

AFCEE Galena Triad Meeting No. 9

ATTENDEES: See Attached
FROM: CH2M HILL
DATE: October 11, 2011

The Galena Triad meeting/teleconference was attended by members of the Air Force, ADEC, ADOT, CH2M HILL, and Booz Allen Hamilton. Please see the attached **Galena Triad Team Contact List** for attendees.

The meeting followed the standard agenda setup for the Galena Triad calls.

Agenda:

1. Safety moment
2. Status update for field work activities
3. Review of action items and conclusions from previous Triad meeting. Approval of minutes
4. Discussion of new site data and evaluating progress toward Work Plan objectives
5. Identifying additional work needed and/or concurrence that Work Plan objectives have been met
6. Open discussion of other items
7. Schedule update for upcoming activities

Safety Moment

Win discussed that as the days are getting shorter and it is dark in the mornings and evenings, it is important to wear reflective clothing and maybe lights so cars can see you if you are running or cycling. Choose the bike path, if available, rather than run or bike in the roadway.

Status Update of Field Work Activities

Ronny gave an update on the current field activities:

- This past week DPT drilling and sampling has been focused on Site SS006.
- Site TU001 was completed last week and Site SS019 was completed yesterday.
- The hollow-stem auger (HSA) drilling resumed yesterday and they are installing the monitoring wells at Million Gallon Hill.
- DPT drilling is also commencing at TACAN1.
- The fall groundwater monitoring event of all existing wells is nearly complete (7 wells remain to be sampled). Additional wells that are still being installed this week and next will be sampled after they are installed and developed.
- The bioreactor will be shut down and winterized this week.

Win gave a summary of how much work has been completed during 2010 and 2011 so far:

- 733 soil borings
- 124 grab groundwater samples
- Approximately 75 monitoring wells installed
- 3,400 soil samples
- 920 groundwater samples

Review of Action Items, Approval of Minutes

- Action items from the previous Triad call No. 8:
 - Evaluate the distribution of PCE and TCE in soil around Million Gallon Hill and Missile Storage Area. New figures are in preparation to add elevation to the data annotation and will be discussed next week.
 - Evaluate if nature and extent of contamination has been delineated at Sites SS014/17/21. This will be discussed during this call.
- Minutes are still in preparation from Triad call No. 8 and will be sent to ADEC and ADOT by the end of this week. Still waiting on approval of minutes from Triad meetings No. 5, 6, and 7 from ADEC. Will resend the minutes for approval.

New Site Data and Evaluating Progress toward Work Plan Objectives

- **DS1769.** Did geophysics to determine locations for buried debris and have adjusted the proposed sampling locations to coincide with the anomalies. ADEC concurred that the proposed sampling locations look good.
- **DSWD.** Presented a figure showing the surface debris locations (blue dots) and the possible boundary for a PCB spill area that was pointed out by Dick Evans from the Galena community after the June 22, 2011, RAB meeting. Fred commented he thought the area noted just west of the dike road was a former laydown storage area for transformers before they were shipped offsite. AL and Win commented that they recalled Mr Evans saying that this was where oil was poured on the ground, just west of the road.

Fred requested that 2 hand auger sampling locations be added near the southern boundary of DSWD, closer to where he recalled Mr Evans pointed out the oil was spilled.

- Proposed sampling for DSWD was agreed to plus the two additional samples at the southern boundary.

The City has removed all the visible debris from the wooded area. Additional geophysics will be performed at the slit trench on the west side of DSWD, but this won't hold up starting the hand auger sampling.

- **ST005.** Soil results were available to discuss for Areas A, B, C, E, F, and the apron.
 - **Area B** was a location where tanks were staged in a historical aerial photo. Three SI-type borings were sampled and all results were below screening levels.
 - All agreed that no contamination is indicated at Area B and sampling is complete.

