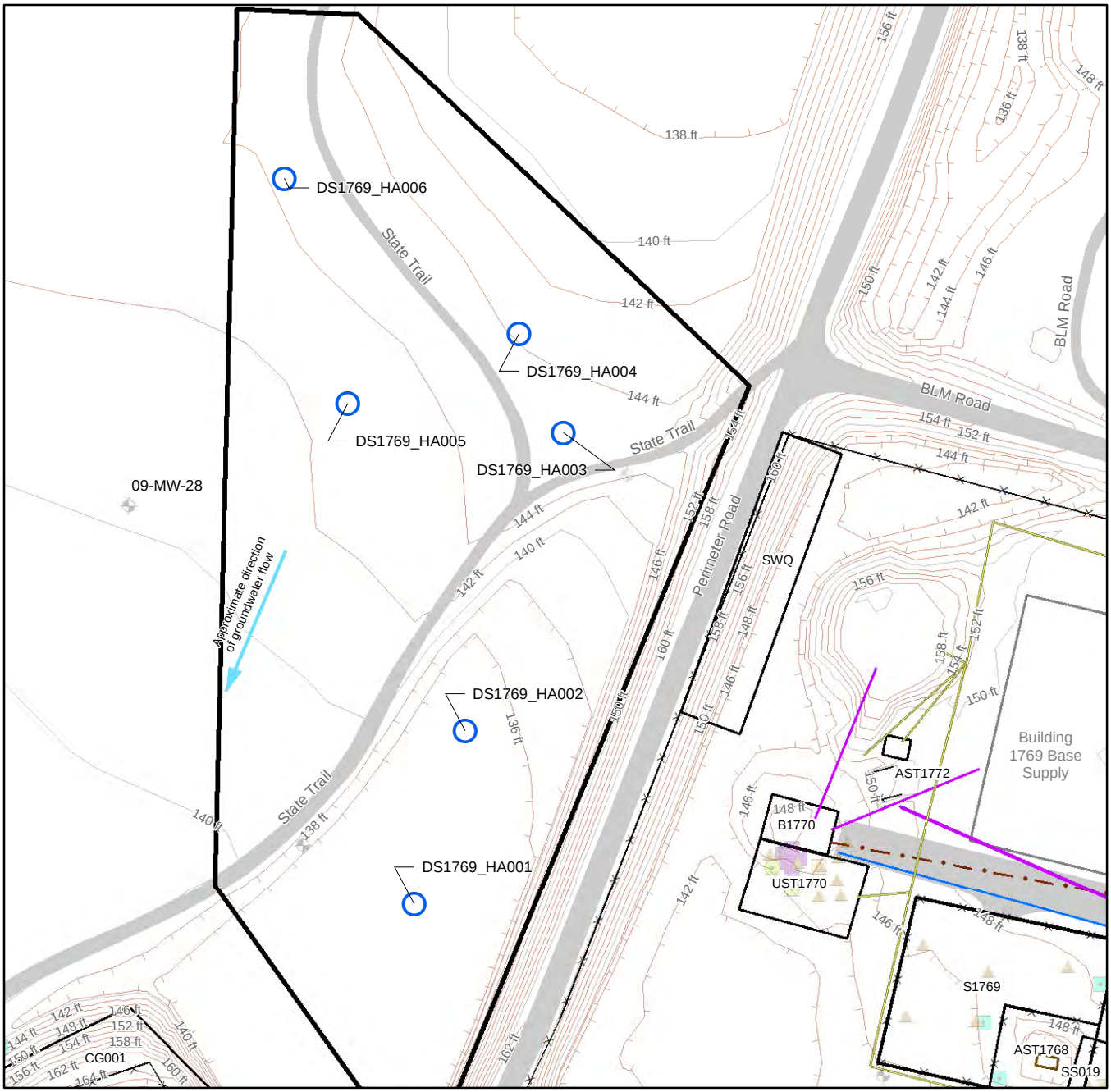
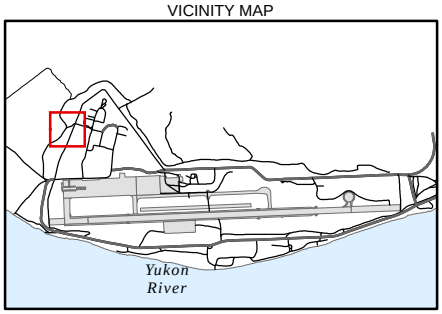


VICINITY MAP



LEGEND

- DS1769
- Adjacent Site
- Structure
- Road
- Fence
- Electrical Line
- Abandoned Fuel Line
- Heating/Cooling Line
- Abandoned Wastewater Line
- Water Line
- Fuel Tank

- Index Contour
- Index Depression Contour
- Intermediate Contour
- Intermediate Depression Contour

Proposed Sample Location

- Proposed Soil Sample

Historical Sample Location

- Soil Boring
- Surface Soil Sample
- Monitoring Well
- Soil Vapor Sample

N

0 62.5 125
Feet

FIGURE D5-DS1769
Proposed Sample Locations

Work Plan for Site Inspection, Remedial Investigation, and Site Characterization

Former Galena Forward Operating Location, Alaska

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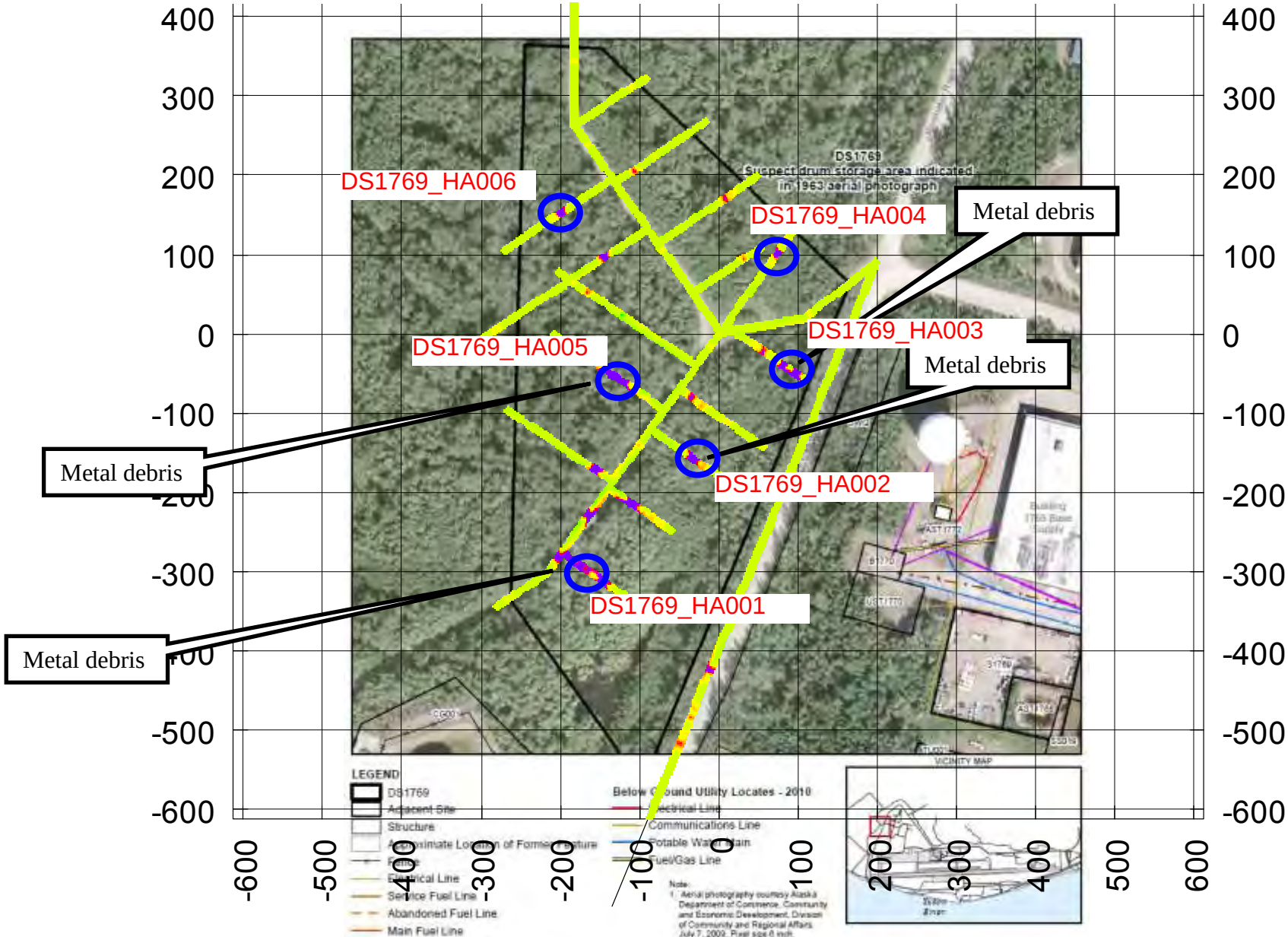
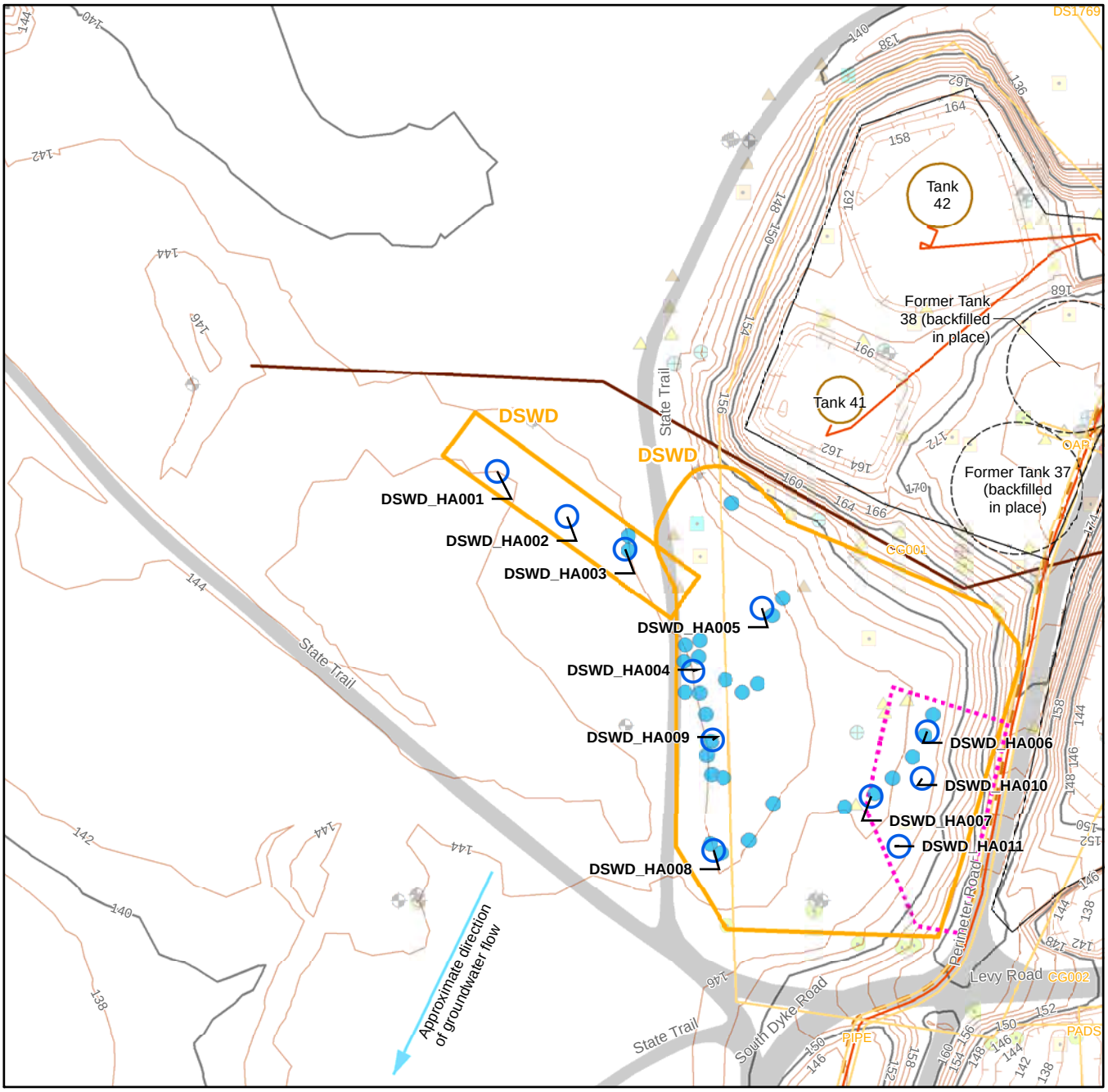
SAGE EARTH SCIENCE
GEOPHYSICAL SURVEYS



2184 Channing Way, Suite 110, Idaho Falls, ID 83404
telephone: (208)522-5049, Fax: (208)528-6200, email: sageearthscience@yahoo.com
http://www.sageearthscience.com



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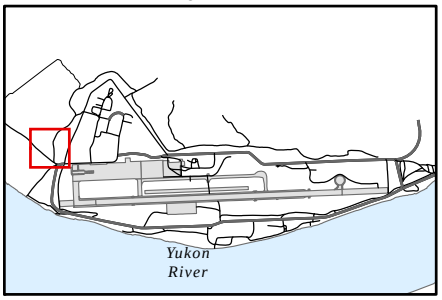

LEGEND

- DSWD
- Adjacent Site
- Road
- Suspected Disposal Trench
- Fuel Tank
- Fence
- Abandoned Fuel Line
- Main Fuel Line
- Main Wastewater Line
- Index Contour
- Index Depression Contour
- Intermediate Contour
- Intermediate Depression Contour

0 75 150
Feet

- Proposed Soil Sample
- Debris

Historical Sample Location

- Soil Boring
- Surface Soil Sample
- Hydro Punch
- Monitoring Well
- Abandoned Monitoring Well
- Product Recovery Well
- Bioventing System Well
- Soil Vapor Sample
- Vapor Monitoring Point

N

FIGURE D7-DSWD
Proposed Sample Locations

Work Plan for Site Inspection, Remedial Investigation, and Site Characterization

Former Galena Forward Operating Location, Alaska

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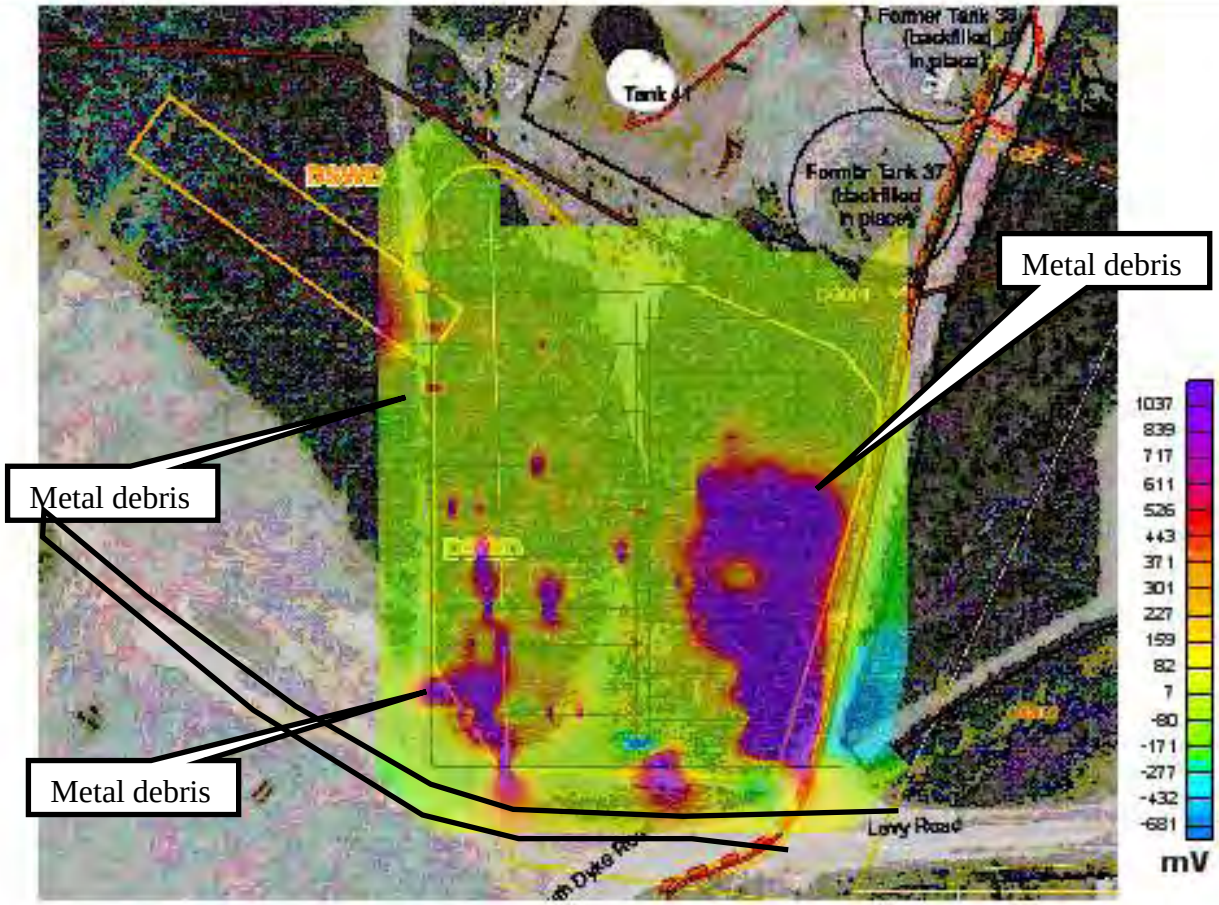


