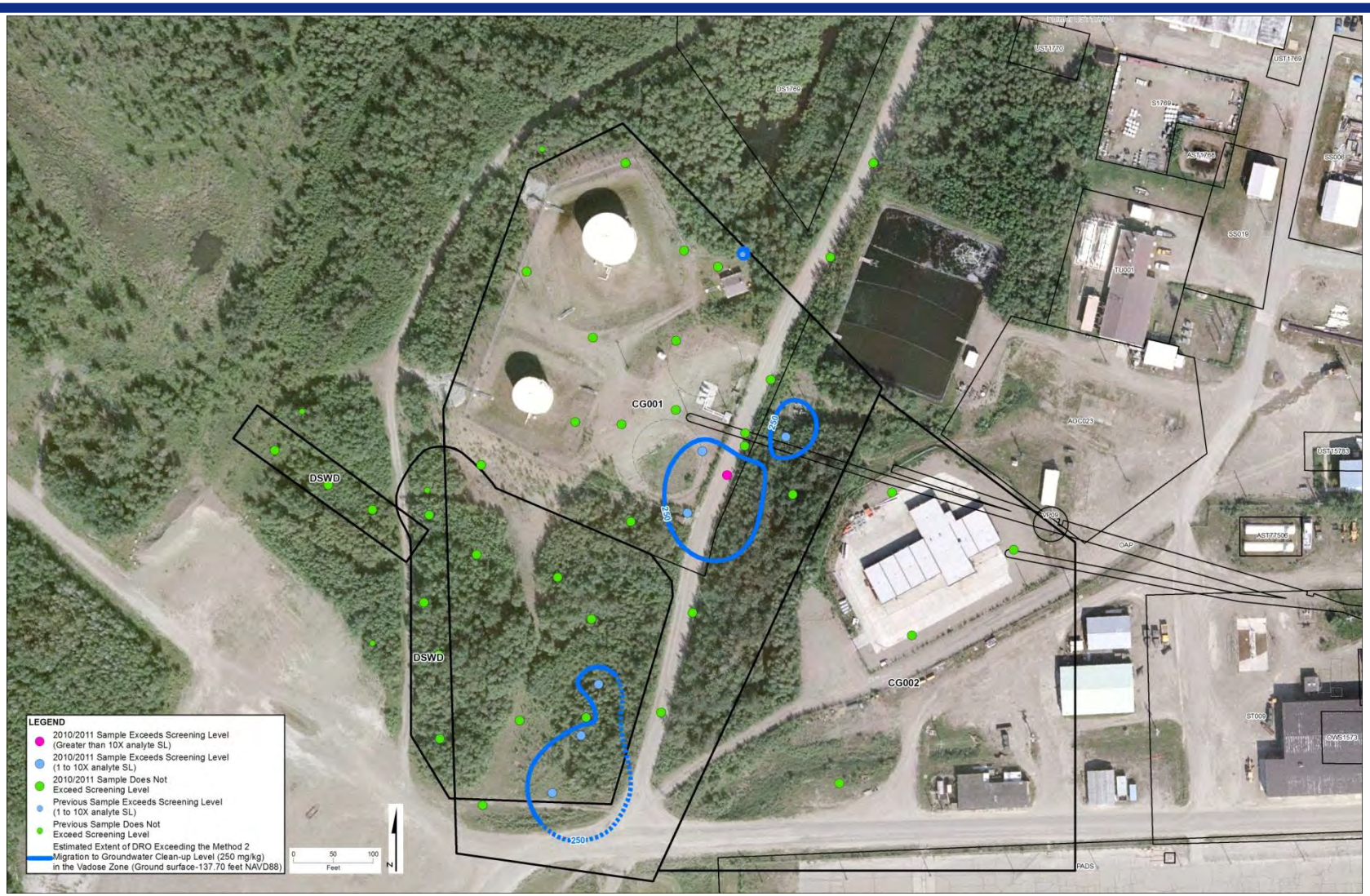
Sites CG001/CG002 Distribution of DRO in the Vadose Zone (depending on elevation - surface to 25 feet below ground surface)



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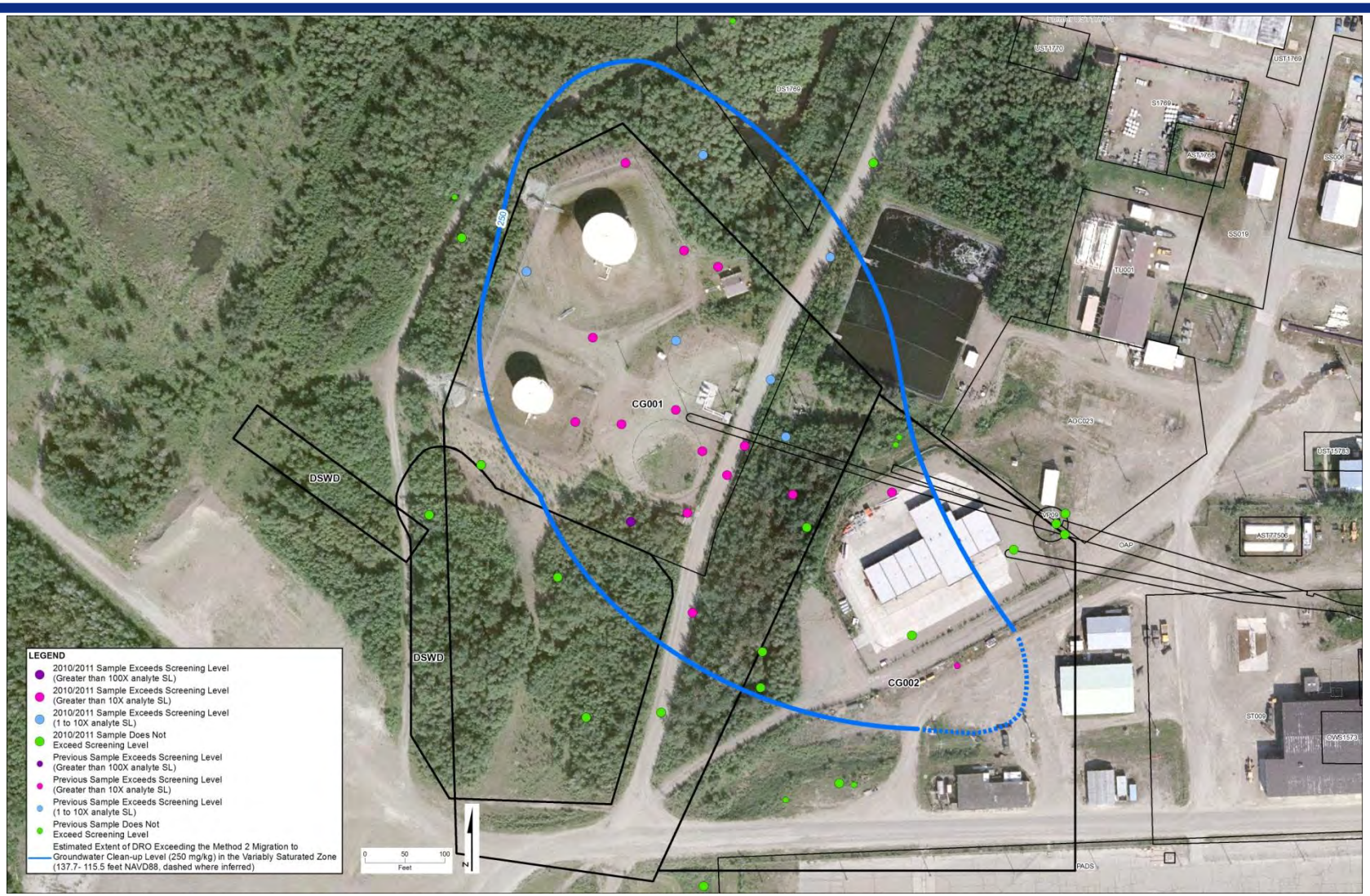
Sites CG001/CG002 – Distribution of DRO in the Variably Saturated Zone (depending on elevation – 25 to 59 feet below ground surface)



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Sites CG001/CG002 – Distribution of Benzene in the Vadose Zone (depending on elevation - surface to 25 feet below ground surface)

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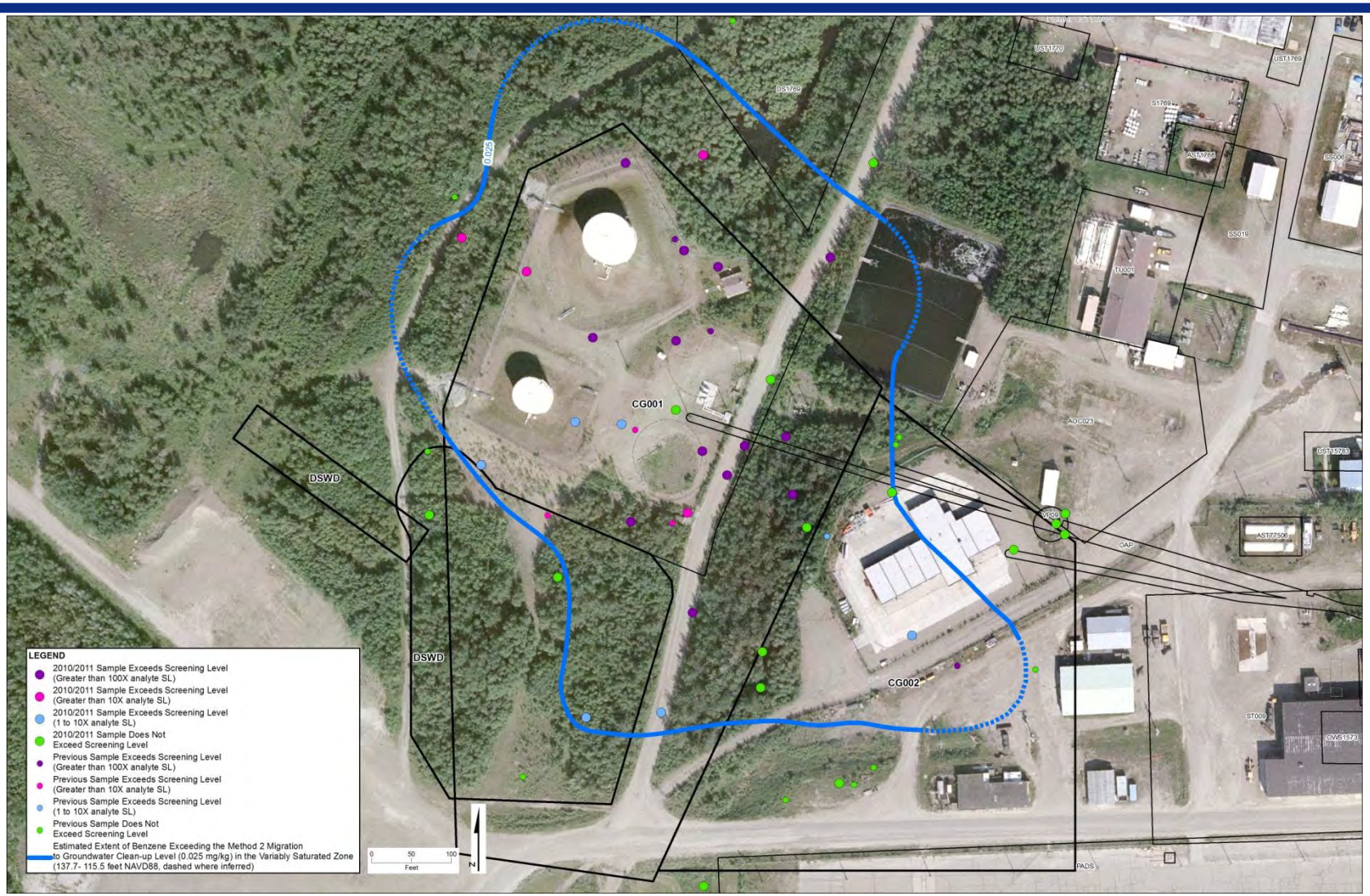
Sites CG001/CG002– Distribution of Benzene in the Variably Saturated Zone (depending on elevation – 25 to 59 feet below ground surface)



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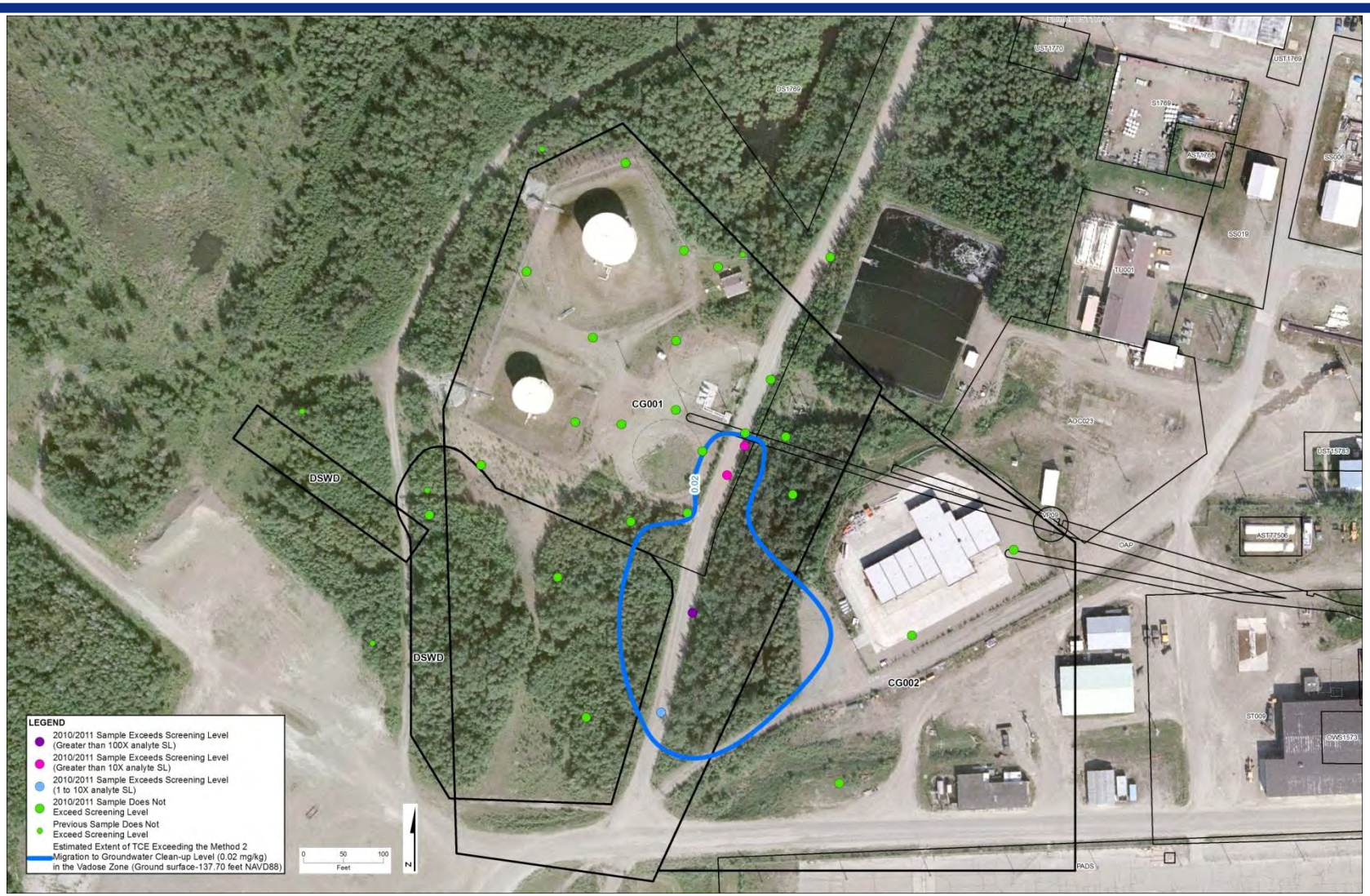
Sites CG001/CG002 – Distribution of TCE in the Vadose Zone (depending on elevation - surface to 25 feet below ground surface)



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Sites CG001/CG002 – Distribution of TCE in the Variably Saturated Zone (depending on elevation – 25 to 59 feet below ground surface)

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DSWD
(Disposal Area West of Dike)

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DSWD – Site Layout

LEGEND

- DSWD
- Adjacent Site
- Fence
- Abandoned Fuel Line
- Main Fuel Line
- Main Wastewater Line

N

0 75 150

Feet

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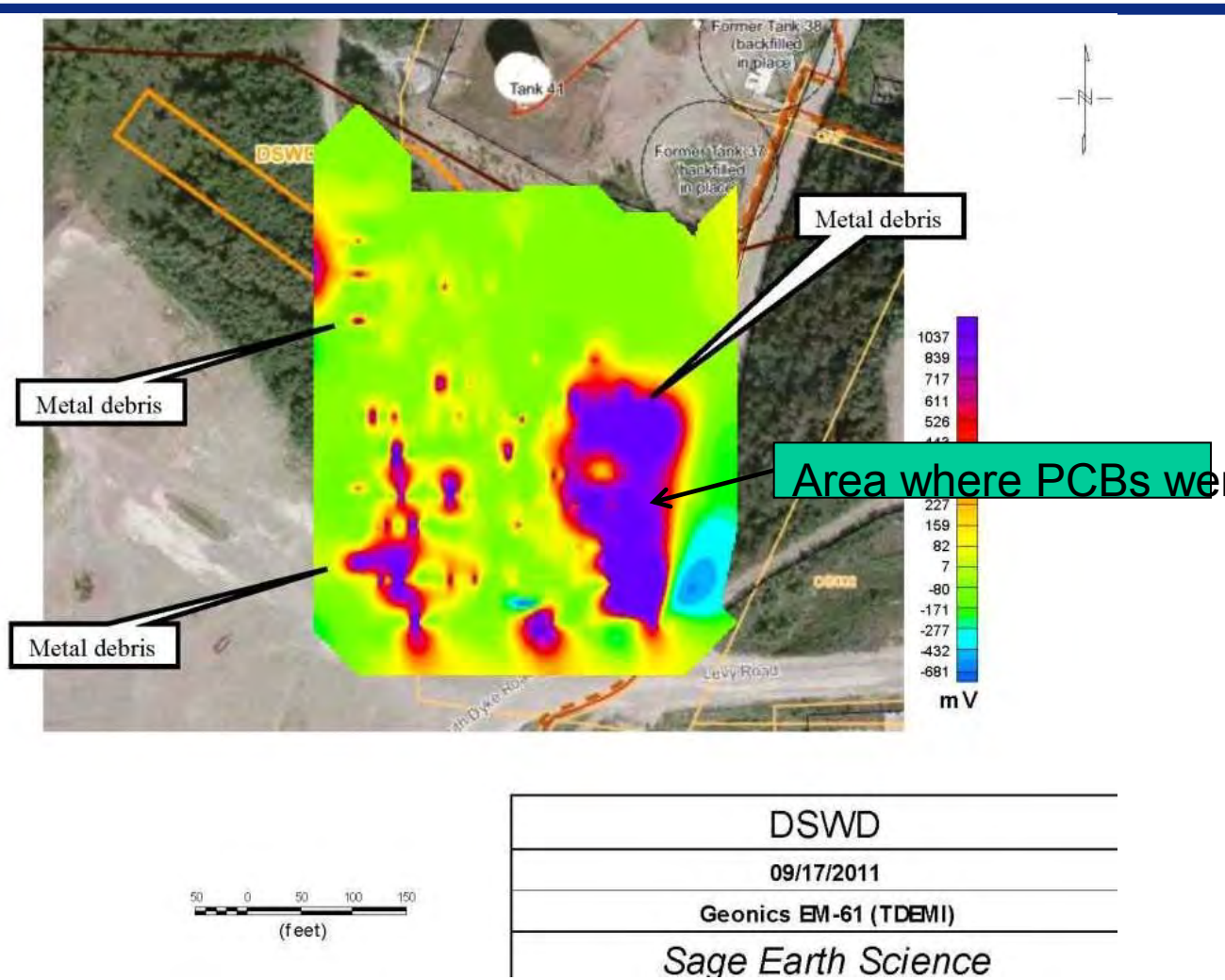
Site DSWD – Geophysical Results and Location of PCBs



ST009
(JP-4 Fill Stands)

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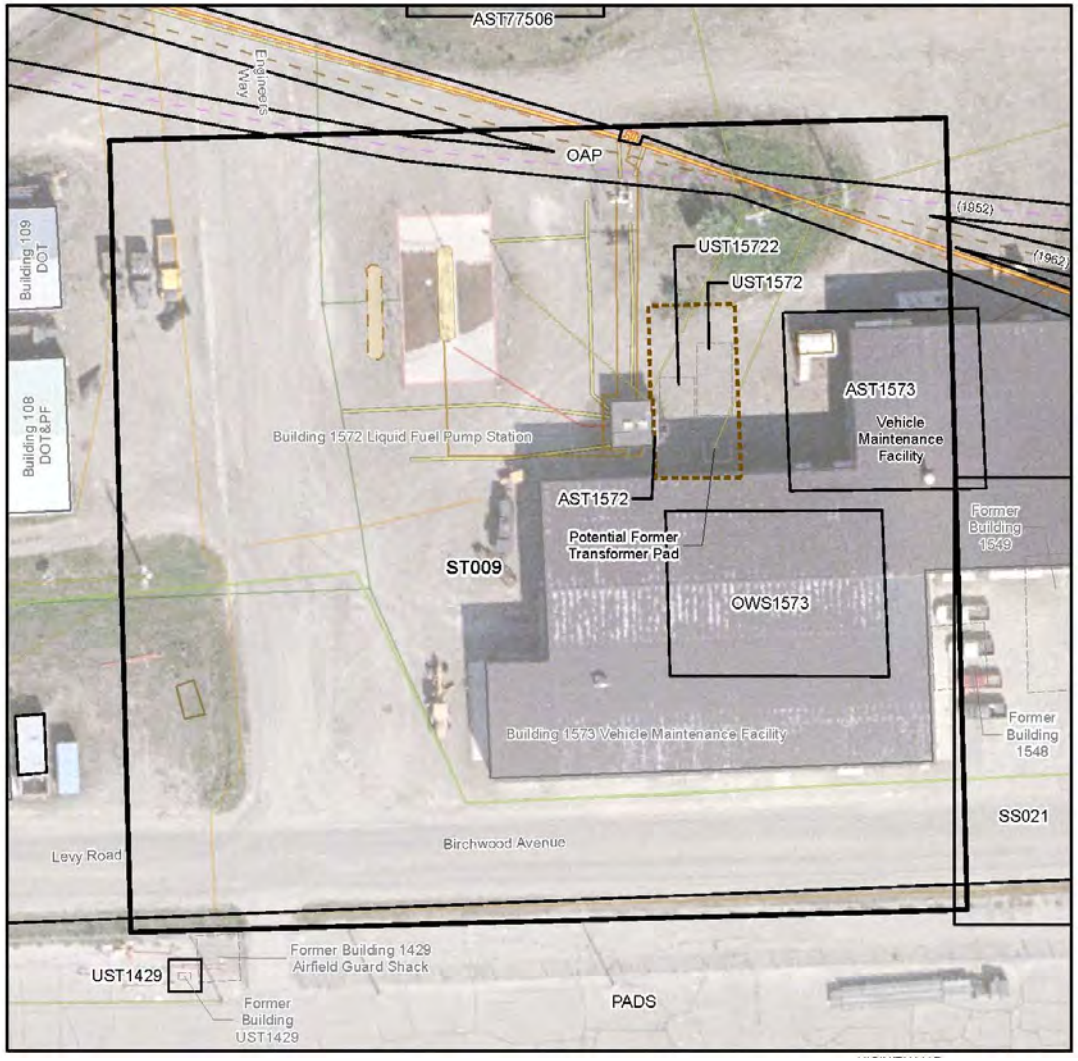
ST009 – Site Layout



LEGEND

- ST009
- Adjacent Site
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Electrical Line
- Abandoned Fuel Line
- Main Fuel Line
- Main Storm Sewer Line
- Service Wastewater Line
- Former UST Excavation Footprint

- Active Fillstand Area
- Removed Fillstand Area
- Fuel Tank

Underground Utility Locates - 2010

- Communications Line
- Electrical Line
- Fuel/Gas Line
- Sanitary Sewer Main
- Concrete Pad

N

0 30 60
Feet

Site ST009 – Distribution of DRO in the Vadose Zone (surface to 6 feet below ground surface)

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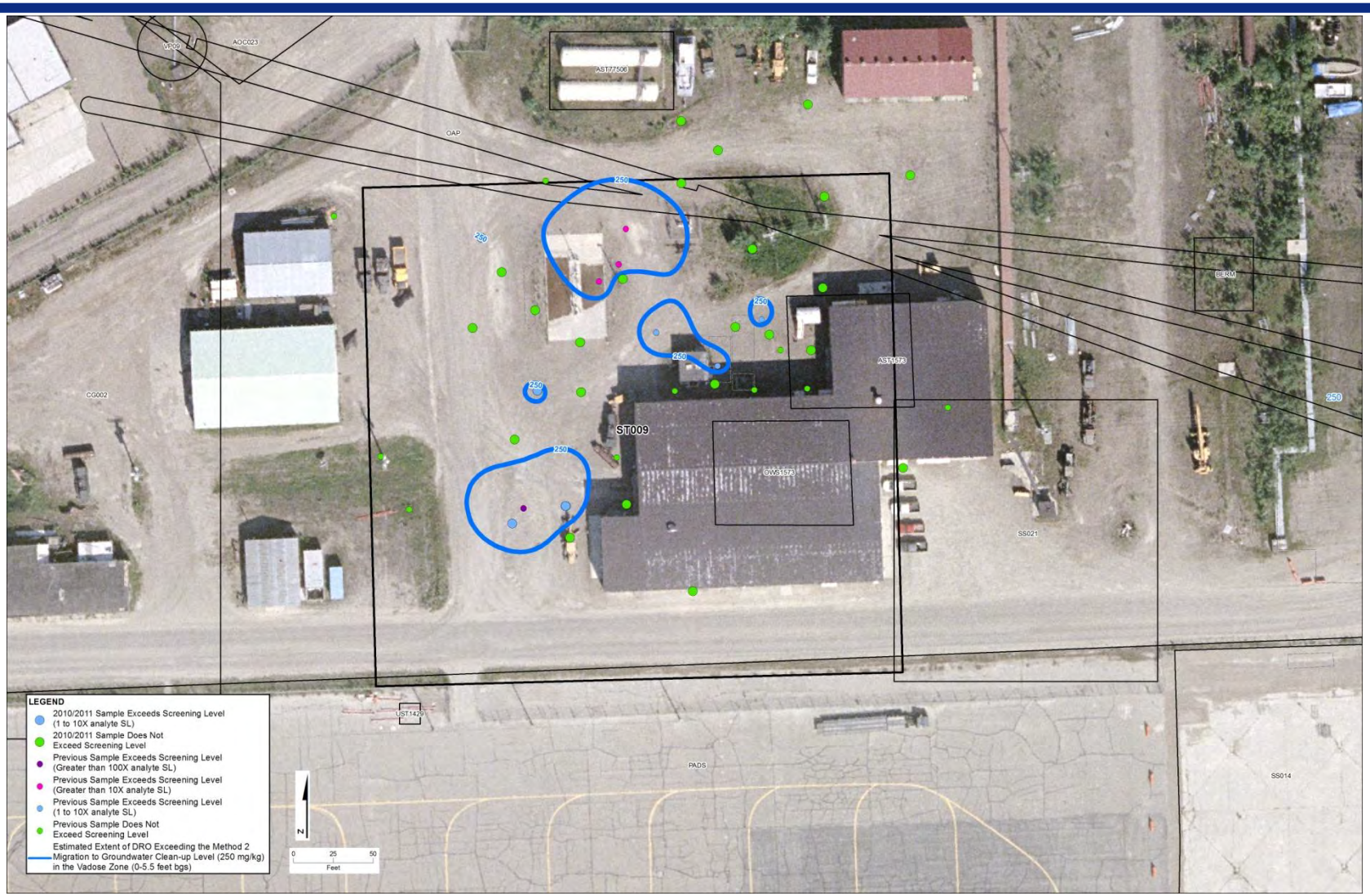

Site ST009 – Distribution of DRO in the Variably Saturated Zone (6 to 27 feet below ground surface)

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Site ST009 – Distribution of Benzene in the Vadose Zone (surface to 6 feet below ground surface)