- **Area A** was a tank farm with MOGAS and AVGAS. Five borings and 2 grab groundwater samples were sampled. There was some low level methylene chloride detections reported in samples and blanks that is suspected laboratory contaminants. Also low levels of benzene were detected in soil at 4 and 7 feet deep at ST005_GP003, but all other samples were below screening levels. Fred speculated that the benzene may be due to groundwater recontaminating the soil during periods when groundwater flow is to the north.
 - All agreed that no additional sampling is required at Area B.
- **Area C** is also a tank farm within a bermed secondary containment area. Nine soil borings were completed down to 40 feet deep. At GP009, GP010, GP011, GP012 and GP013, moderately high levels of GRO and DRO were detected down to 7 feet deep, but deeper samples were below screening levels. TCE and PCE were also detected in borings GP011 and GP013, but again were below screening levels deeper than 7 feet. 2008 soil gas data also showed TCE in this area.
 - Three stepouts and one deeper pipeline screening location (GP058) were agreed to outside of the bermed secondary containment area south and west of Area C to delineate contamination. All agreed that contamination was bounded to the north and east.
- **Area E** is the existing Tank 44 and lined secondary containment area. Five borings were drilled and sampled around the secondary containment area (avoided drilling inside the secondary containment and through the liner). On the south side of Area E, boring ST005_GP019 had DRO, GRO, and BTEX above screening levels at 28 feet deep at the bottom of the variably saturated zone (water table fluctuation is between 6 and 28 feet in this area). On the west side, boring ST005_GP018 had DRO and RRO exceedances at 4 feet deep and benzene at 40 feet deep, but this location is bounded by clean borings.

Fred noted that this area was excavated when they built the new tank and the soil was contaminated when they excavated it. He thought there were confirmation samples in the southwest corner of the excavation.

 - Agreed to no further stepout sampling for Area E. Determine if there are additional confirmational samples from the tank construction excavation available that are not shown on the figures.
- **Area F** is a pumphouse with no reported spills. New borings were clean, but one historical boring 05-SB-02 on the east side had elevated BTEX down to 10 feet in July 1992 sampling. This location is on the slope of the berm and cannot be accessed by the drilling rig. The soil may have been excavated during the tank construction.
 - Agreed to use a hand auger to attempt to sample down to 10 feet deep and confirm the detections reported at location 05-SB-02
- **Apron area** sampling south of ST005 was only performed in existing 2-inch wide cracks in the asphalt as required by the ADOT permit. The southern extent of contamination under the apron was bounded by several borings with no exceedances of GRO, DRO, or RRO. Fred noted that there was a large area that was not sampled between borings ST005_GP089 and ST005_GP091; however, there were no cracks approved that could be

- sampled in this area. Groundwater samples were collected in the grassy area south of the apron.
- **ST005 Pipeline sampling;** discussed approval of the Air Force approach in the revised draft final FSP and response to comments.
 - ADEC gave approval for the pipeline sampling every 50 feet as proposed in the revised draft final FSP and response to comments.
 - **SS014/17/21.** Discussed 6 stepout borings for delineating extent of contamination around the three sites. FAA gave their approval today for daytime drilling in the apron area around the Birchwood Hangar foundation.
 - Fred asked do we have a southwest bounding sample for SS021? Is there delineation between ST021 and ST009, or do they merge? AL said there was 10,000 CY of soil removed to a depth of 8 feet during the construction of the ADOT building, which may affect sample results in this area.
 - Agreed to not take additional samples to delineate western boundary of SS021. All data for ST009 and SS021 should be considered together during the reporting.
 - Bounding at the north of SS017; OAP_GP016 only went to 16 feet deep. Fred asked if there were groundwater monitoring points upgradient of SS017.
 - There are two OAP pipeline samples that were just approved – agreed to take the one pipeline boring north of SS017 to the full SC-boring depth and collect groundwater.
 - Fred asked how deep was the contamination at GP023 and GP024 on the east side of SS017? It was getting progressively shallower. Also discussed groundwater data at the southern boundary of SS014; a 3 well cluster was just installed at the southwest corner of the Birchwood Hangar foundation.
 - For SS014/17/21, the group agreed to the 6 proposed stepout locations plus taking 1 OAP boring north of the SS017 to the full SC depth with grab groundwater.
 - **SS015.** Soil data were discussed in Triad Call No. 8 and a follow-up action was to discuss the groundwater data to determine if the plume has been bounded. Reviewed the All Exceedances Groundwater figure, which showed blue dots (1 to 10x screening levels, which are 1/10th of MCLs) to the north, east, and west of the SS015 plume.
 - Team agreed that no further stepouts were needed for nature and extent delineation of Site SS015.
 - **Monitoring Wells.** Discussed source area and upgradient wells for SS006 (TCE Source Area) and an upgradient well for SS005 (Wilderness Hall).
 - Discussed that upgradient well 06-MW-07 is a little off the centerline of the plume through SS006. Fred recommended adding two shallow well completions where the proposed SS006-MW070 and MW071 are, to match the screen intervals for 06-MW-08 and 06-MW-09R.
 - For SS006, the team agreed to (2) deeper source area wells [SS006-MW065 and MW066] and (4) upgradient well cluster [SS006-MW070 and MW071, plus two shallower wells that match screen intervals for 06-MW-08 and 06-MW-09R].