(feet)

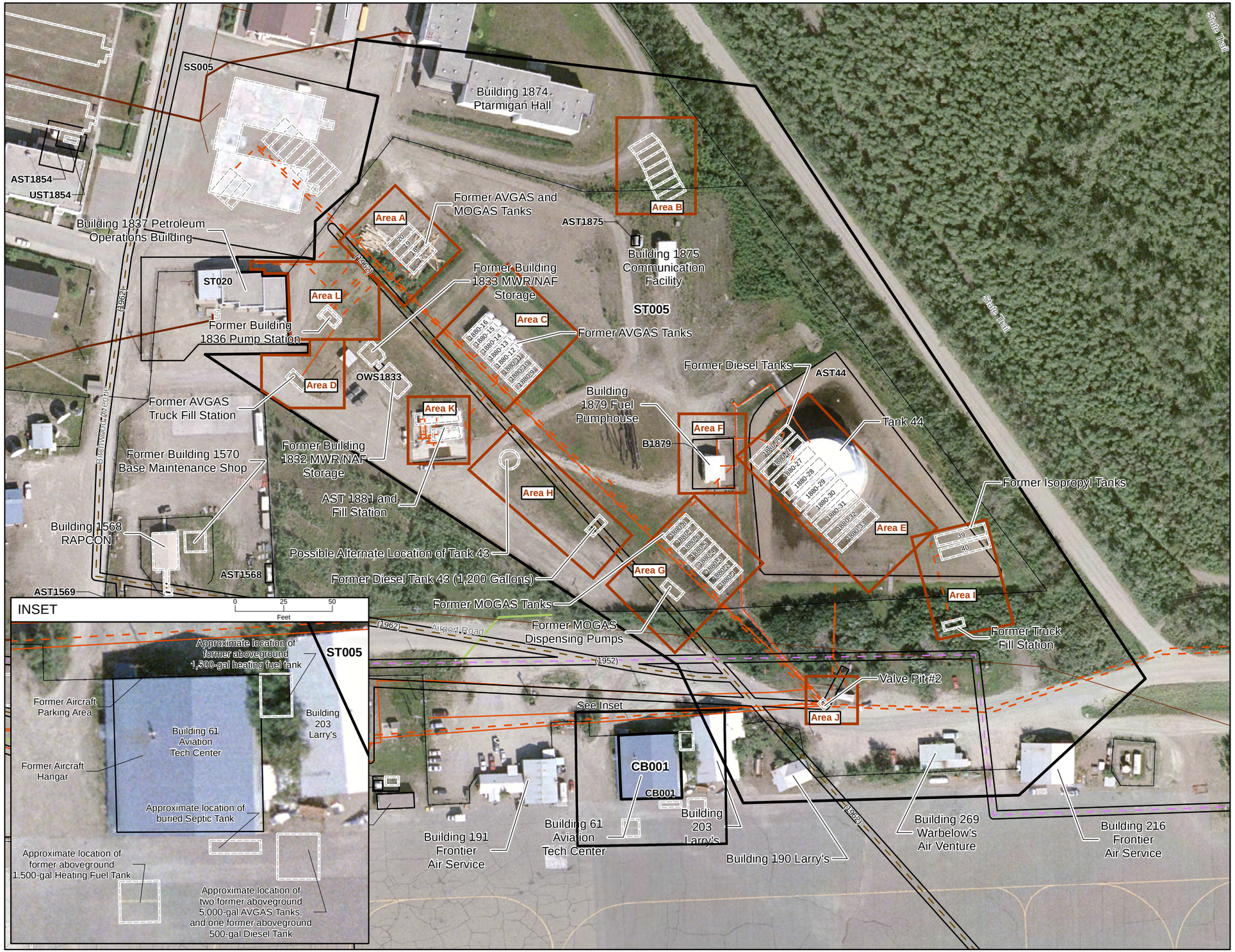
DSWD

09/17/2011

Geonics EM-61 (TDEMI)

Sage Earth Science

2184 Channing Way, Suite 110, Idaho Falls, ID 83404
telephone: (208)522-5049, Fax: (208)528-6200, email: sageearthscience@yahoo.com
http://www.sageearthscience.com



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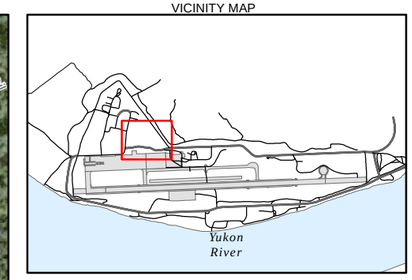

LEGEND

- ST005/CB001
- Adjacent Site
- Approximate Location of Former Feature
- Source Area
- Fence
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Fuel Line
- Former Fuel Line
- Main Wastewater Line
- Service Wastewater Line
- Main Storm Sewer Line

Notes:
1. Aerial photography courtesy Alaska Department of Commerce, Community and Economic Development, Division of Community and Regional Affairs. July 7, 2009. Pixel size 6 inch.
2. Sites that fall inside ERP Site ST005, that are evaluated in separate FSPs (attachment number listed, if applicable) or that are recommended by the PA as non-sites: OWS1833 (Att D31), AST1875 (Att D10), AST1880, AST1881, AST44, AST77506, B1836, B1879.

0 60 120
Feet

N

FIGURE D1-ST005/CB001
Site Layout
Work Plan for Site Inspection, Remedial Investigation, and Site Characterization
Former Galena Forward Operating Location, Alaska

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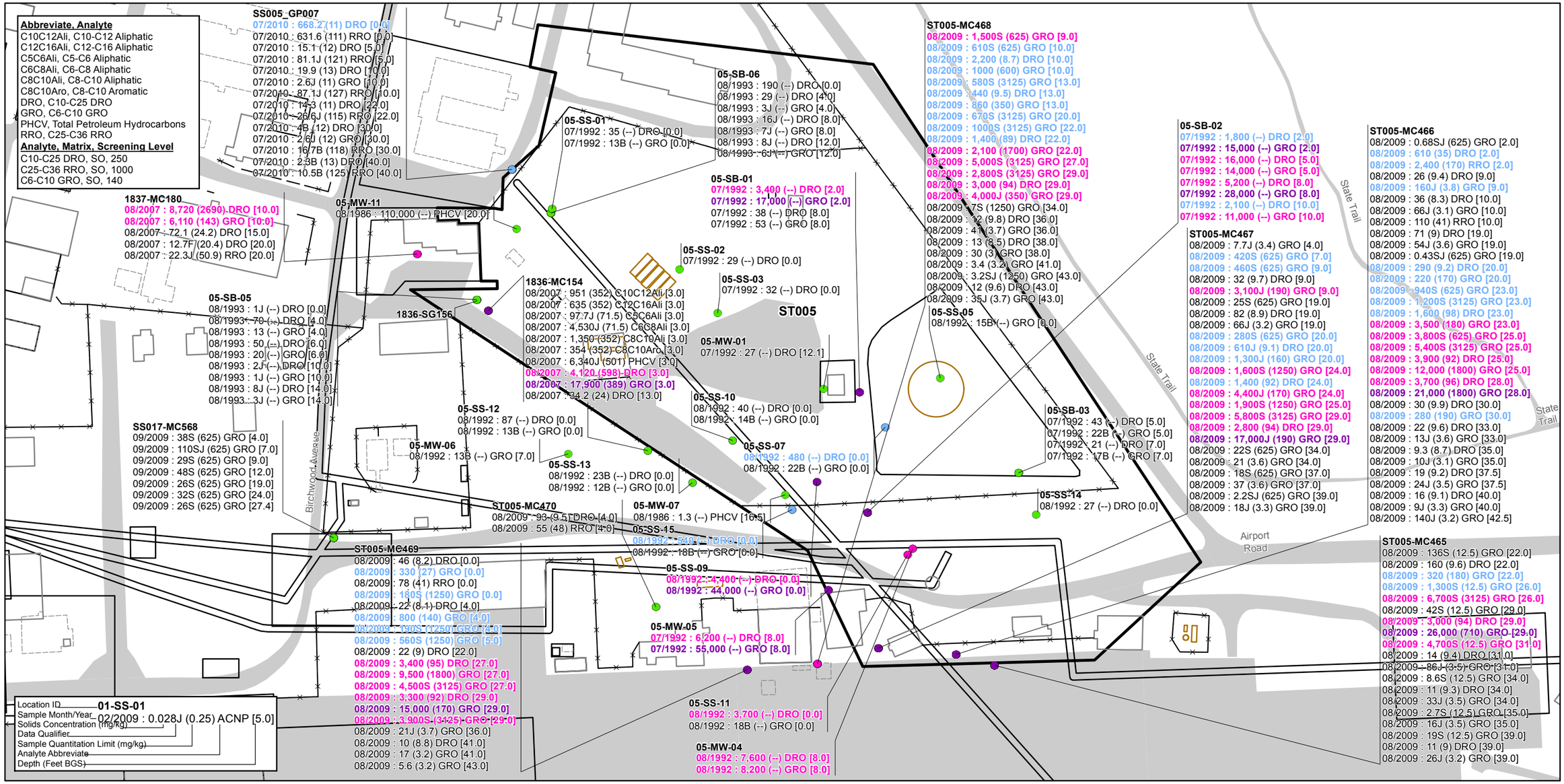


LEGEND

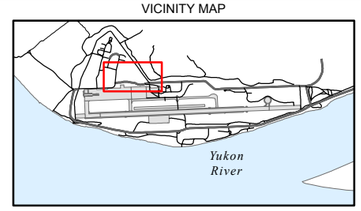
- ST005
- Adjacent Site
- Structure
- Approximate Location of Former Feature
- Fuel Tank
- Airfield Surface or Road
- Fence

Below Ground Utility Locates - 2010

- Electrical Line
- Storm Drain
- Communications Line
- Sanitary Sewer Main
- Potable Water Main
- Fuel/Gas Line
- Utility Vault
- Electrical Transformer
- Concrete Pad

- 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

VICINITY MAP



0 75 150
Feet

N

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   F - The analyte was positively identified by the lab: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only detect are posted.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

FIGURE D18-ST005/CB001
Hydrocarbon in Soil

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

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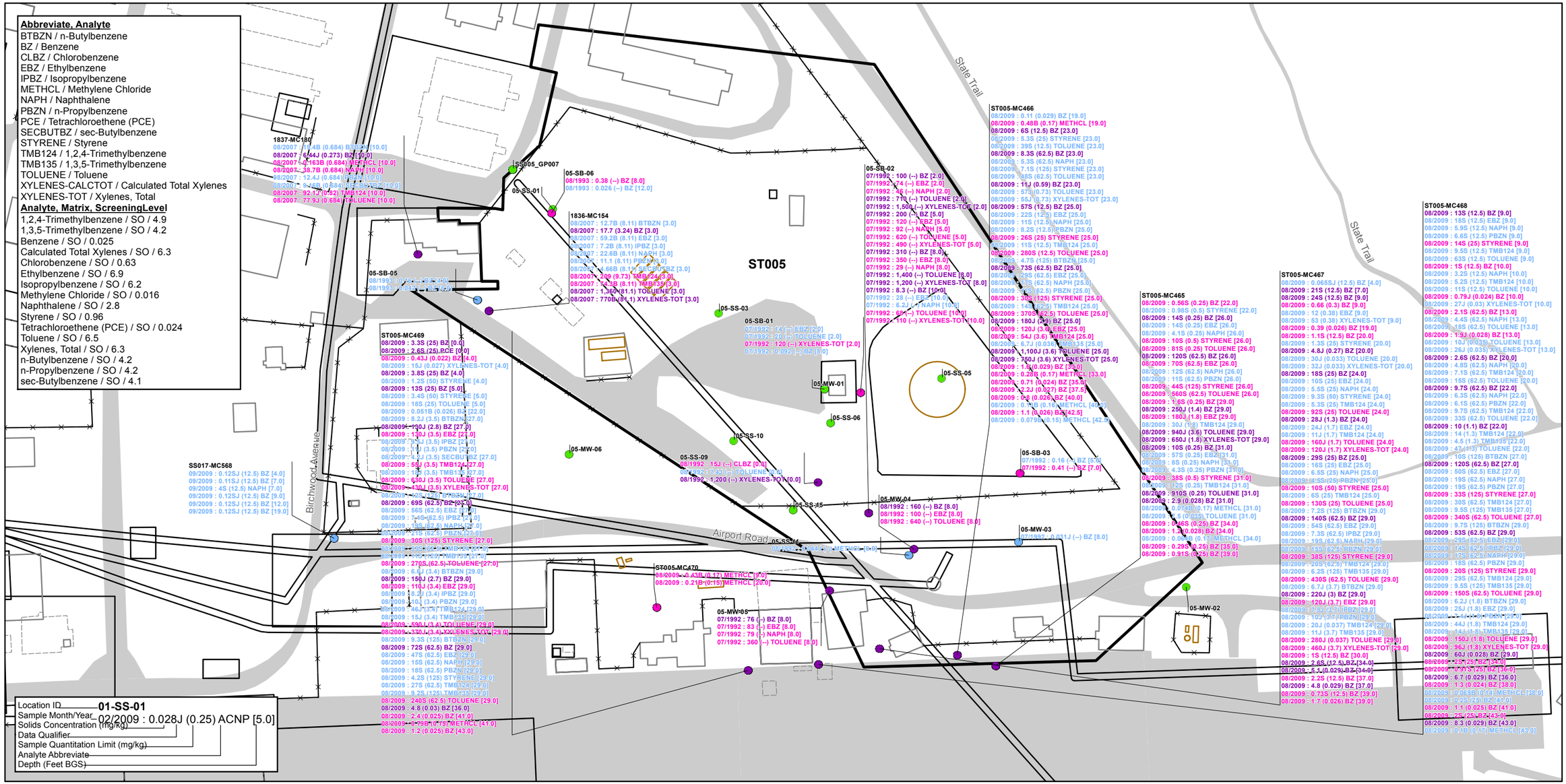
V:\GALENATO184_394439\MAPFILES\QAPP\ST005\FIGURE_D18_ST005_HIST_SO_HYDROCARBONS.MXD CVONFREE 7/28/2011 12:48:40 PM



LEGEND

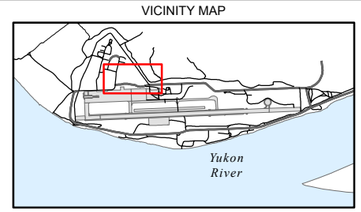
- ST005
- Adjacent Site
- Structure
- Approximate Location of Former Feature
- Fuel Tank
- Airfield Surface or Road
- Fence

Below Ground Utility Locates - 2010

- Electrical Line
- Storm Drain
- Communications Line
- Sanitary Sewer Main
- Potable Water Main
- Fuel/Gas Line
- Utility Vault
- Electrical Transformer
- Concrete Pad

- 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

VICINITY MAP



0 75 150
Feet

N

Notes:
1. J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. Only Exceedances are posted.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