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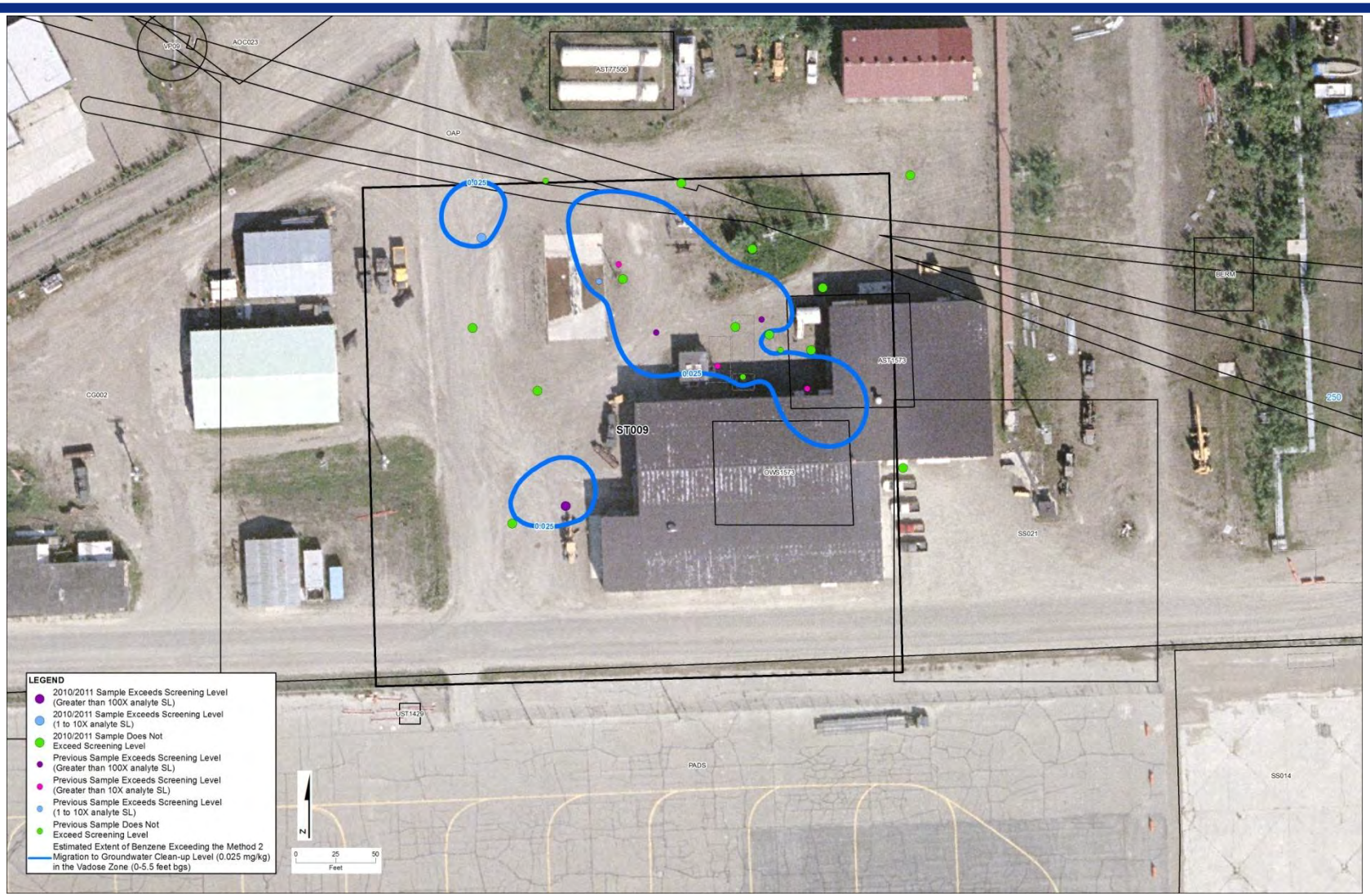

Site ST009 – Distribution of Benzene in the Variably Saturated Zone (6 to 27 feet below ground surface)

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Site ST009 Soil Gas Sampling

- Samples collected in both winter (Jan-Feb 2011) and fall (Oct 2011) during high and low groundwater levels
- Two soil gas samples at collected from immediately outside the vehicle maintenance facility
- Three sub slab samples to determine the concentrations of VOCs in vapors immediately beneath the building slab
- None of the VOCs exceeded the ADEC target level for soil gas; therefore vapor intrusion is not an issue at ST009

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ST009 – Soil Gas Sample Locations

SS014/SS017/SS021

(Birchwood Hangar, Truck Fill Stands, and Old Fire Station)

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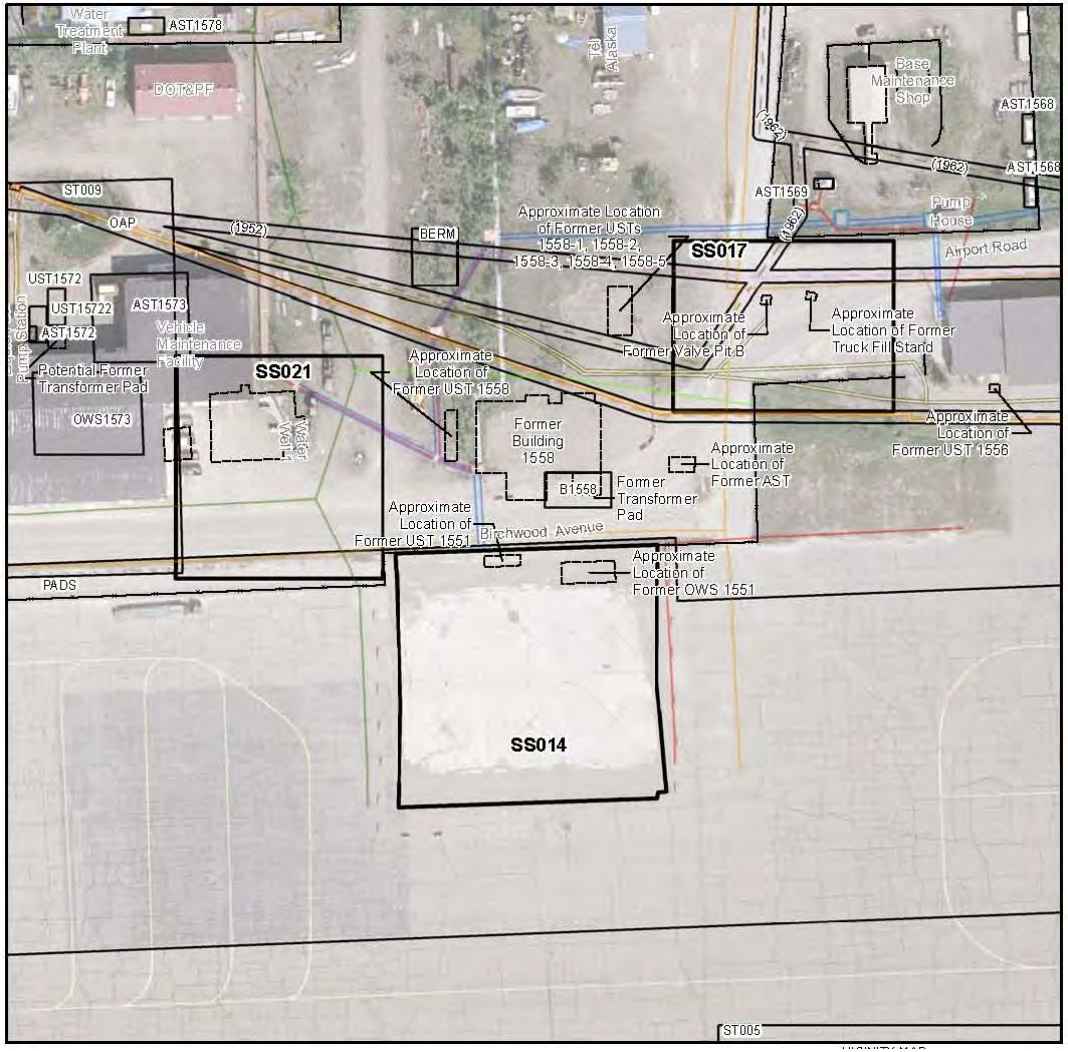
SS014/SS017/SS021 – Site Layout



LEGEND

- SS014/17/21
- Adjacent Site
- Approximate Location of Former Feature
- Fence
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Electrical Line
- Heating/Cooling Line

Underground Utility Locates – 2010

- Electrical Line
- Communications Line
- Potable Water Main
- Fuel/Gas Line
- Electrical Transformer
- Utility Vault

N

0 60 120

Feet

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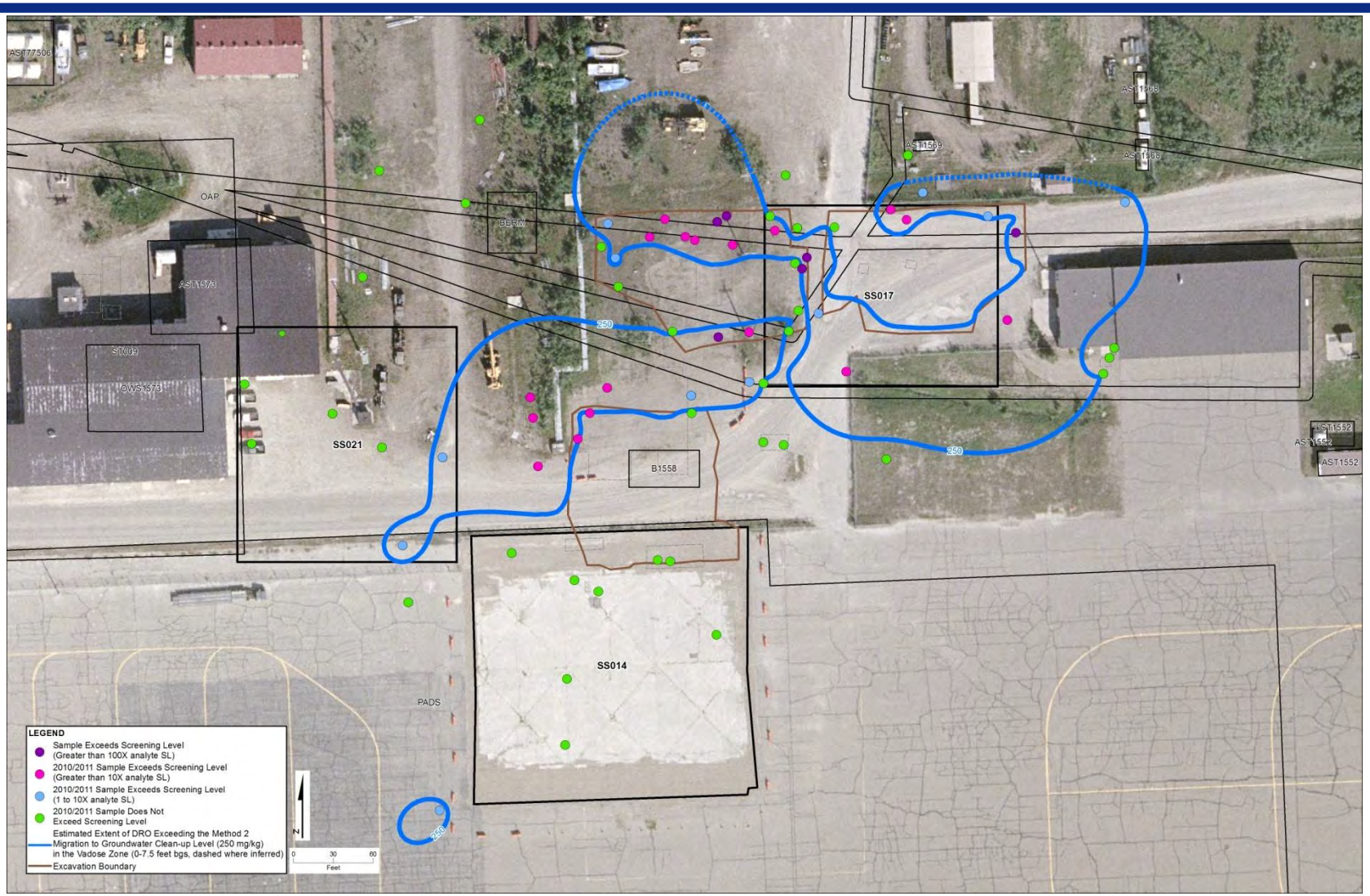
Sites SS014, SS017, and SS021 – Distribution of DRO in the Vadose Zone (surface to 6 feet below ground surface) – Post Excavation



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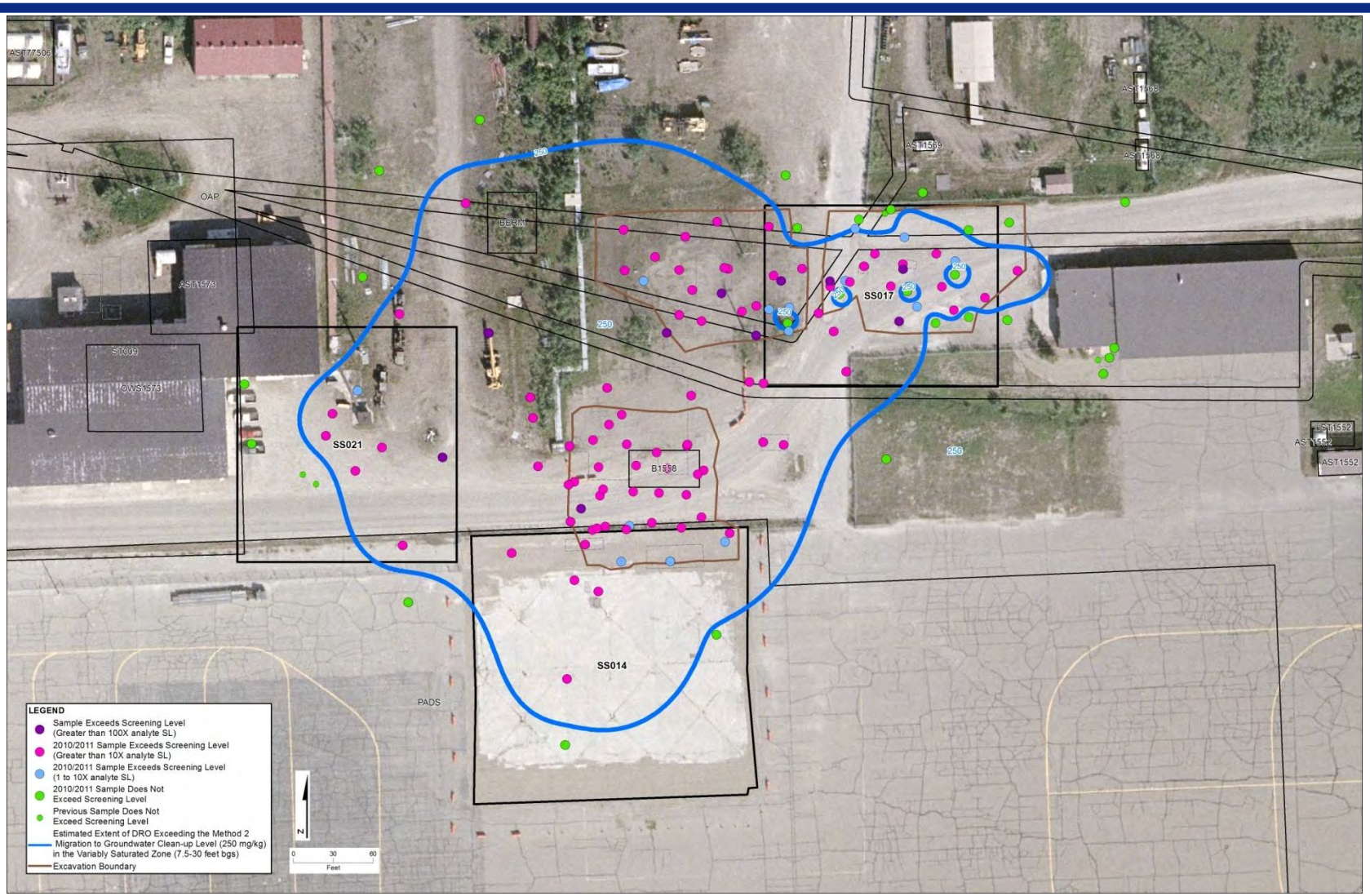
Sites SS014, SS017, and SS021 – Distribution of DRO in the Variably Saturated Zone (6 to 31 feet below ground surface)



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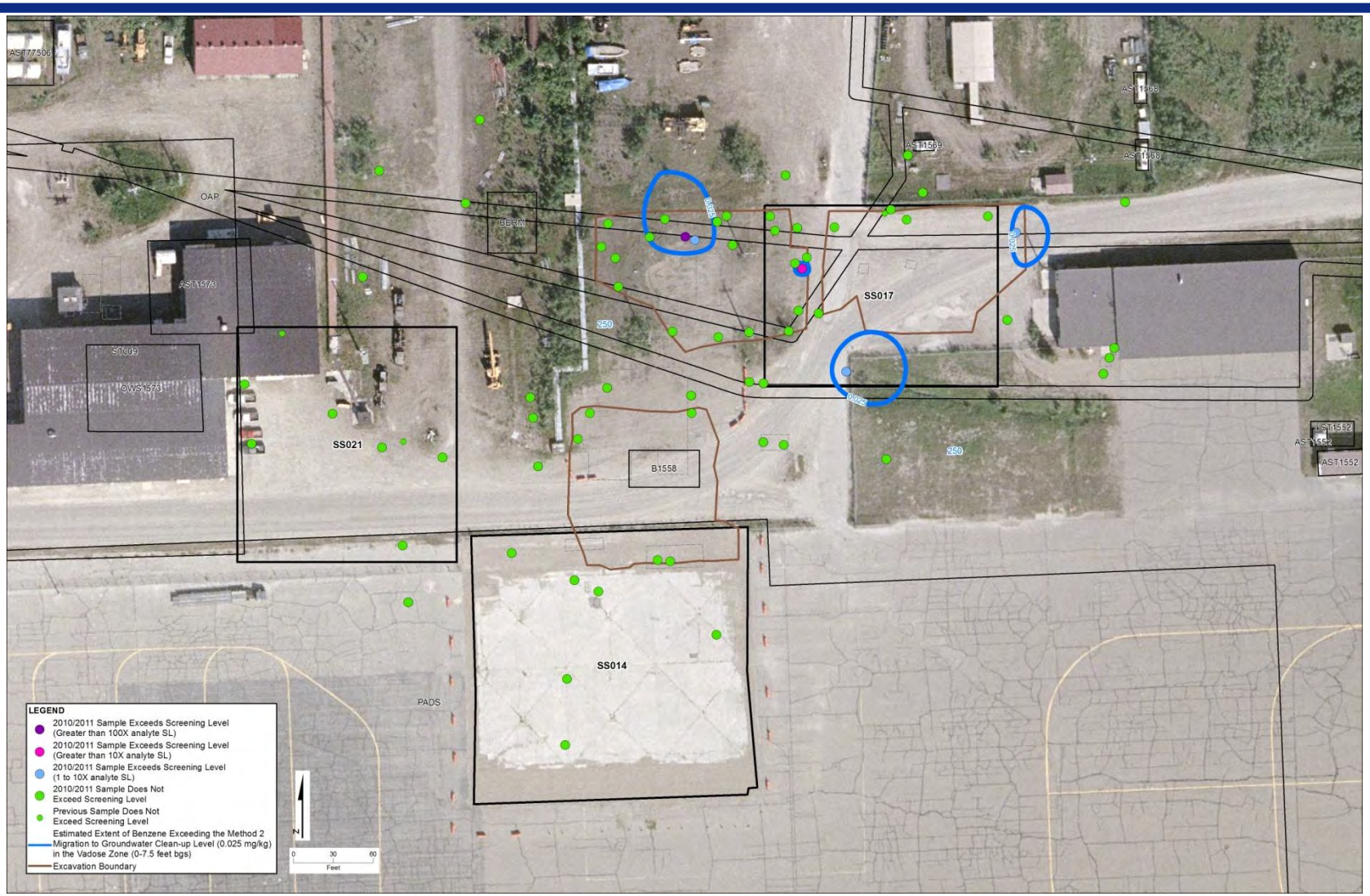
Sites SS014, SS017, and SS021– Distribution of Benzene in the Vadose Zone (surface to 6 feet below ground surface) – Post Excavation



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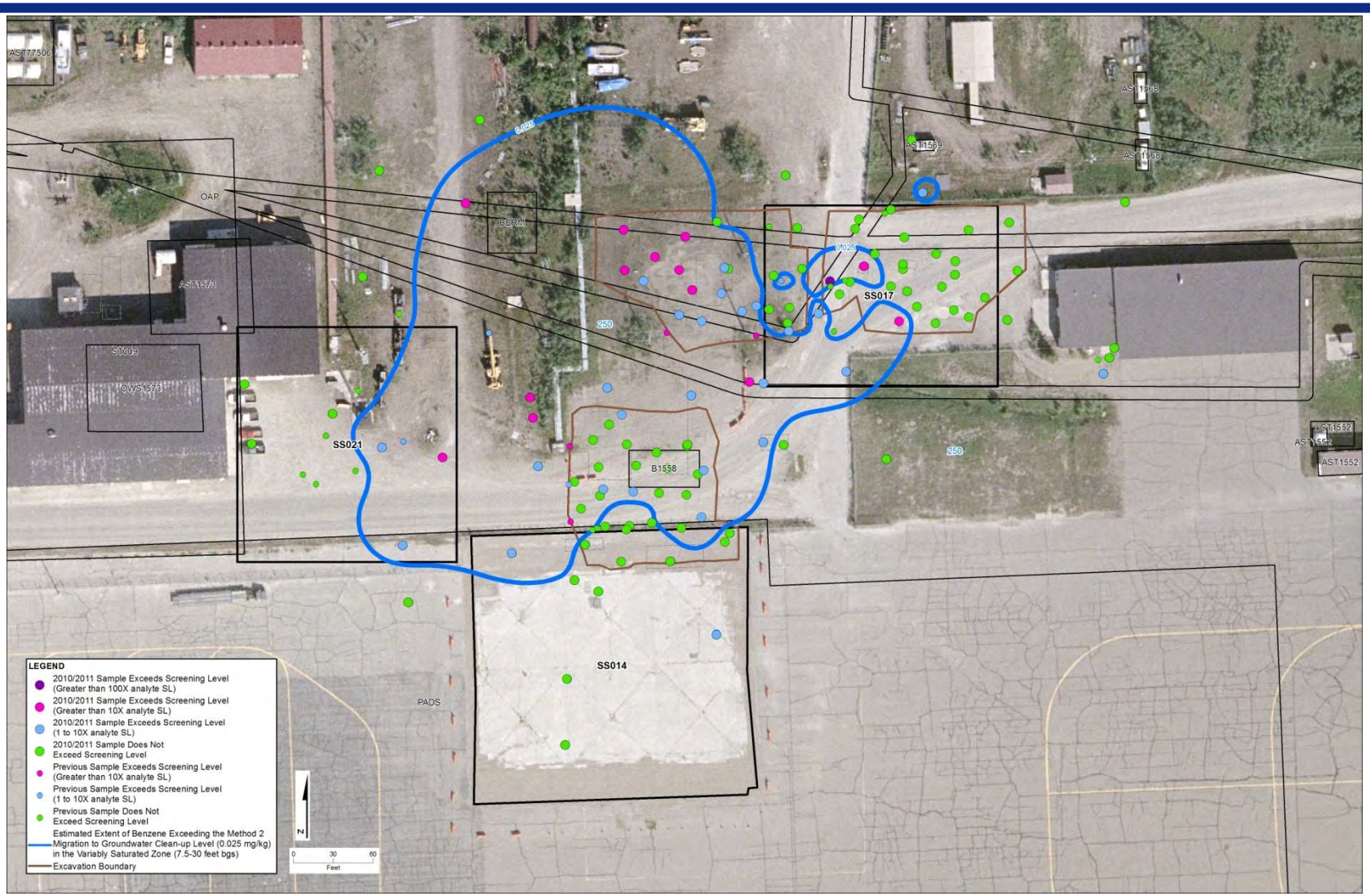
Sites SS014, SS017, and SS021 – Distribution of Benzene in the Variably Saturated Zone (6 to 31 feet below ground surface)



ST005
(POL Tank Farm)

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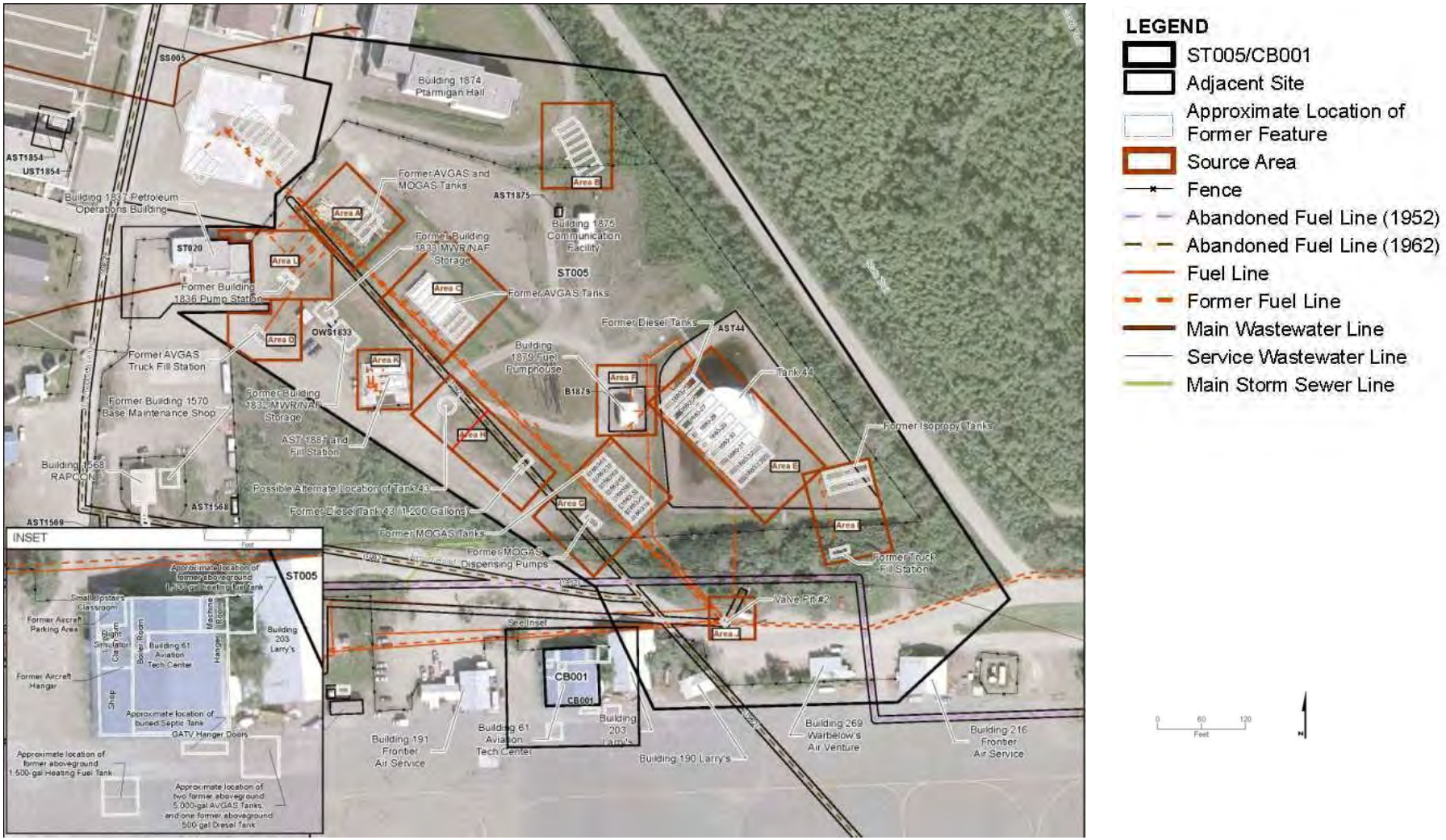
ST005 – Site Layout