- For SS005, agreed to one shallow well upgradient, since contamination was left in the north wall of the excavation. Want to site the well between the excavation area and dormitory building.

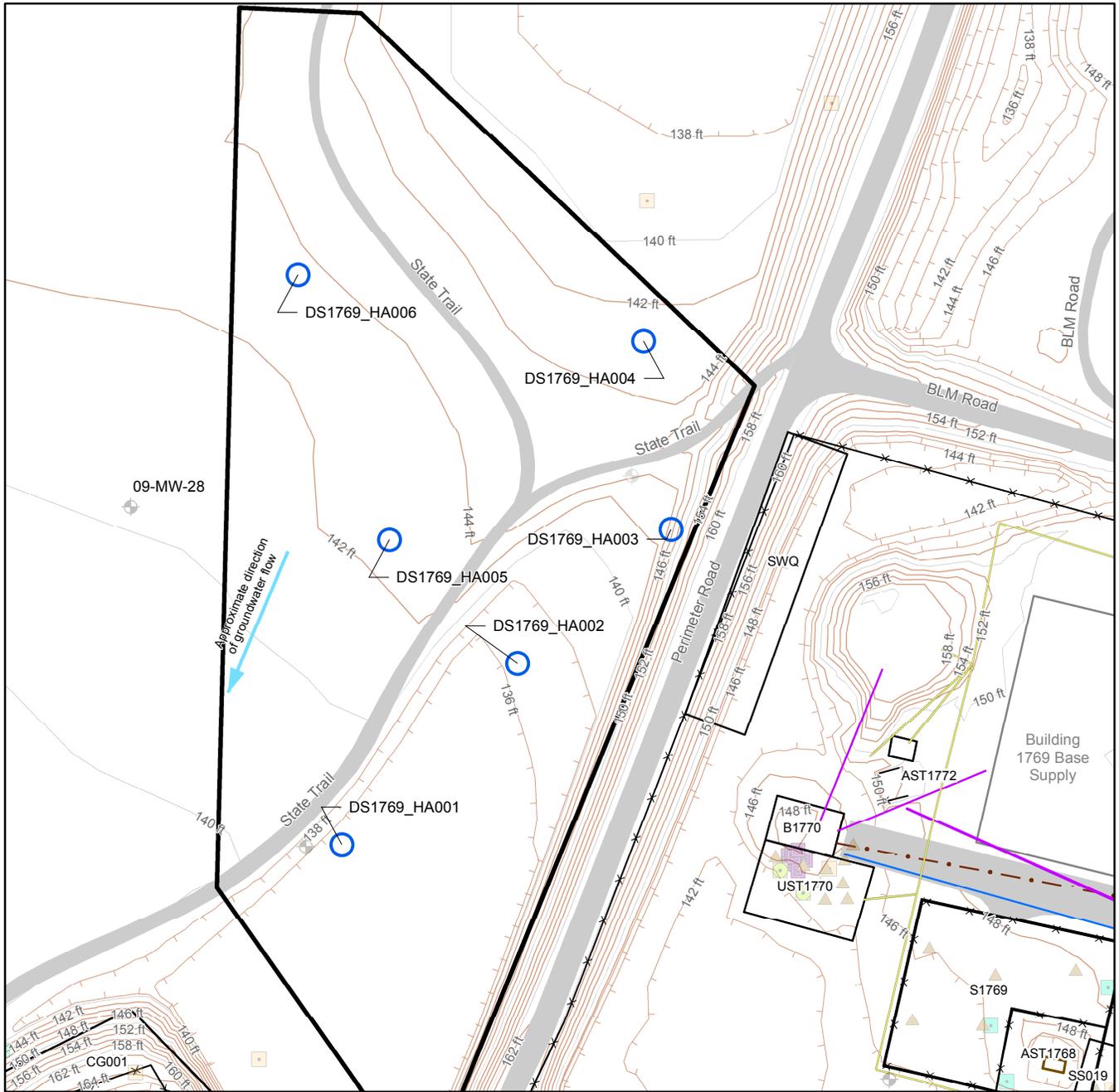
Open Discussion for Other Items

No other comments.