FIGURE D19-ST005/CB001
VOCs in Soil

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

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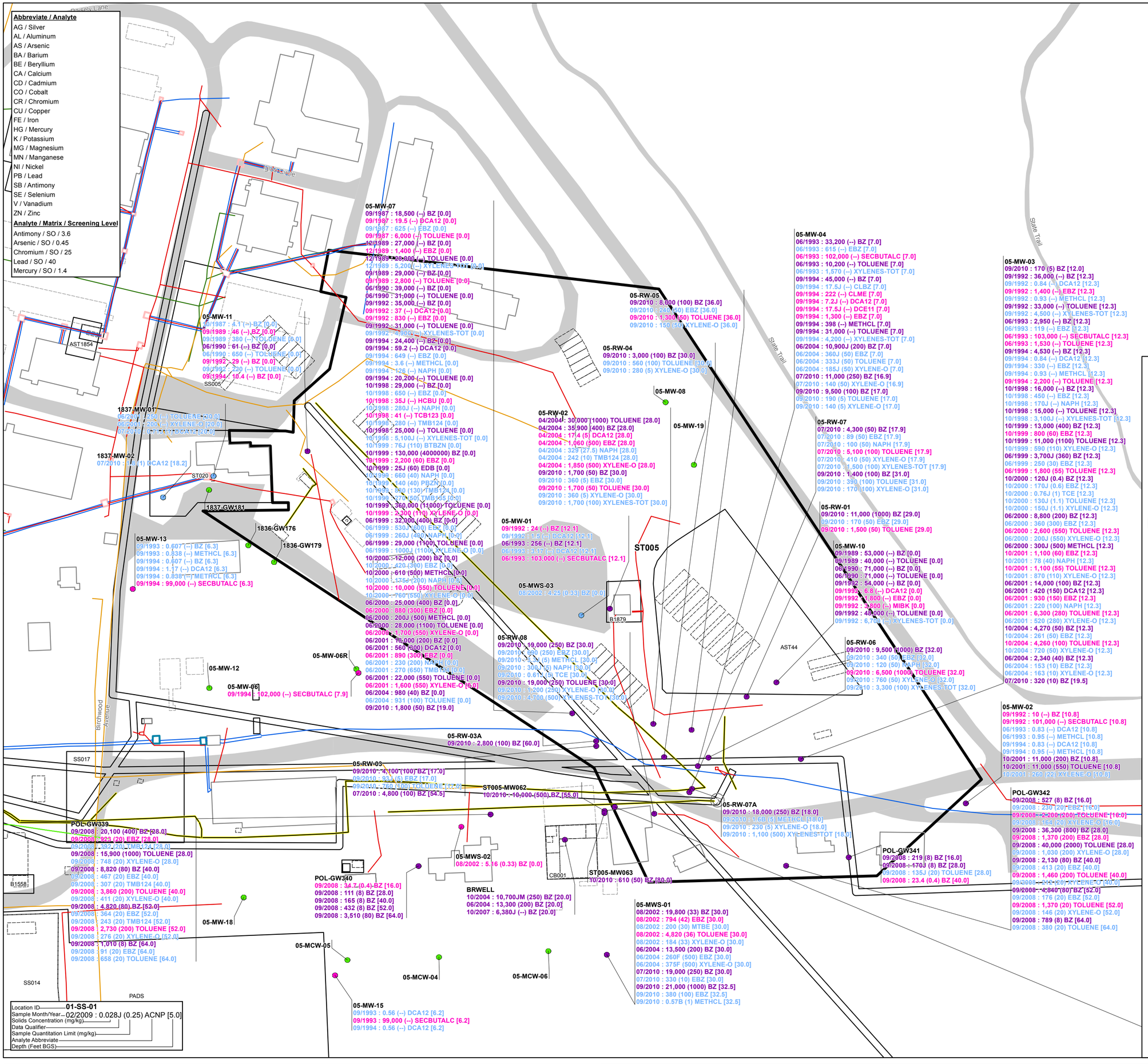
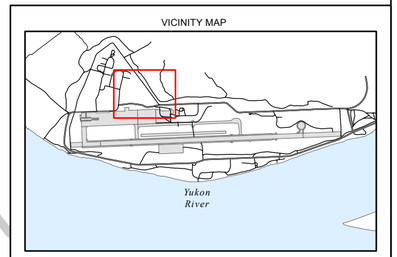


VICINITY MAP



LEGEND

- ST005
- Adjacent Site
- Road
- Approximate Location of Former Feature
- Structure
- Diesel Storage Tank

Utility Locates - 2010

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

Notes:

1. B - The analyte was detected in the associated method and/or calibration blank.
   F - The analyte was positively identified by the lab: the associated numerical value is the approximate concentration of the analyte in the sample.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. Only exceeds are posted.
3. Screening levels are presented in units of ug/L for WG (groundwater) samples.
4. Scarlet Label = Sample Exceeds Screening Level (Greater than 10X analyte SL)
5. Blue Label = Sample Exceeds Screening Level (1 to 10X analyte SL)
6. SL = Screening Level
7. Depth shown is the TOP depth of the sample.
8. 2010 utilities shown are underground only.

0 50 100 Feet

N

FIGURE 23 - ST005
VOCs in Groundwater

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

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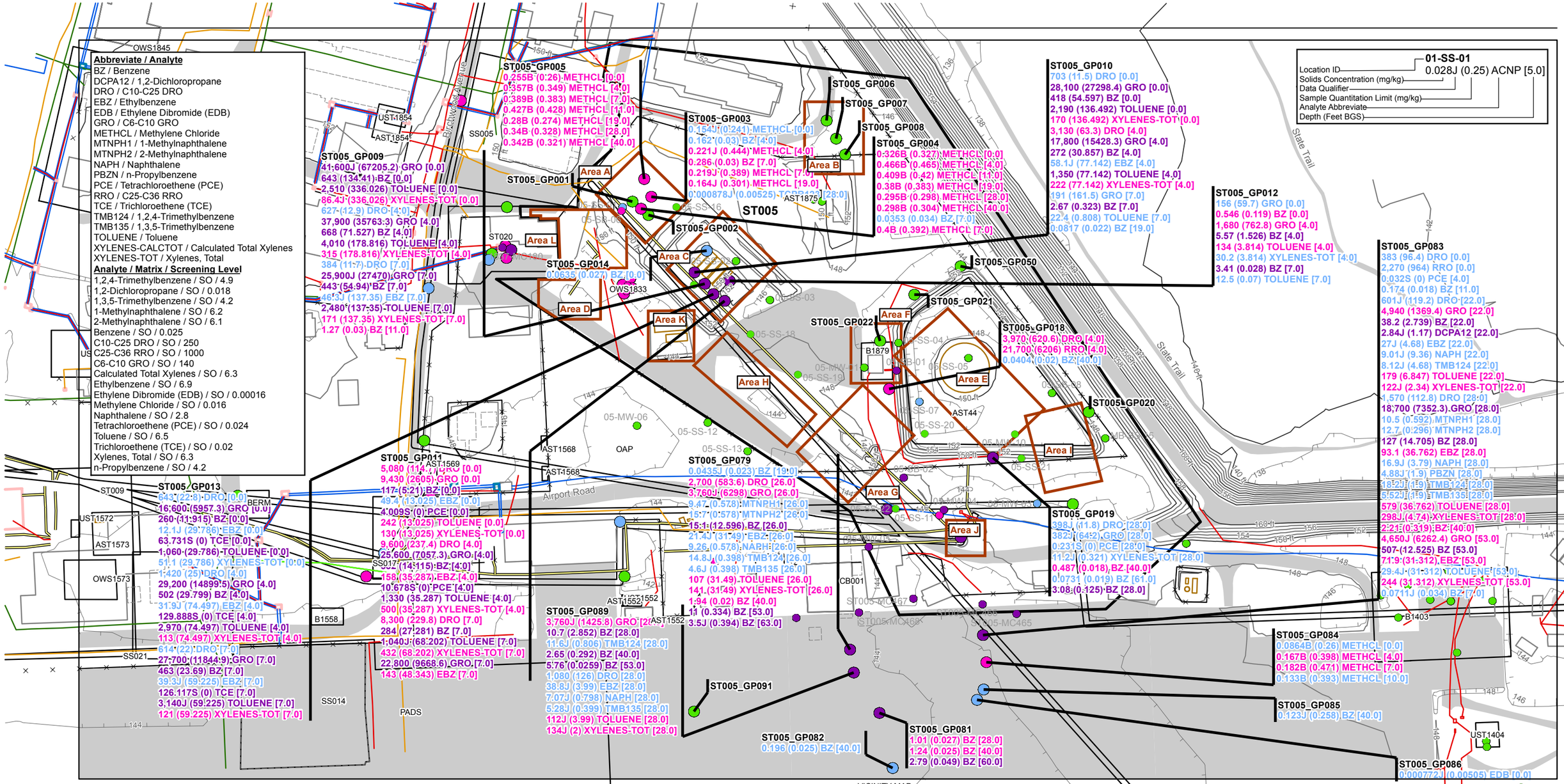

LEGEND

- 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 Exceeds Screening Level (1 to 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

Notes:

1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. Only exceedences shown, non-detects excluded.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

Site Name: ST005
Investigation Type: SC
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011

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Abbreviate / Analyte
DRO / C10-C25 DRO
GRO / C6-C10 GRO
RRO / C25-C36 RRO

Analyte / Matrix / Screening Level
C10-C25 DRO / SO / 250
C25-C36 RRO / SO / 1000
C6-C10 GRO / SO / 140

01-SS-01
Location ID
0.028J (0.25) ACNP [5.0]
Solids Concentration (mg/kg)
Data Qualifier
Sample Quantitation Limit (mg/kg)
Analyte Abbreviate
Depth (Feet BGS)

ST005_GP001
9.7B (11.9) DRO [0.0]
0.83B (14.1) GRO [0.0]
48.8J (119) RRO [0.0]
8.47B (12.2) DRO [4.0]
0.76B (13.7) GRO [4.0]
37J (122) RRO [4.0]
2.95B (12.5) DRO [7.0]
ND (15.5) GRO [7.0]
43.9J (125) RRO [7.0]
ND (12.7) DRO [19.0]
1.42B (12.7) GRO [19.0]
5.8B (127) RRO [19.0]
ND (11) DRO [28.0]
0.83B (11.1) GRO [28.0]
9B (110) RRO [28.0]
ND (11.3) DRO [40.0]
0.56B (10.9) GRO [40.0]
6.3B (113) RRO [40.0]

ST005_GP002
21.3 (12.4) DRO [0.0]
0.87B (12.7) GRO [0.0]
60.5J (124) RRO [0.0]
1.39B (13.9) GRO [4.0]
14.9 (12.5) DRO [7.0]
4.98J (14.3) GRO [7.0]
72.6J (125) RRO [7.0]
ND (11.9) DRO [19.0]
1.08B (11.8) GRO [19.0]
5.8B (119) RRO [19.0]
5.66B (11.4) DRO [28.0]
0.82B (13.1) GRO [28.0]
15.2B (114) RRO [28.0]
6.52B (11.8) DRO [40.0]
ND (10.9) GRO [40.0]
30.4J (118) RRO [40.0]
9.93B (12.1) DRO [4.0]
48.6J (121) RRO [4.0]

ST005_GP003
7.38B (10.6) DRO [0.0]
ND (9) GRO [0.0]
32.4J (106) RRO [0.0]
10B (11.9) DRO [4.0]
10.6J (14.8) GRO [4.0]
41.9J (119) RRO [4.0]
10.8B (12.6) DRO [7.0]
20.6 (14.9) GRO [7.0]
45.7J (126) RRO [7.0]
2.8B (11.4) DRO [19.0]
0.88J (12.7) GRO [19.0]
8.1B (114) RRO [19.0]
5.4B (11) DRO [28.0]
0.79J (11.9) GRO [28.0]
30.2J (110) RRO [28.0]
ND (11.2) DRO [40.0]
1.34J (10.8) GRO [40.0]
8.8B (112) RRO [40.0]

ST005_GP004
8.99B (10.4) DRO [0.0]
1.55J (10.2) GRO [0.0]
37.6J (104) RRO [0.0]
7.3B (12.2) DRO [4.0]
ND (16.3) GRO [4.0]
37.7J (122) RRO [4.0]
62.2J (121) RRO [7.0]
8.66B (13) DRO [11.0]
1.24J (17.9) GRO [11.0]
38.4J (130) RRO [11.0]
ND (11) DRO [19.0]
0.66J (11) GRO [19.0]
ND (110) RRO [19.0]
ND (11.6) DRO [28.0]
1.07J (12.4) GRO [28.0]
10B (116) RRO [28.0]
ND (10.7) DRO [40.0]
ND (10.6) GRO [40.0]
8.5B (107) RRO [40.0]
13.4 (12.7) DRO [7.0]
2.49J (17.1) GRO [7.0]

ST005_GP005
4.97B (9.7) DRO [0.0]
0.67J (9.5) GRO [0.0]
23.8J (97) RRO [0.0]
7.67B (11.9) DRO [4.0]
ND (13.1) GRO [4.0]
33.3J (119) RRO [4.0]
10.5B (11.4) DRO [7.0]
0.95J (14.1) GRO [7.0]
77.6J (114) RRO [7.0]
3.9B (115) DRO [11.0]
ND (15.5) GRO [11.0]
17B (117) RRO [11.0]
ND (10.9) DRO [19.0]
0.71J (10.1) GRO [19.0]
8B (109) RRO [19.0]
ND (11.7) DRO [28.0]
ND (11.6) GRO [28.0]
6.7B (117) RRO [28.0]
0.86J (11.1) GRO [40.0]
ND (11.1) DRO [40.0]
9B (111) RRO [40.0]

ST005_GP006
10.9 (9.9) DRO [0.0]
1.34J (9.4) GRO [0.0]
39.3J (99) RRO [0.0]
4.76J (12.9) DRO [4.0]
1.13J (15.1) GRO [4.0]
35.7J (129) RRO [4.0]
ND (12.5) DRO [7.0]
ND (14) GRO [7.0]
17.1J (125) RRO [7.0]
4.74J (11.5) DRO [11.0]
ND (12.4) GRO [11.0]
21.4J (115) RRO [11.0]
ND (11.3) DRO [19.0]
ND (12) GRO [19.0]
6.5B (113) RRO [19.0]
ND (10.6) DRO [28.0]
ND (11.3) GRO [28.0]
7.8B (106) RRO [28.0]
ND (10.1) DRO [40.0]
0.66J (7.6) GRO [40.0]
5.3B (101) RRO [40.0]

ST005_GP007
12.4 (10.7) DRO [0.0]
2.18J (11) GRO [0.0]
48J (107) RRO [0.0]
9.96J (12.5) DRO [4.0]
0.95J (13.7) GRO [4.0]
57J (125) RRO [4.0]
ND (13.3) DRO [7.0]
ND (15.6) GRO [7.0]
20.2J (133) RRO [7.0]
ND (11.9) DRO [11.0]
0.88J (12.8) GRO [11.0]
11.8B (119) RRO [11.0]
ND (12.1) DRO [19.0]
ND (11.8) GRO [19.0]
7.8B (121) RRO [19.0]
ND (11.6) DRO [28.0]
ND (12.2) GRO [28.0]
7.2B (116) RRO [28.0]
ND (10.2) DRO [40.0]
ND (8.3) GRO [40.0]
6.3B (102) RRO [40.0]

ST005_GP008
59.6J (10.6) DRO [0.0]
360 (106) RRO [0.0]
12.4 (12.4) DRO [4.0]
1.25J (15) GRO [4.0]
64J (124) RRO [4.0]
5.72J (12.6) DRO [7.0]
2.9J (16.8) GRO [7.0]
29.2J (126) RRO [7.0]
3.31J (12) DRO [11.0]
1.58J (16.5) GRO [11.0]
17.4J (120) RRO [11.0]
ND (11.6) DRO [19.0]
1.14J (14.9) GRO [19.0]
6.6B (116) RRO [19.0]
9.92J (11.8) DRO [28.0]
0.93J (16.6) GRO [28.0]
59.2J (118) RRO [28.0]
ND (10.6) DRO [40.0]
ND (10.8) GRO [40.0]
4.6B (106) RRO [40.0]
ND (11.2) GRO [0.0]

ST005_GP009
240 (10.6) DRO [0.0]
41,600J (67205.2) GRO [0.0]
45.5J (106) RRO [0.0]
527 (12.3) DRO [4.0]
37,900 (35763.3) GRO [4.0]
104J (129) RRO [4.0]
384 (11.7) DRO [7.0]
25,900J (27470) GRO [7.0]
73.1J (117) RRO [7.0]
14.3B (11.5) DRO [11.0]
35.5 (15.1) GRO [11.0]
31.3J (115) RRO [11.0]
ND (11) DRO [19.0]
1.88B (9.7) GRO [19.0]
9.6B (110) RRO [19.0]
ND (11.9) DRO [28.0]
1.03B (12) GRO [28.0]
14.1B (119) RRO [28.0]
ND (11.5) DRO [40.0]
0.87B (10.8) GRO [40.0]
9.4B (115) RRO [40.0]

ST005_GP010
703 (11.5) DRO [0.0]
28,100 (27298.4) GRO [0.0]
379J (115) RRO [0.0]
3,130 (63.3) DRO [4.0]
17,800 (15428.3) GRO [4.0]
80.9B (633) RRO [4.0]
27.2 (11.8) DRO [7.0]
191 (161.5) GRO [7.0]
45.5J (118) RRO [7.0]
ND (11.1) DRO [19.0]
9.1J (10.8) GRO [19.0]
9.2B (111) RRO [19.0]
ND (12.2) DRO [28.0]
0.75B (11.1) GRO [28.0]
12.3B (122) RRO [28.0]
ND (10.8) DRO [40.0]
0.79B (10.5) GRO [40.0]
9.2B (108) RRO [40.0]

ST005_GP011
6,080 (114.7) DRO [0.0]
9,430 (2605) GRO [0.0]
60.3B (1147) RRO [0.0]
9,600 (237.4) DRO [4.0]
25,600 (7057.3) GRO [4.0]
172B (2374) RRO [4.0]
8,300 (229.8) DRO [7.0]
ND (10.4) DRO [19.0]
2.4B (9.8) GRO [19.0]
9.6B (104) RRO [19.0]
ND (11.5) DRO [28.0]
1.34B (12.6) GRO [28.0]
5.9B (115) RRO [28.0]
ND (11.2) DRO [40.0]
0.88B (10.9) GRO [40.0]
5.5B (112) RRO [40.0]
22,800 (9668.6) GRO [7.0]
159B (2312) RRO [7.0]

ST005_GP012
24.1 (11.3) DRO [0.0]
150 (65.7) GRO [0.0]
63.8J (113) RRO [0.0]
48.9 (12.6) DRO [4.0]
1,680 (762.8) GRO [4.0]
39.7J (126) RRO [4.0]
19.8 (11.9) DRO [7.0]
103 (13.9) GRO [7.0]
63J (119) RRO [7.0]
ND (11.3) DRO [19.0]
2J (9.9) GRO [19.0]
10B (113) RRO [19.0]
ND (11.5) DRO [28.0]
0.93B (9.7) GRO [28.0]
13B (115) RRO [28.0]
ND (11) DRO [40.0]
0.66B (12.4) GRO [40.0]
10.2B (110) RRO [40.0]