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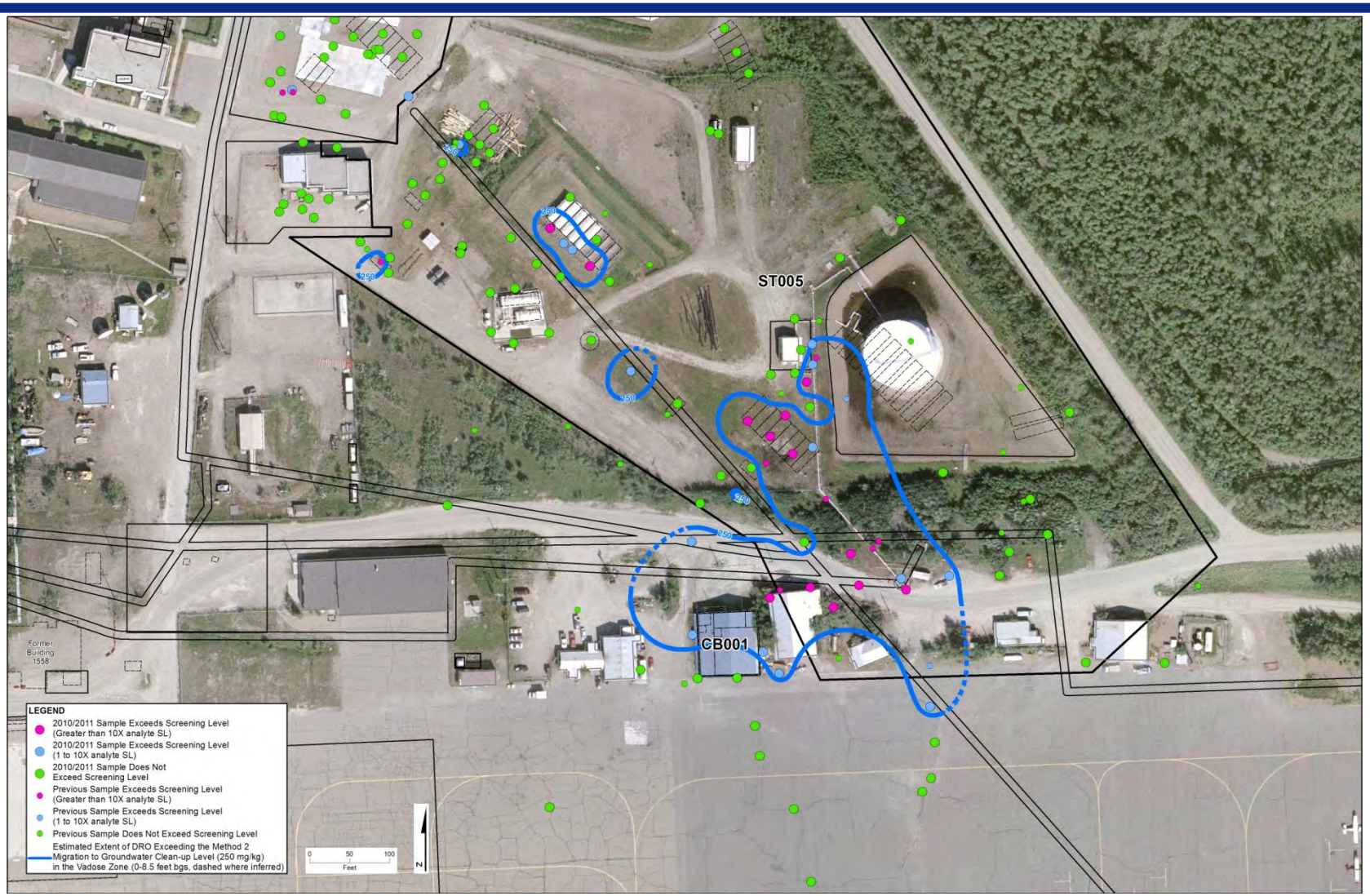
Site ST005 – Distribution of DRO in the Vadose Zone (surface to 8 feet below ground surface)



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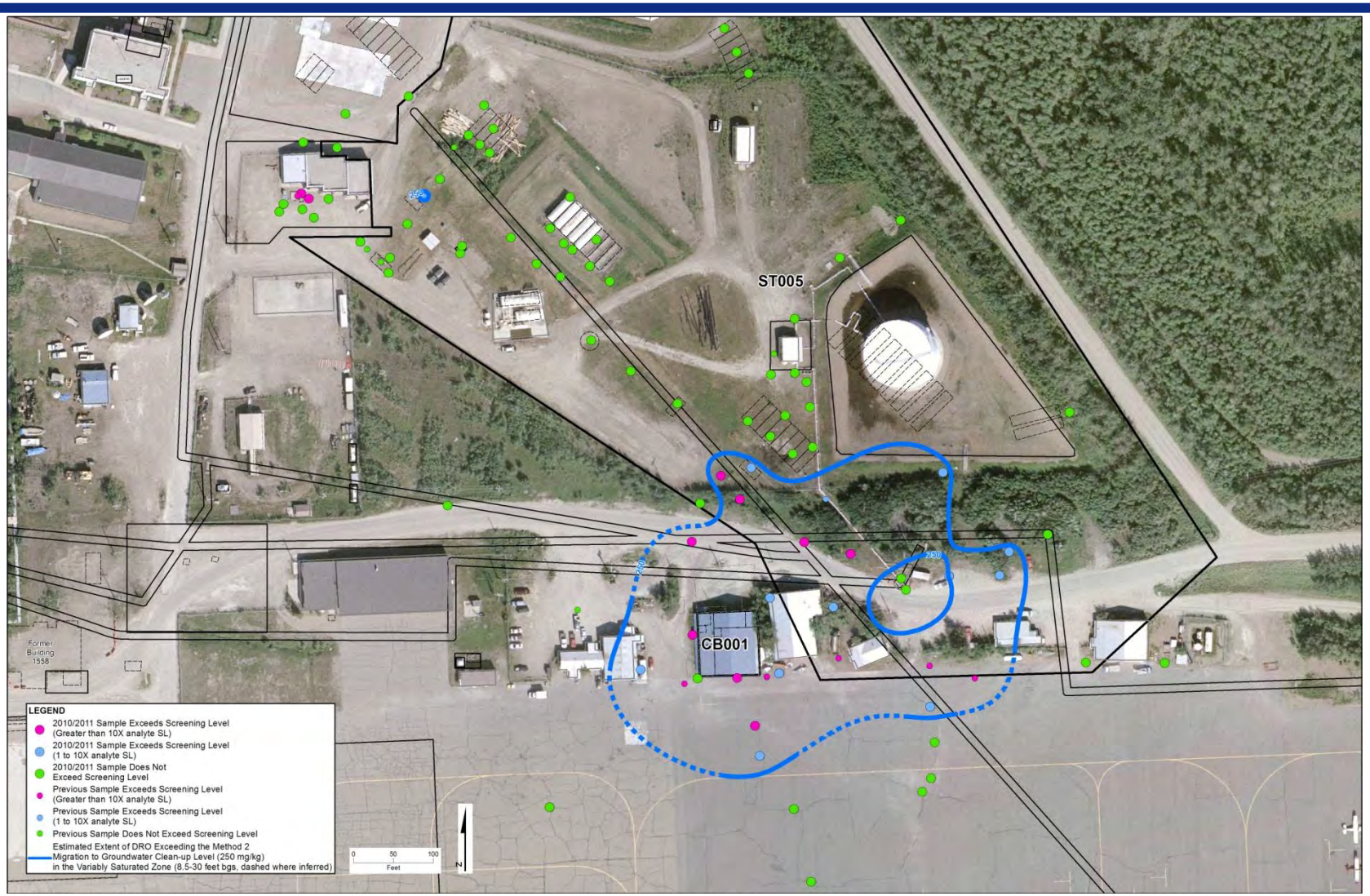
Site ST005 – Distribution of DRO in the Variably Saturated Zone (8 to 30 below ground surface)



Site ST005 – Distribution of Benzene in the Vadose Zone (surface to 8 feet below ground surface)

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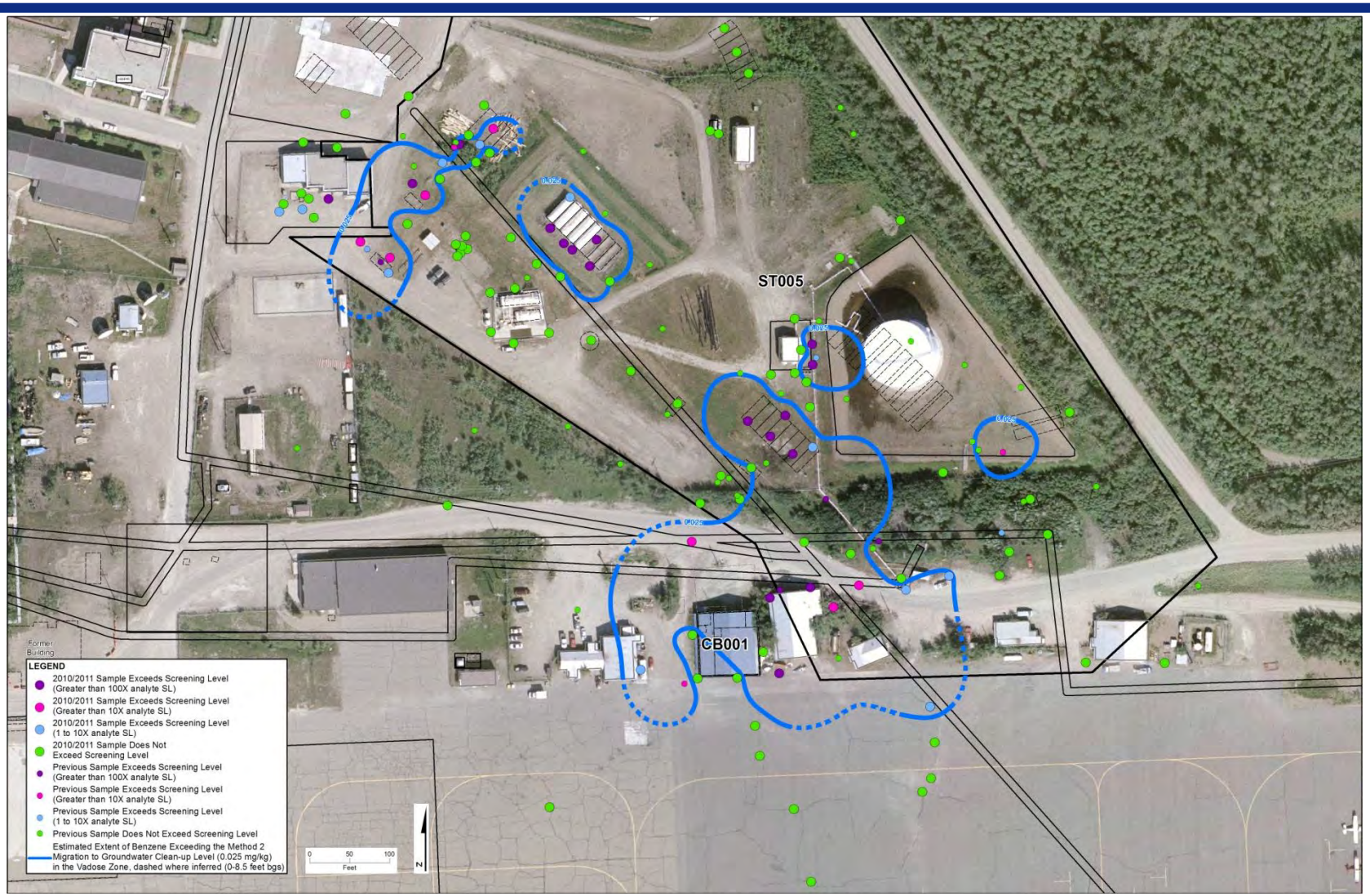

Site ST005 – Distribution of Benzene in the Variably Saturated Zone (8 to 30 feet below ground surface)

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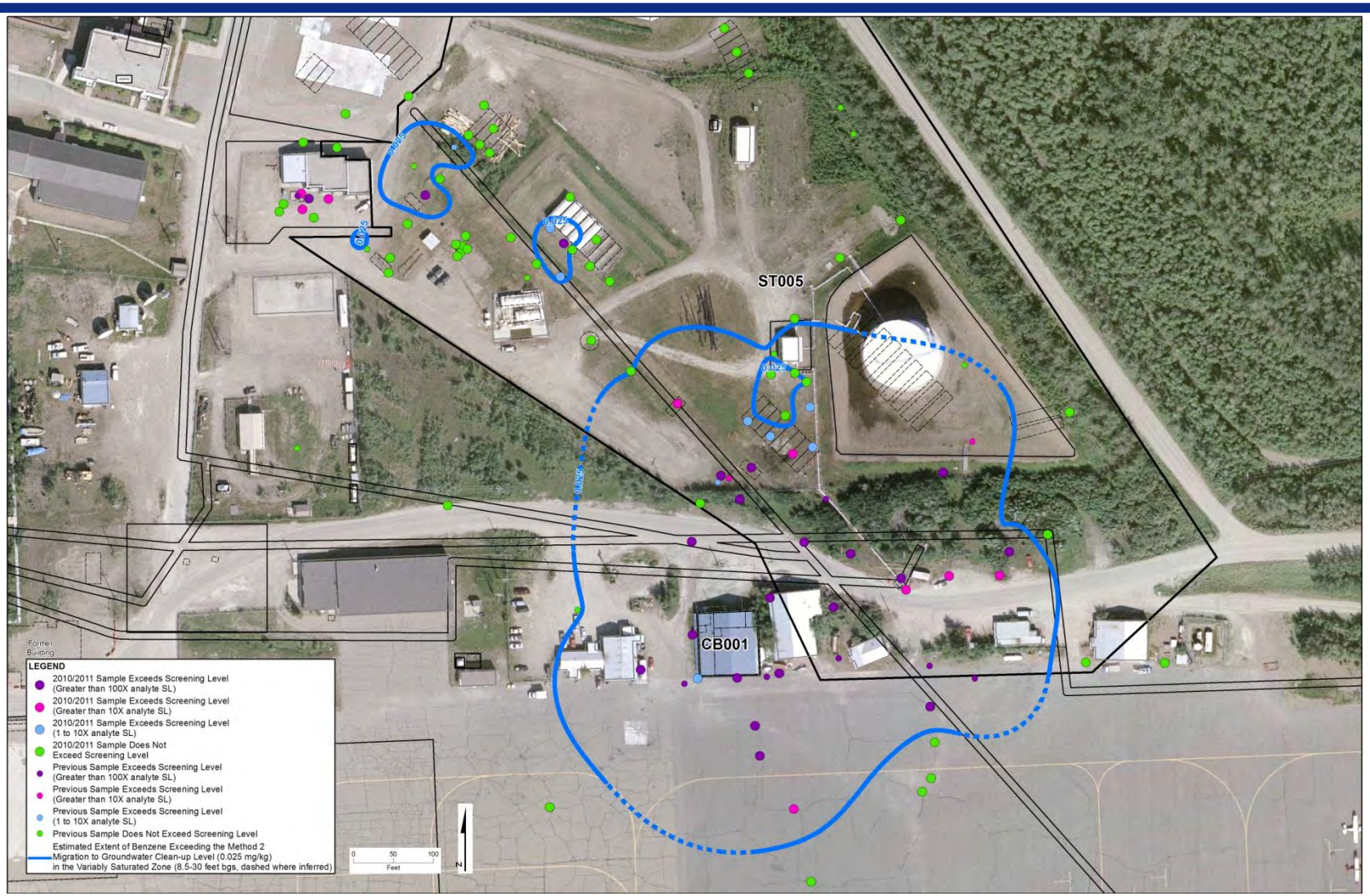

SS006 & SS019

(TCE Area and Building 1700 – Refueler Maintenance Shop)

SS006 & SS019 – Site Layout

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LEGEND

- SS006/SS019
- Adjacent Site
- Approximate Location of Feature
- Approximate Location of Former Feature
- Fence
- Water Line
- Electrical Line
- Heating/Cooling Line
- Abandoned Wastewater Line
- Main Wastewater Line
- Service Wastewater Line
- Former Pipelines

Underground Utility Locates – 2010

- Electrical Line
- Potable Water Main
- Communications Line
- Sanitary Sewer Main
- Concrete Pad
- Utility Vault

N

0 30 60

Feet

Sites SS006 and SS019 – Distribution of TCE in the Vadose Zone (surface to 9 feet below ground surface)

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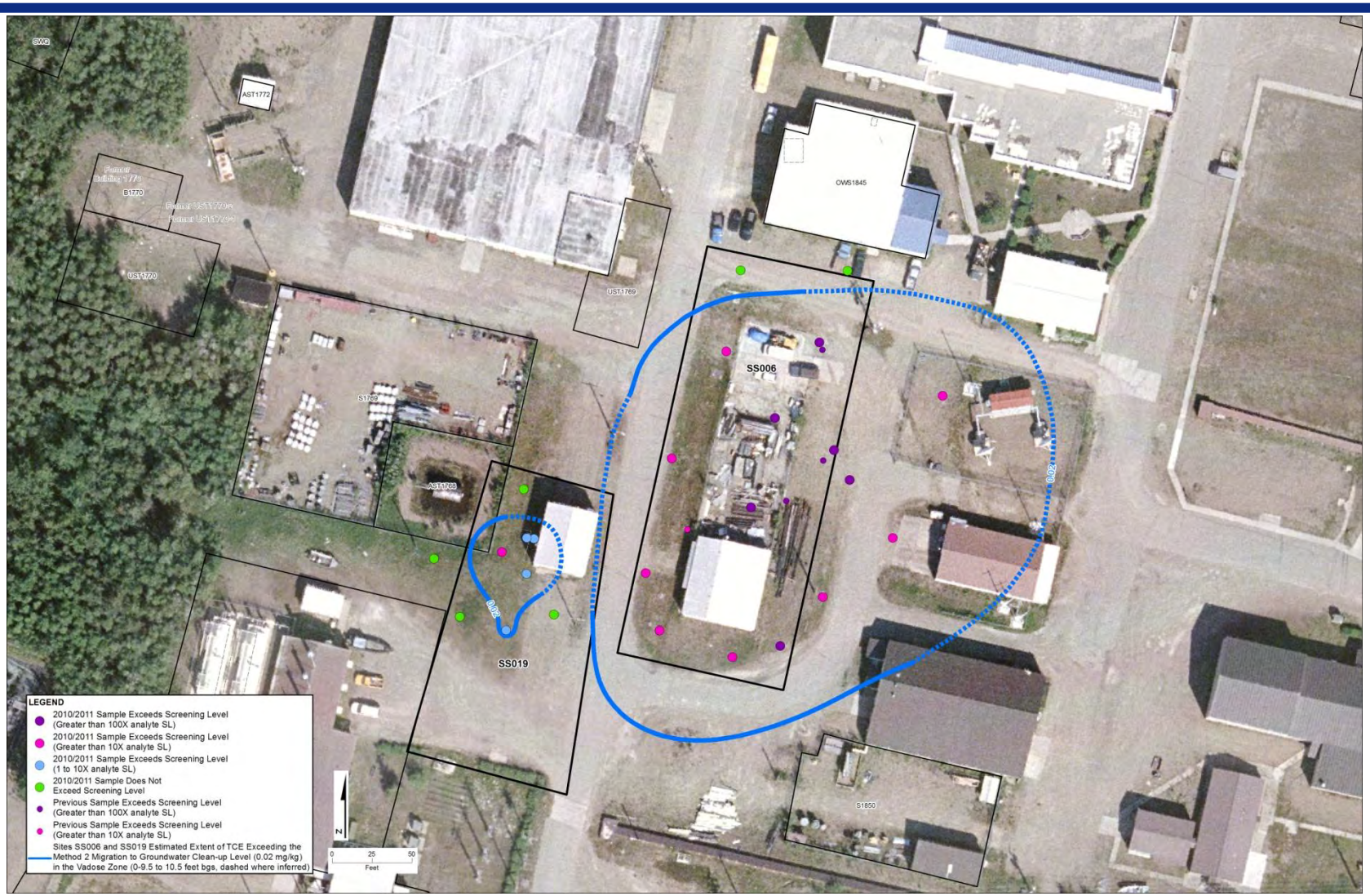

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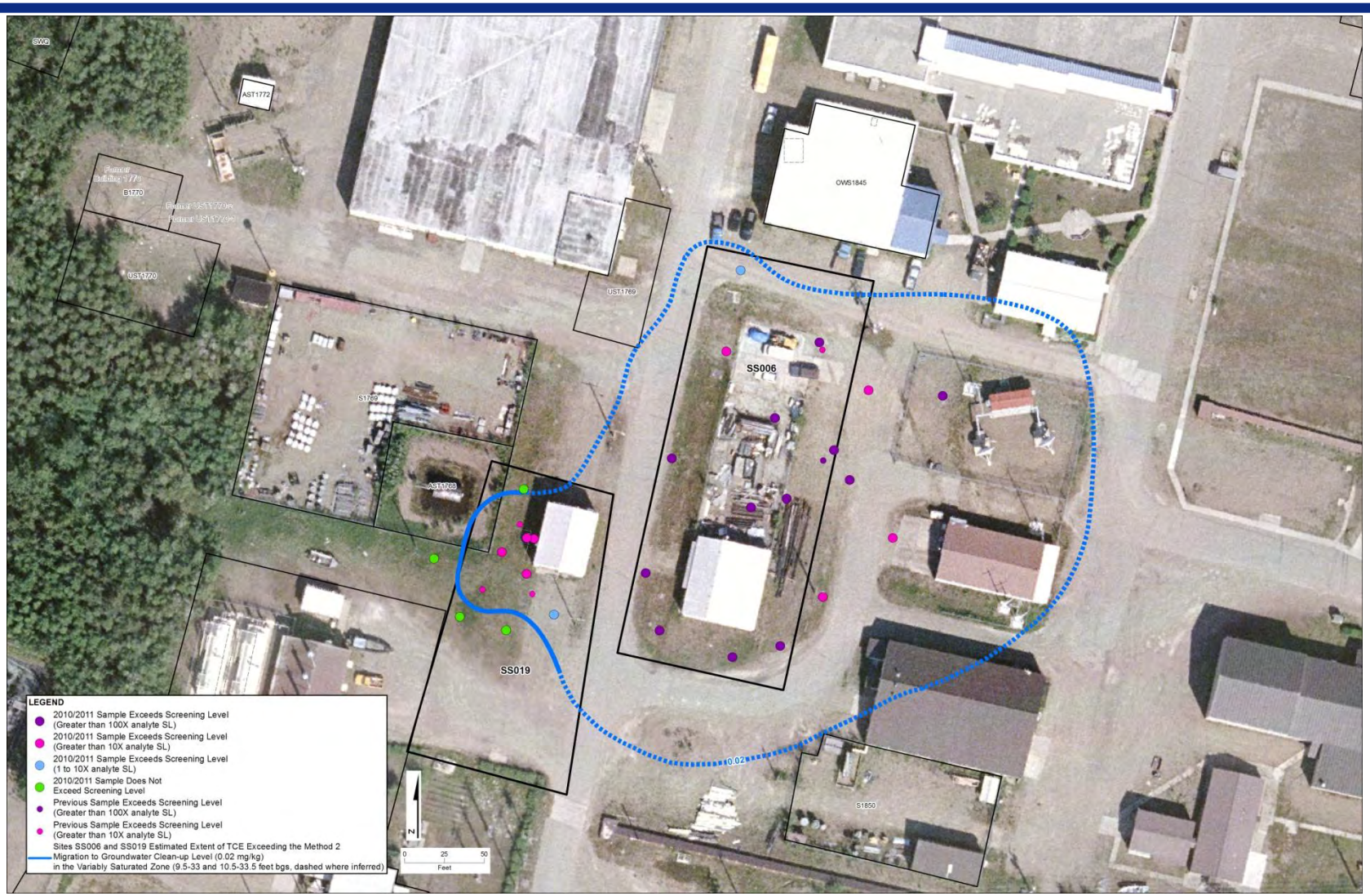
Sites SS006 and SS019 – Distribution of TCE in the Variably Saturated Zone (9 to 33 feet below ground surface)



Sites SS006 and SS019 – Distribution of DRO in the Vadose Zone (surface to 9 feet below ground surface)

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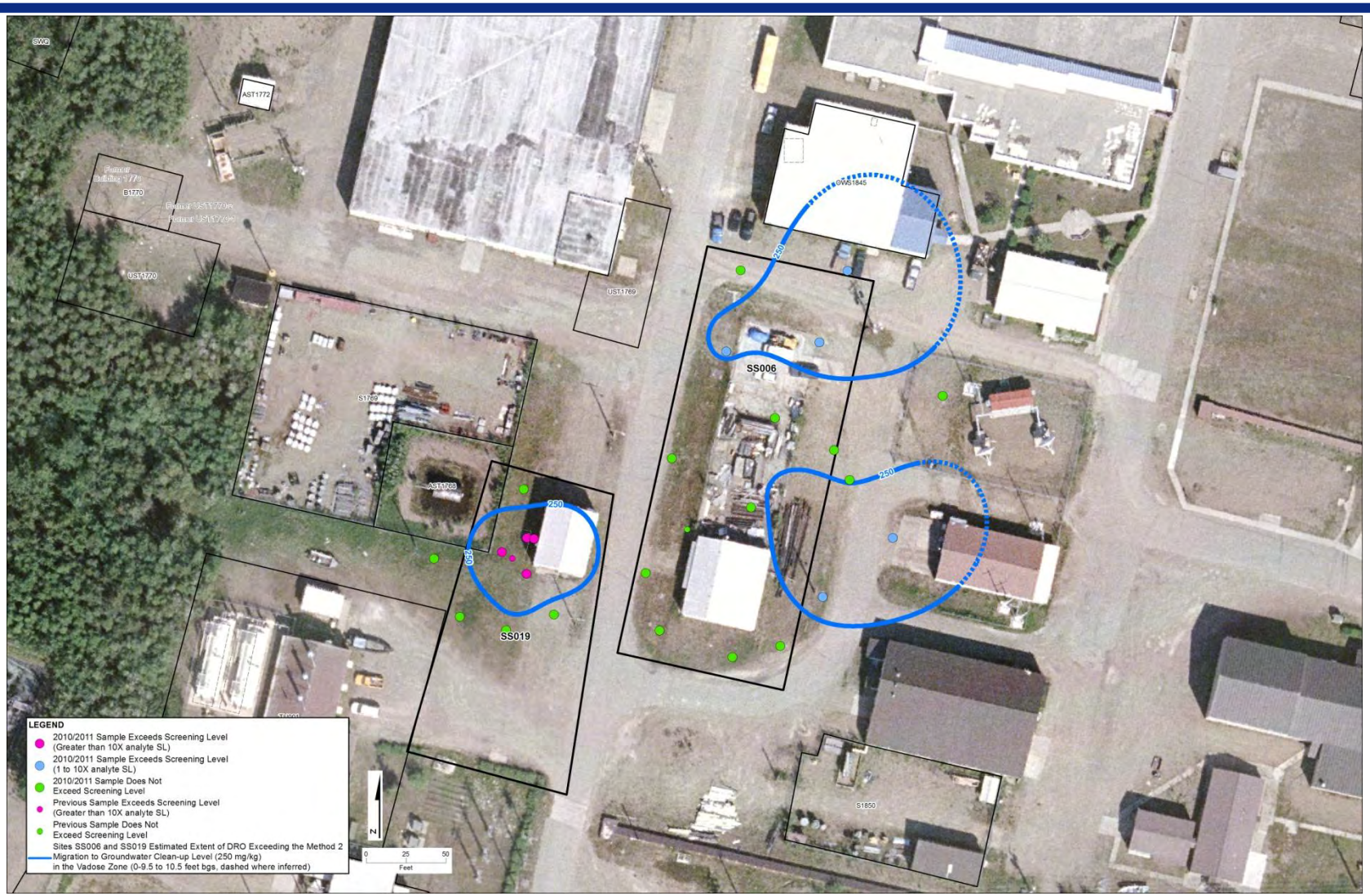

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Sites SS006 and SS019 – Distribution of DRO in the Variably Saturated Zone (9 to 33 feet below ground surface)

Sites SS006 and SS019 – Distribution of Benzene in the Vadose Zone (surface to 9 feet below ground surface)