Schedule Update for Upcoming Activities

The last Triad meeting during field work is scheduled for Thursday, October 20, 9:30 a.m. to 11:30 am Alaska time. Discussion will include more ST005, TU001, and SS019 data.

Attachment: Galena TO 294 Triad Team Contact List



VICINITY MAP

LEGEND

- | | |
|---------------------------|-----------------------------------|
| DS1769 | Index Contour |
| Adjacent Site | Index Depression Contour |
| Structure | Intermediate Contour |
| Road | Intermediate Depression Contour |
| Fence | Proposed Sample Location |
| Electrical Line | Proposed Soil Sample |
| Abandoned Fuel Line | Historical Sample Location |
| Heating/Cooling Line | Soil Boring |
| Abandoned Wastewater Line | Surface Soil Sample |
| Water Line | Monitoring Well |
| Fuel Tank | Soil Vapor Sample |

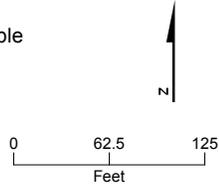
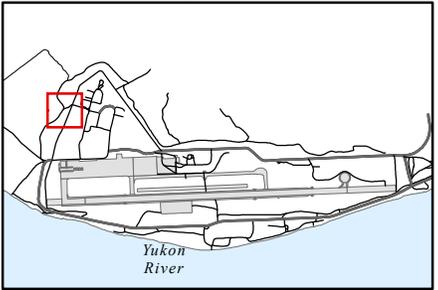
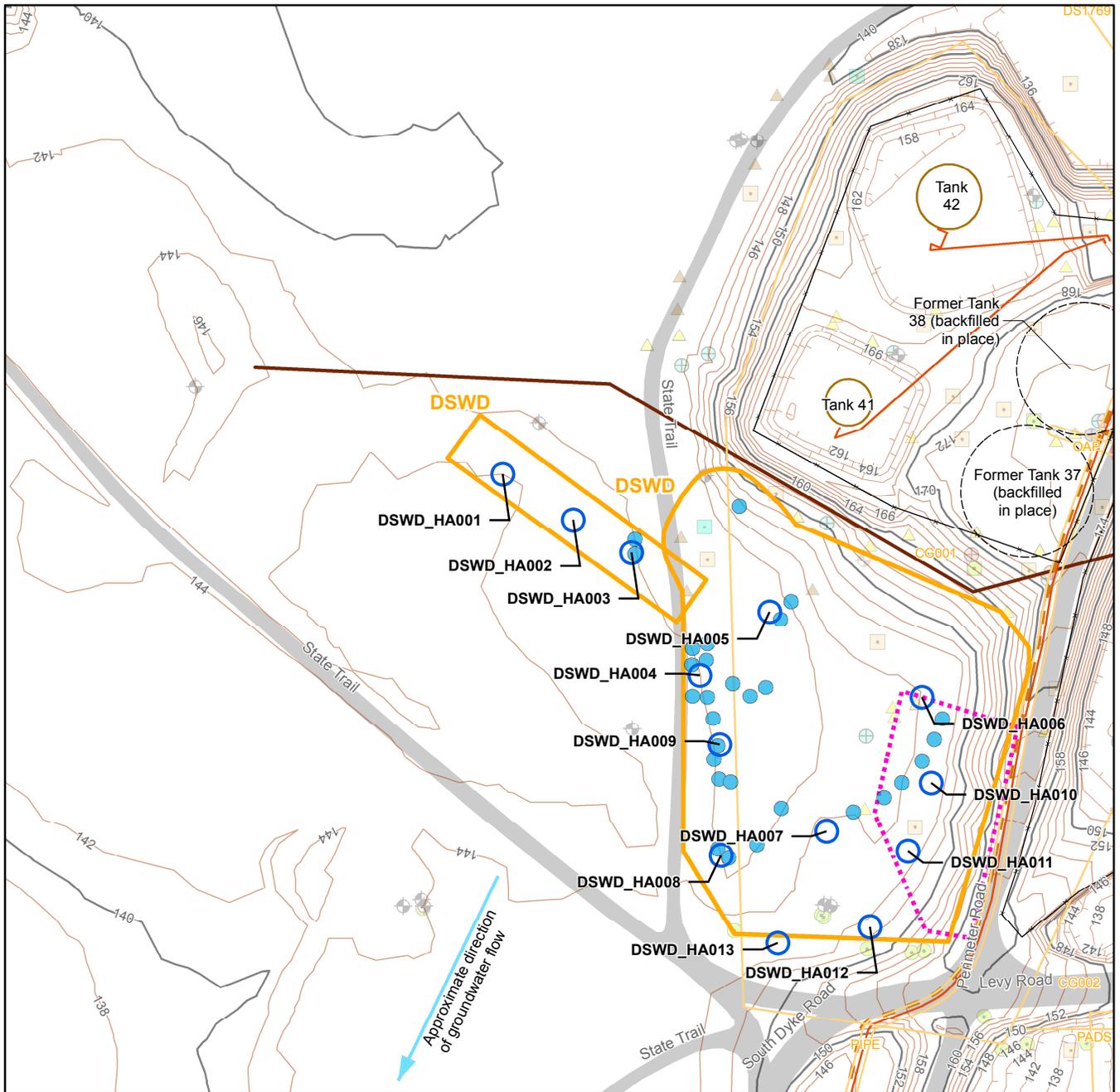
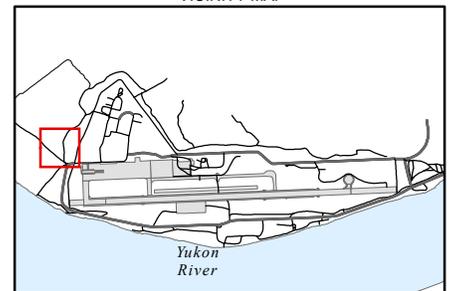