ST005_GP013
6,135 (22.8) DRO [0.0]
16,600 (5957.3) GRO [0.0]
31.8B (228) RRO [0.0]
1,420 (23) GRO [4.0]
29,200 (14899.5) GRO [4.0]
73.7J (250) RRO [4.0]
814 (22) DRO [7.0]
27,700 (11844.9) GRO [7.0]
50.8J (220) RRO [7.0]
ND (11) DRO [19.0]
1.9J (12.7) GRO [19.0]
5.6B (110) RRO [19.0]
ND (10.7) DRO [28.0]
1.3J (13.3) GRO [28.0]
15.8B (107) RRO [28.0]
ND (11.2) DRO [40.0]
1.81J (11.9) GRO [40.0]
6.6B (112) RRO [40.0]

ST005_GP014
28.1 (11.5) DRO [0.0]
8.73J (13.6) GRO [0.0]
58.1J (115) RRO [0.0]
9.39J (11.4) DRO [4.0]
2.25J (14.6) GRO [4.0]
47.4J (114) RRO [4.0]
11.7J (12.5) DRO [7.0]
1.66J (14.7) GRO [7.0]
49.5J (125) RRO [7.0]
8.07J (12.1) DRO [11.0]
1.43J (15.2) GRO [11.0]
33.2J (121) RRO [11.0]
ND (11.3) DRO [19.0]
1.24J (12.3) GRO [19.0]
11.6B (113) RRO [19.0]
6.92J (11.9) DRO [28.0]
2.29J (14.3) GRO [28.0]
39.4J (119) RRO [28.0]
ND (11.1) DRO [40.0]
0.92J (10.6) GRO [40.0]
7.1B (111) RRO [40.0]

ST005_GP018
19.4 (10.9) DRO [0.0]
1.19J (10.8) GRO [0.0]
80.7J (109) RRO [0.0]
3,970 (620.6) DRO [4.0]
68.2 (15.2) GRO [4.0]
21,700 (6208) RRO [4.0]
9.94J (12.1) DRO [7.0]
5.56J (17.1) GRO [7.0]
65.5J (121) RRO [7.0]
ND (11.2) DRO [19.0]
6.27J (14.2) GRO [19.0]
13.4B (112) RRO [19.0]
3.92J (11.5) DRO [28.0]
1.67J (13) GRO [28.0]
8B (115) RRO [28.0]
1.91J (10.4) DRO [40.0]
1.27J (9.8) GRO [40.0]
8.1B (104) RRO [40.0]

ST005_GP019
7.84J (10.2) DRO [0.0]
3.07J (8.9) GRO [0.0]
28.8J (102) RRO [0.0]
9.59J (12.5) DRO [4.0]
2.25J (14.6) GRO [4.0]
50.3J (125) RRO [4.0]
6.81J (11.5) DRO [7.0]
1.36J (13.4) GRO [7.0]
25.1B (115) RRO [7.0]
ND (10.9) DRO [11.0]
1.28J (12) GRO [11.0]
11.9B (109) RRO [11.0]
128 (11.8) DRO [19.0]
1.21J (12.4) GRO [19.0]
10.7B (118) RRO [19.0]
398J (11.8) DRO [28.0]
382J (64.2) GRO [28.0]
7.3B (118) RRO [28.0]
ND (10.7) DRO [40.0]
7.6J (9.1) GRO [40.0]
5.7B (107) RRO [40.0]
ND (10.3) DRO [61.0]
1.44J (9.7) GRO [61.0]
4.4B (103) RRO [61.0]

ST005_GP020
6.82J (10.8) DRO [0.0]
1.64J (14) GRO [0.0]
32.9J (108) RRO [0.0]
1.67J (11) DRO [4.0]
1.82J (16.2) GRO [4.0]
8.6B (110) RRO [4.0]
4.71J (11.6) DRO [7.0]
1.46J (17.4) GRO [7.0]
22.2J (116) RRO [7.0]
2.12J (11.4) DRO [19.0]
3.54J (14.2) GRO [19.0]
8.5B (114) RRO [19.0]
ND (11.5) DRO [28.0]
0.88J (13.7) GRO [28.0]
6.4B (115) RRO [28.0]
ND (11) DRO [40.0]
ND (11.2) GRO [40.0]
8B (110) RRO [40.0]

ST005_GP021
9.63J (10.7) DRO [0.0]
0.9J (12.6) GRO [0.0]
40.6J (107) RRO [0.0]
ND (11.7) DRO [4.0]
1.07J (15.6) GRO [4.0]
11.4B (117) RRO [4.0]
ND (12.1) DRO [7.0]
1.49J (16.4) GRO [7.0]
12.6B (121) RRO [7.0]
4.11J (13.9) GRO [19.0]
13.4B (118) RRO [19.0]
ND (12.5) DRO [28.0]
1.24J (14.1) GRO [28.0]
7.1B (125) RRO [28.0]
ND (10.1) DRO [40.0]
0.63J (9.7) GRO [40.0]
11.4B (101) RRO [40.0]
ND (11.5) DRO [19.0]

ST005_GP050
ND (11.7) DRO [0.0]
1.04J (13.4) GRO [0.0]
32.5J (117) RRO [0.0]
4.58J (12.1) DRO [4.0]
1.12J (15.3) GRO [4.0]
26.1J (121) RRO [4.0]
ND (12.7) DRO [7.0]
1.32J (14.9) GRO [7.0]
16.4B (127) RRO [7.0]
ND (11.8) DRO [11.0]
ND (12.7) GRO [11.0]
11B (118) RRO [11.0]
ND (11.6) DRO [19.0]
1.16J (13.4) GRO [19.0]
10B (116) RRO [19.0]
16.3 (13.6) DRO [28.0]
1.22J (16.6) GRO [28.0]
91.9J (136) RRO [28.0]
ND (10.5) DRO [40.0]
ND (11.5) GRO [40.0]
10.7B (105) RRO [40.0]

ST005_GP022
15.7 (10.5) DRO [0.0]
1.56J (9.6) GRO [0.0]
7.54J (11.6) DRO [4.0]
2.92J (14.1) GRO [4.0]
16.2B (116) RRO [4.0]
7.14J (12.8) DRO [7.0]
2.26J (15.8) GRO [7.0]
28.9J (128) RRO [7.0]
4.8J (11.4) DRO [11.0]
1.24J (10.4) GRO [11.0]
7.6B (114) RRO [11.0]
4.83J (10.9) DRO [19.0]
5.26J (11.8) GRO [19.0]
13.8B (109) RRO [19.0]
ND (11.6) DRO [28.0]
1.78J (12.6) GRO [28.0]
5B (116) RRO [28.0]
3.56J (10.7) DRO [40.0]
1.36J (10.7) GRO [40.0]
9.9B (107) RRO [40.0]
43.6J (100) RRO [0.0]

ST005_GP079
9.32B (9.6) DRO [0.0]
ND (11.3) GRO [0.0]
43.6J (96) RRO [0.0]
11B (12.6) DRO [4.0]
ND (15.1) GRO [4.0]
41.2J (126) RRO [4.0]
9.7B (12.6) DRO [7.0]
ND (17.4) GRO [7.0]
37.7J (126) RRO [7.0]
6.02B (12.8) DRO [11.0]
ND (14.7) GRO [11.0]
20.9B (128) RRO [11.0]
144 (10.4) DRO [19.0]
12.4J (11.4) GRO [19.0]
8.9B (104) RRO [19.0]
2,700 (583.6) DRO [26.0]
3,760J (6298) GRO [26.0]
27.1B (5836) RRO [26.0]
4.37B (10.6) DRO [40.0]
14.5 (10.2) GRO [40.0]
7B (106) RRO [40.0]
10.7B (11.8) DRO [53.0]
55.6 (12.7) GRO [53.0]
44.8J (118) RRO [53.0]
4.89B (11.1) DRO [63.0]
8.44J (12) GRO [63.0]
8.9B (111) RRO [63.0]

ST005_GP091
22.6 (9.6) DRO [0.0]
0.64J (9.6) GRO [0.0]
127 (96) RRO [0.0]
23.7 (11.3) DRO [4.0]
0.99J (14.8) GRO [4.0]
82.8J (113) RRO [4.0]
3.6B (12.5) DRO [7.0]
17.1B (125) RRO [7.0]
ND (11.9) DRO [11.0]
ND (14.8) GRO [11.0]
11.6B (119) RRO [11.0]
ND (10.3) DRO [19.0]
ND (12.1) GRO [19.0]
6.5B (103) RRO [19.0]
ND (10.9) DRO [27.0]
ND (12.6) GRO [27.0]
13.9B (109) RRO [27.0]
ND (11.1) DRO [40.0]
ND (13.7) GRO [40.0]
11.9B (111) RRO [40.0]
ND (16.3) GRO [7.0]

ST005_GP089
18B (9.9) DRO [0.0]
ND (10.6) GRO [0.0]
161 (99) RRO [0.0]
9.29B (11.4) DRO [4.0]
ND (13.8) GRO [4.0]
67.8J (114) RRO [4.0]
6.83B (12.5) DRO [7.0]
ND (15.8) GRO [7.0]
33.3J (125) RRO [7.0]
ND (10.5) DRO [11.0]
ND (9) GRO [11.0]
8.9B (105) RRO [11.0]
ND (11.5) DRO [19.0]
ND (13.1) GRO [19.0]
4.5J (115) RRO [19.0]
3,760J (1425.8) GRO [28.0]
ND (116) RRO [28.0]
2.77B (10.3) DRO [40.0]
17.3 (10.7) GRO [40.0]
ND (103) RRO [40.0]
3.19B (11.2) DRO [53.0]
17.5J (57.3) GRO [53.0]
5.9J (112) RRO [53.0]
1,080 (126) DRO [28.0]

ST005_GP082
18.2B (11) DRO [0.0]
1.47B (12) GRO [0.0]
159 (110) RRO [0.0]
1.11B (14.1) GRO [4.0]
ND (11.7) DRO [7.0]
0.97B (13.9) GRO [7.0]
9.4B (117) RRO [7.0]
ND (11.3) DRO [11.0]
0.88B (12.7) GRO [11.0]
7.8B (113) RRO [11.0]
ND (10.6) DRO [20.0]
ND (9.6) GRO [20.0]
ND (106) RRO [20.0]
ND (11.3) DRO [28.0]
ND (13.2) GRO [28.0]
ND (113) RRO [28.0]
5.37B (12) DRO [4.0]
25.8J (120) RRO [4.0]
ND (10.3) DRO [40.0]
1.61B (12.7) GRO [40.0]
6.8B (103) RRO [40.0]

ST005_GP081
33.6 (9.8) DRO [0.0]
3.47B (16.8) GRO [0.0]
451 (98) RRO [0.0]
12.5B (11.7) DRO [4.0]
3.23B (17.2) GRO [4.0]
70.3J (117) RRO [4.0]
9.19B (11.6) DRO [7.0]
1.14B (15) GRO [7.0]
43.3J (116) RRO [7.0]
28.9J (112) RRO [11.0]
4.17B (10.8) DRO [20.0]
0.76B (11.5) GRO [20.0]
7.4B (108) RRO [20.0]
3.54B (11.5) DRO [28.0]
3.88J (13.4) GRO [28.0]
20.6B (115) RRO [28.0]
3.83B (10.7) DRO [40.0]
4.98J (12.5) GRO [40.0]
ND (107) RRO [40.0]
ND (11.2) DRO [60.0]
15.3J (24.7) GRO [60.0]
9.6B (112) RRO [60.0]
5.76B (11.4) DRO [11.0]
3.34B (14.2) GRO [11.0]

ST005_GP086
12.2B (9.9) DRO [0.0]
ND (10.9) GRO [0.0]
27.6J (99) RRO [0.0]
20.4B (12.7) DRO [4.0]
0.94B (14) GRO [4.0]
98.5J (127) RRO [4.0]
5.95B (12.2) DRO [7.0]
ND (20.4) GRO [7.0]
24.8J (122) RRO [7.0]
ND (12.8) DRO [11.0]
ND (14.5) GRO [11.0]
7.1B (128) RRO [11.0]

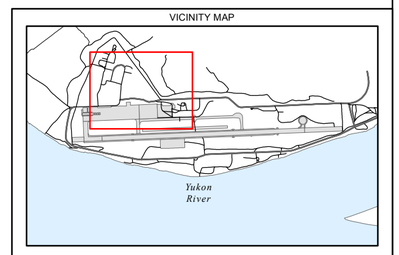
ST005_GP085
62 (10.5) DRO [0.0]
0.77J (11) GRO [0.0]
70.9J (105) RRO [0.0]
1.33J (18.5) GRO [4.0]
69.6J (124) RRO [4.0]
6.52B (12.8) DRO [7.0]
1.49J (19.3) GRO [7.0]
35.4J (128) RRO [7.0]
ND (10.2) DRO [11.0]
0.93J (12.2) GRO [11.0]
11.2B (102) RRO [11.0]
ND (11.8) DRO [18.0]
ND (14.8) GRO [18.0]
9.9B (118) RRO [18.0]
ND (12.4) DRO [28.0]
ND (15.5) GRO [28.0]
7.3B (124) RRO [28.0]
3.95B (10.8) DRO [40.0]
1.83J (11.4) GRO [40.0]
16.5B (108) RRO [40.0]
14.2B (11.8) DRO [4.0]

ST005_GP084
81.4 (10.1) DRO [0.0]
0.72J (10.1) GRO [0.0]
140 (101) RRO [0.0]
7.88B (13.4) DRO [4.0]
1.18J (17.8) GRO [4.0]
43.5J (134) RRO [4.0]
7.31B (13) DRO [7.0]
1.67J (25) GRO [7.0]
38.6J (130) RRO [7.0]
3.64B (11.7) DRO [10.0]
ND (13.4) GRO [10.0]
16.6J (117) RRO [10.0]

ST005_GP083
18.3J (96.4) DRO [0.0]
2.53J (10.2) GRO [0.0]
2,270 (964) RRO [0.0]
17.1B (11.1) DRO [4.0]
42.5 (13.3) GRO [4.0]
35.8J (111) RRO [4.0]
6.94B (12.1) DRO [7.0]
35J (121) RRO [7.0]
2.52B (10.1) DRO [11.0]
2.58J (9.2) GRO [11.0]
5.9J (101) RRO [11.0]
601J (119.2) DRO [22.0]
4,940 (1369.4) GRO [22.0]
ND (1192) RRO [22.0]
1570 (112.8) DRO [28.0]
18,700 (7352.3) GRO [28.0]
ND (1128) RRO [28.0]
ND (10.5) DRO [40.0]
19.7 (11.4) GRO [40.0]
ND (105) RRO [40.0]
ND (11.5) DRO [53.0]
4,650J (6262.4) GRO [53.0]
5.4J (115) RRO [53.0]
2.83J (16.9) GRO [7.0]

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. ND = Non-Detect
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

VICINITY MAP



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
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Exceeds Screening Level (1 to 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

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

0 80 160
Feet

N

Site Name: ST005
Investigation Type: SC
Analytes: Petroleum Hydrocarbons
Media: Soil
SLs: Soil Extent
Data Range: 2011

CH2MHILL

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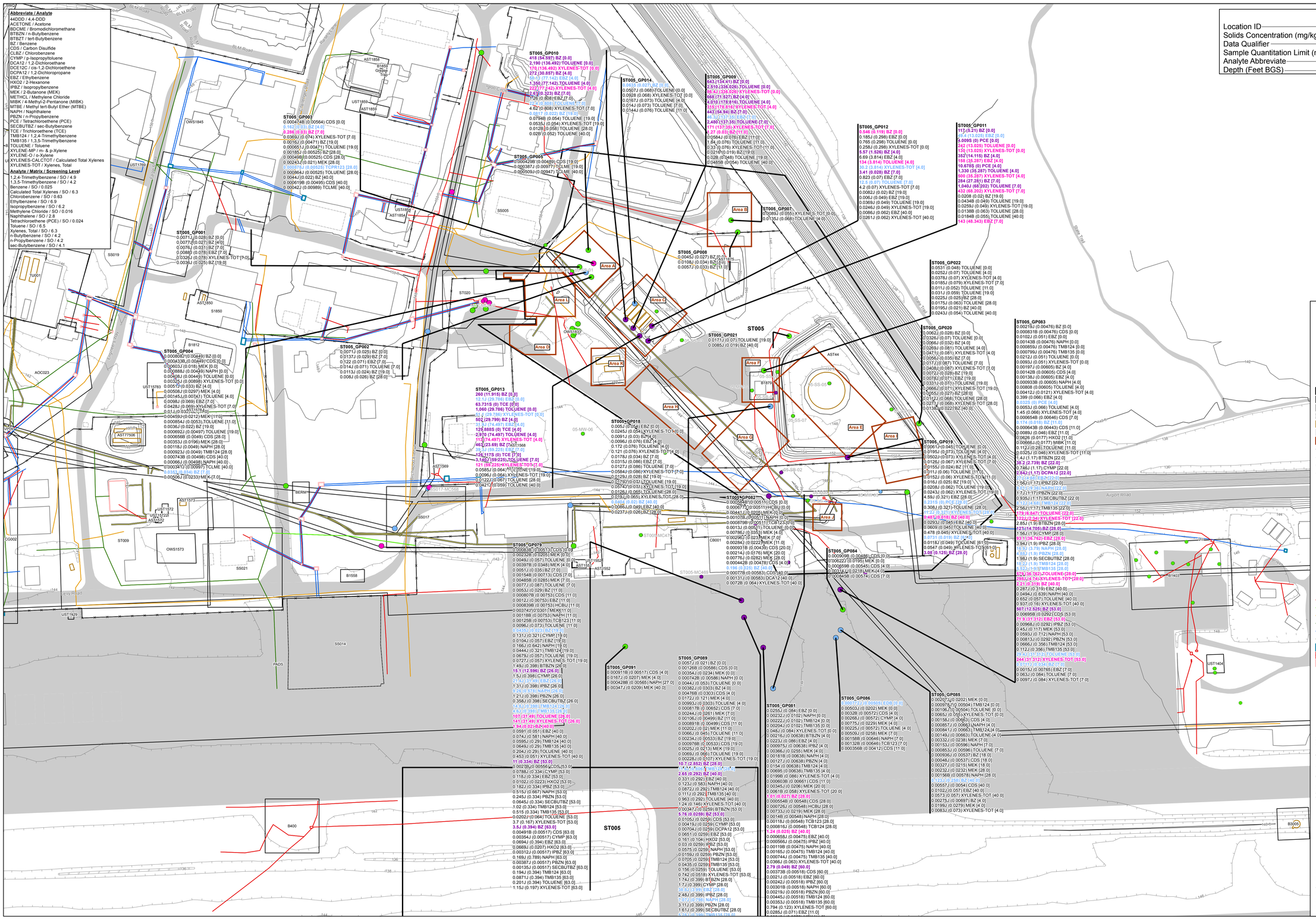