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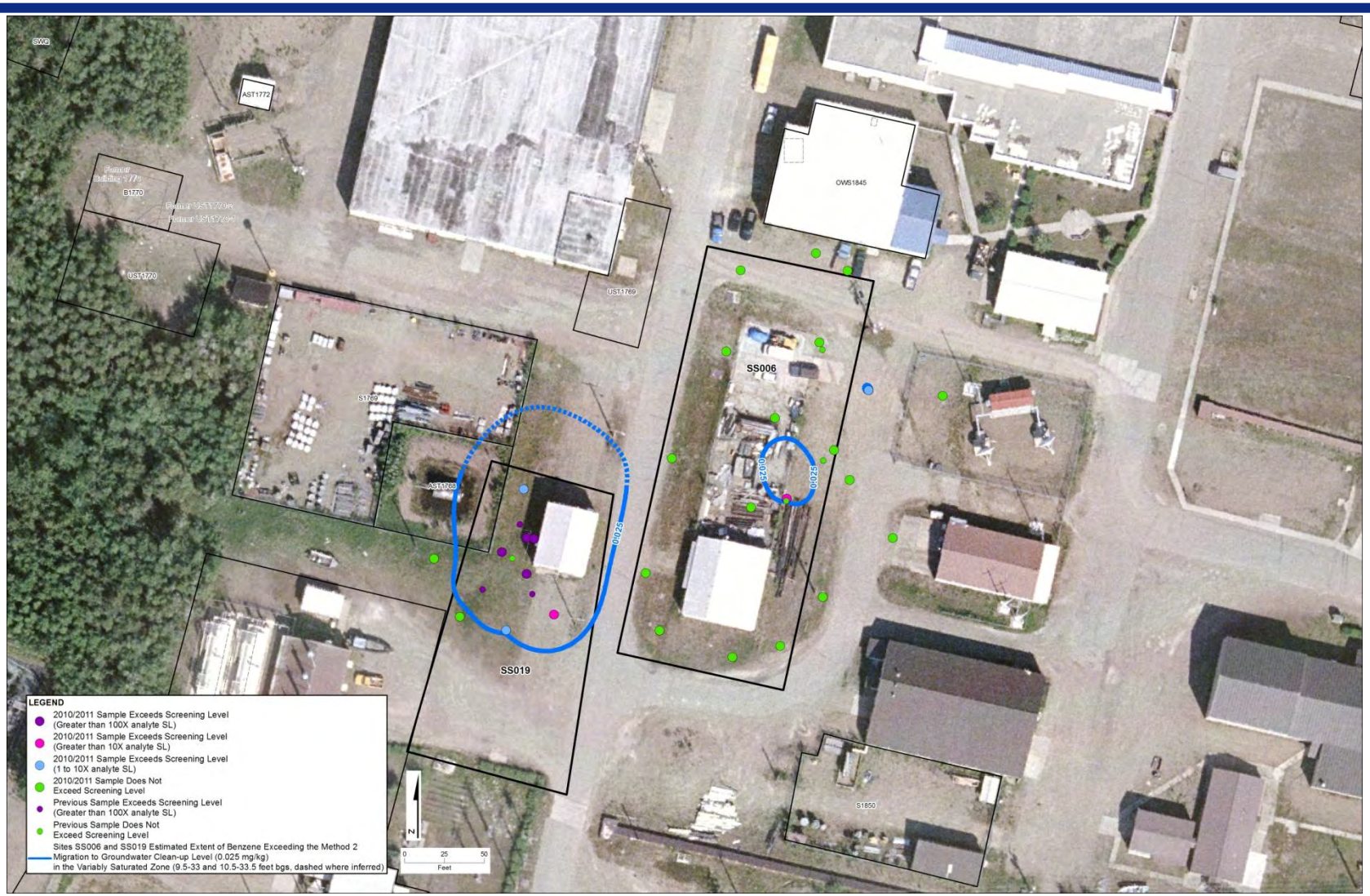
Sites SS006 and SS019 – Distribution of Benzene in the Variably Saturated Zone (9 to 33 feet below ground surface)



Headquarters U.S. Air Force

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Hydrogeologic Study

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Topics

- Field Investigation Results
  - Well installation
  - Groundwater levels
  - Yukon River stage
  - Groundwater plumes
- Groundwater Modeling
  - Model Construction
  - Plume simulations

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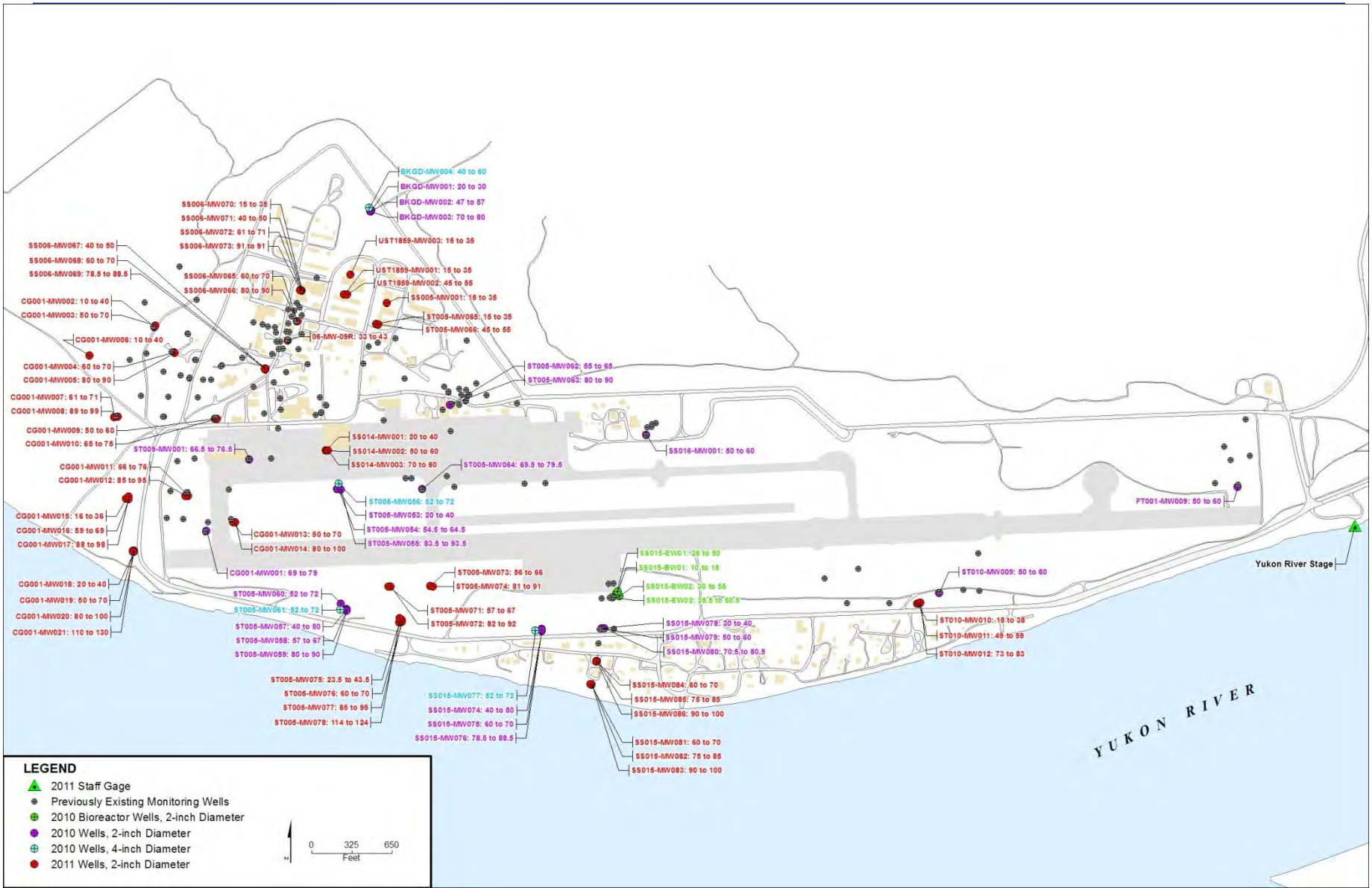
2010/2011 Well Installations



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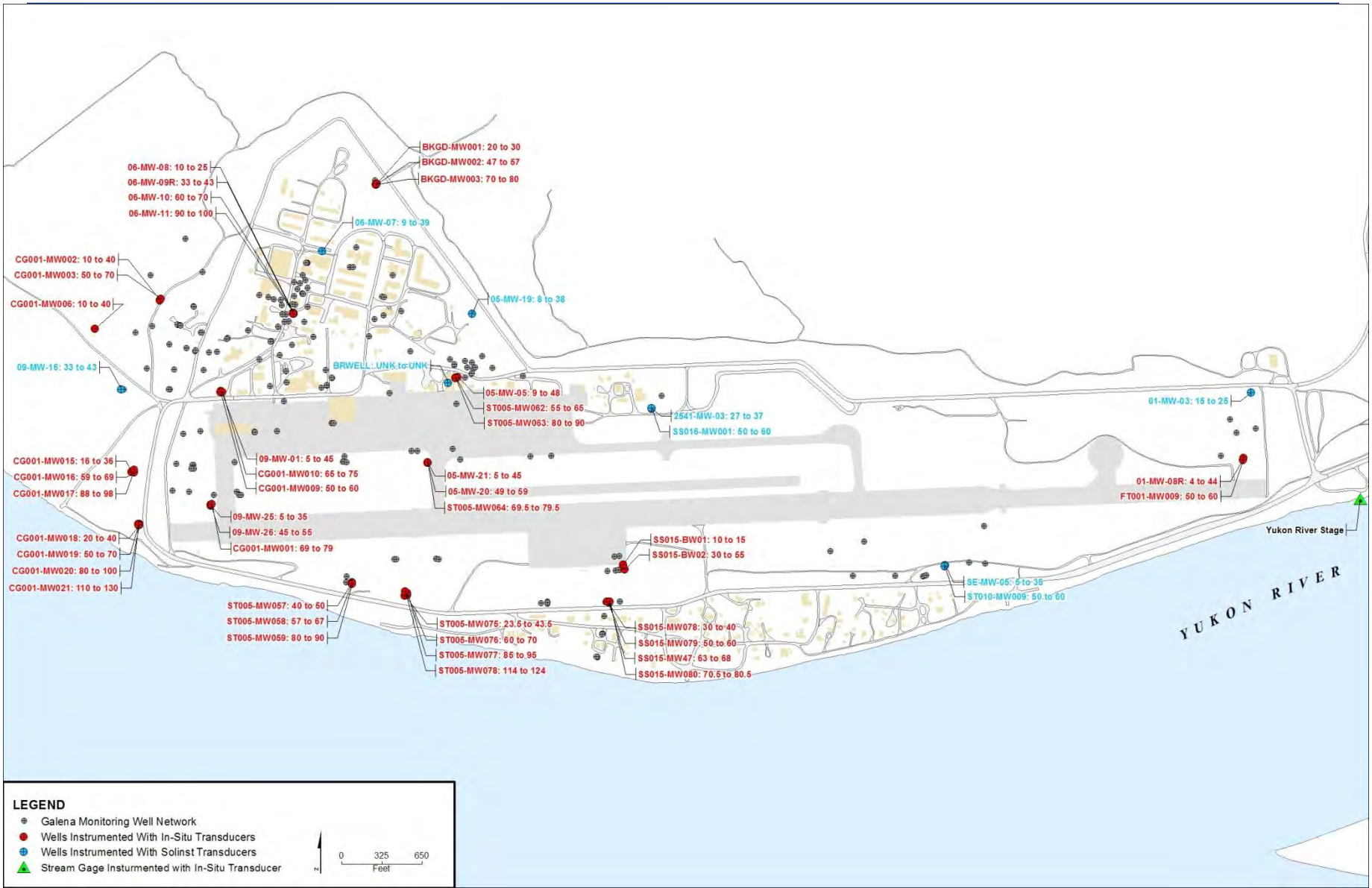
Transducer Deployment



Transducer Deployment – Shallow

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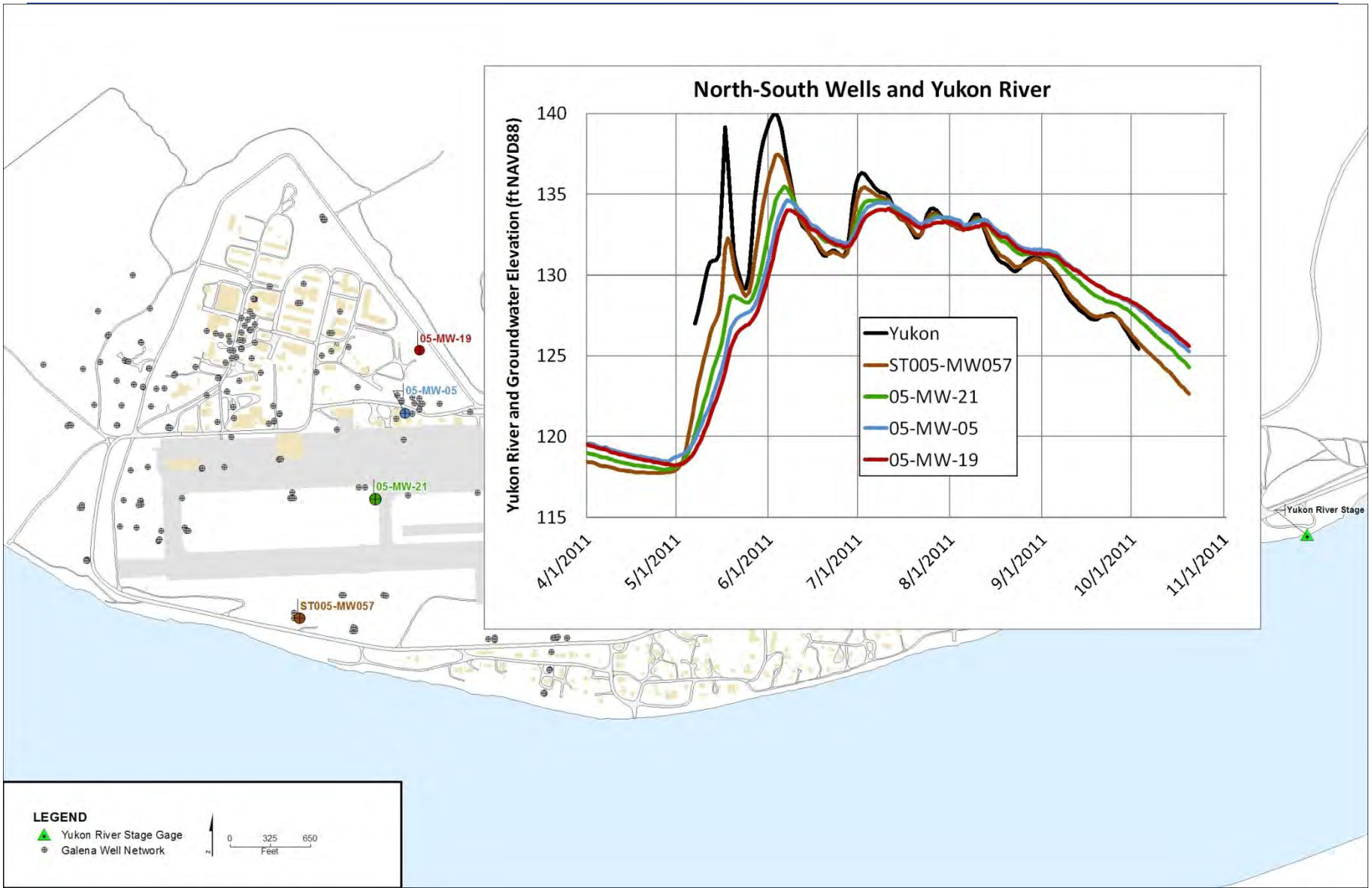

Groundwater Temperature

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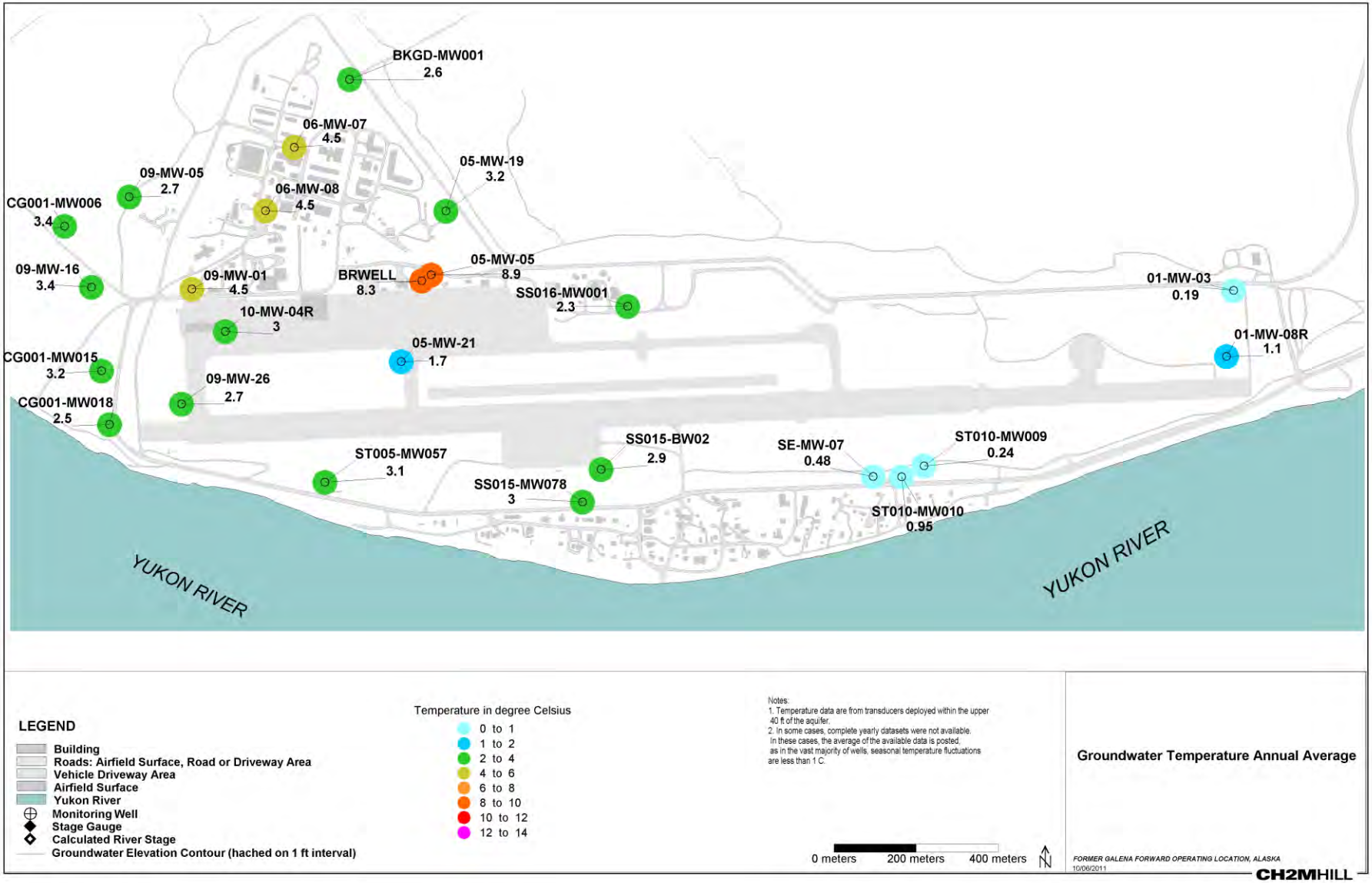

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Groundwater Contaminant Plumes

- Groundwater plumes were evaluated based on three rounds of sampling performed in Summer 2010, Spring 2011, and Fall 2011
- Benzene, DRO, and TCE plumes were evaluated
- Seasonal data suggests that concentrations increase from fall to spring as groundwater levels decline and decrease from spring to fall
- It is important to note that apparent changes to plume extents are often due to installation of new wells as opposed to changes in concentrations

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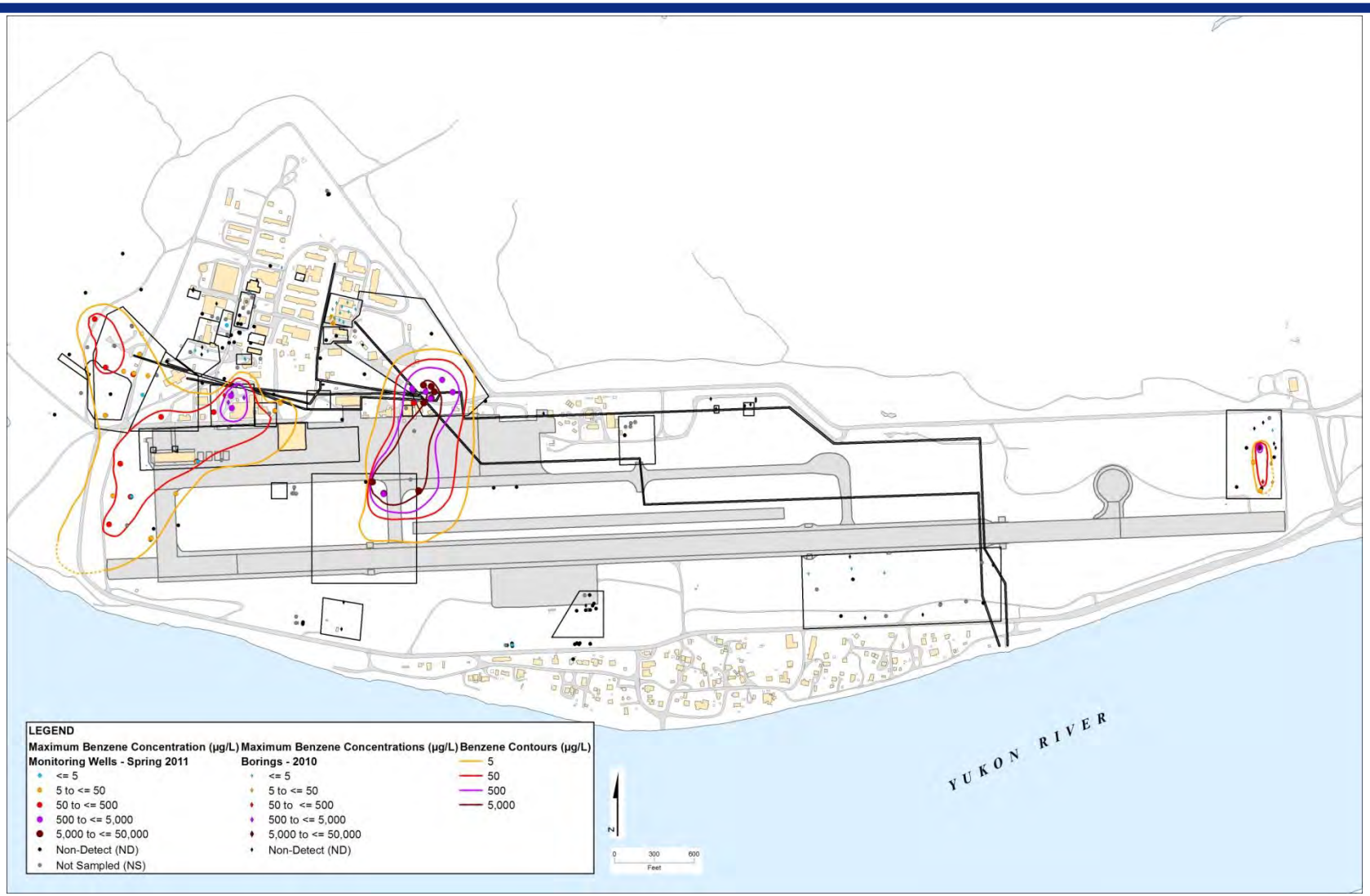
Distribution of Benzene in Groundwater – Spring 2011



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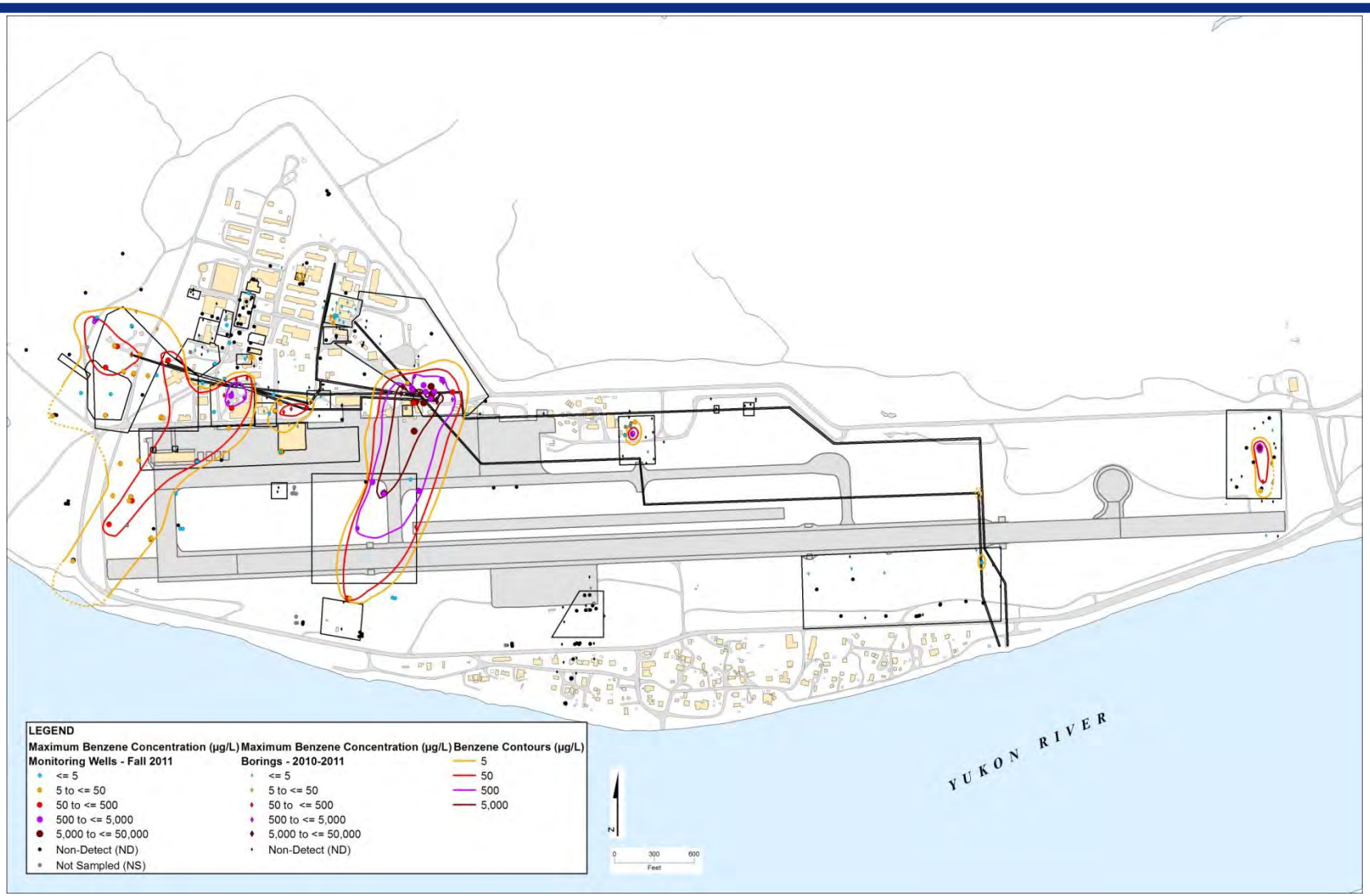
Distribution of Benzene in Groundwater – Fall 2011