FIGURE D5-DS1769
Proposed Sample Locations
 Work Plan for Site Inspection, Remedial Investigation,
 and Site Characterization
 Former Galena Forward Operating Location, Alaska

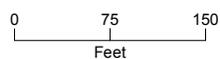


VICINITY MAP



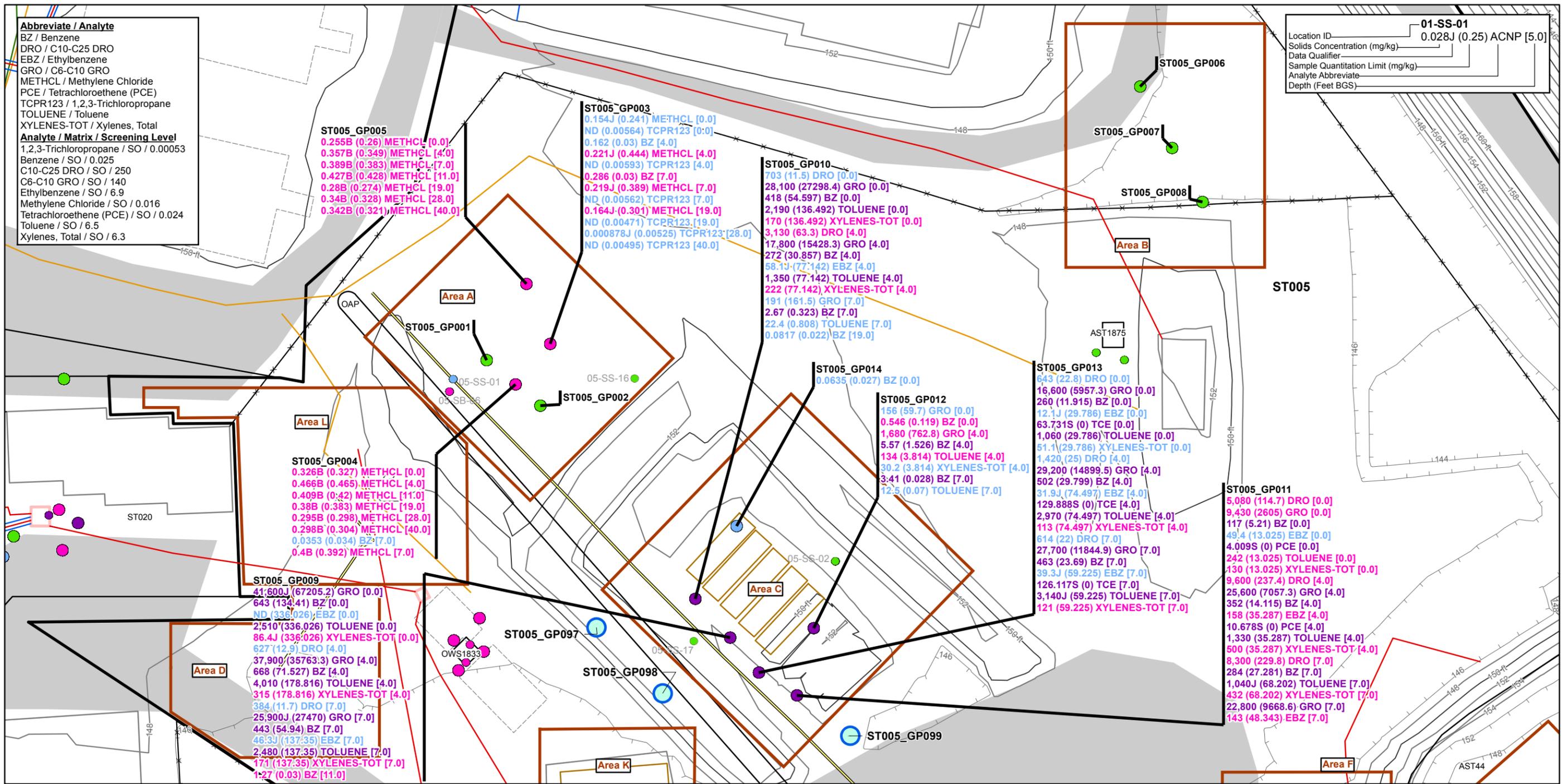
LEGEND

- | | |
|---------------------------------|-----------------------------------|
| DSWD | Proposed Soil Sample |
| Adjacent Site | Debris |
| Road | Historical Sample Location |
| Suspected Disposal Trench | Soil Boring |
| Fuel Tank | Surface Soil Sample |
| Fence | Hydro Punch |
| Abandoned Fuel Line | Monitoring Well |
| Main Fuel Line | Abandoned Monitoring Well |
| Main Wastewater Line | Product Recovery Well |
| Index Contour | Bioventing System Well |
| Index Depression Contour | Soil Vapor Sample |
| Intermediate Contour | Vapor Monitoring Point |
| Intermediate Depression Contour | |