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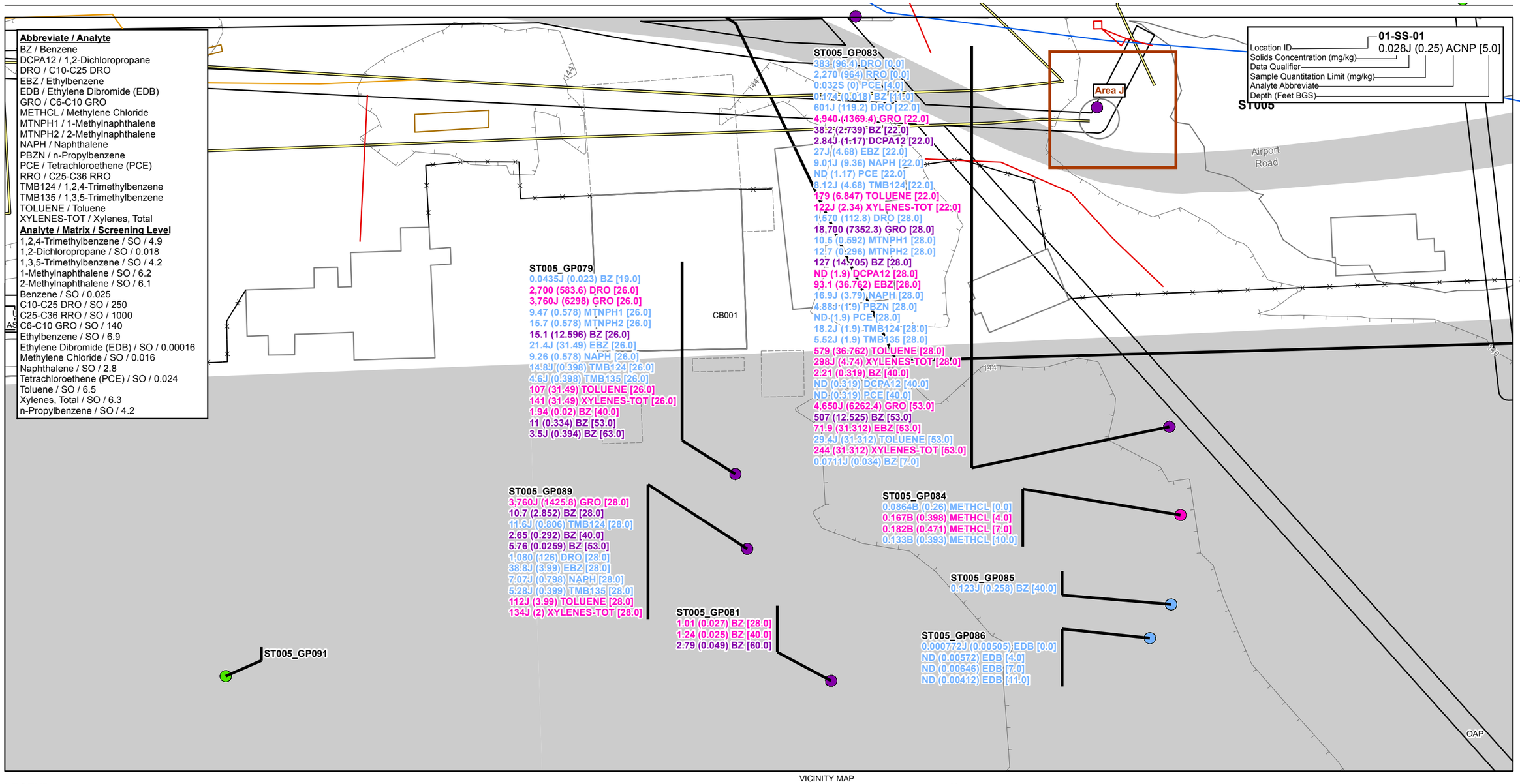


LEGEND

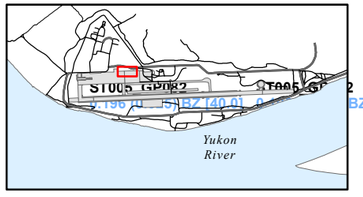
- ST005
- Adjacent Site
- Structure
- Approximate Location of Former Feature
- Fuel Tank
- Airfield Surface or Road
- Source Area
- Fence
- Index Contour
- Intermediate Contour Depression
- Intermediate Contour

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 Exceeds Screening Level (1 to 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)

VICINITY MAP



0 25 50
Feet

N

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedences shown.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

Site Name: ST005; Apron Area
Investigation Type: SC
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011

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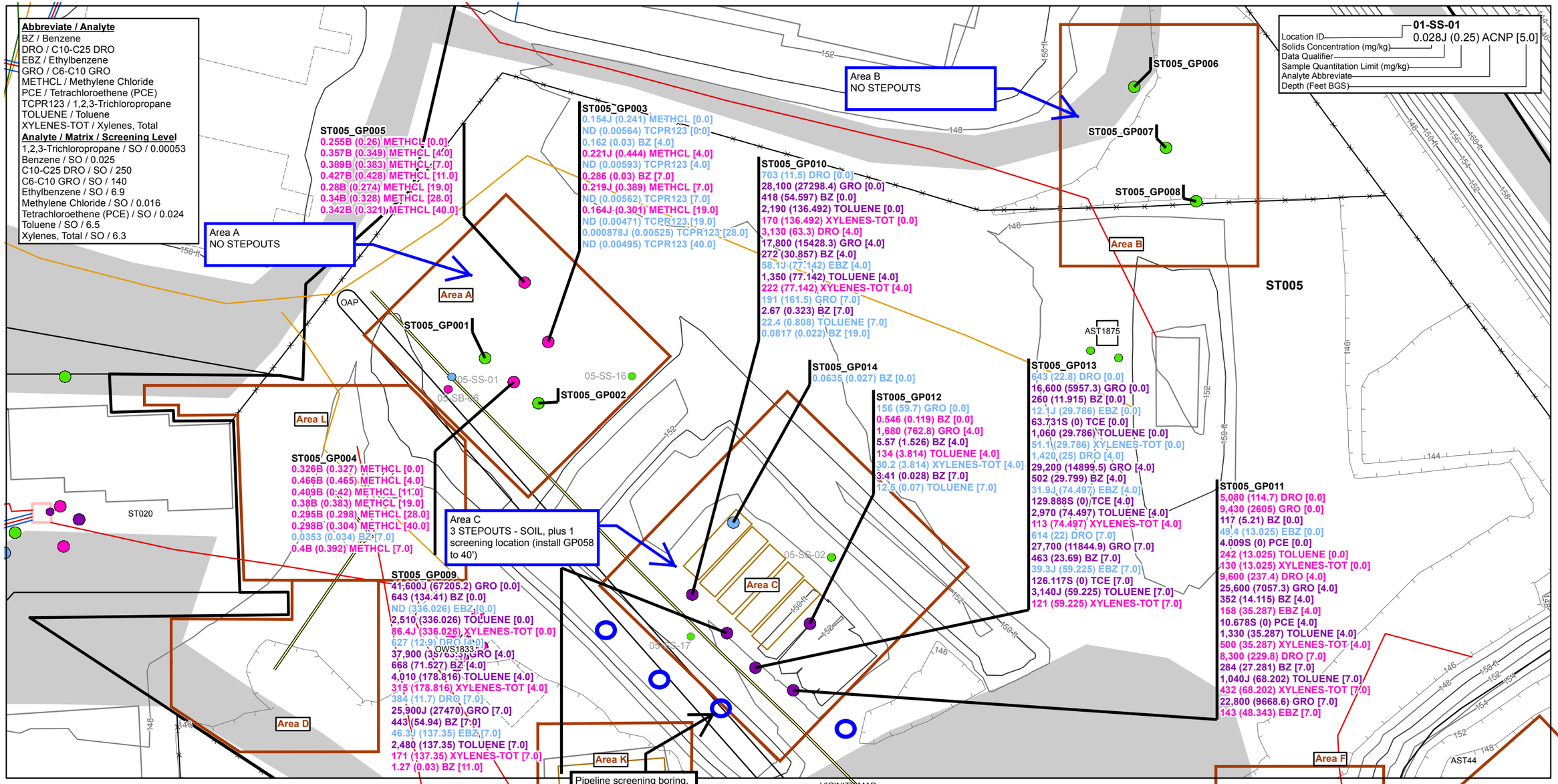


LEGEND

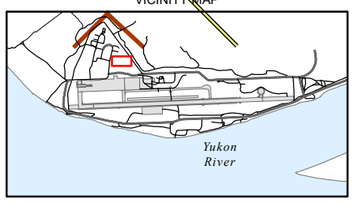
- ST005
- Adjacent Site
- Structure
- Approximate Location of Former Feature
- Fuel Tank
- Airfield Surface or Road
- Source Area
- Fence
- Index Contour
- Intermediate Contour Depression
- Intermediate Contour

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

VICINITY MAP



0 25 50 Feet

N

Notes:

1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedences shown.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

Site Name: ST005; Source Areas A, B, and C
Investigation Type: SC
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011

CH2MHILL

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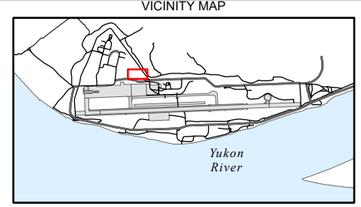
Abbreviate / Analyte
BZ / Benzene
DRO / C10-C25 DRO
GRO / C6-C10 GRO
PCE / Tetrachloroethene (PCE)
RRO / C25-C36 RRO
XYLENES-TOT / Xylenes, Total
Analyte / Matrix / Screening Level
Benzene / SO / 0.025
C10-C25 DRO / SO / 250
C25-C36 RRO / SO / 1000
C6-C10 GRO / SO / 140
Tetrachloroethene (PCE) / SO / 0.024
Xylenes, Total / SO / 6.3

01-SS-01
Location ID
Solids Concentration (mg/kg)
Data Qualifier
Sample Quantitation Limit (mg/kg)
Analyte Abbreviate
Depth (Feet BGS)
0.028J (0.25) ACNP [5.0]

ST005
Area F
Area E
Area H
Area G
Area I
State Trail
OAP
B1879
AST44
05-SS-04
05-SS-05
05-MW-01
05-SB-01
05-MW-10
ST005_GP050
ST005_GP021
ST005_GP022
ST005_GP018
3,970 (620.6) DRO [4.0]
21,700 (6206) RRO [4.0]
0.0404 (0.02) BZ [40.0]
ST005_GP020
ST005_GP019
398J (11.8) DRO [28.0]
382J (64.2) GRO [28.0]
0.231S (0) PCE [28.0]
11.2J (0.321) XYLENES-TOT [28.0]
0.487 (0.018) BZ [40.0]
0.0731 (0.019) BZ [61.0]
3.08 (0.125) BZ [28.0]

VICINITY MAP



0 25 50
Feet

N

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

Notes:
1. J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedences shown
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
7. SL = Screening Level
8. Depth shown is the TOP depth of the sample.
9. 2010 utilities shown are underground only.

Site Name: ST005; Source Areas E and F
Investigation Type: SC
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011

CH2MHILL

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SS015_GP007
SS015_GP008
SS015_GP019
SS015_GP001
SS015_GP004
SS015_GP002
SS015_GP003
SS015_GP005
SS015_GP021
SS015_GP006
SS015_GP016
SS015_GP010
SS015_GP009
SS015_GP017
SS015_GP018
SS015_GP011
SS015_GP012
SS015_GP013
SS015_GP014
SS015_GP015
SS015-MW46
SS015-MW43
SS015-MW45
SS015-MW42
SS015-MW44
SS015-EW02
SS015-MW078
SS015-MW079
SS015-MW48
SS015-MW080
SS015-MW47
SS015-MW50
SS015-MW49
SS015-MW076
SS015-MW075
SS015-MW074
SS015-MW077
SS015-MW73
03-GW-04
BIOR_GP005
BIOR_GP001
BIOR_GP002
BIOR_GP006
BIOR_GP004
BIOR_GP003
BIOR_GP007
SS015-BW01
SS015-BW02
SS015-EW01
PIPE
trail
Former Building 54 Retardent Refill
Approximate direction of groundwater flow
South Dyke Road
Building 183 Abandoned Motel
Building 253 Residential
Building 220 Residential
Building 219 Residential
Building 218 Residential
Building 217 Residential
Building 113 Residential
Building 74 Yukon Fuel Company
Building 159 Fuel Stand
Laundry Mat/Gas Station
Building 277
Old Galena Streets
Building 192 Residential
Building 231 Residential
Building 158 Residential
Building 182 Galena Liquor Store
Building 281 Post Office
Building 59 Residential
Building 221 Residential
Building 196 Commercial
Building 118 Residential
Building 97 Storage
J Street
G Street
8th Avenue
7th Avenue

Note:
1. The groundwater flow direction shown is the predominant direction that persists from late August through breakup of the Yukon River (approximately May 15). Groundwater flow directions during the remainder of the year are directed away from the Yukon River and are oriented approximately due north (exact direction will vary depending on time and location).