Change In Benzene Plume Configuration from Spring to Fall 2011

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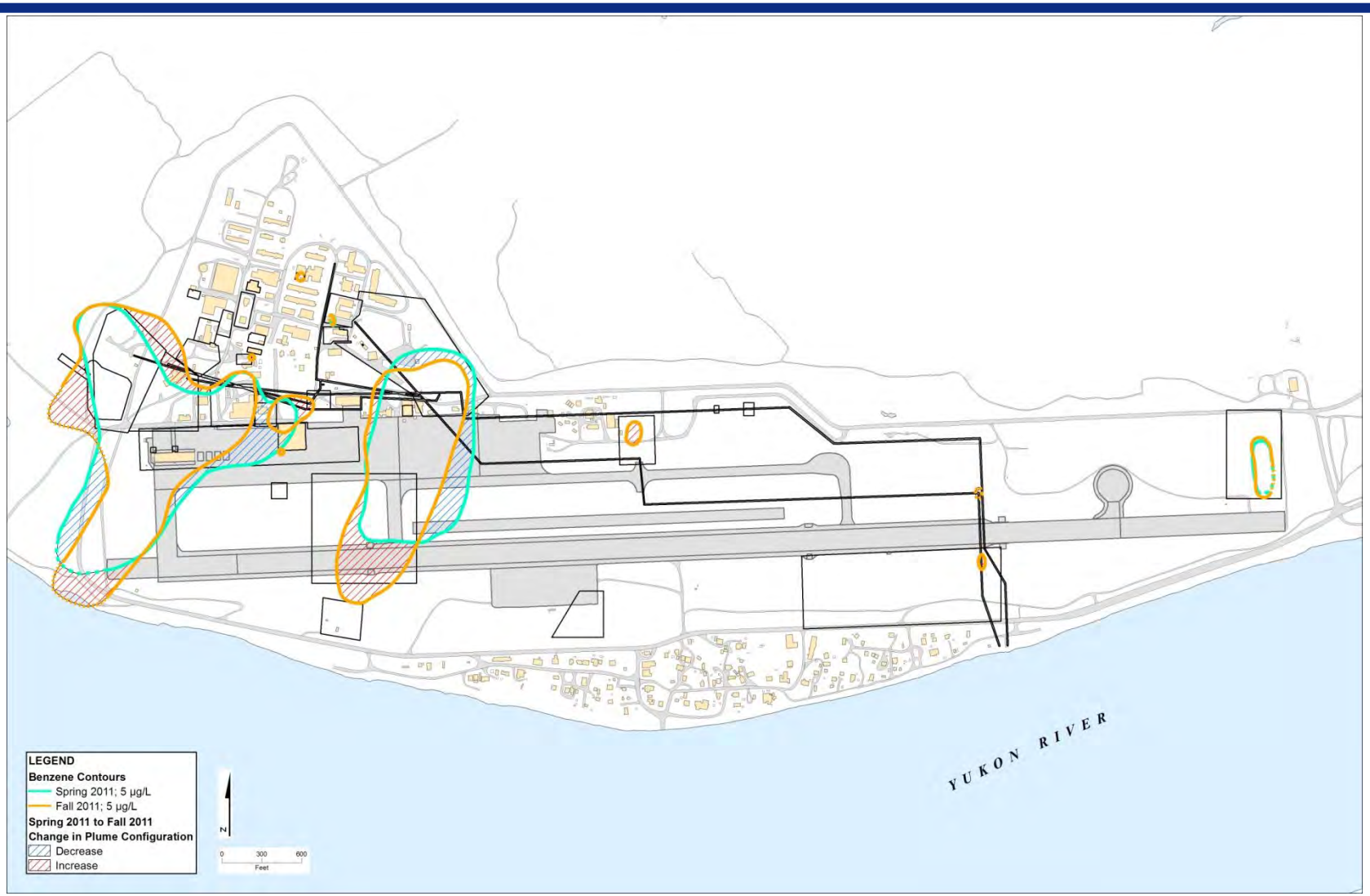

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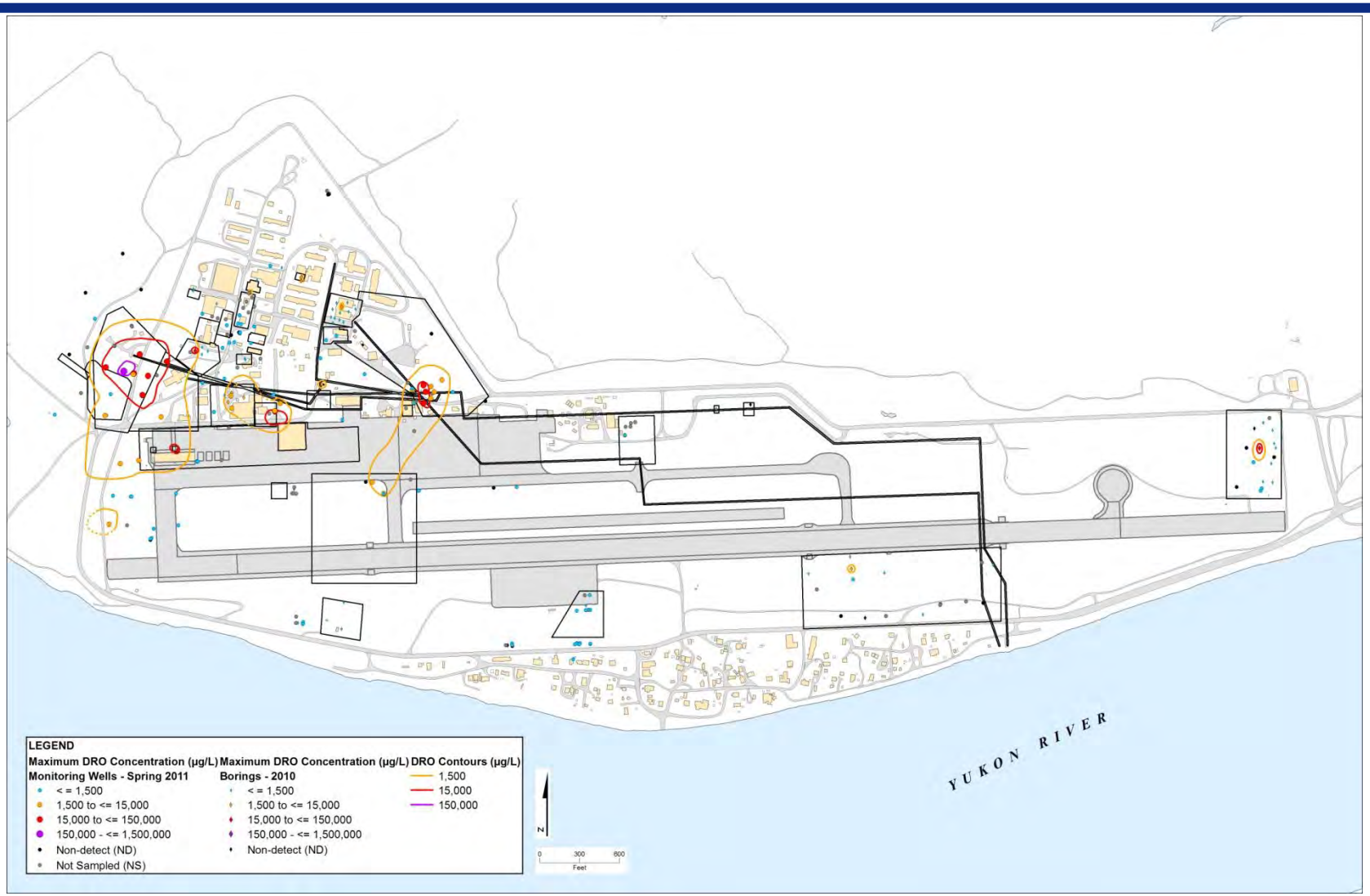
Distribution of DRO in Groundwater – Spring 2011



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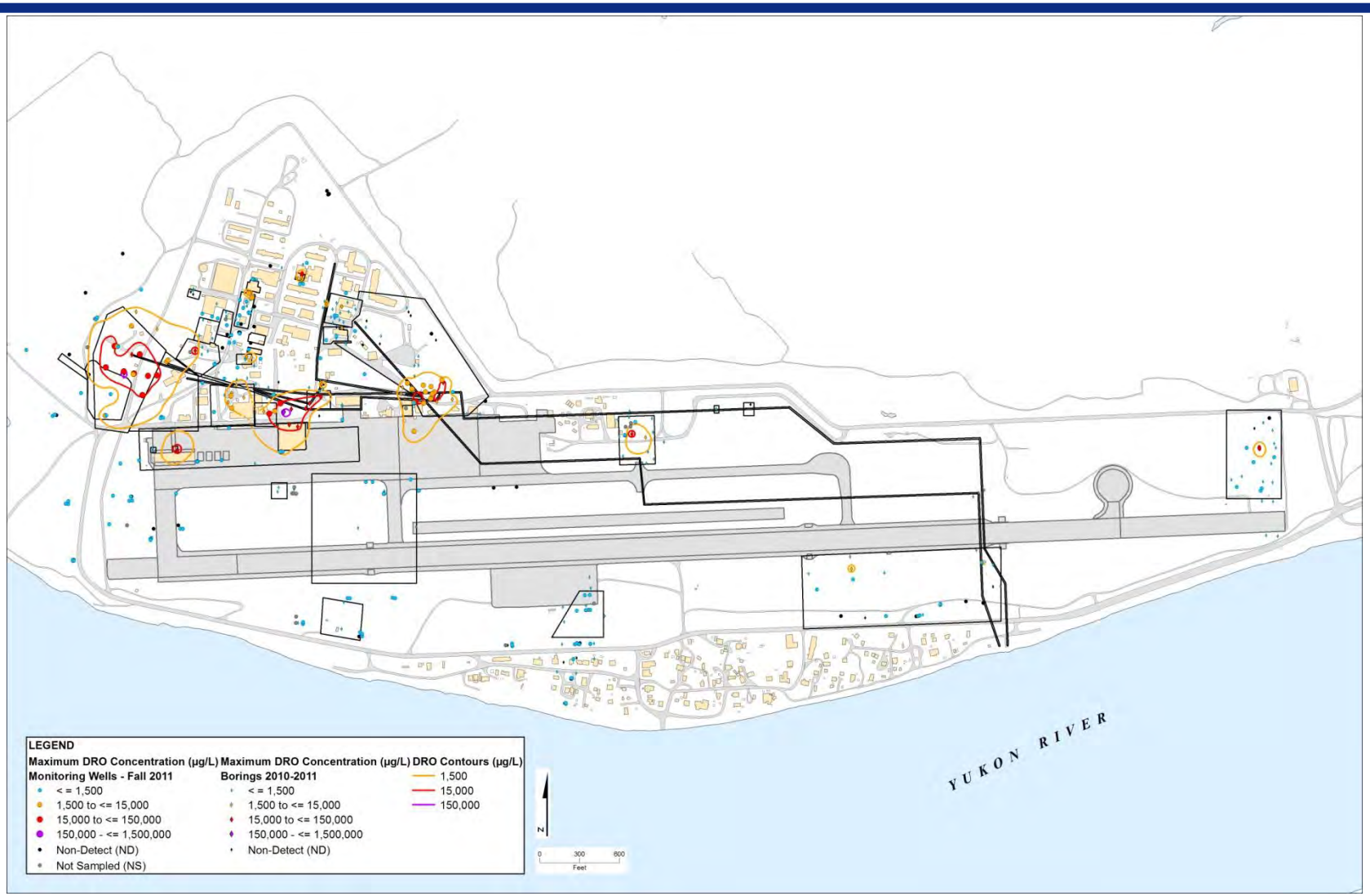
Distribution of DRO in Groundwater – Fall 2011



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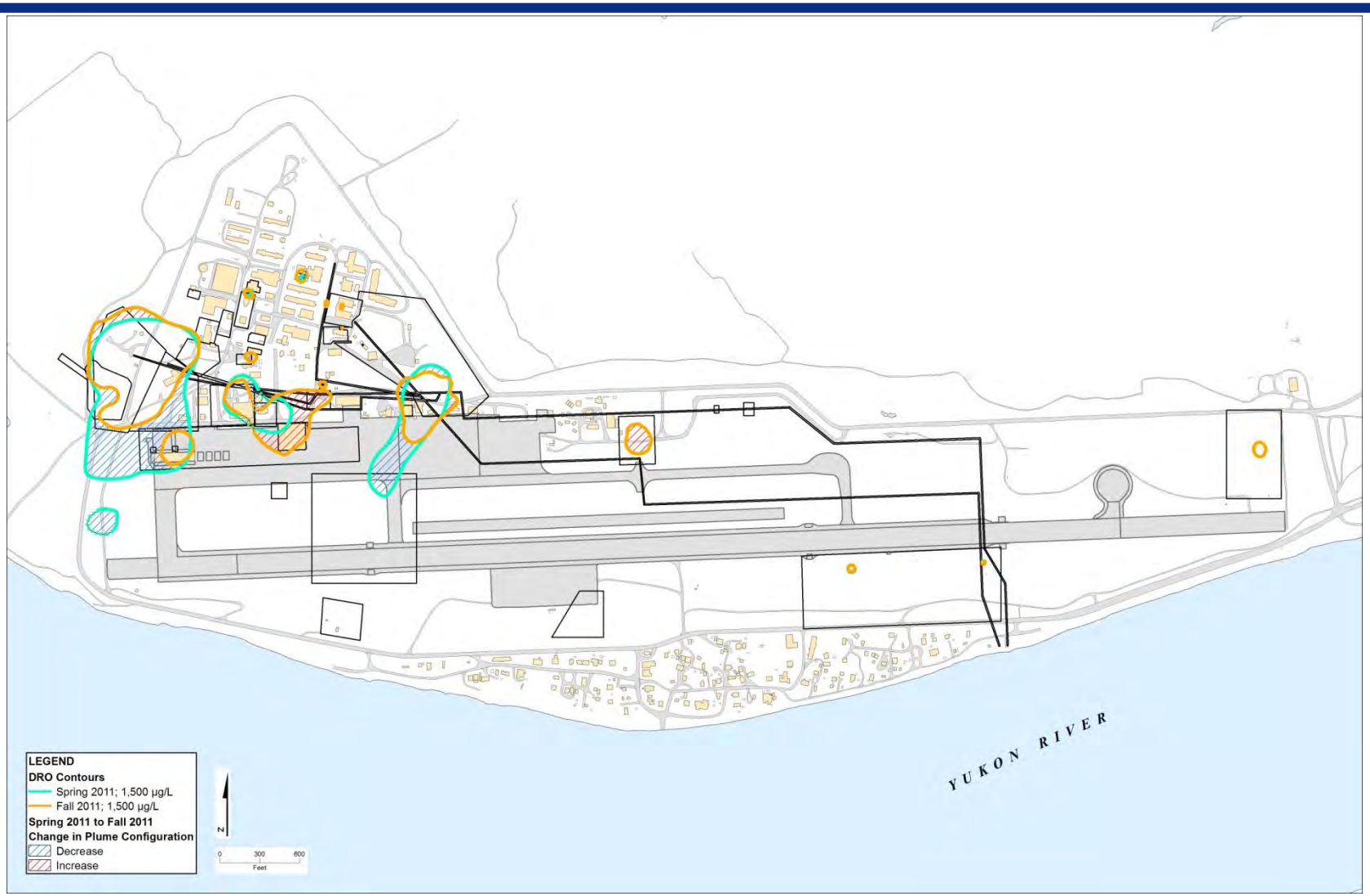
Change In DRO Plume Configuration from Spring to Fall 2011



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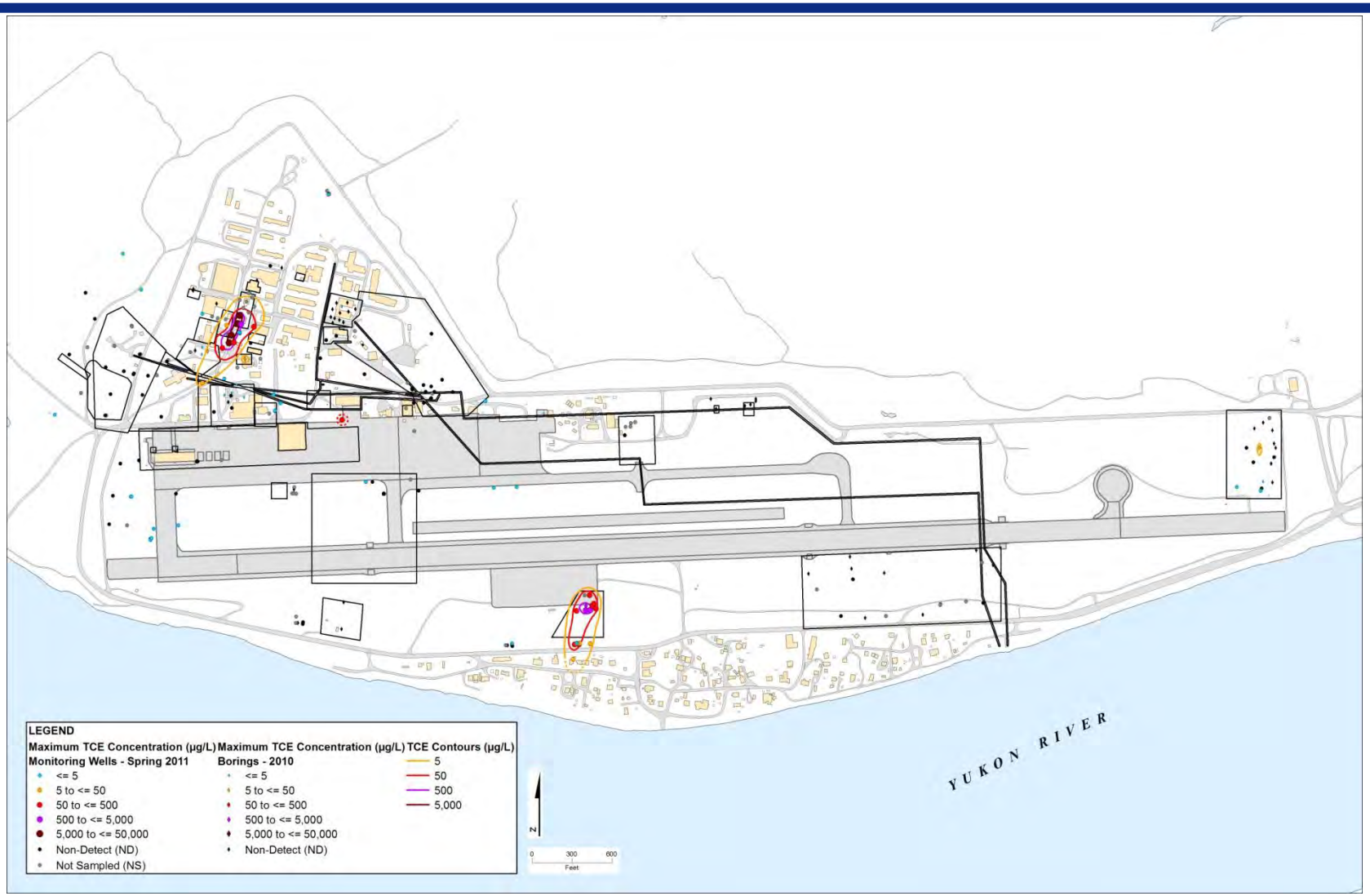
Distribution of TCE in Groundwater – Spring 2011



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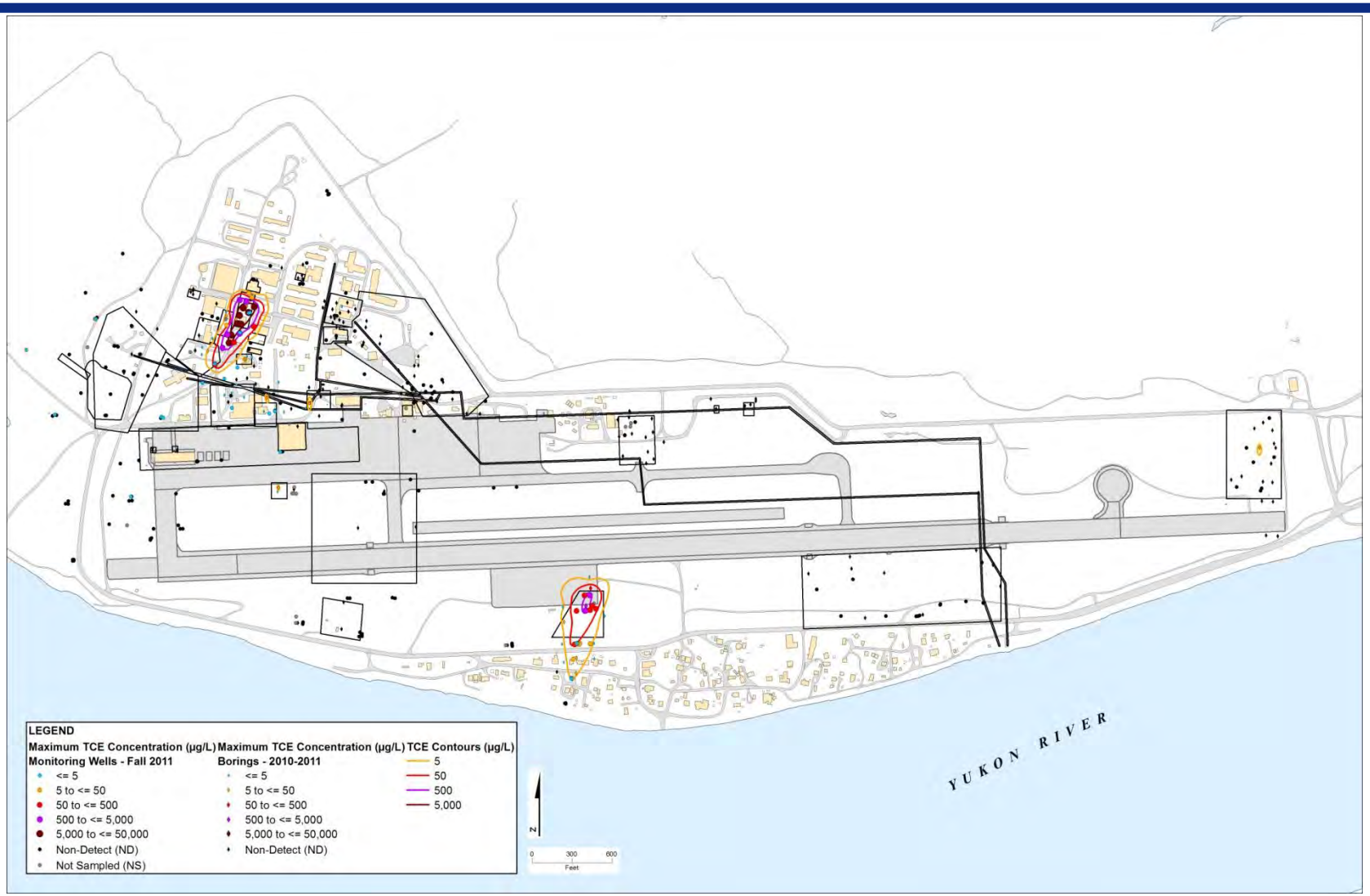
Distribution of TCE in Groundwater – Fall 2011



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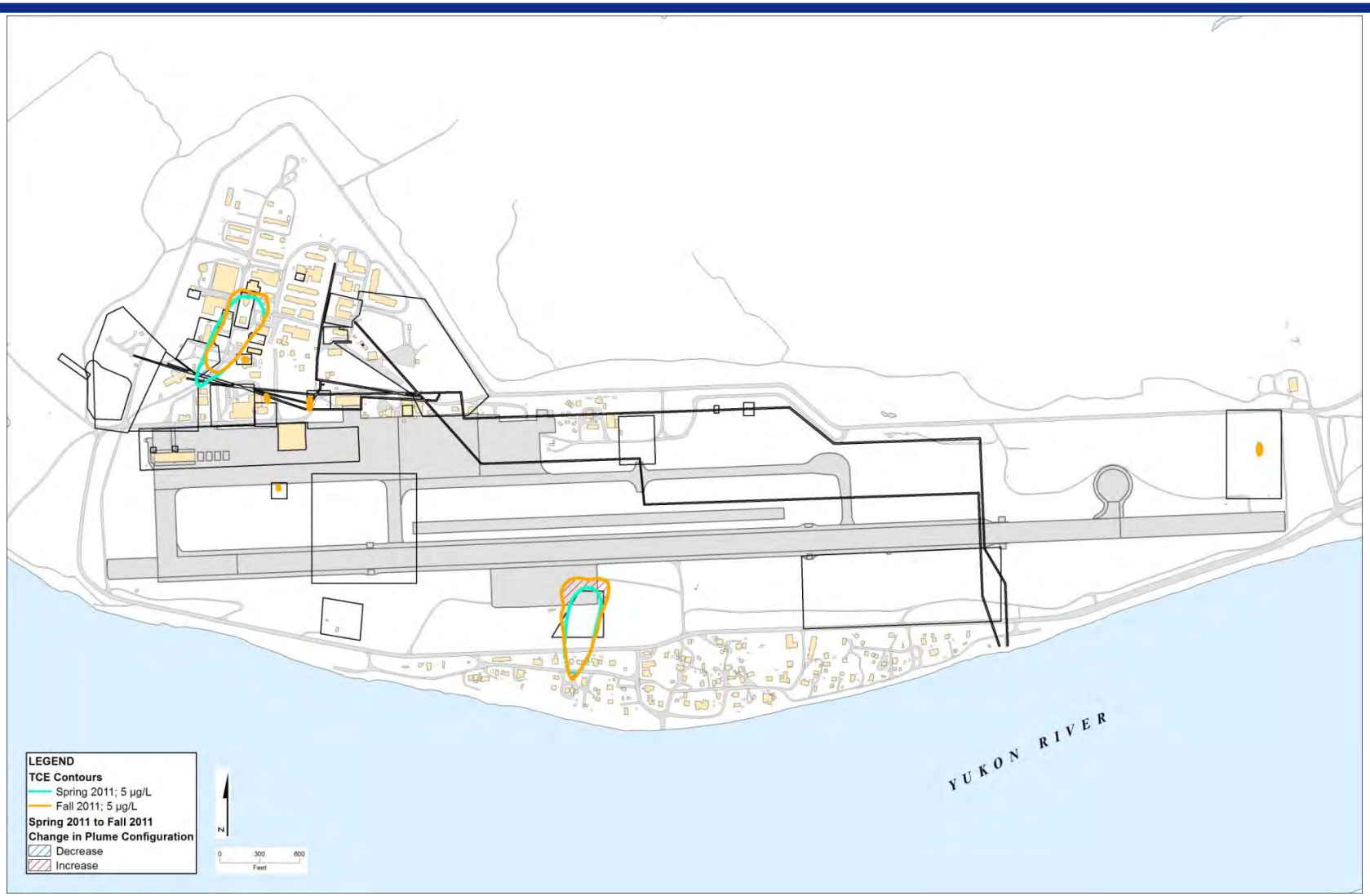
Change In TCE Plume Configuration from Spring to Fall 2011