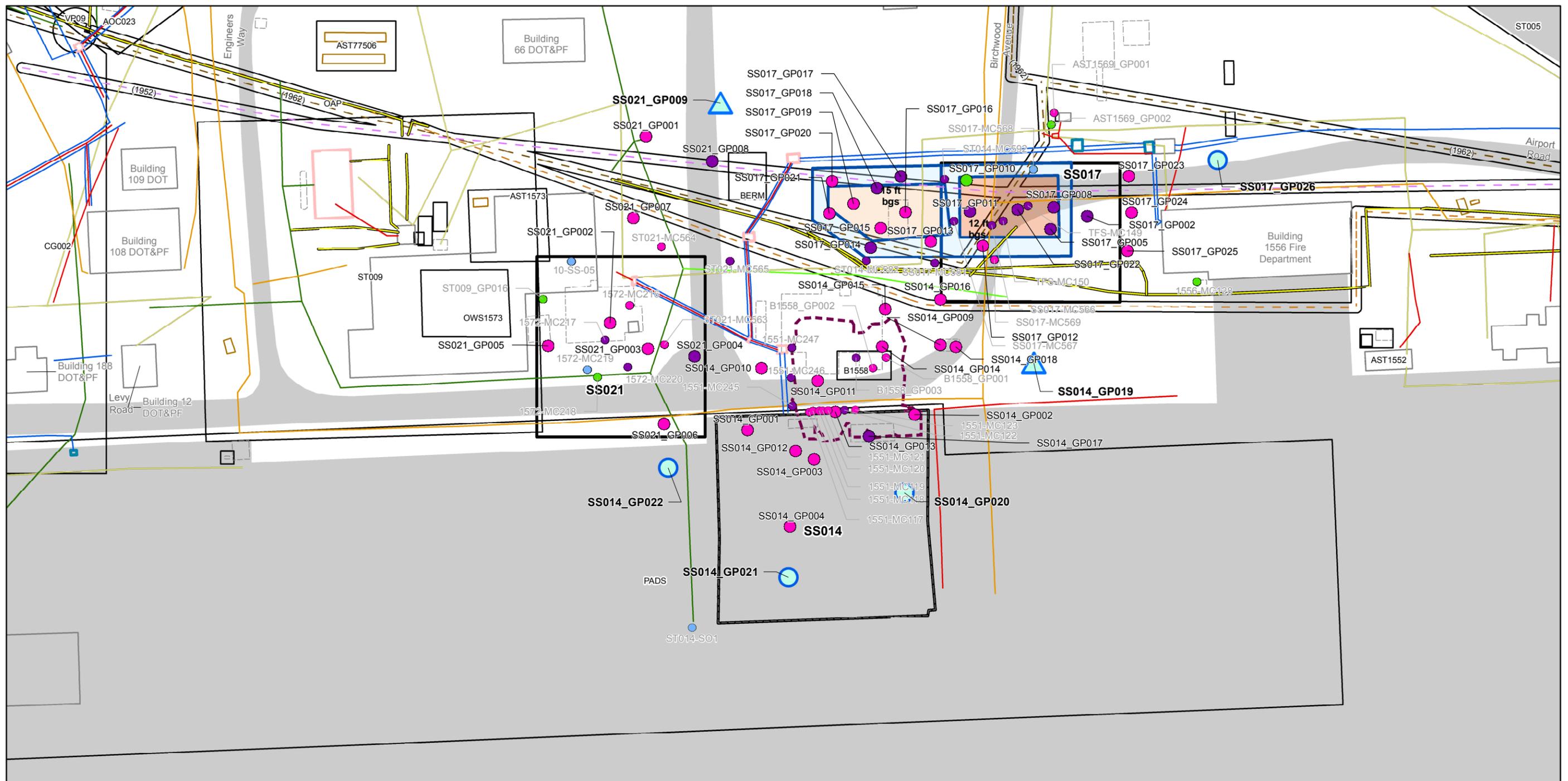
**FIGURE D7-DSWD
Proposed Sample Locations**

Work Plan for Site Inspection, Remedial Investigation,
and Site Characterization
Former Galena Forward Operating Location, Alaska



LEGEND

- ST005
- Adjacent Site
- Structure
- Approximate Location of Former Feature
- Fuel Tank
- Airfield Surface or Road
- Source Area
- Fence
- Index Contour
- Intermediate Contour Depression
- Intermediate Contour
- Underground Utility Locates - 2010
 - Electrical Line
 - Storm Drain
 - Communications Line
 - Sanitary Sewer Main
 - Potable Water Main
 - Fuel/Gas Line
 - Utility Vault
 - Electrical Transformer
 - Concrete Pad
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Does Not Exceed Screening Level
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (1 to 10X analyte SL)
- Historical Sample Does Not Exceed Screening Level



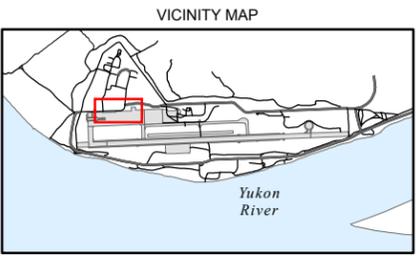
LEGEND

- SS014/SS017/SS021
- Adjacent Site
- Airfield or Road
- Approximate Location of Former Feature
- Structure
- Approximate Excavation Limit (0-15 ft bgs)
- Approximate Excavation Limit (12 ft bgs)
- Approximate Excavation Limit (15 ft bgs)
- Abandoned Fuel Line
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Electrical Line
- Fuel Tank

- Remedial Excavation
- Underground Utility Locates - 2010**
- Electrical Line
- Communications Line
- Storm Drain
- Sanitary Sewer Main
- Potable Water Main
- Fuel/Gas Line
- Concrete Pad
- Electrical Transformer
- Utility Vault

- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Does Not Exceed Screening Level
- Historical Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (1 to 10X analyte SL)
- Historical Sample Does Not Exceed Screening Level

- Proposed Sample Location - Step Out #1**
- Proposed Soil/Groundwater Sample
- Proposed Soil Sample



Site Name: SS014/SS017/SS021
Investigation Type: SC
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011