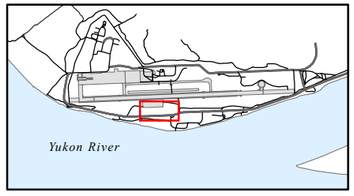
LEGEND

- SS015
- Adjacent Site
- Approximate Location of Former Feature
- Structure
- Airfield Surface or Road
- Bioreactor Installation Area (20' x 20' x 15' Deep)
- Proposed Solar Panel Array Area -- Maximum Height 4'
- Bioreactor piping 1/2" SCH 40 PVC
- Abandoned Fuel Line
- Main Fuel Line
- Index Contour
- Intermediate Contour Depression
- Intermediate Contour
- Monitoring Well
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)

Proposed Sample Location - Step Out #1

- Proposed Soil Sample
- Proposed Groundwater Sample
- Proposed Soil/Groundwater Sample

VICINITY MAP



0 50 100
Feet

N

Step-Out Samples

Site Name: SS015\BIOR
Investigation Type: RI
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: Historical and 2010

CH2MHILL

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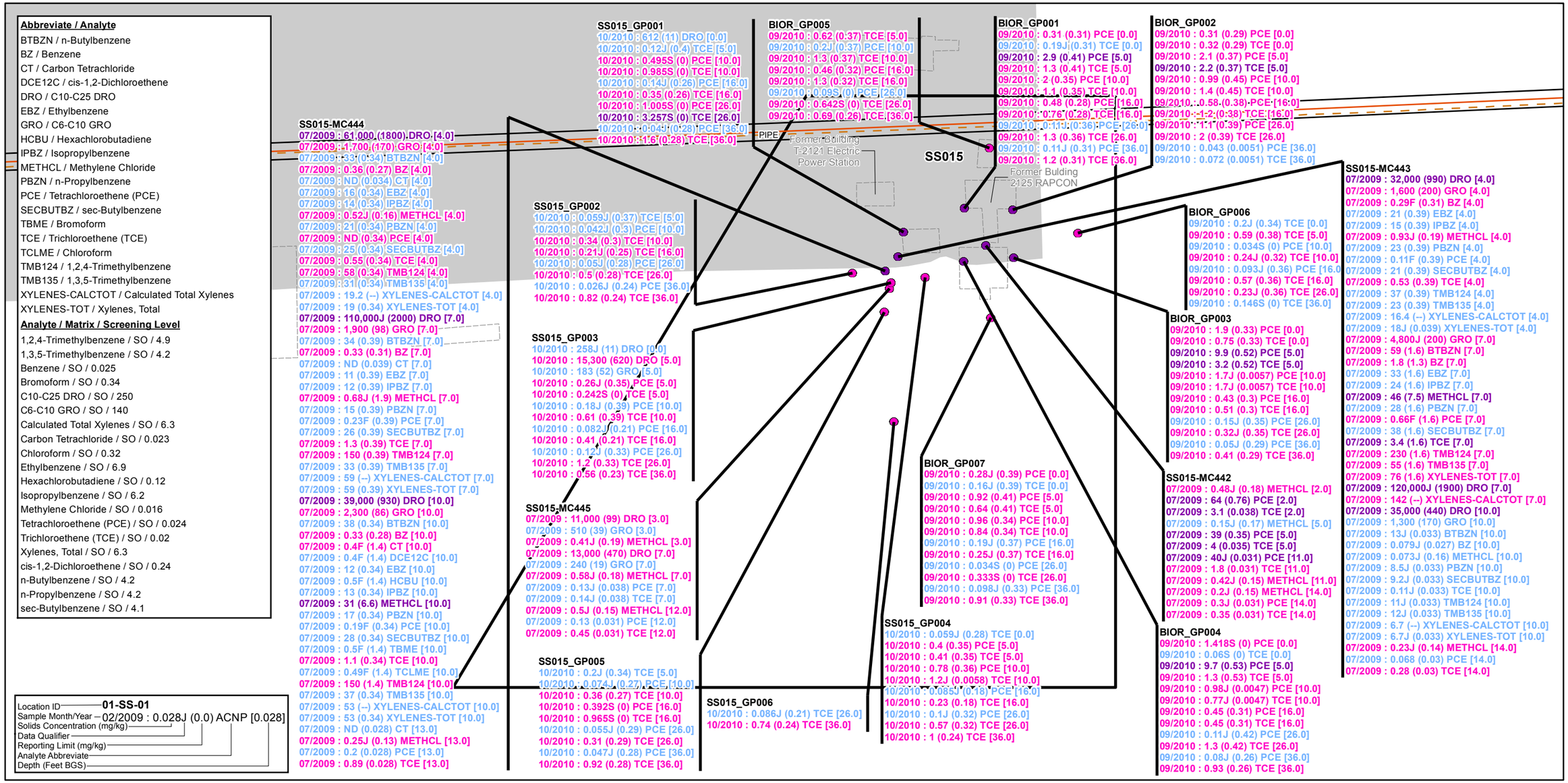
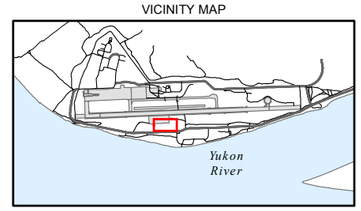


LEGEND

- SS015
- Adjacent Site
- Approximate Location of Former Feature
- Airfield Surface
- Abandoned Fuel Line
- Main Fuel Line
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)

VICINITY MAP



0 30 60
Feet

N

Notes:

1. F - The analyte was positively identified by the lab: the associated numerical value is the approximate concentration of the analyte in the sample.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedances shown.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
6. SL = Screening Level
7. No 2010 utility locate data for this site.

Site Name: SS015
Investigation Type: RI
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: Historical

CH2MHILL

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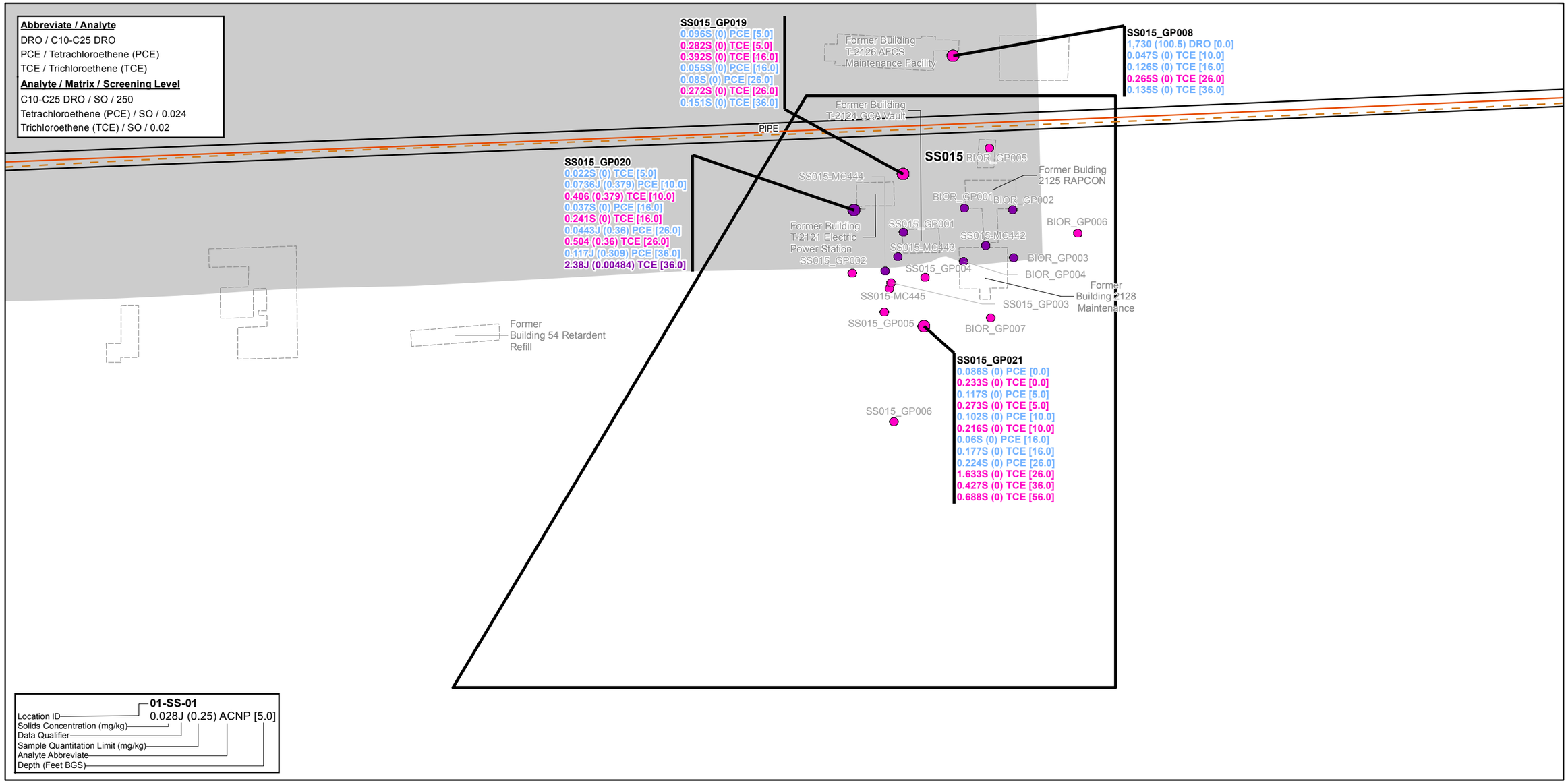
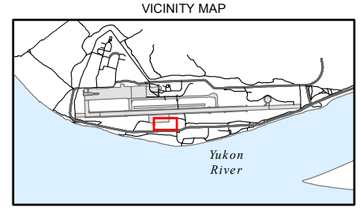


LEGEND

- SS015
- Adjacent Site
- Approximate Location of Former Feature
- Airfield Surface
- Abandoned Fuel Line
- Main Fuel Line
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Historical Sample Exceeds Screening Level (Greater than 10X analyte SL)

VICINITY MAP



0 30 60
Feet

N

Notes:
1. J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedances shown.
3. Screening levels are presented in units of mg/kg for SO (soil) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. Blue Label = Sample Exceeds Screening Level (1 to 10X analyte SL)
6. SL = Screening Level
7. No 2010 utility locate data for this site.

Site Name: SS015
Investigation Type: RI
Analytes: All Exceedences
Media: Soil
SLs: Soil Extent
Data Range: 2011

CH2MHILL

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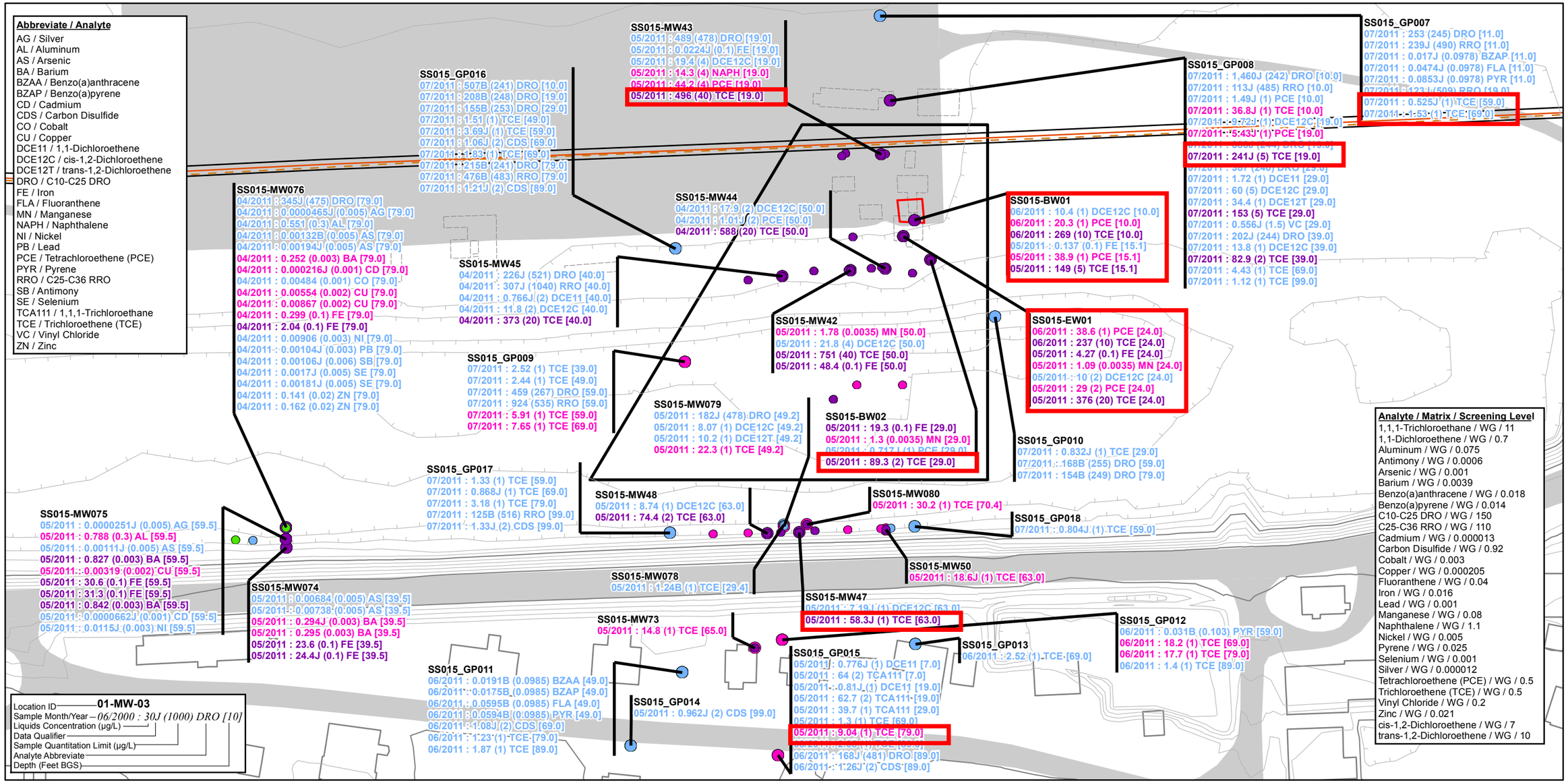


LEGEND

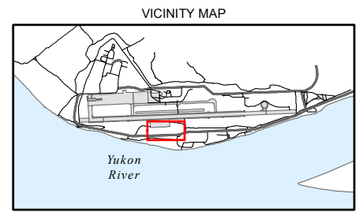
- SS015
- Adjacent Site
- Approximate Location of Former Feature
- Airfield Surface
- Abandoned Fuel Line
- Main Fuel Line
- Bioreactor Installation Area (20' x 20' x 15' Deep)

Contour Interval = 2 Feet

- Index Contour
- Intermediate Contour Depression
- Intermediate Contour

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

VICINITY MAP



0 30 60
Feet

N

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. Only exceedances shown, non-detects excluded.
3. Screening levels are presented in units of ug/L for WG (groundwater) samples.
4. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
5. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
6. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
6. SL = Screening Level
7. No 2010 utility locate data for this site.
8. Methylene chloride was excluded

Site Name: SS015
Investigation Type: RI
Analytes: All Exceedences
Media: Groundwater
SLs: Groundwater Project SLs
Data Range: 2011

CH2MHILL

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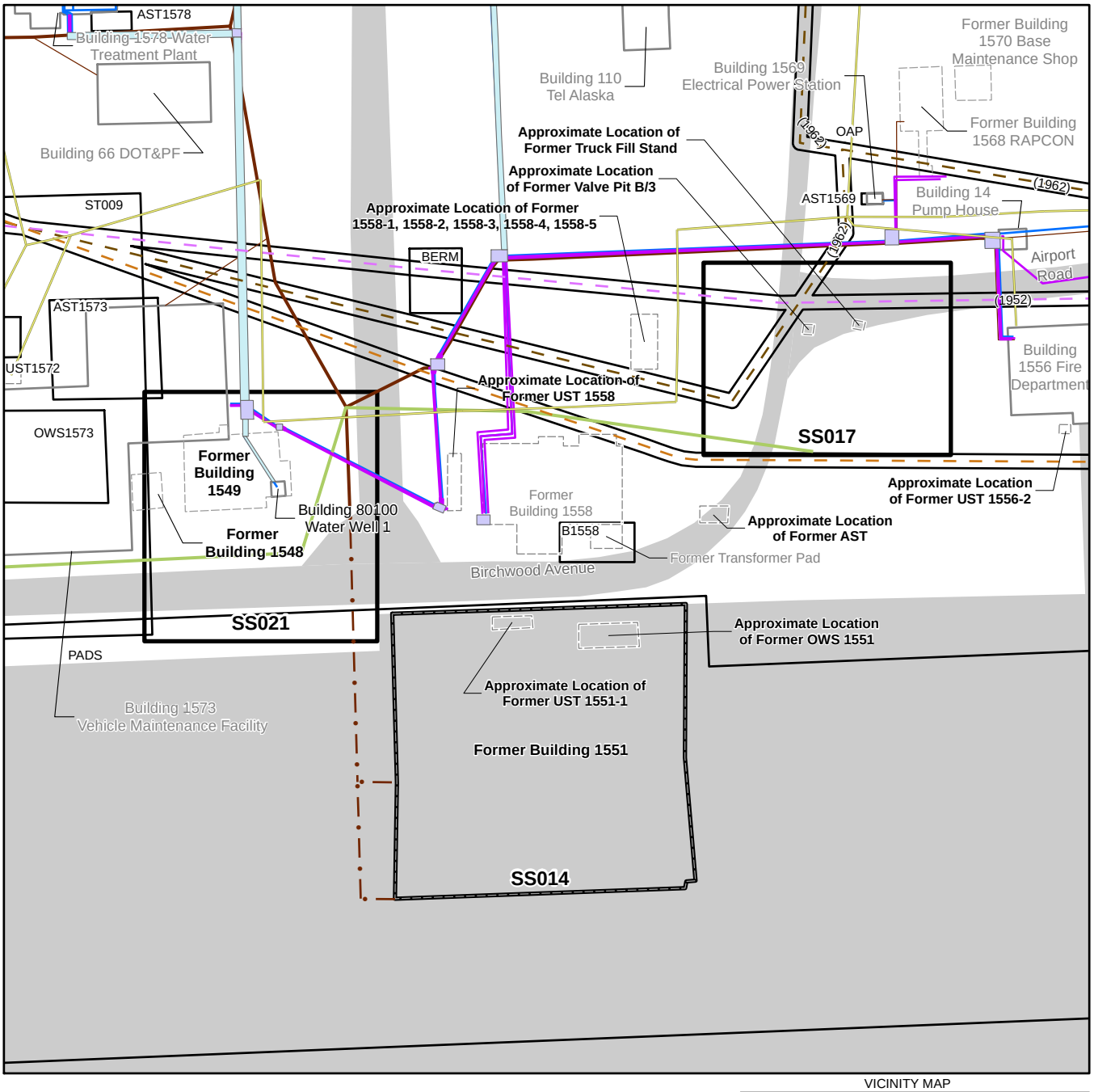
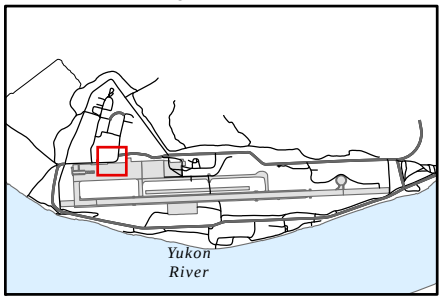


LEGEND

- SS014, SS017, SS021
- Adjacent Site
- Approximate Location of Former Feature
- Airfield Surface or Road
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Abandoned Fuel Line
- Electrical Line
- Heating/Cooling Line
- Main Storm Sewer Line
- Abandoned Wastewater Line
- Main Wastewater Line
- Service Wastewater Line
- Utility Valve Pit

Note:
1. Building numbers were inferred based on available information (maps, reports, and real property records).
3. 'UNK' Building numbers are unknown.