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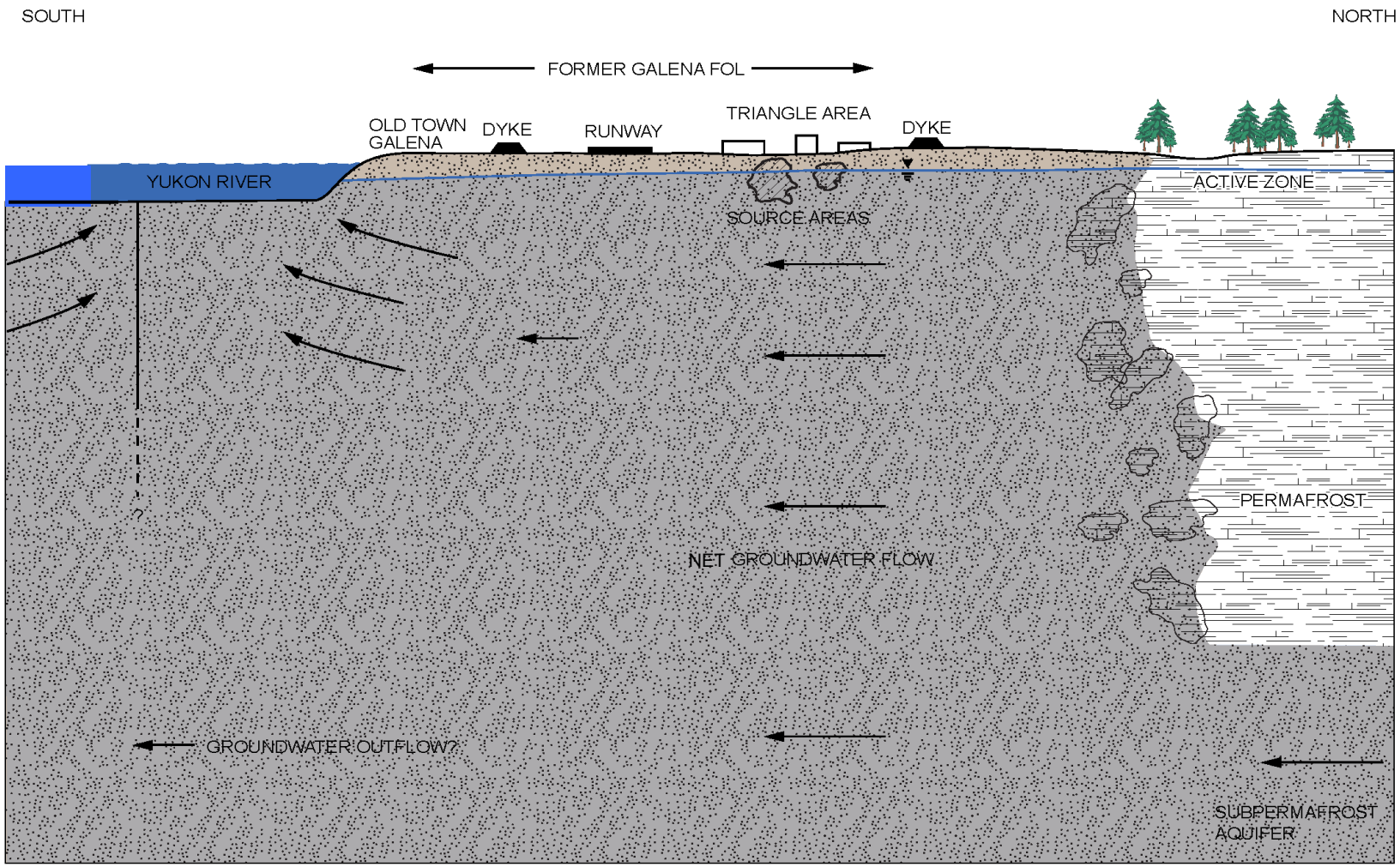
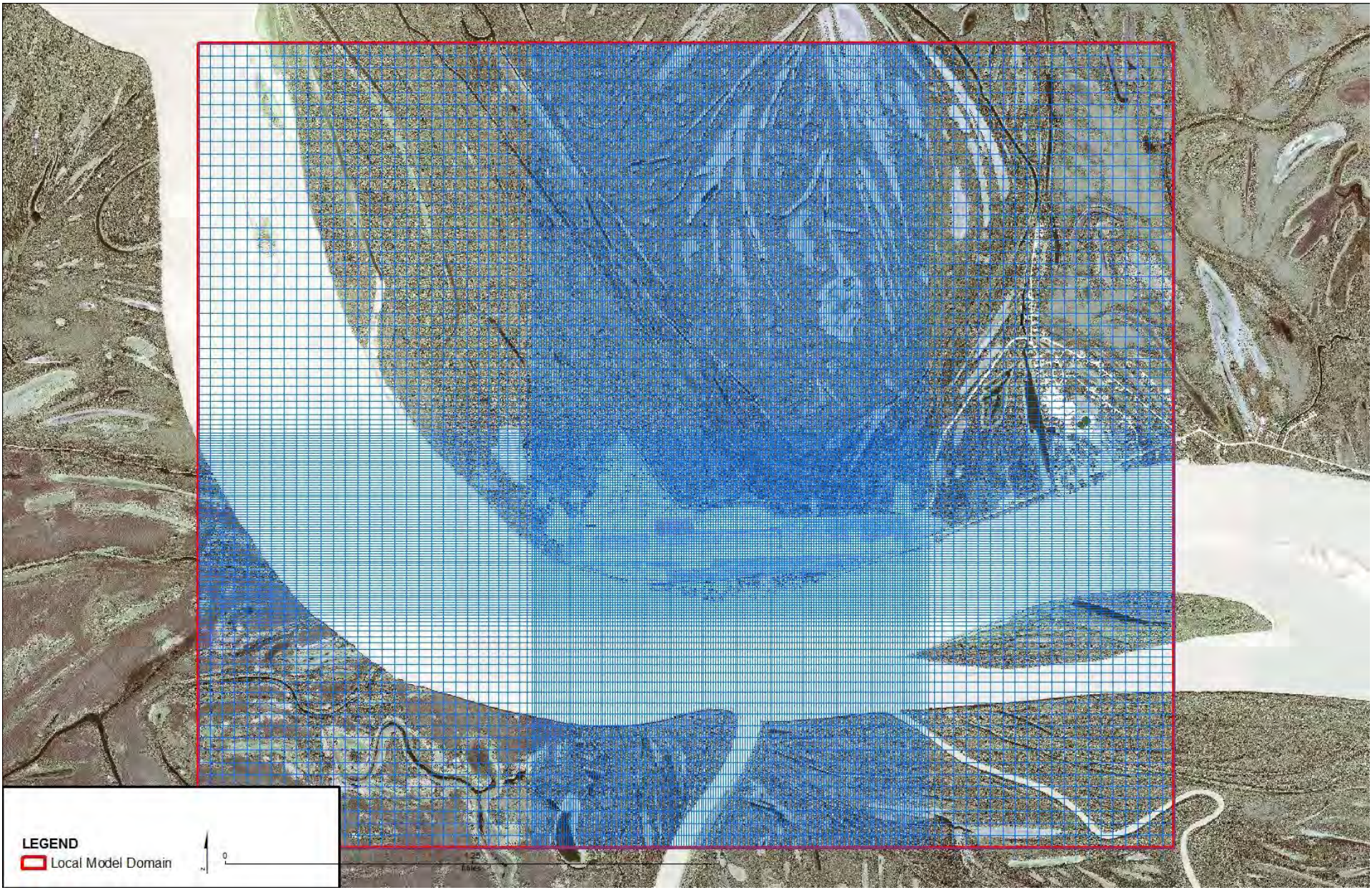
Groundwater Flow and Transport Modeling

Hydrologic Site Conceptual Model

U.S.



Flow Model Grid



Flow Model Grid – Galena Area

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Transport Model Input Data

- Contaminant transport models were developed for both the benzene and TCE plumes
- Models were populated with site-specific data regarding aquifer properties and contaminant distributions
- Contaminant properties were obtained from the literature or computed from observed contaminant concentration trends
- Initial conditions of model simulations were the current day plume extents

Calibration Hydrographs

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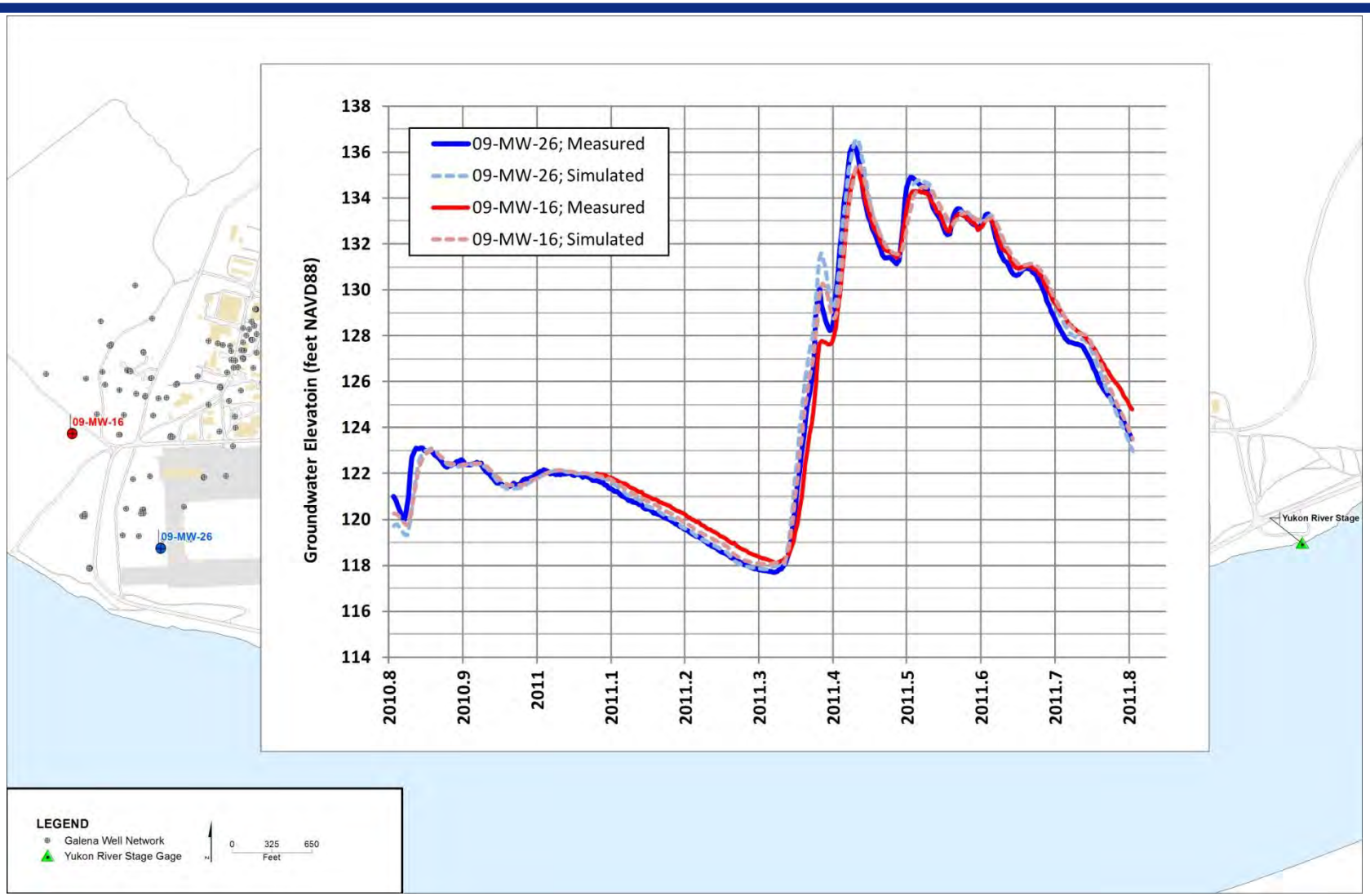

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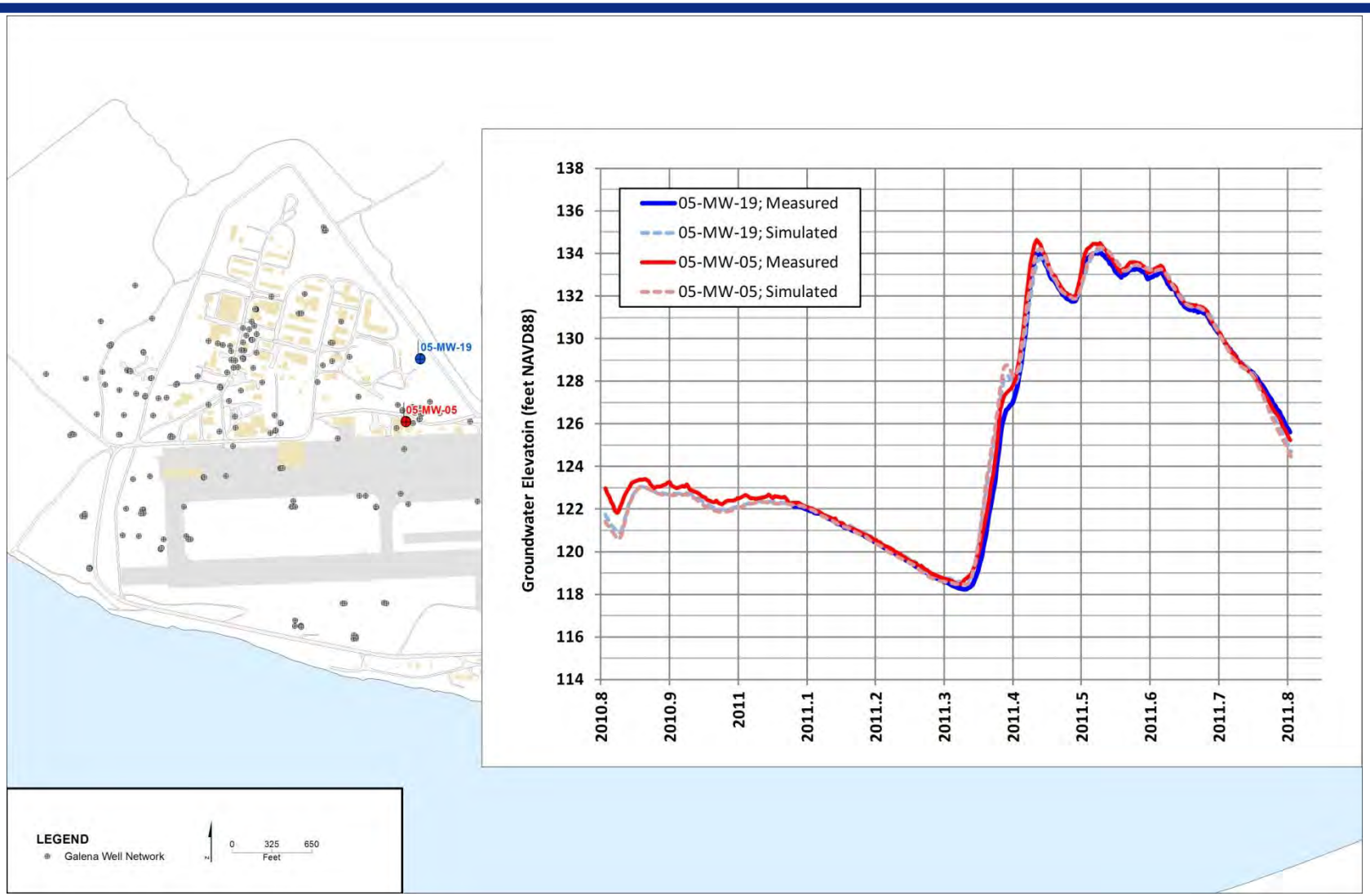
Calibration Hydrographs



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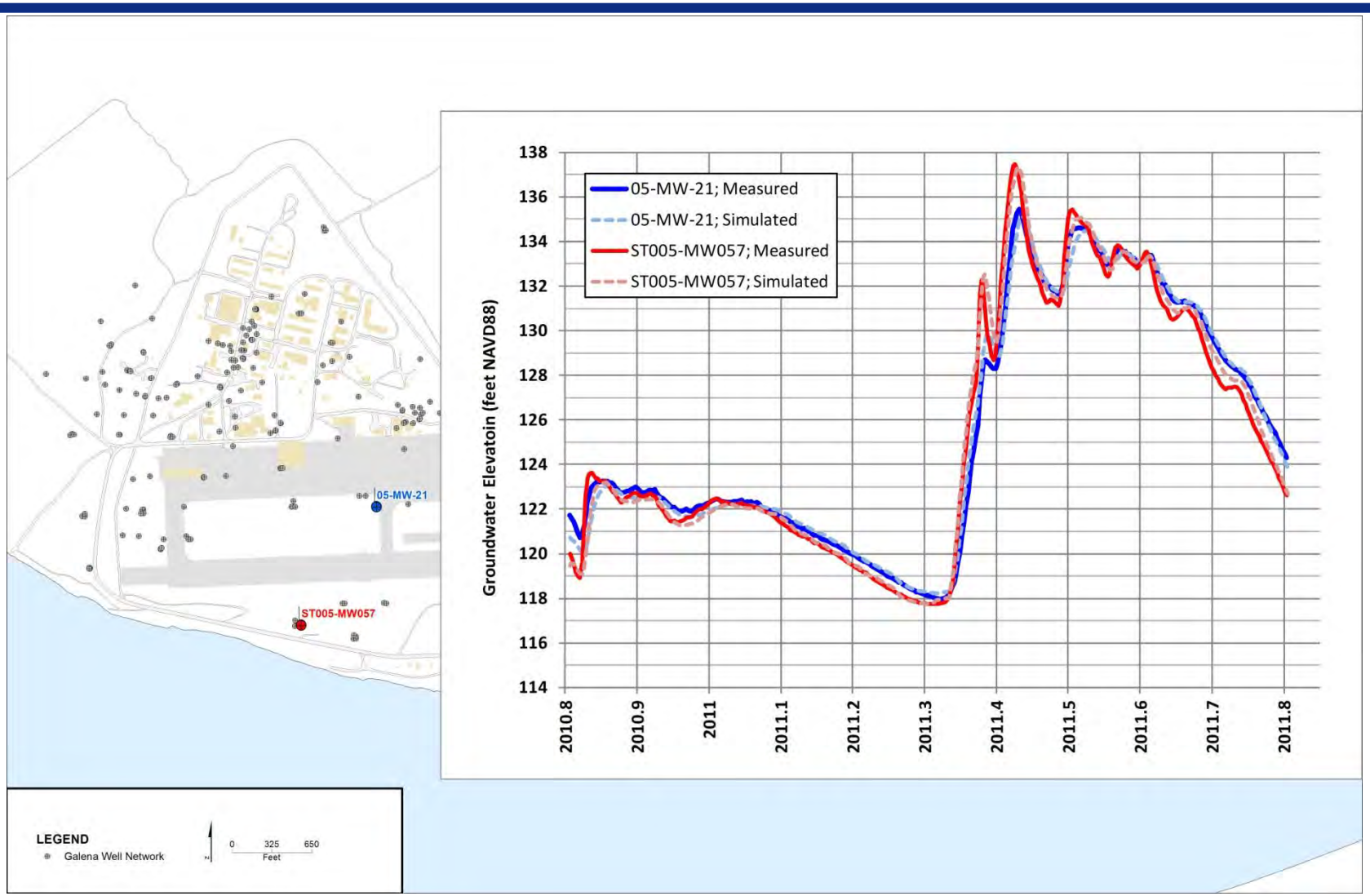
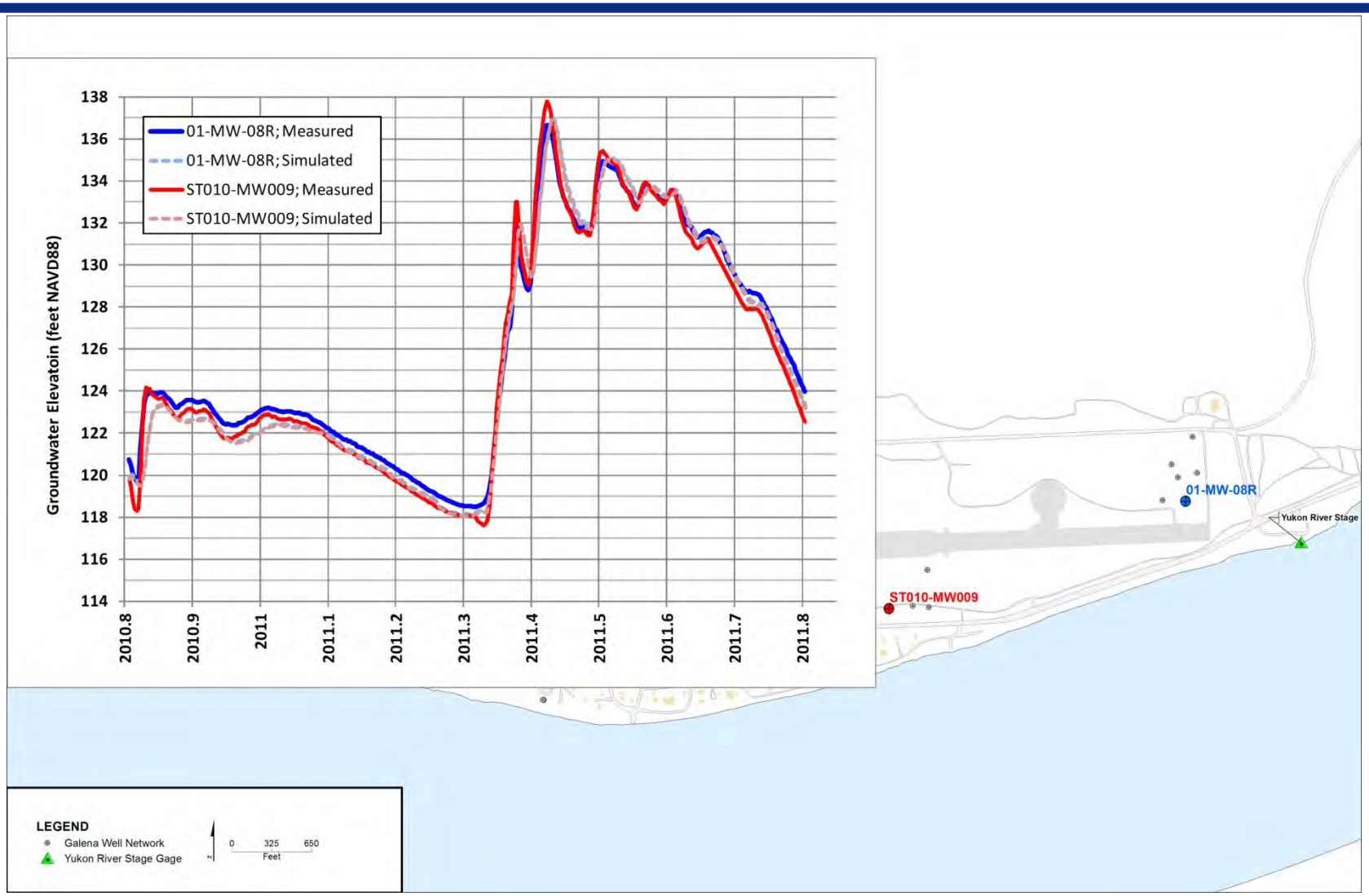
Calibration Hydrographs



Calibration Hydrographs

U.S. AIR FORCE



TCE Simulations

Initial Conditions – 10 to 40 feet

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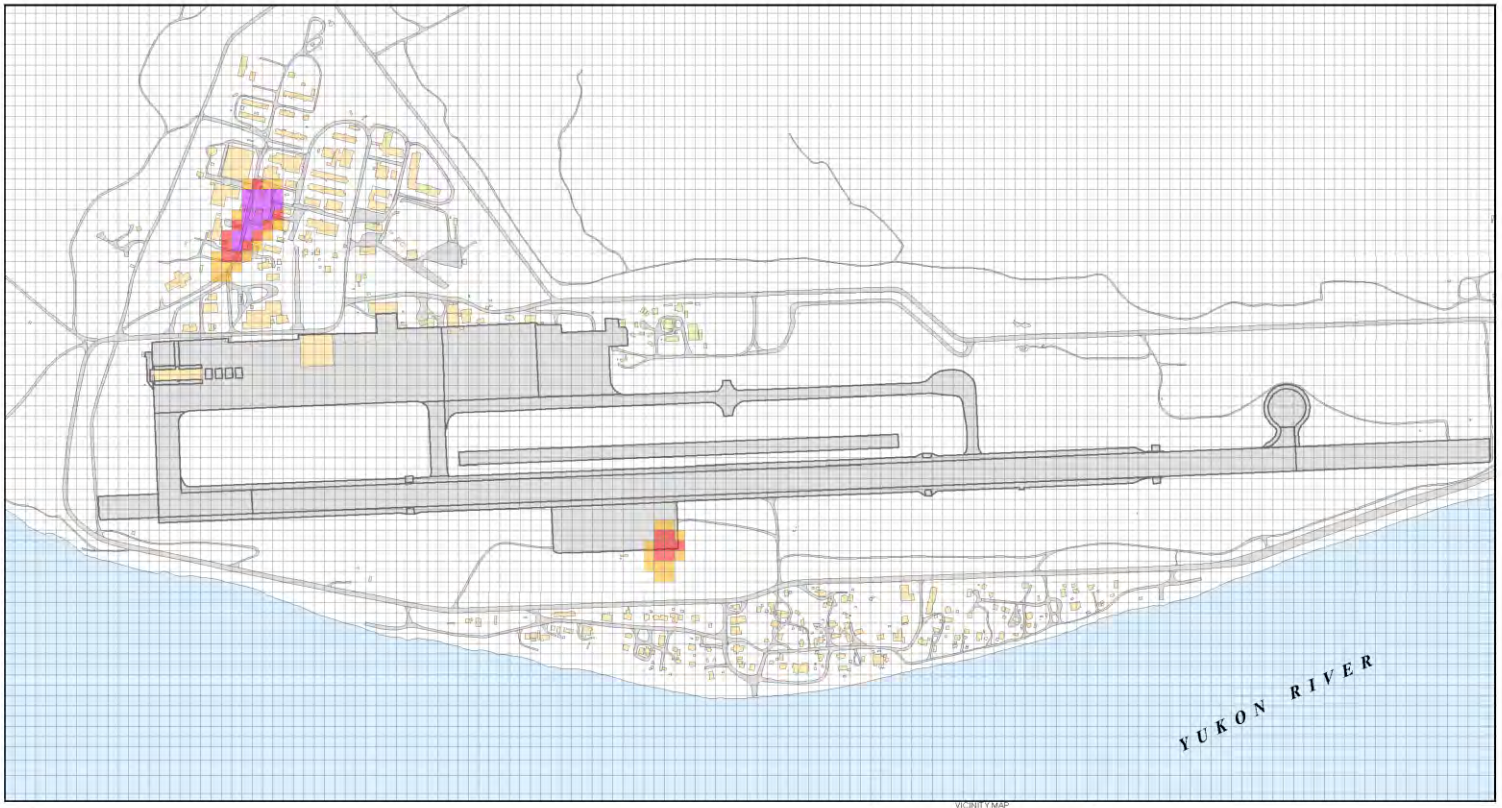

FIGURE 3-12
Inital TCE Concentrations
Layers 2 and 3, Mobile Domain
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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Initial Conditions – 40 to 70 feet

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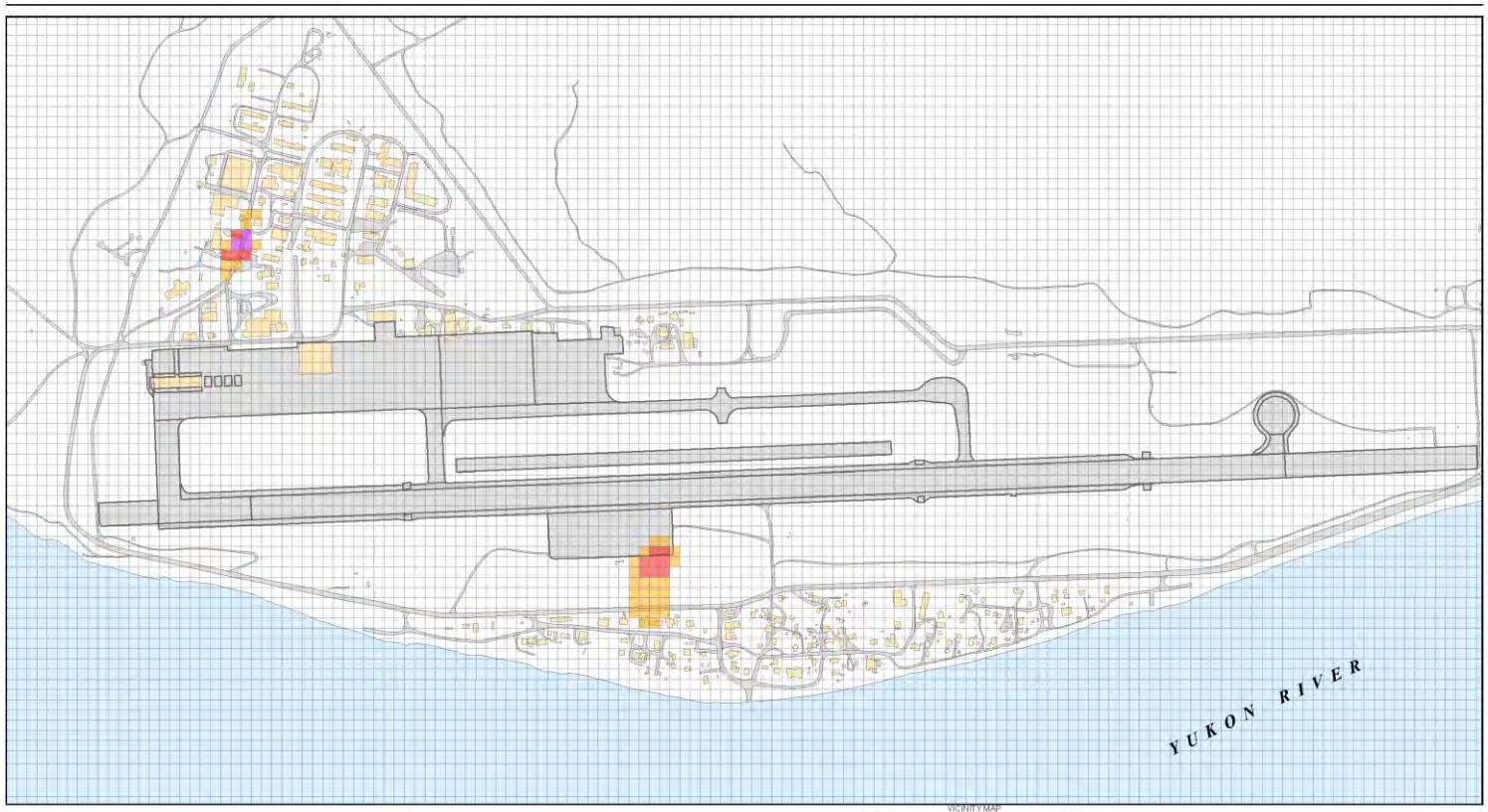

Initial Conditions – 70 to 100 ft

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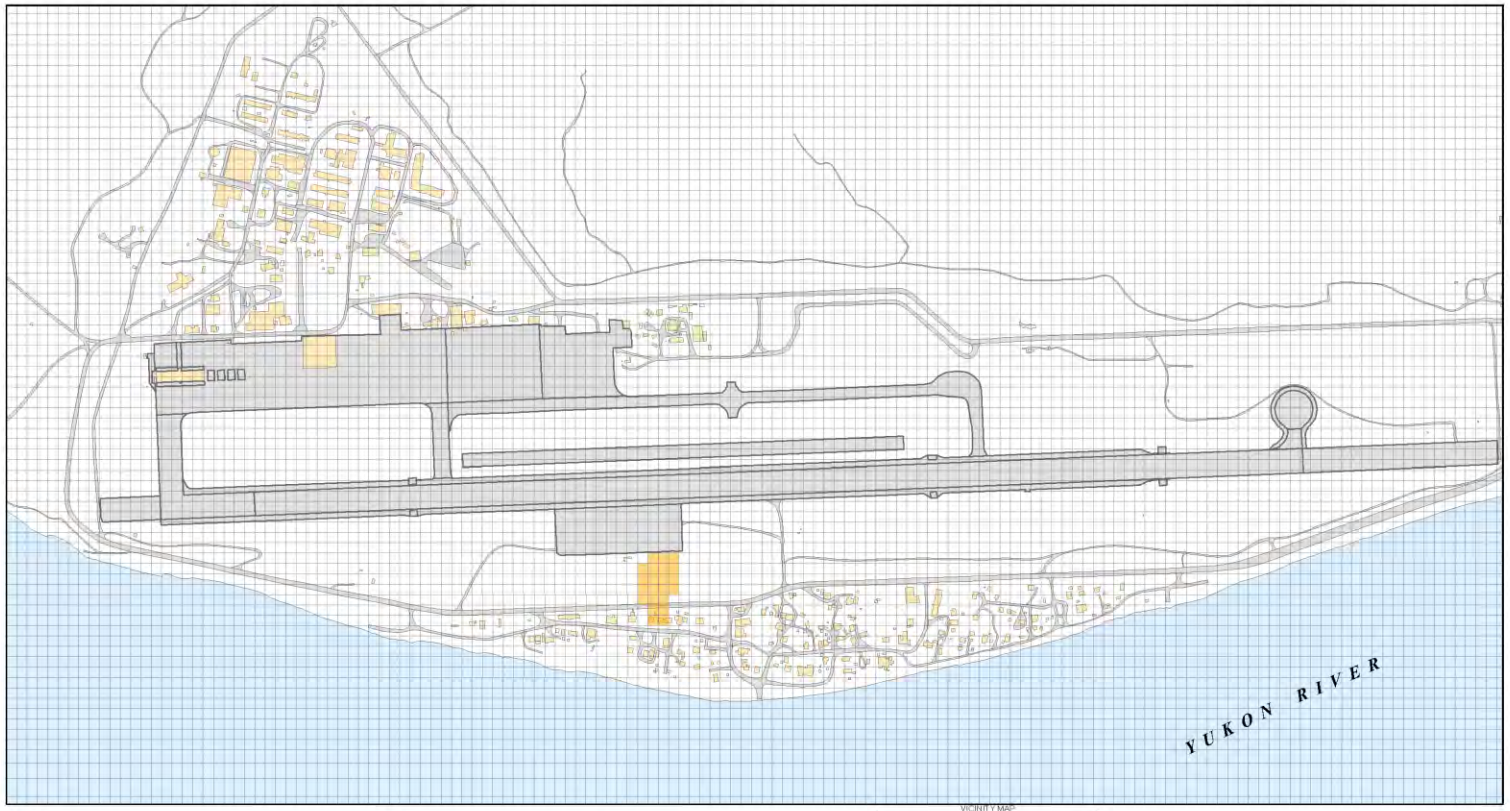

LEGEND
Building
Airfield Surface, Road, or Driveway Area
TCE (µg/L)
<= 5
5 <= 50
50 <= 500
500 <= 5000
> 5000

Note:
Mobile and immobile domain were set in equilibrium.