VICINITY MAP



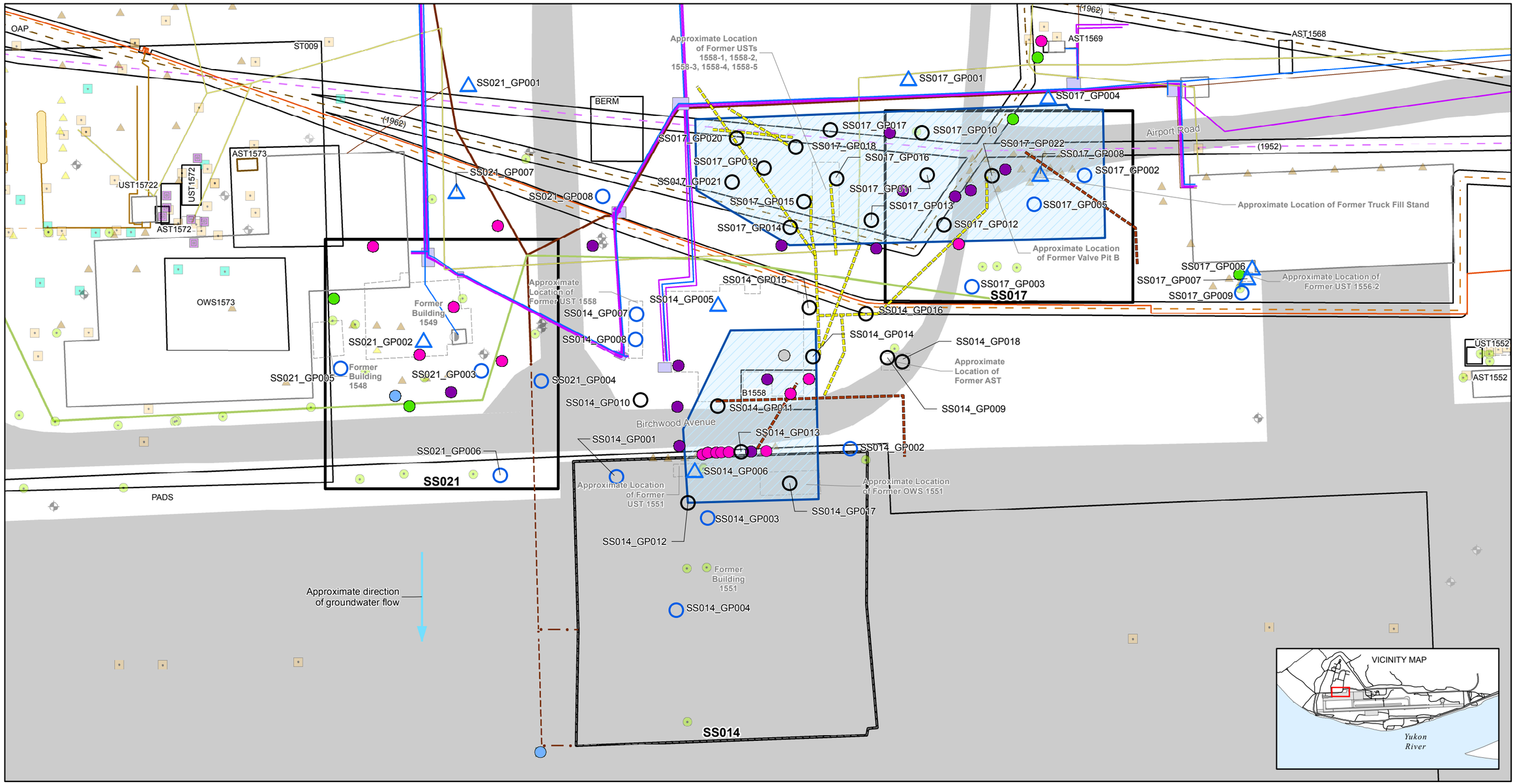
0 55 110
Feet

N

FIGURE D1-SS014, SS017, AND SS021 Site Layout

Work Plan for Site Inspection, Remedial Investigation, and Site Characterization

Former Galena Forward Operating Location, Alaska



LEGEND

- SS014, SS017, SS021
- Adjacent Site
- Airfield Surface or Road
- Approximate Location of Former Feature
- Structure
- Proposed Excavation Limits
- Abandoned Fuel Line (1952)
- Abandoned Fuel Line (1962)
- Electrical Line
- Heating/Cooling Line
- Main Storm Sewer Line
- Abandoned Wastewater Line
- Main Wastewater Line
- Service Wastewater Line
- Water Line
- Manhole Junction Area
- Valve Pit
- Fuel Tank
- Active Fillstand Area
- Removed Fillstand Area

Historical Sample Location

- Excavation Sample
- Soil Boring
- Surface Soil Sample
- Hydro Punch
- Monitoring Well
- Abandoned Monitoring Well
- Production Well
- Soil Vapor Sample
- Vapor Monitoring Point

- Proposed Soil Sample (Source Area Delineation)
- Proposed Soil Sample (Nature and Extent Delineation)
- Proposed Soil/Groundwater Sample
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Exceeds Screening Level (1 to 10X analyte SL)
- Sample Does Not Exceed Screening Level
- All Records are Non-Detect

Other Utilities Identified from Geophysical Survey

- Underground Pipe, Inactive
- Underground Conduit, Inactive

Note:
1. Exceedance determined using VOC and non-VOC soil data frmo 1992 and 2007 to 2010.
2. The groundwater flow direction shown is the predominant direction that persists from late August through breakup of the Yukon River (approximately May 15). Groundwater flow directions during the remainder of the year are directed away from the Yukon River and are oriented approximately due north (exact direction will vary depending on time and location).

0 35 70
Feet

N

FIGURE D12-SS014, SS017, AND SS021
Proposed Sample Locations
Work Plan for Site Inspection, Remedial Investigation, and Site Characterization
Former Galena Forward Operating Location, Alaska

CH2MHILL

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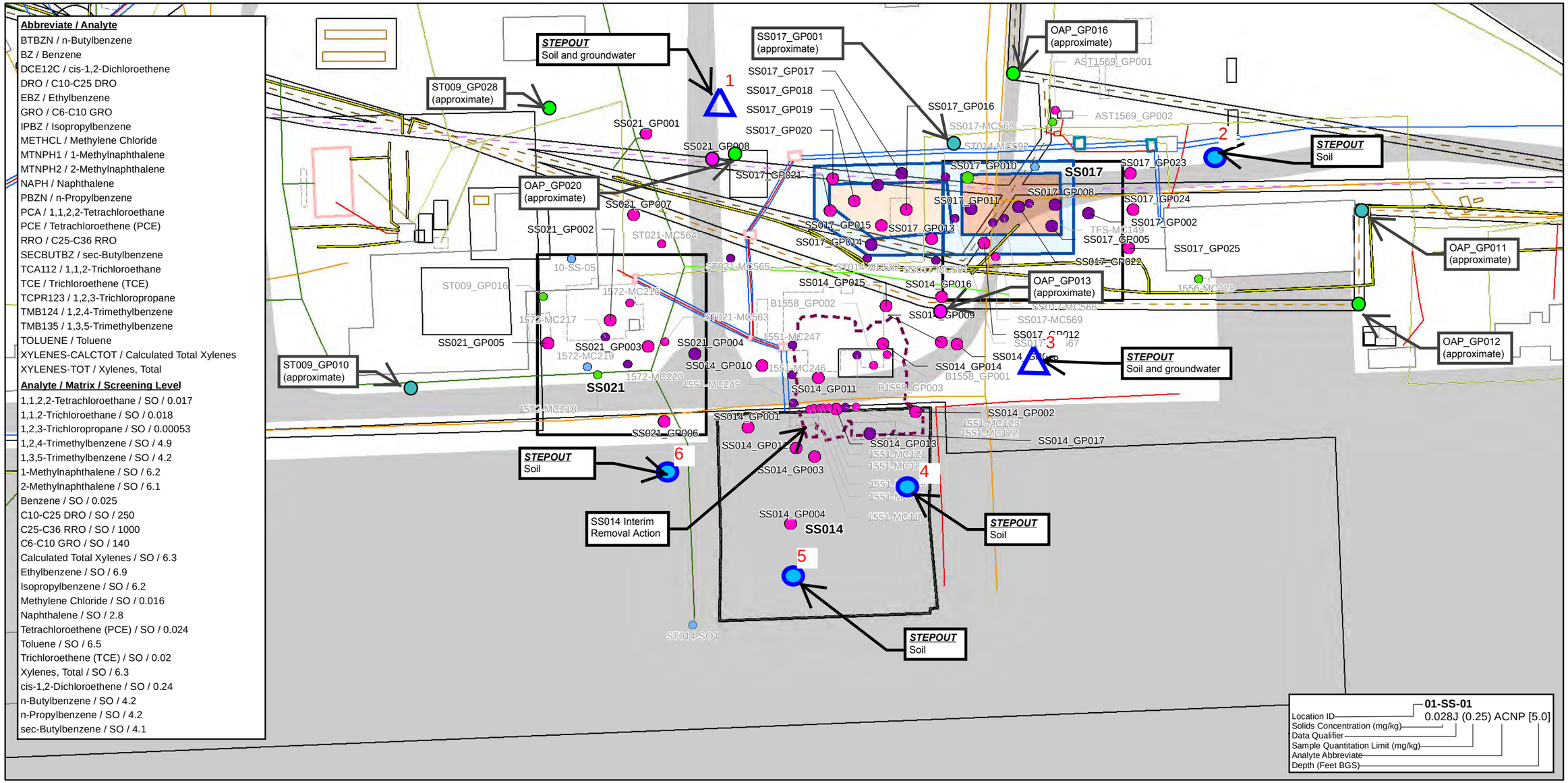
Abbreviate / Analyte
BTBZN / n-Butylbenzene
BZ / Benzene
DCE12C / cis-1,2-Dichloroethene
DRO / C10-C25 DRO
EBZ / Ethylbenzene
GRO / C6-C10 GRO
IPBZ / Isopropylbenzene
METHCL / Methylene Chloride
MTNPH1 / 1-Methylnaphthalene
MTNPH2 / 2-Methylnaphthalene
NAPH / Naphthalene
PBZN / n-Propylbenzene
PCA / 1,1,2,2-Tetrachloroethane
PCE / Tetrachloroethene (PCE)
RRO / C25-C36 RRO
SECBUTBZ / sec-Butylbenzene
TCA112 / 1,1,2-Trichloroethane
TCE / Trichloroethene (TCE)
TCPR123 / 1,2,3-Trichloropropane
TMB124 / 1,2,4-Trimethylbenzene
TMB135 / 1,3,5-Trimethylbenzene
TOLUENE / Toluene
XYLENES-CALCTOT / Calculated Total Xylenes
XYLENES-TOT / Xylenes, Total

Analyte / Matrix / Screening Level
1,1,2,2-Tetrachloroethane / SO / 0.017
1,1,2-Trichloroethane / SO / 0.018
1,2,3-Trichloropropane / SO / 0.00053
1,2,4-Trimethylbenzene / SO / 4.9
1,3,5-Trimethylbenzene / SO / 4.2
1-Methylnaphthalene / SO / 6.2
2-Methylnaphthalene / SO / 6.1
Benzene / SO / 0.025
C10-C25 DRO / SO / 250
C25-C36 RRO / SO / 1000
C6-C10 GRO / SO / 140
Calculated Total Xylenes / SO / 6.3
Ethylbenzene / SO / 6.9
Isopropylbenzene / SO / 6.2
Methylene Chloride / SO / 0.016
Naphthalene / SO / 2.8
Tetrachloroethene (PCE) / SO / 0.024
Toluene / SO / 6.5
Trichloroethene (TCE) / SO / 0.02
Xylenes, Total / SO / 6.3
cis-1,2-Dichloroethene / SO / 0.24
n-Butylbenzene / SO / 4.2
n-Propylbenzene / SO / 4.2
sec-Butylbenzene / SO / 4.1

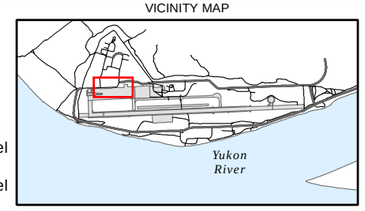


LEGEND
- SS014/SS017/SS021
- Adjacent Site
- Airfield or Road
- Approximate Location of Former Feature
- Structure
- Approximate Excavation Limit (0-15 ft bgs)
- Approximate Excavation Limit (12 ft bgs)
- Approximate Excavation Limit (15 ft bgs)
- Abandoned Fuel Line
- Abandoned Fuel Line (1952)
- Abandoned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

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

VICINITY MAP



0 50 100
Feet
N

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   S - The sample results are unvalidated and should be used for screening purposes only.
2. Only exceedances shown.
3. ND = Non-Detect
4. Screening levels are presented in units of mg/kg for SO (soil) samples.
5. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
6. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
7. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
8. SL = Screening Level
9. 2010 utilities shown are underground only.

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

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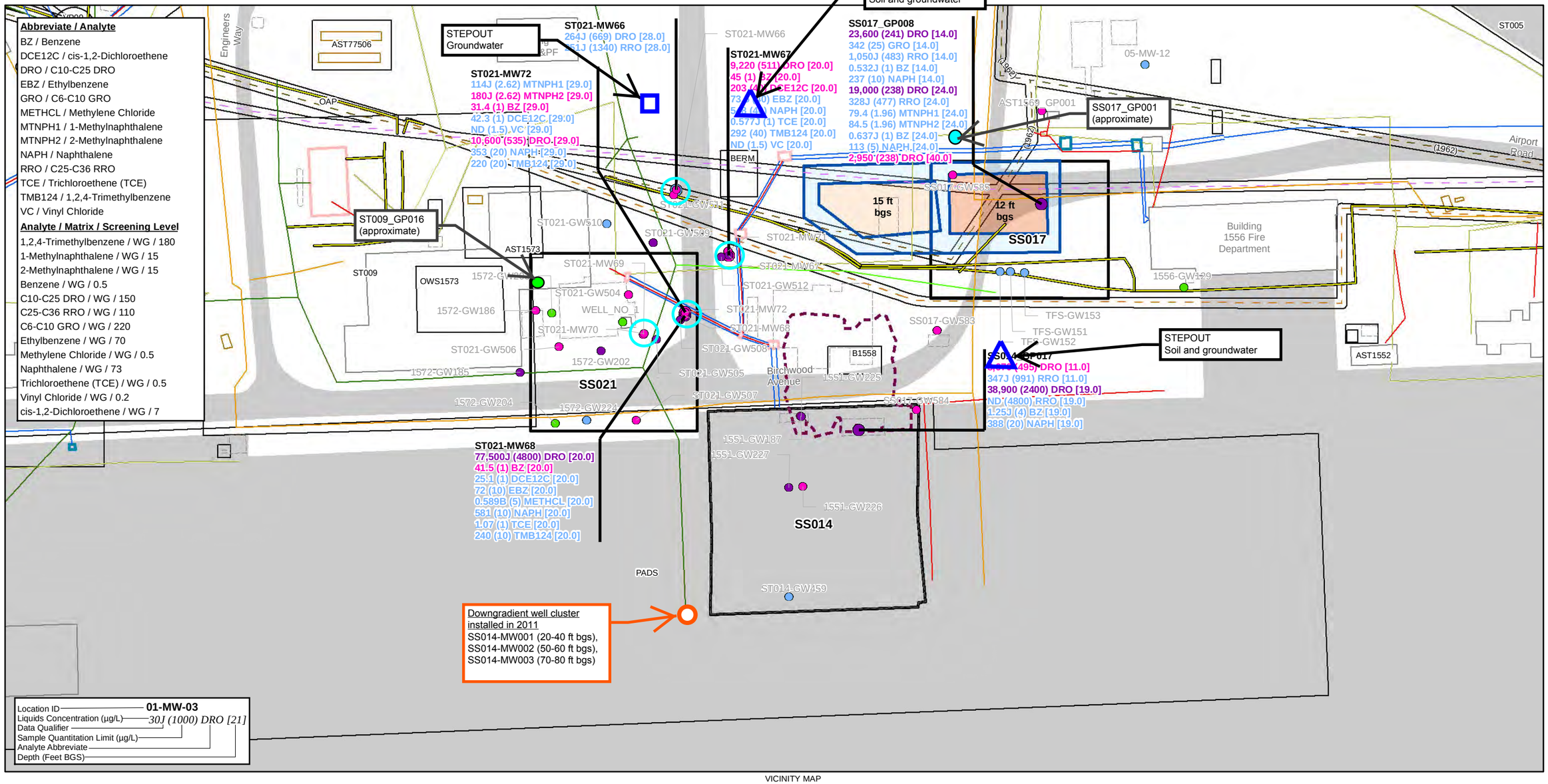


LEGEND

- 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

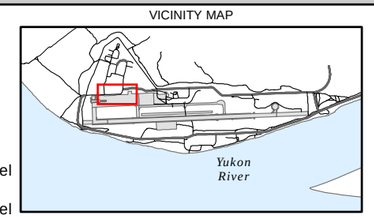
Underground Utility Locates - 2010

- Electrical Line
- Communications Line
- Storm Drain
- Sanitary Sewer Main
- Potable Water Main
- Fuel/Gas Line
- Concrete Pad
- Electrical Transformer
- Utility Vault

Product observed in 2010/2011 groundwater sampling

- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Exceeds Screening Level (1 to 10X analyte SL)
- 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

VICINITY MAP



0 50 100
Feet

Notes:

1. B - The analyte was detected in the associated method and/or calibration blank.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. Only exceedances shown.
3. ND = Non-Detect
4. Screening levels are presented in units of ug/L for WG (groundwater) samples.
5. **Purple Label** = Sample Exceeds Screening Level (Greater than 100X analyte SL)
6. **Scarlet Label** = Sample Exceeds Screening Level (Greater than 10X analyte SL)
7. **Blue Label** = Sample Exceeds Screening Level (1 to 10X analyte SL)
8. SL = Screening Level
9. 2010 utilities shown are underground only.