0 300 600
Feet

VICINITY MAP

FIGURE 3-14
Inital TCE Concentrations
Layers 6 and 7
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 10 to 25 feet – 5 yrs

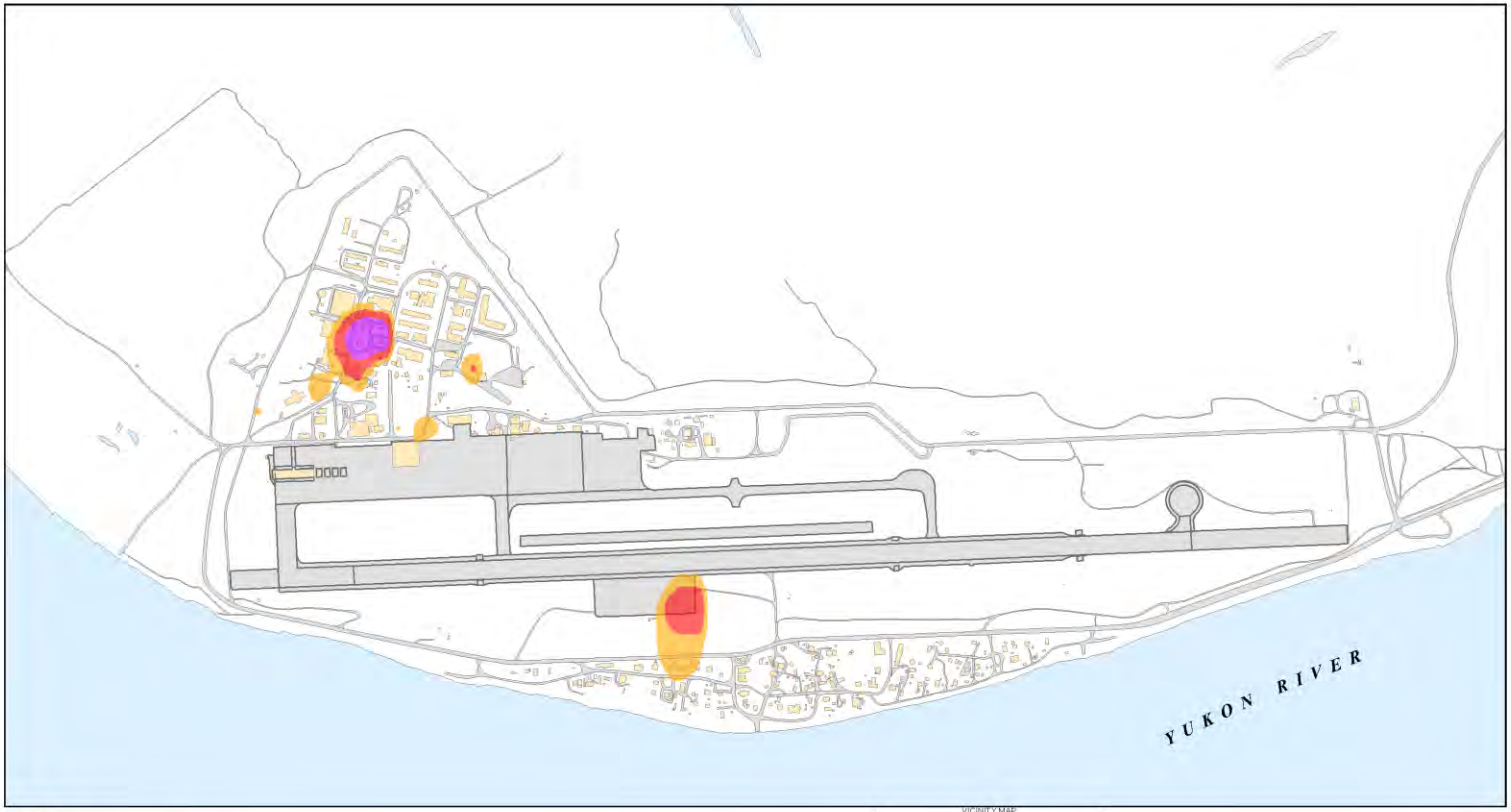

FIGURE 5-11
TCE Concentrations, Layer 2, Year 5
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 40 to 55 feet – 5 yrs

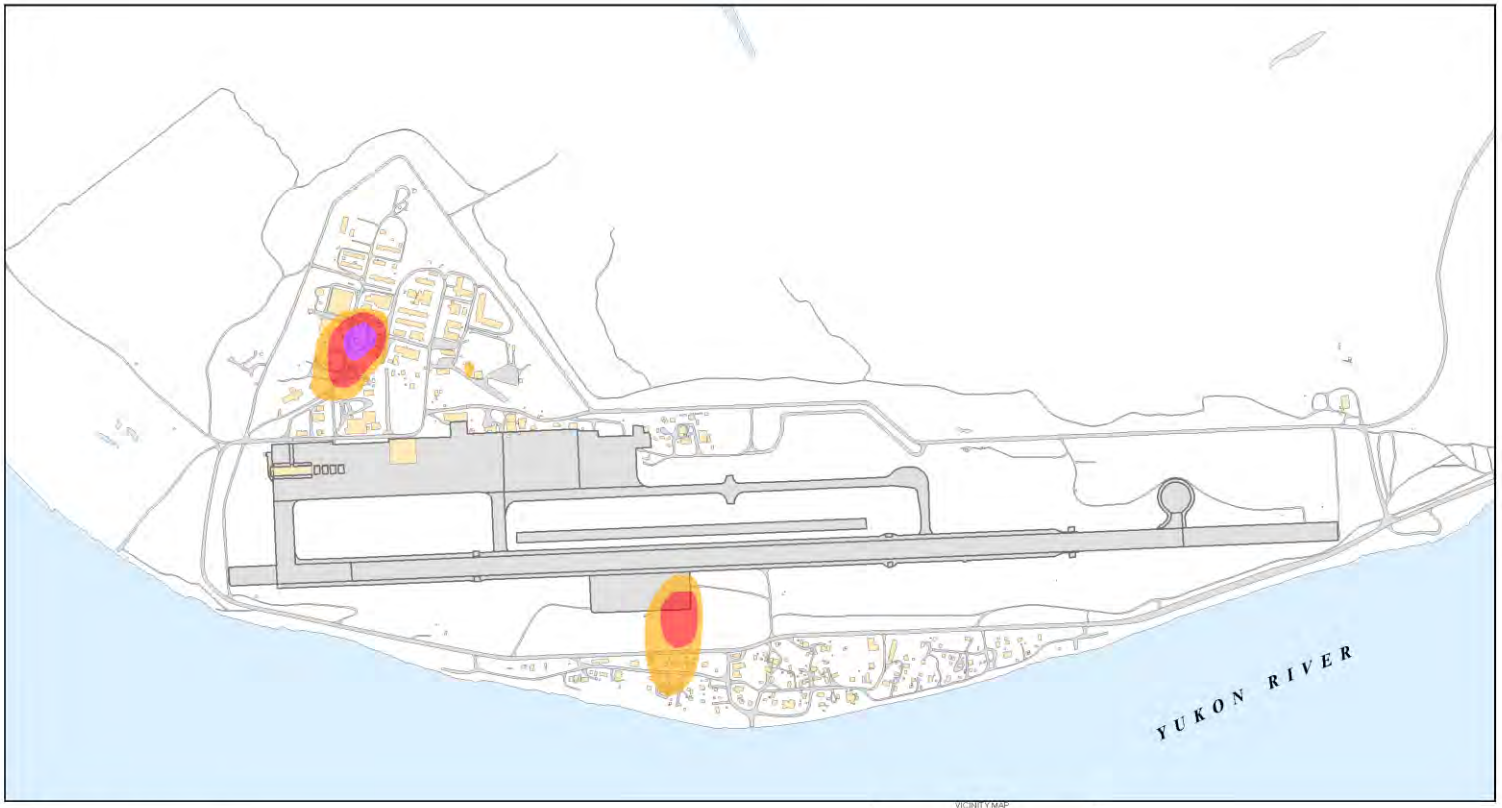

FIGURE 5-12
TCE Concentrations, Layer 4, Year 5
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 70 to 85 feet – 5 yrs

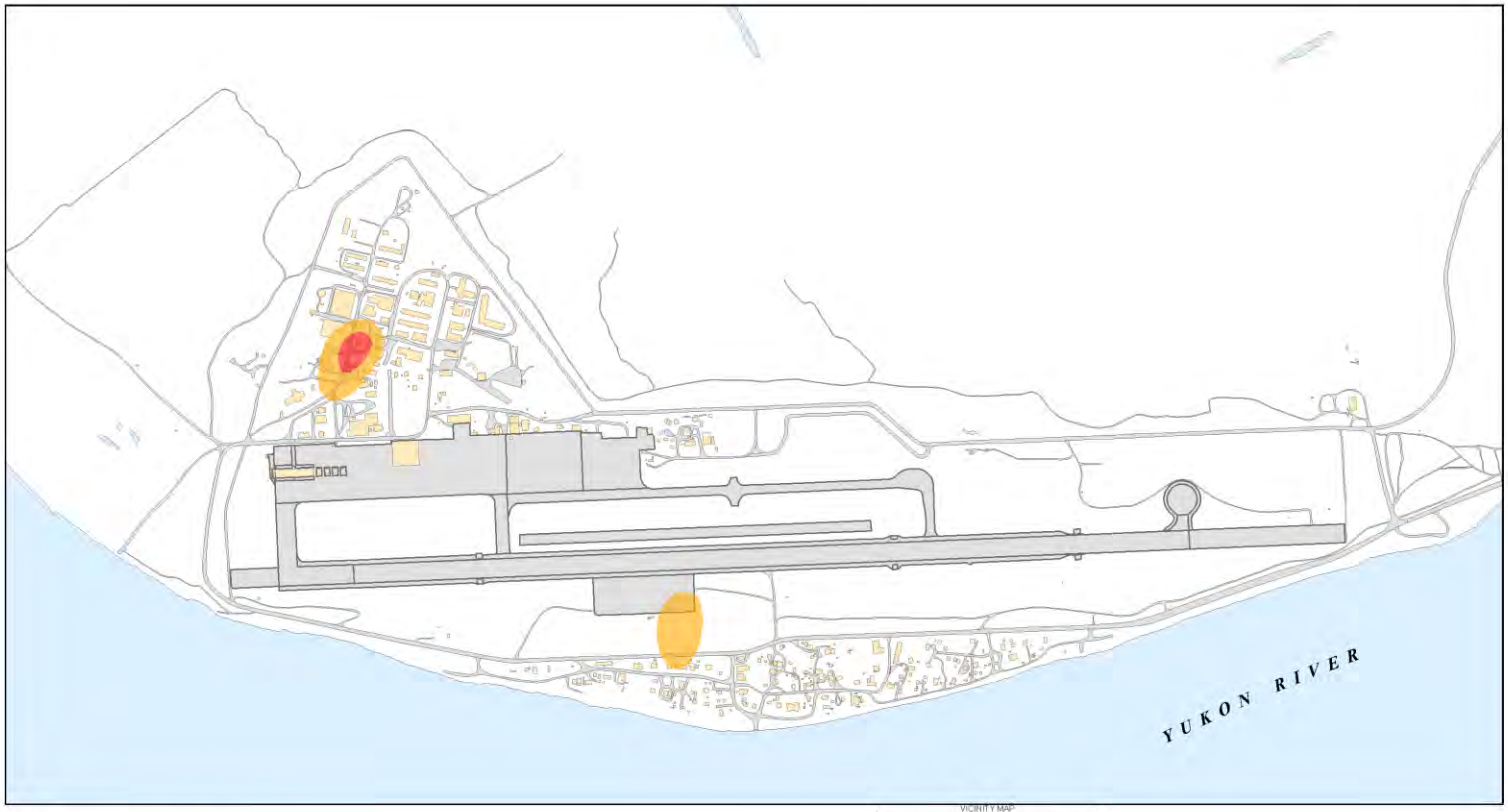

FIGURE 5-13
TCE Concentrations, Layer 6, Year 5
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 10 to 25 feet – 10 yrs

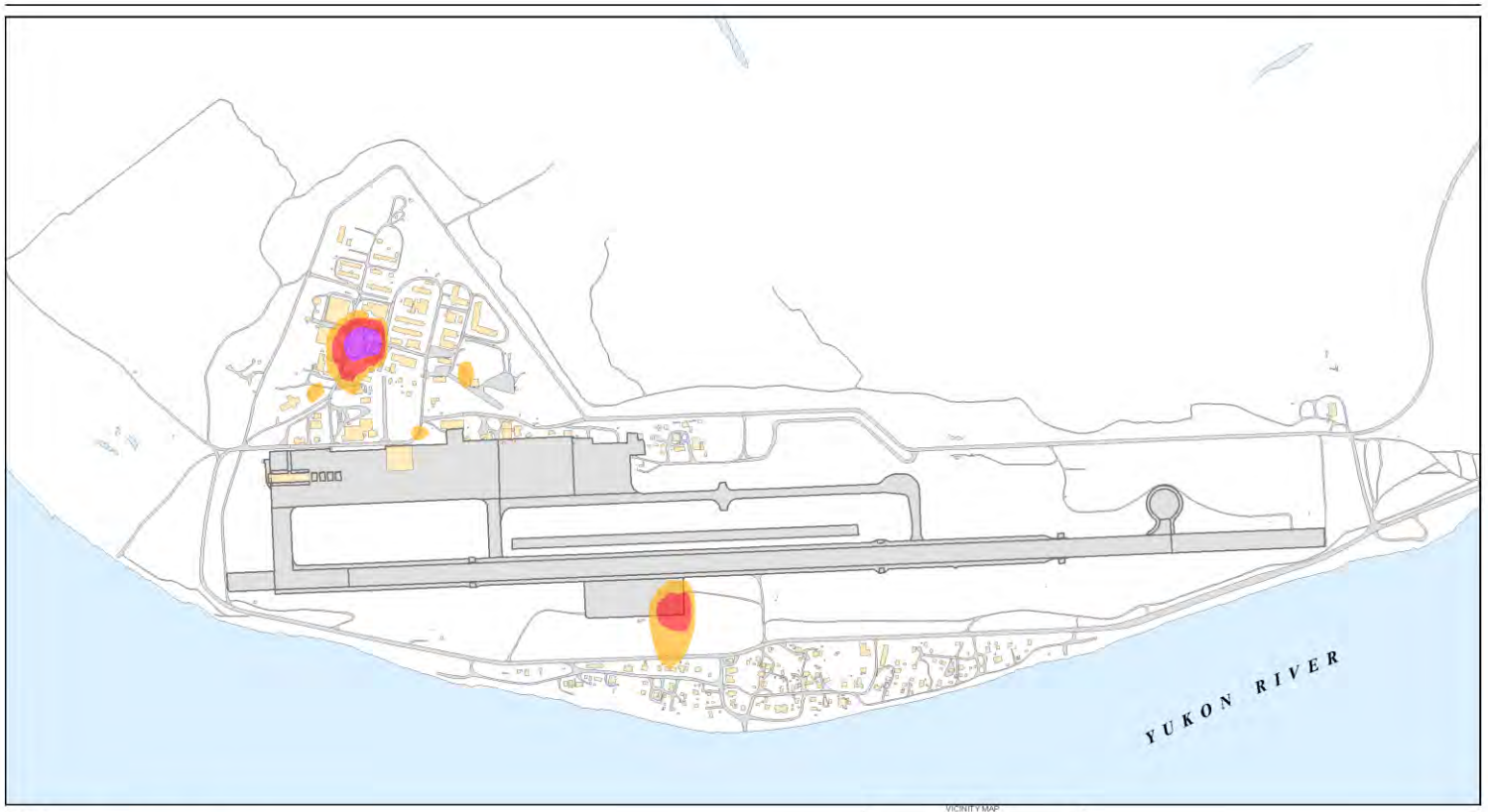

FIGURE 5-14
TCE Concentrations, Layer 2, Year 10
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 40 to 55 feet – 10 yrs

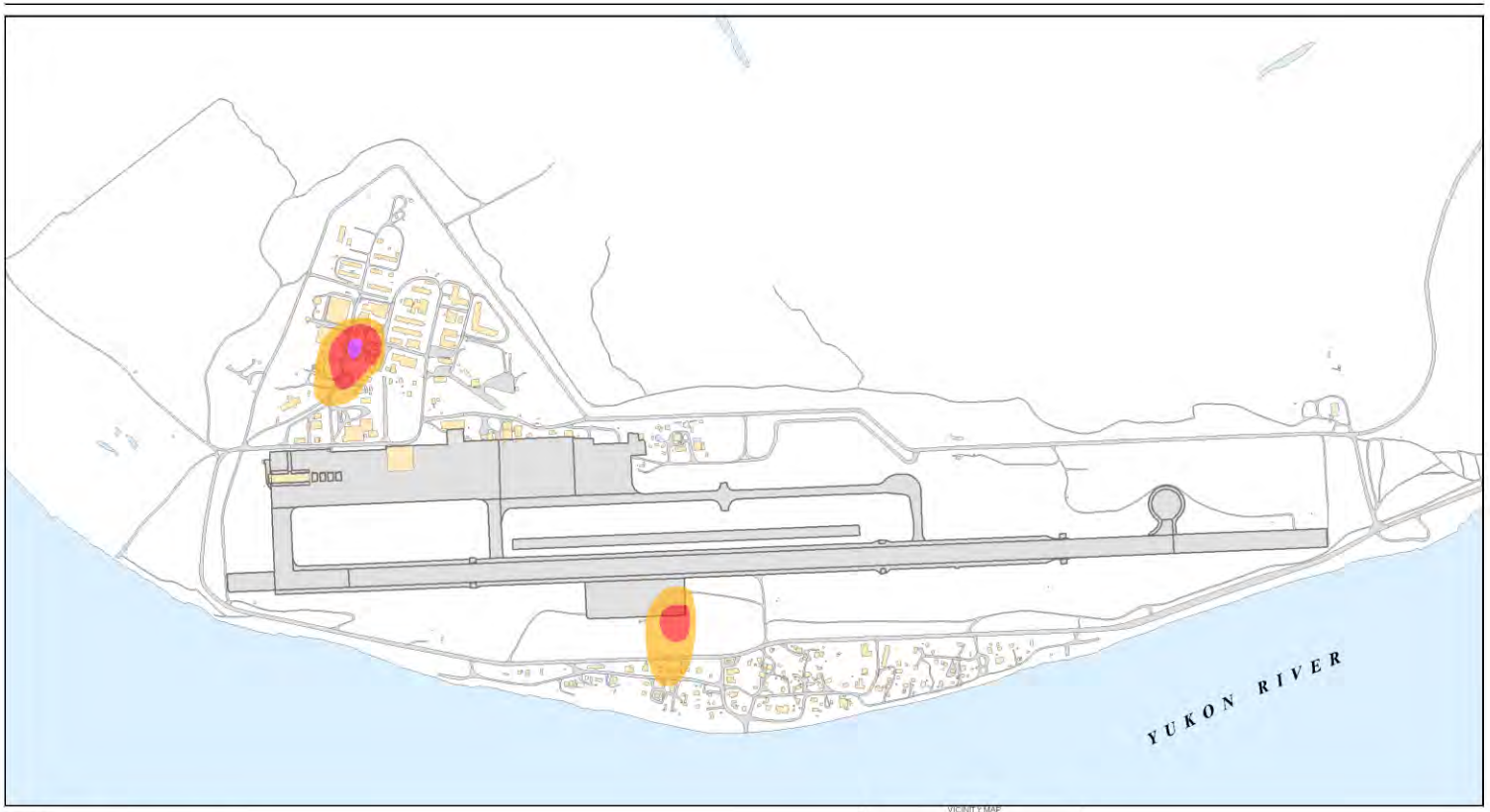

FIGURE 5-15
TCE Concentrations, Layer 4, Year 10
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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TCE 70 to 85 feet – 10 yrs

FIGURE 5-16
TCE Concentrations, Layer 6, Year 10
Groundwater Modeling Report
Former Galena Forward Operating Location, Alaska

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Conclusions

- The greatest influence on groundwater levels is changing Yukon River stage
- Groundwater flow directions shift from toward the river to away from the river as seasonal river stage changes
- Shallow and deep groundwater levels are very similar, indicating little vertical flow within the aquifer system

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Conclusions

- Groundwater data suggests that groundwater flow is toward the river 70% of the time, away from the river 20% of the time, and parallel to the river 10% of the time
- Overall annual travel distance is approximately 500 ft toward the river, and 300 feet away from the river, for a net movement of 200 ft/yr toward the river
- The groundwater flow model is well calibrated to 2011 groundwater level and aquifer testing data

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Conclusions

- The transport model is in development and will benefit from future groundwater data collection
- Model simulations suggest that the plumes are relatively stable; mass movement toward the river balanced by natural degradation
- This implies very limited contaminant discharge to the Yukon River

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Conclusions

- Potential future uses of the model include:
  - Support the planning and implementation of remedial designs and remedial actions
  - Forecasting potential benefits from proposed remedial actions
  - Development of a site-wide monitoring network

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Bioreactor Study Update

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SS015 Bioreactor Pilot Study

- The “bioreactor” is a pilot-scale study to evaluate cleanup of chlorinated volatile organic compounds (CVOCs) from soil and groundwater
- Uses a combination of wood mulch and vegetable oil to provide a food source to microbial organisms to enhance bioremediation
- A solar-powered pump pumps groundwater through the bioreactor to treat the water and distribute the food source to the groundwater plume.

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Bioreactor Location

Site had many uses since the 1940s, including:

- air field control towers
- radar approach control (RAPCON)
- fuel storage, maintenance facilities
- commercial businesses.

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SS015 Bioreactor Pilot Study

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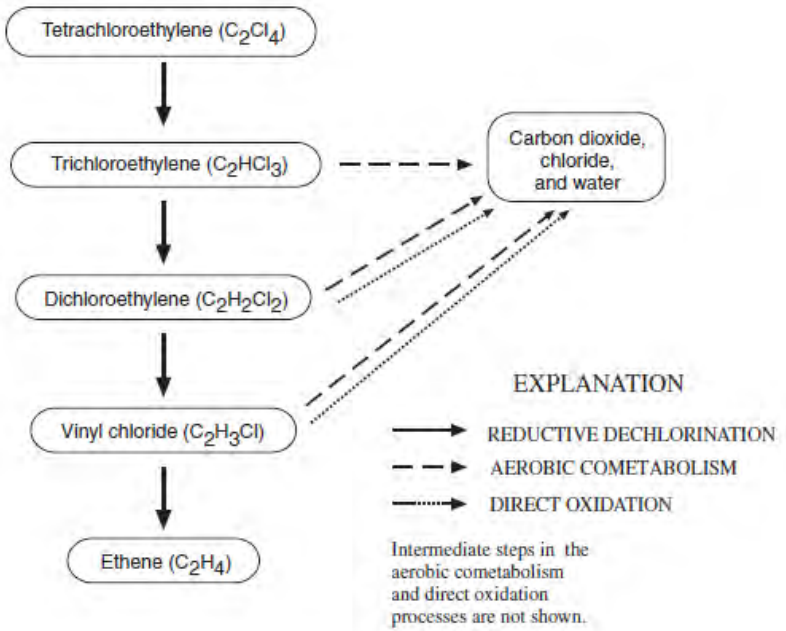

Figure 1. Common biological degradation processes for chlorinated ethenes.

Source: USGS, 2000. Water Resources Investigation Report 99-4285

- Site SS015 is the source of a groundwater plume containing tetrachloroethene (PCE) and trichloroethene (TCE).
- PCE is a solvent commonly used for dry cleaning.
- TCE is a degreasing solvent commonly used for electronics and parts cleaning.
- PCE and TCE can be biodegraded to carbon dioxide, chloride, and water.

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SS015 Bioreactor Pilot Study

- The bioreactor was constructed in September 2010
- Excavated 200 cy of PCE and TCE-contaminated soil from the “hot spot” source area at the edge of the apron.

SS015 Bioreactor Pilot Study

- The excavation was backfilled with wood chip mulch, vegetable oil, and gravel.
- Perforated piping allows the pumped groundwater to filter back through the top of the bioreactor.
- Some of the PCE/TCE-contaminated soil was put back on top of the bioreactor, the rest was moved to a lined

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SS015 Bioreactor Pilot Study

- Operation began in May 2011 by installing the solar panel and groundwater pump
- The system operated continuously to mid-October 2011, then was shutdown for the winter.

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SS015 Bioreactor Pilot Study

- A black hose passive heating coil is used to warm the groundwater before it is reinjected back into the bioreactor.
- Increased the water temperature by 5 °C at a flowrate of 1.5 gallons per minute.

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SS015 Bioreactor Pilot Study
View from the South

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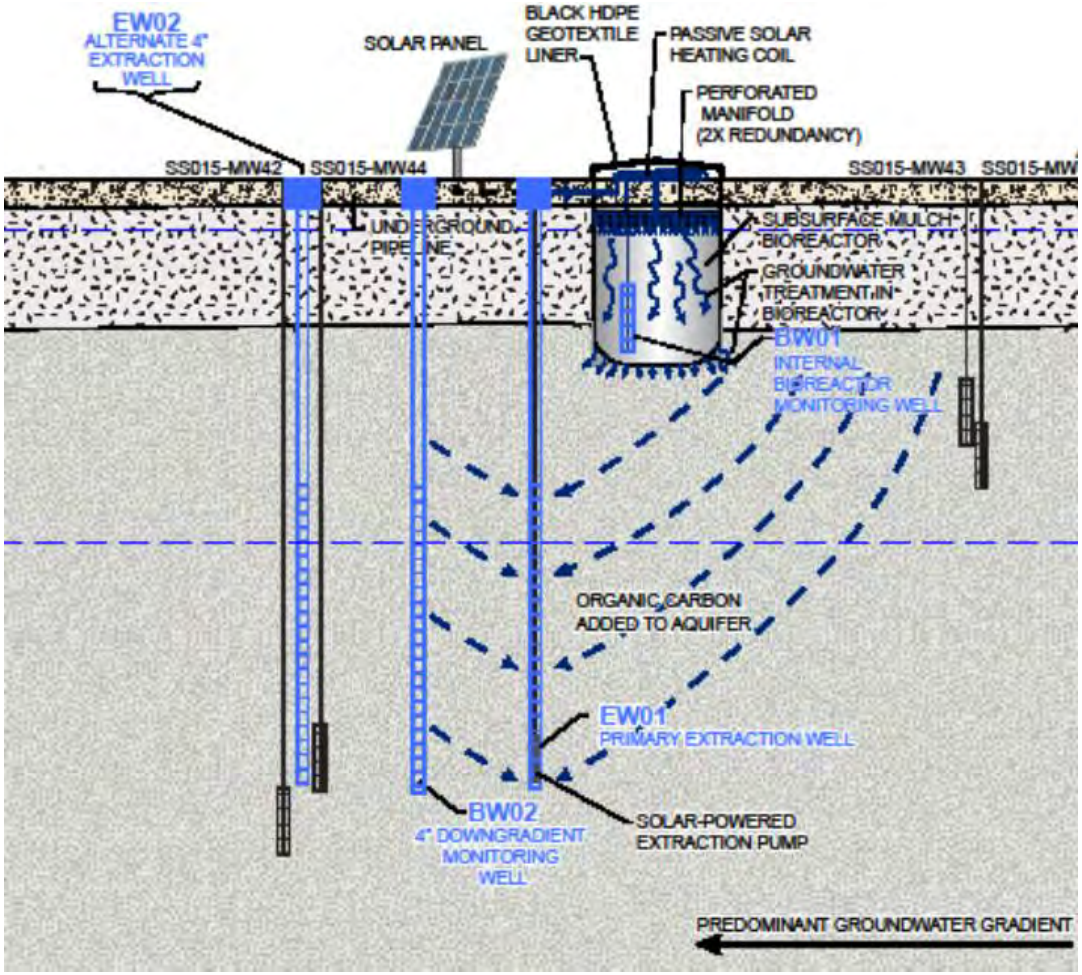
SS015 Bioreactor Pilot Study Schematic Cross-Section



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SS015 Bioreactor Pilot Study

- The solar power pump was operational 100% of the time between May and October 2011
  - ~134,000 gallons of groundwater were pumped through the bioreactor
- Performance Monitoring to Date
  - Four rounds of groundwater sampling (Oct 2010; May, June, and Sept 2011) for CVOCs
  - Monthly system checks to record flow rate, temperature, water levels, and field measurements (dissolved oxygen, redox potential).

Water Temperature Monitoring

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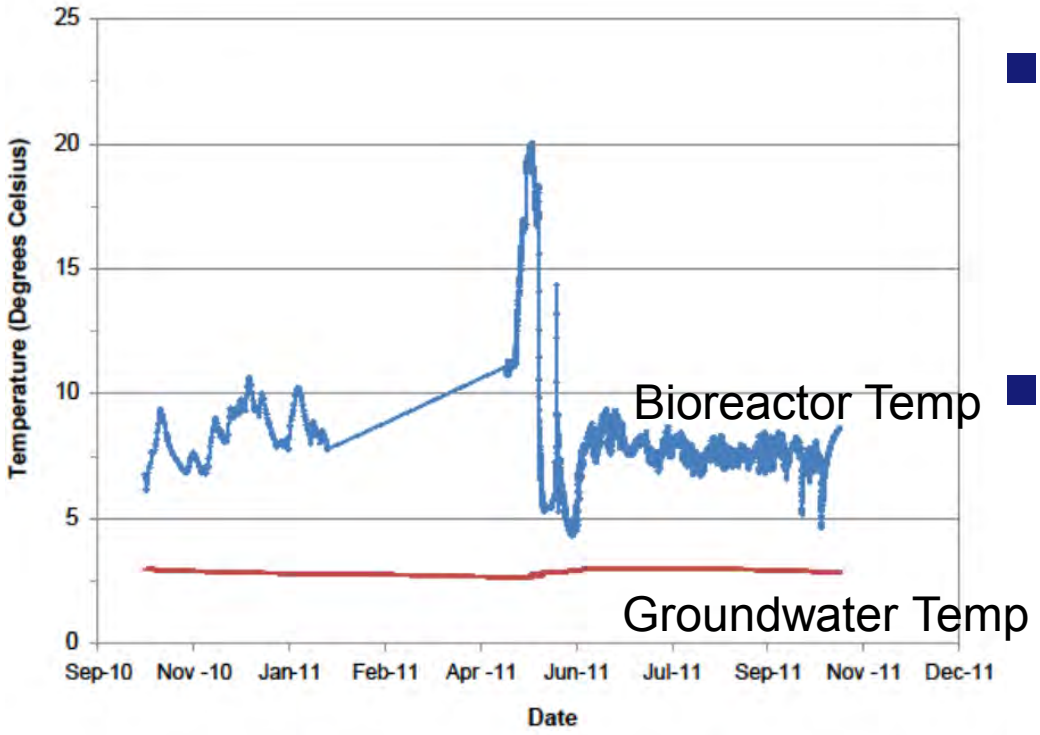

- The groundwater temperature is typically about 3°C (37°F) year-round.
- The passive heating coil and heat from biodegradation within the bioreactor increased the temperature about 8°C (46°F).
- Will plan to add another 100 foot hose to the heating coil in 2012 to see if the temperature

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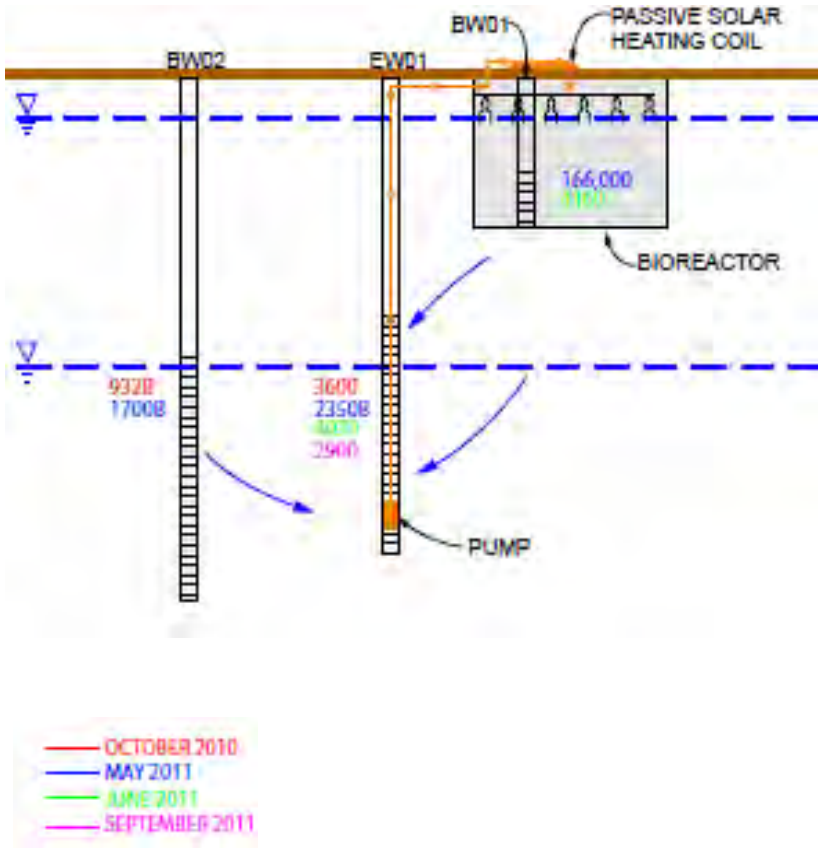
Groundwater Monitoring Results for Total Organic Carbon



- TOC (a food source for microorganisms) was initially high in the bioreactor in May 2011, but decreased substantially after a month.
- Plan to supplement the TOC in 2012 by adding food-grade sodium lactate to the bioreactor.

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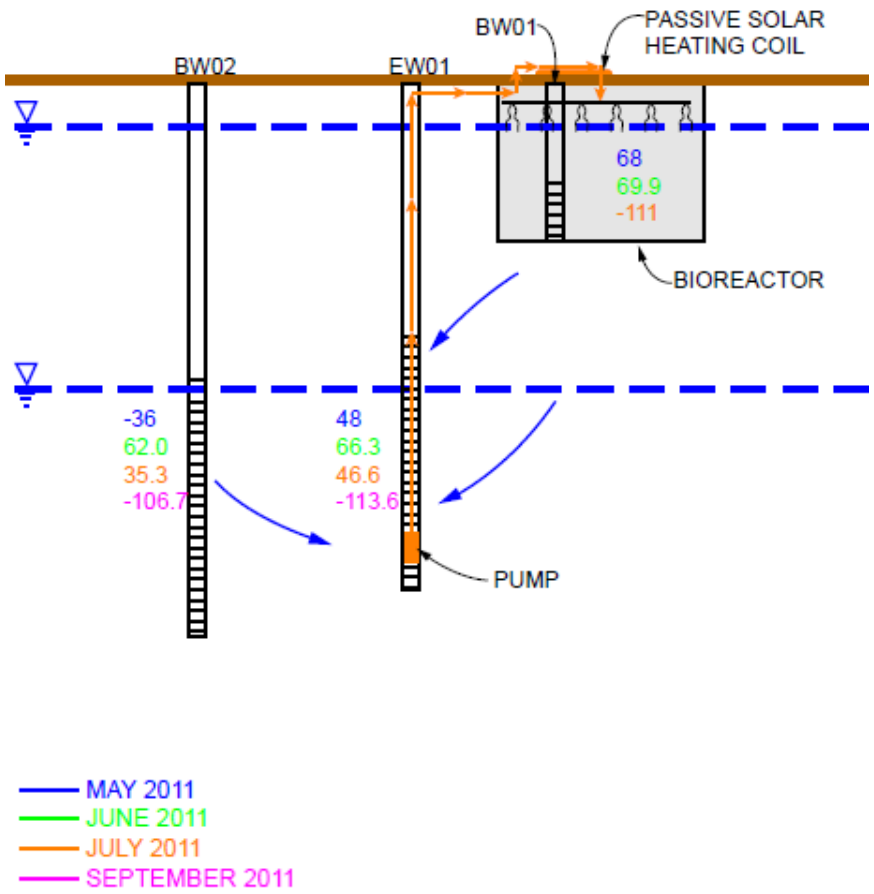
Groundwater Monitoring Results for Oxidation Reduction Potential



- ORP is an indication of conditions that are conducive to anaerobic biodegradation of CVOCs.
- ORP values less than 50 mV indicate good conditions for biodegradation of PCE and TCE.

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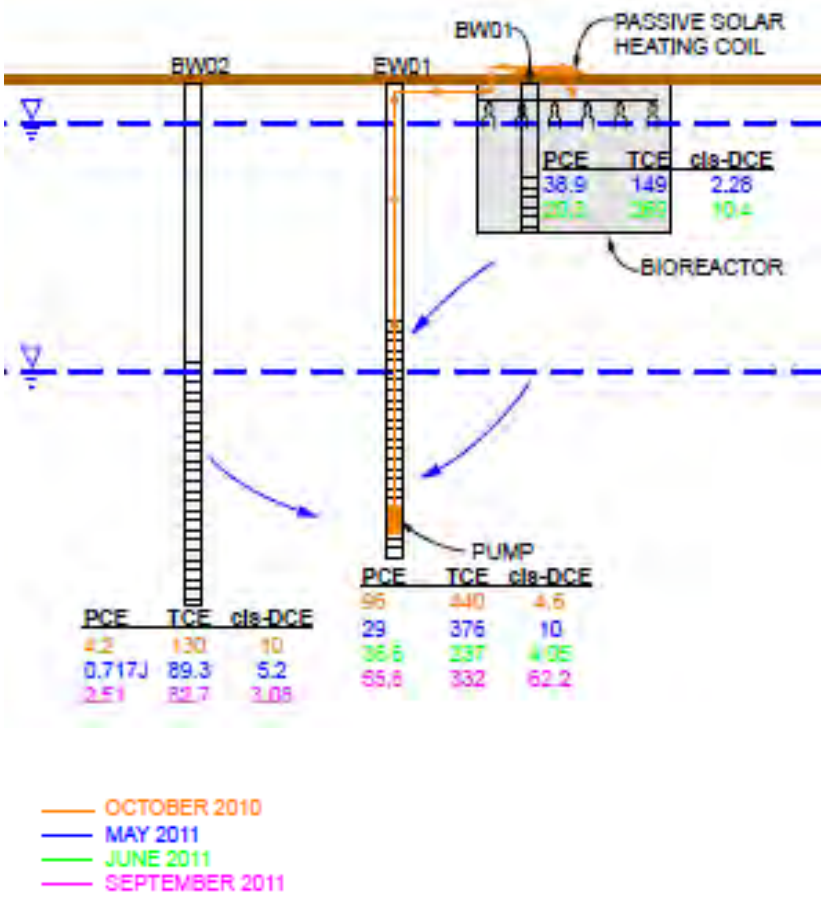
Groundwater Monitoring Results for Chlorinated VOCs



- Between October 2010 and September 2011, PCE and TCE concentrations decreased in the two wells closest to the bioreactor
  - PCE – 40 to 42% change
  - TCE – 25 to 36% change
- cis-1,2-Dichloroethene (DCE), a breakdown product, increased in several wells.
  - DCE + 350 to 1250% change

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SS015 Bioreactor Pilot Study

- Conclusions from 1st Field Season
  - PCE and TCE concentrations have started to decrease in the monitoring wells closest to the bioreactor, due to a combination of excavation of the hot spot soils and biodegradation.
  - cis-1,2-DCE, a breakdown product of PCE and TCE biodegradation, increased in concentration, indicating that biodegradation is occurring.
  - The solar powered groundwater pump was reliable and operational 100% of the time, pumping ~134,000 gallons.

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SS015 Bioreactor Pilot Study

- Conclusions (Cont'd)
  - The passive heating coil and heat from biodegradation raised the water temperature an average of 5°C in the bioreactor.
  - Total organic carbon (food source for microorganisms) was initially high in the bioreactor, but dropped to low levels after a month of operation, probably due to the vegetable oil flushing out of the bioreactor.
  - Oxidation-Reduction measurements in the groundwater indicated suitable conditions for biodegradation of chlorinated compounds.

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SS015 Bioreactor Pilot Study

- Plans for 2012
  - Restart the groundwater recirculation through the bioreactor in late May, perform monthly system checks, and shutdown in mid-October.
  - Perform more groundwater monitoring in May and September to measure changes in PCE, TCE, and breakdown product concentrations.
  - Add sodium lactate to the bioreactor to increase the food source for microorganisms.
  - Add more black hose to the heating coil to see if water temperatures can be increased.

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SS015 Bioreactor Pilot Study

- How the Pilot Study Results will be Used
  - Evaluate if this type of technology can be successful for groundwater treatment at Galena
  - Only one of several options that will be evaluated during the Feasibility Study (FS) stage of the investigation process
  - The final remedy for Site SS015 will be proposed in the FS report and Record of Decision (ROD)

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SS015 Bioreactor Pilot Study

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Public Involvement Update

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Public Involvement Update

- Galena Community Relations Plan
  - Summary of community concerns:
    - Safety of topsoil/groundwater
    - Contamination in Yukon
    - *Campion
    - Use of acronyms
    - Hiring local contractors

- Community consensus: AF is making good progress
  - RAB meetings/newsletters good source of information
  - AF being open and transparent
  - Introduce partnerships with Louden, radio, school

*Note Campion is managed through 611th Air Support Group and is not part of Galena cleanup

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Public Involvement Update

- Galena Newsletter
  - Created to keep stakeholders informed of the status of environmental cleanup activities
  - AFRPA works with BEC, contractors and regulators for newsletter content
  - New edition coming this summer

The Former Galena FOL Environmental Update

Published to keep the Galena community informed of the Air Force's environmental cleanup progress | Vol 1, Issue 2 | November 2011

Looking Back on 2011 and Ahead to 2012

2011 was a productive year for the Air Force Real Property Agency's environmental restoration program for Galena, AK. We will continue the momentum in 2012 as the environmental cleanup continues. This issue contains updates on activities completed to date and plans for next year.

Interim Removal Action

This year, AFRPA's contractor, CH2M Hill, removed 17,700 cubic yards of petroleum-contaminated soils from four sites – the former Wilderness Hall (SS005), the former Birchwood Hangar (SS014), the former truck fill-stand (SS017) and the former RAPCON above-ground storage tank (AST1569). AFRPA also built a pedestrian walkway for Galena residents and students prior to excavation of sites SS014 and SS017 to ensure the safety of pedestrians during the interim removal actions next to the flightline.

(Top) AFRPA completed Interim Removal Actions on four sites this year, and (above) conducted soil sampling on the sites.

In addition, AFRPA completed excavation activities at SS005 prior to the students' return for the 2011/2012 school year to avoid any disruption to the community, and to ensure the safety of the Alaskan students who rely on the Galena community for their educational needs.

In Memoriam: Norm (Buckets) Burgett 1934-2011

Condolences go out to the family and friends of Norm (Buckets) Burgett of Galena, who passed away November 1, 2011 in Fairbanks.

Buckets was born in Indianapolis and joined the U.S. Air Force in 1952. At his request he was stationed at Galena Air Force Base in 1954. There he met his wife of 56 years, Cecelia, and together they had eight children. Buckets was devoted to their 25 grandchildren and 12 great-grandchildren.

Buckets had several careers throughout his life, working much of that time at Galena AFB where he was actively involved in the Air Force environmental program.

He was a wealth of knowledge for the Air Force restoration program and a valued member of the Galena Restoration Advisory Board. He will be greatly missed.

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Public Involvement Update

- Scheduling future RAB meetings
- Proposed dates:
  - 3rd Wednesday in April
  - 3rd Wednesday in October

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Web Presentation

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Welcome

Program Manager: Steve Bainbridge
(907) 451-2143

The Contaminated Sites Program (CSP) protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska.

Prevention - Preparedness - Response

- About Us
- Contact Information

Quick Links

- State of Alaska
- Public Notices
- What's New?
- Approvals & Permits
- Guidance & Forms
- Statutes & Regulations
- Regulations Development
- Contaminated Site Summaries
- Areawide Investigations
- **The Cleanup Process**
- **North Pole sulfolane issue**
- Vapor Intrusion NEW!
- Qualified Persons
- **Selecting an Environmental Consultant**
- Soil Treatment Facilities
- Approved Labs
- Underground Storage Tanks
- Restoration Advisory Boards
- Report: Alaska's Legacy of Contaminated Sites (PDF 1.6M)
- Publications, Fact Sheets
- Finding out about Contaminants

DEC Search

find

Of Interest

- Program Organization
- **Federal Facilities**, including Dept. of Defense
- **Reuse & Redevelopment** - Brownfields
- Leaking Underground Tanks
- Interstate Technology and Regulatory Council (ITRC) NEW!
- American Recovery & Reinvestment Act Projects
- Sign up for our Email List
- Site Map
- Database of Contaminated Sites
- Map of Contaminated Sites
- Method 3 & Cumulative Risk Calculator

Division of Spill Prevention and Response

Contaminated Sites Program

Federal Facilities in Alaska

Civilian Agency Sites | Department of Defense Sites | Restoration Advisory Boards

Table of Contents

History of Federal Facilities in Alaska

Since Territorial Days, Civilian Federal Agencies have provided public services throughout Alaska. Basics such as schools, power generation, mail service and navigational facilities have been built and operated for Alaska residents. As environmental awareness increased, many agencies have performed audits of their facilities, finding impacts from petroleum and hazardous materials used in historical operations. Issues such as fuel tank farms with leaks, buildings with lead paint or asbestos, older landfills with erosion problems and abandoned buildings with physical hazards have been discovered. In certain cases, Civilian Federal Agencies have also inherited environmental issues through land conveyances. While not in the majority of land transfers, certain lands with contaminated soils, water and physical hazards have been transferred to various agencies to manage

Quick Links

- CS Program Homepage
- What's New?
- Approvals & Permits
- Guidance Documents
- Statutes & Regulations
- Frequently Asked Questions
- Glossary & Acronyms

Of Interest

- Contaminated Site Summaries
- Brownfields

Alaska Restoration Advisory Boards (RABs)

Federal Facilities Department of Defense Sites in Alaska

Table of Contents

Alaska Restoration Advisory Boards

Restoration Advisory Boards (RABs) Restoration Advisory Boards are a primary mechanism for actively working with the community during environmental restoration at many installations. The Department of Defense gives each community the option of forming one of these advisory boards to share community views with the installation decision-makers. A RAB has representatives of the Department of Defense installation or overseeing federal agency, the Alaska Department of Environmental Conservation, local governments, tribal governments and the affected local community. RAB members also report information back to the community on the Department of Defense's environmental restoration activities. In Alaska, many, but not all, of the Department of Defense's contaminated sites have RABs to help provide community involvement. Some of the RABs work with more than one site, or even take a regional focus, such as the Barrow RAB.

- **Department of Defense's RAB Handbook**: download (PDF 461K)

Back to the Top

Galena

Galena Airport
Kalakaket Creek Radio Relay Station
Campion Air Station

Restoration Advisory Board meetings

Next meeting: April 26, 2012, at 6:30 p.m. to 8:30 p.m., at the Larsen Charlie Community Hall in Galena.

Recent meeting: Nov. 16, 2011

The RAB meetings are held twice a year, in November/December and April/May. The public is encouraged to attend. More information.

Stakeholder meetings

Next meeting: April 26, 2012, at 2:30 p.m. to 4:30 p.m., at the Larsen Charlie Community Hall in Galena.

Recent meeting: Nov. 16, 2011

In the Galena Airport's case, the stakeholder meetings are generally held on the same day as the Restoration Advisory Board meetings. More information.

Contacts

DEC:

Fred Vreeman,
907-451-2181

Air Force:

Armando Perez and Steve Davis, Public Affairs Officers
Public Affairs Office
Air Force Real Property Agency
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(Note: Al Weilbacher, Armando Perez and Steve Davis have the same address, phone numbers and email address.)

Galena Airport

Documents

Updated: April 12, 2012

- Restoration Advisory Board Meetings
- Stakeholder Meetings
- Triad Meetings
- Technical Project Team Meetings
- Project Overview Documents
- Maps
- Newsletters

Project Links...

- Home
- Restoration Adivsory Boards
- Federal Facilities in Alaska
- Database of Alaska's Contaminated Sites
- Fact Sheets
- Glossary/Acronyms

Restoration Advisory Board Meetings

Description	Posted	Download
Definition of Restoration Advisory Board	2-27-12	73K
Charter and Operating Guidelines for the RAB – Charter and Operating Guidelines for the Restoration Advisory Board, Galena Airport, Campion Air Station and Kalakaket Creek Radio Relay Station, October 1997	October 1997	1.6MB
Agenda for April 26, 2012, meeting	3-9-12	70K
Minutes of previous meetings –		

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Figure – S1850, Soil - All Exceedances, for 2010	1-21-11	825K
Figure – SS016, Soil - All Exceedances, for 2011 and Historical	7-28-11	4MB
Figure – UST 1770, Soil - All Exceedances, for 2010	1-18-11	821K
Triad No. 3 – July 21, 2011, meeting		
Agenda	7-21-11	86K
Meeting Summary	1-5-12	165K
Technical Justification for Phase 1 Monitoring Wells, July 2011	7-15-11	806K
Figure – SS014, Soil - All Exceedances, for 2011 and Historical	7-19-11	1.7MB
Figure – SS017, Soil - All Exceedances, for 2011 and Historical	7-19-11	3.5MB
Triad No. 2 – July 5, 2011		
Agenda	12-27-11	874K
Meeting Summary	10-28-11	175K
Figure – Overview of Investigation Areas	3-16-11	2.6MB
Figure – OWS1833, Investigation Areas	3-16-11	3.5MB
Figure – S1850, Investigation Areas	3-16-11	3.5MB
Figure – ST009, Investigation Areas	3-16-11	4.5MB
Figure – UST1769, Investigation Areas	3-16-11	4.1MB
Triad No. 1 – June 21, 2011		
Meeting Summary	6-30-11	298K

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Project Overview Documents

For this Project Overview Documents section:

1. The documents listed below will give users a general overview of what's occurring in the Galena Airport site cleanup.

2. Nearly all the documents on the Galena Airport site are on the Air Force's website for Galena.

Description	Posted	Download
Interim Removal Action – Work Plan for Interim Removal Action at Sites SS005, SS014, SS016, SS017 and AST1569 at Former Galena Forward Operating Location, Alaska	September 2011	
Main Text and Figures		12.MB
Appendices		360K
Preliminary Assessment – Preliminary Assessment, Former Galena Forward Operating Location, Alaska, Final Report	September 2011	
Main Text		4.5MB
Appendix A-1 – Above-Ground Storage Tanks		16MB
Appendix A-2 – Underground Storage Tanks		15MB
Appendix A-3 – Oil-Water Separators		17MB
Appendix A-4 – Buildings		28MB
Appendix A-5 – Other Sites		11MB

Welcome

Program Manager: Steve Bainbridge
(907) 451-2143

The Contaminated Sites Program (CSP) protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska.

Prevention - Preparedness - Response

About Us | Contact Information

Quick Links

- State of Alaska
- Public Notices
- What's New?
- Approvals & Permits
- Guidance & Forms
- Statutes & Regulations
- Regulations Development
- Contaminated Site Summaries
- Areawide Investigations
- **The Cleanup Process**
- **North Pole sulfolane issue**
- Vapor Intrusion NEW!
- Qualified Persons
- **Selecting an Environmental Consultant**
- Soil Treatment Facilities
- Approved Labs
- Underground Storage Tanks
- Restoration Advisory Boards
- Report: Alaska's Legacy of Contaminated Sites (PDF 1.6M)
- Publications, Fact Sheets
- Finding out about Contaminants

DEC Search

find

Of Interest

- Program Organization
- **Federal Facilities**, including Dept. of Defense
- **Reuse & Redevelopment** - Brownfields
- Leaking Underground Tanks
- Interstate Technology and Regulatory Council (ITRC) NEW!
- American Recovery & Reinvestment Act Projects
- Sign up for our Email List
- Site Map
- Database of Contaminated Sites
- Map of Contaminated Sites
- Method 3 & Cumulative Risk Calculator

Contaminated Sites Program

State of Alaska > DEC > SPAR > CSP > Site Summaries > Interior > Galena Air Force Station

Galena Air Force Station

Description | Health & Environment | Current Status | More Info

View detailed information from database on this site.

Status: Active

Database Name: Galena AFS

Location: Galena, Alaska

Latitude/Longitude: See database entries

This site has a Restoration Advisory Board, which involves the community.

DEC Contaminated Sites contact: Fred Vreeman, Project Manager, 907-451-2181 (Fairbanks)

U.S. Air Force contacts: Al Weilbacher, Project Manager for Galena, Air Force Center for Engineering and the Environment
866-725-7617 (Lackland AFB, Texas)
Armando Perez and Steve Davis, Public Affairs Officers, Air Force Real Property Agency
866-725-7617 (Lackland AFB, Texas)

Contacts Updated Dec. 5, 2011

Summary Updated June 26, 2006

Description

The Galena Airport is located in the City of Galena on the Yukon River about 270 miles west of Fairbanks, Alaska. Galena is located in traditional Koyukon Athabaskan Indian territory. The airport was constructed in 1940. During World War II, Galena supported the Alaska-Siberia route for transfer of aircraft to the Soviet Union. Since 1951, the U.S. Air Force has had joint civilian-military use of the airfield, which became a Forward Operating Base for fighter-interceptors to meet the

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- Questions or Comments?

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Prior to End of Meeting

- **Suggested Agenda Items for Next RAB**
- **General Discussion and Closing Remarks**

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Contact Information

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