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

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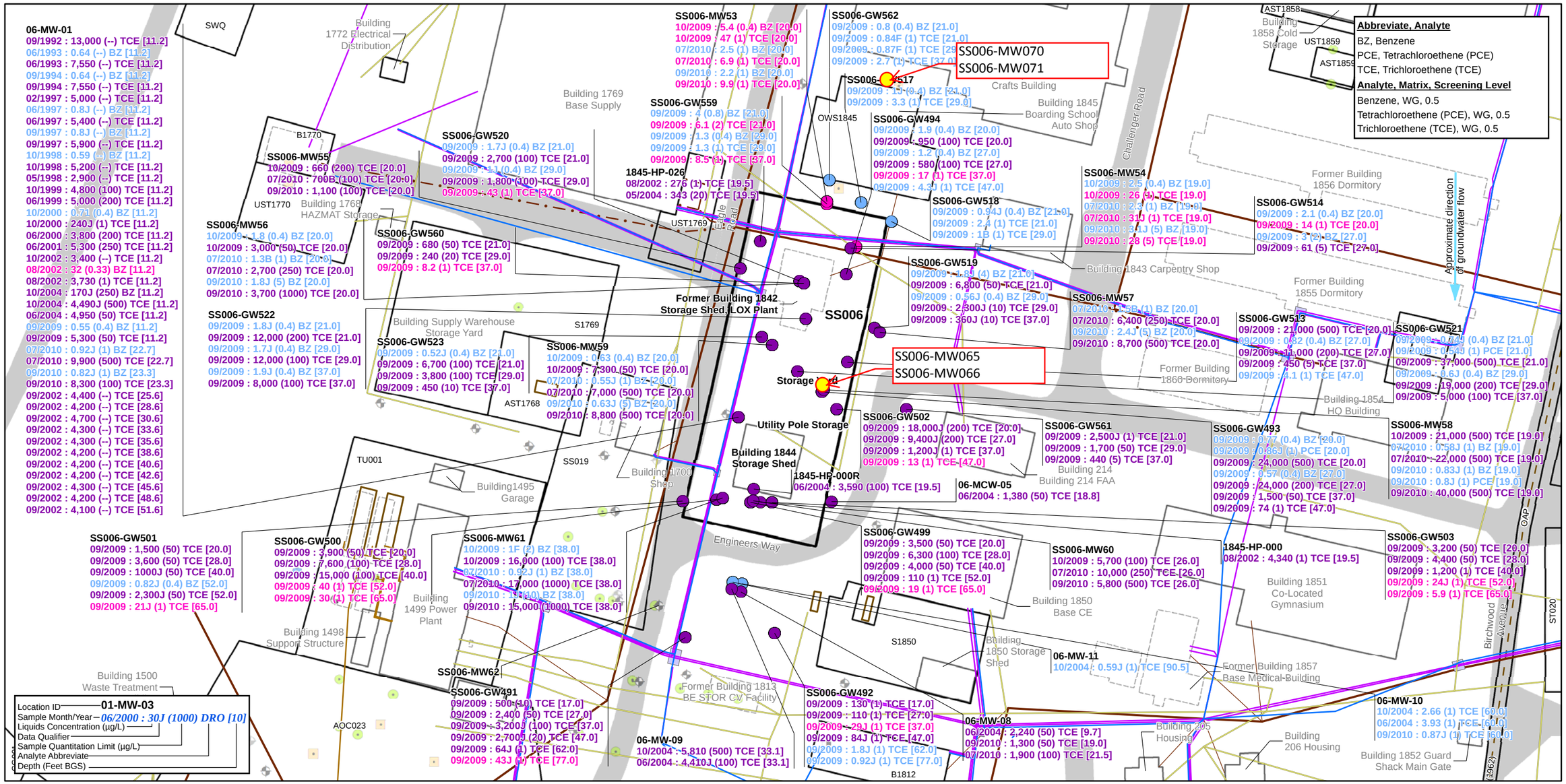


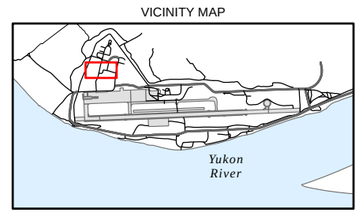
LEGEND

- SS006
- Adjacent Site
- Road
- Structure
- Approximate Location of Former Feature
- Electrical Line
- Heating/Cooling Line
- Abandoned Wastewater Line
- Main Wastewater Line
- Water Line
- Service Fuel Line
- Fuel Tank
- Utility Valve Pit
- Sample Exceeds Screening Level (Greater than 100X analyte SL)
- Sample Exceeds Screening Level (Greater than 10X analyte SL)
- Sample Exceeds Screening Level (1 to 10X analyte SL)

Historical Sample Location

- Monitoring Well
- Hydro Punch
- Abandoned Monitoring Well
- Production Well
- Surface Water Sample

VICINITY MAP



0 40 80
Feet

N

Notes:
1. B - The analyte was detected in the associated method and/or calibration blank.
   F - The analyte was positively identified by the lab: the associated numerical value is the approximate concentration of the analyte in the sample.
   J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
2. (--) = Limit of Quantitation not available.
3. Only exceedances shown, non-detects excluded.
4. Screening levels are presented in units of ug/L for WG (groundwater) samples and mg/kg for SO (soil) samples.
5. Purple Label = Sample Exceeds Screening Level (Greater than 100X analyte SL)
6. Scarlet Label = Sample Exceeds Screening Level (Greater than 10X analyte SL)
7. Blue Label = Sample Exceeds Screening Level (1 to 10X analyte SL)
8. SL = Screening Level
9. Results shown for selected VOCs only (see Abbreviate and Analyte Box)
10. Includes groundwater data 1992 through 2010.

FIGURE D9-SS006
Exceedances of Screening Levels in Groundwater - Volatile Organic Compounds

Work Plan for Site Inspection, Remedial Investigation, and Site Characterization

Former Galena Forward Operating Location, Alaska

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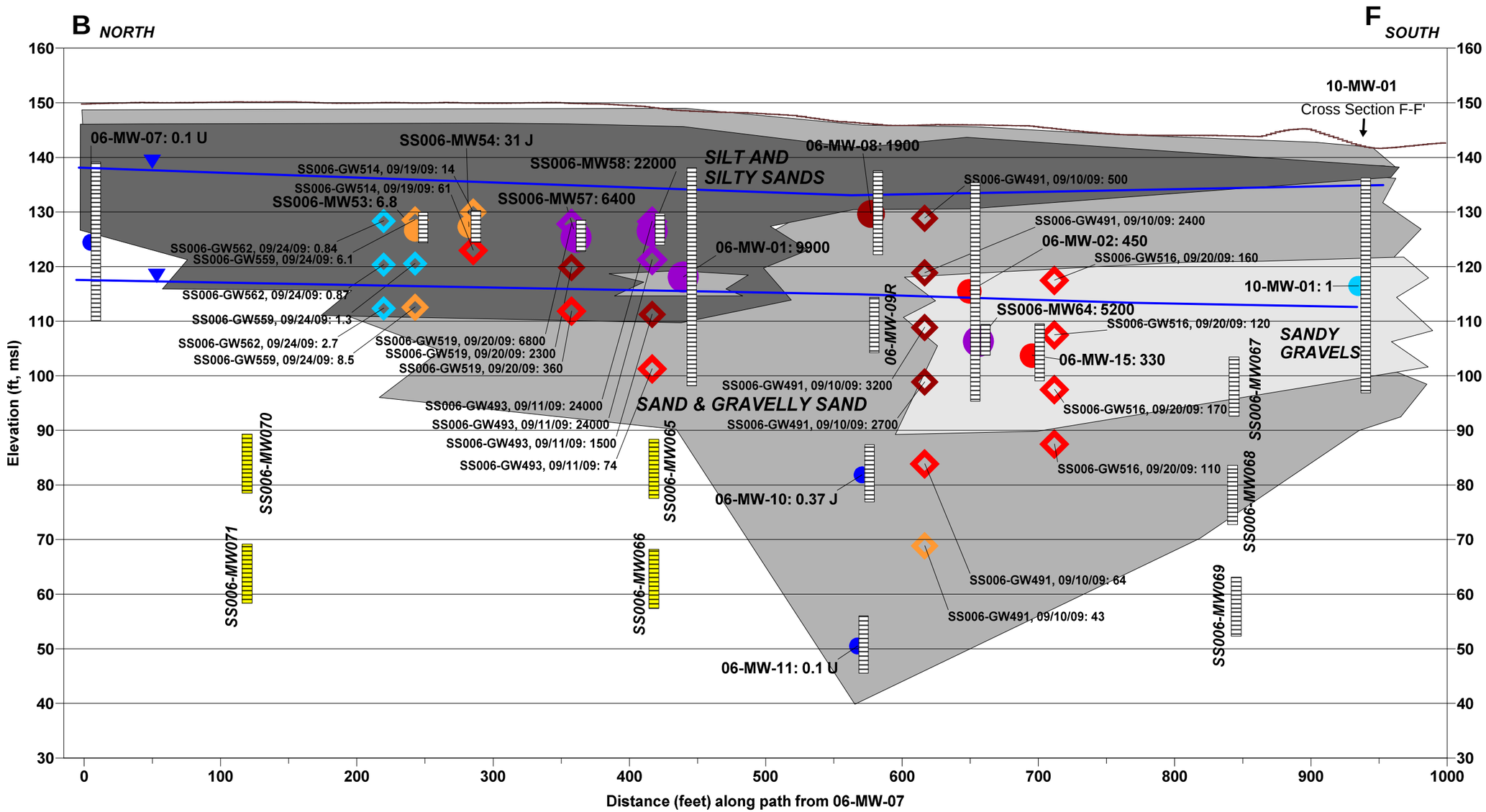

LEGEND

LITHOLOGY

- Silt and Silty Sands
- Sand and Gravelly Sand
- Sandy Gravel
- Approximate Min. and Max. Water Level

Well Screen

Proposed Well

TCE Concentrations (µg/L) in Groundwater

Historical Boring Data 2004-2009	Sept. - Oct. 2010 Well Data
0 to < 0.5	0 to < 0.5
0.5 to < 5	0.5 to < 5
5 to < 50	5 to < 50
50 to < 500	50 to < 500
500 to < 5000	500 to < 5000
5000 to < 50000	5000 to < 50000

Notes:
1. Distances represent distance along transect. Some locations are offset (see Figure D18-CC11).
2. Concentration values are appended with laboratory flags where needed.
   J: The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
   B: the analyte was detected in the associated method and / or calibration blank.
   U and ND: the analyte was analyzed for, but was not detected above the reported sample quantification limit.

Scale: Vertical = 20:1, Horizontal Scale = 80:1

FIGURE D24-CC11
Cross Section B-F

Work Plan for Site Inspection, Remedial Investigation and Site Characterization

Former Galena Forward Operating Location, Alaska

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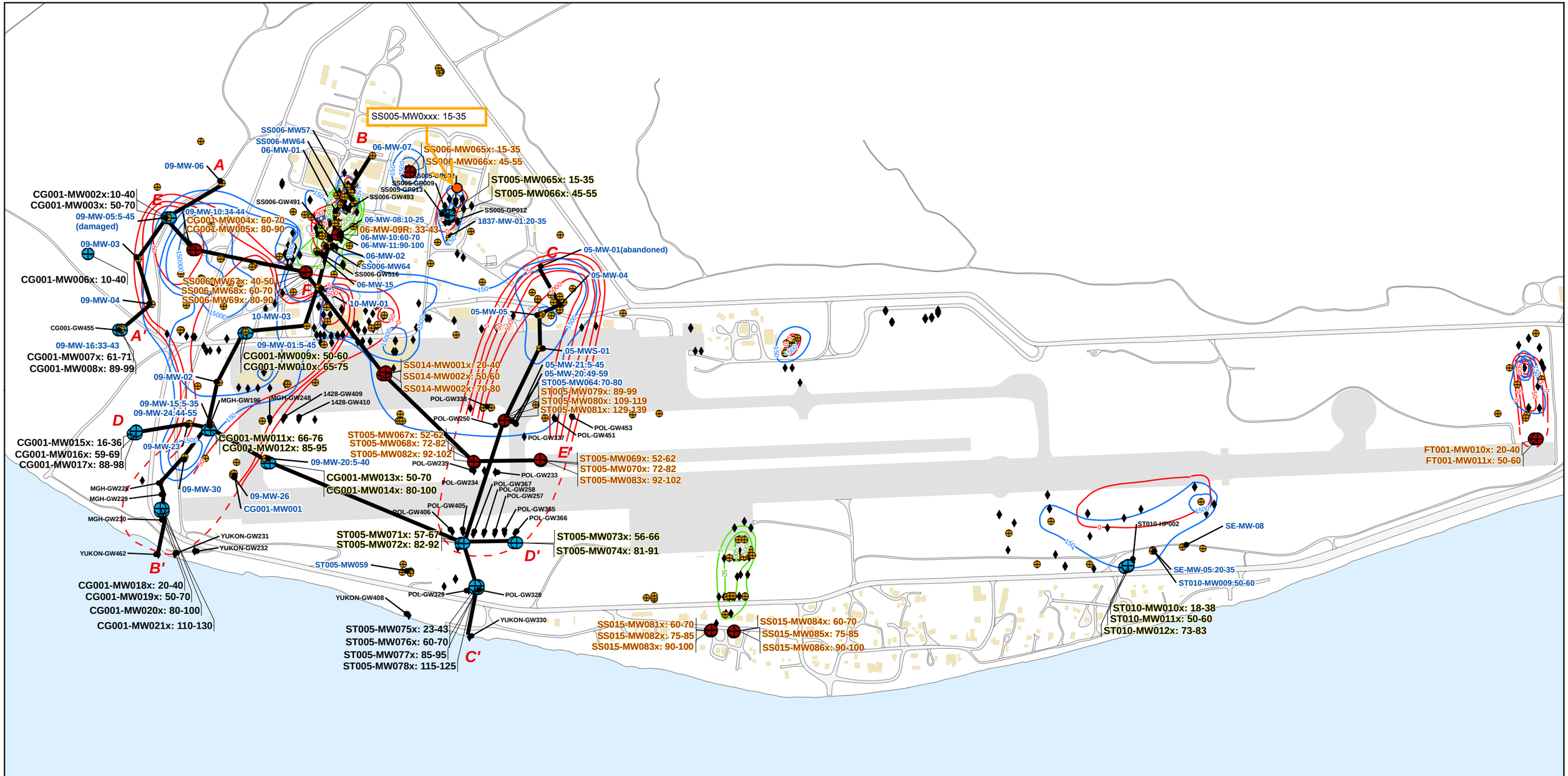

LEGEND

- Building
- Vehicle Driveway Area
- Airfield Surface
- Yukon River
- DRO Contours
- Benzene Contours
- TCE Contours
- Cross-Section Locations
- Current Monitoring Wells, with depth (ft) to screen interval
- 2004 - 2010 Groundwater Grab Sample Locations
- **Phase 1 Proposed 2011 Monitoring Wells, with depth (ft) to screen interval**
- **Phase 2 Proposed 2011 Monitoring Wells, with depth (ft) to screen interval**
- Proposed 2011 monitoring wells

Note:
1. Proposed well names have a subscript "x" that will be removed upon installation of the well.
2. For existing wells and previous borings, only those discussed in the text or shown in cross sections are labeled, and screen intervals are only included for existing wells that form a nest with proposed wells.

Projected coordinate system:
WGS84, UTM Zone 4N, Meters.

0 500 1,000
Feet

FIGURE D18-CC11
Proposed Monitoring Wells
Triad Meeting
10-11-11
Former Galena Forward Operating Location, Alaska

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\\BALDUR\PROJ\GALENATO184_394439\MAPFILES\QAPP\FORINTERNALUSE\2011\GWFSP2011\GCCM\FIGURE18_GCCM_PROPOSEDWELLS.MXD FIGURE18 BBOER 8/12/2011 14:24:20