



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Environmental
Conservation

SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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File No.: 2548.38.001

October 8, 2024

Electronic Delivery Only

Lance Raymore
Federal Aviation Administration
222 W 7th Avenue Box 14
Anchorage, Alaska 99513

Subject: **Decision Document: FAA Farewell Station
No Further Action for the Former Tank Farm (RTH AOC 5)**

Dear Mr. Raymore,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Former Tank Farm area of concern (AOC) at the FAA Farewell Station located approximately 63 miles east-southeast of McGrath and 160 miles northwest of Anchorage. Based on the information provided to date, it has been determined that the contaminant concentrations remaining at this AOC do not pose an unacceptable risk to human health or the environment and no further remedial action will be required unless information becomes available that indicates residual contaminants may pose an unacceptable risk.

This No Further Action determination is based on the administrative record for the Former Tank Farm AOC maintained by DEC. This decision letter summarizes the site history, cleanup actions and levels, and site closure conditions that apply. The FAA Farewell site will remain active on DEC's Contaminated Sites database until all AOCs have achieved cleanup complete status.

Site Name and Location:

FAA Farewell Station
~63 Miles ESE of McGrath
McGrath, Alaska 99627
62°30'21.8" N, 153°53'45.2" W

Name and Mailing Address of Contact Party:

Lance Raymore
222 7th Avenue Box 14
Anchorage, Alaska 99513

DEC Site Identifiers:

File No.: 2548.38.001
Hazard ID.: 1873

Regulatory Authority for Determination

18 Alaska Administrative Code (AAC) 75

Site Description and Background

The FAA Farewell Station is located approximately 63 miles east-southeast of McGrath and 160 miles northwest of Anchorage on the southern bank of Sheep Creek and is only accessible via aircraft or by winter trails when snow is present. The station and the associated airfield were constructed in 1942 to provide defense support during World War II. The property is no longer operated or maintained by the FAA and the landing strip now serves as an emergency landing site and is frequently used by hunters and guides.

The Former Tank Farm was located near the former quarters area in the northern portion of the FAA Farewell Station, approximately 260 feet from the southern bank of Sheep Creek. The tank farm consisted of four 20,000-gallon diesel aboveground storage tanks (ASTs), two 10,000-gallon ASTs, and one 8,000-gallon AST. The ASTs were decommissioned in 1998, and four test pits were advanced near the Former Tank Farm. Nine soil samples were collected and analyzed for diesel range organics (DRO) and benzene, ethylbenzene, toluene, and xylenes (BTEX). The analytical results indicated an exceedance of DRO at the east end of the Former Tank Farm in the footprint of the 8,000-gallon AST.

Contaminants of Concern

Soil samples were collected during the investigation and cleanup activities at this AOC and analyzed for DRO, gasoline range organics (GRO), residual range organics (RRO), polycyclic aromatic hydrocarbons (PAHs), BTEX, extractable petroleum hydrocarbons (EPH), and volatile petroleum hydrocarbons (VPH). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern (COCs) at this site:

- DRO
- GRO
- Ethylbenzene
- 1-methylnaphthalene
- 2-methylnaphthalene
- Naphthalene
- Xylenes

Cleanup Levels

Soil cleanup levels applicable to the site are the 18 AAC 75 Table B1/B2 Human Health/Maximum Allowable cleanup levels for the under 40-inch precipitation zone. DEC has made a determination that the migration to groundwater pathway is incomplete at FAA Farewell due to the depth of groundwater at the site and the fact that groundwater has never been encountered during mobilizations to FAA Farewell.

Table 1 – Approved Cleanup Levels

Contaminant	Table B1/B2 Migration to Groundwater (mg/kg)	Table B1/B2 Soil Human Health/ Max Allowable (mg/kg)
DRO	250	12,500
GRO	300	1,400
Ethylbenzene	0.13	49
1-methylnaphthalene	0.41	68
2-methylnaphthalene	1.3	310
Naphthalene	0.038	29
Xylenes	1.5	57

mg/kg = milligrams per kilogram

Characterization and Cleanup Activities

In 2010, 20 soil borings were advanced in and around the Former Tank Farm footprint and 32 samples were collected and analyzed for GRO, DRO, RRO, and BTEX. An additional nine samples were collected for analysis of EPH and VPH and another nine samples for analysis of PAHs. Analytical results indicated exceedances of the most stringent cleanup levels for DRO, GRO, 1-methylnaphthalene, and 2-methylnaphthalene. The highest detected exceedances were 12,000 mg/kg for DRO, 906 mg/kg for GRO, 21.2 mg/kg for 1-methylnaphthalene, and 17 mg/kg for 2-methylnaphthalene. Contamination ranged from the surface to a depth greater than 116 feet and the lateral extent spanned approximately 188 feet. The drill rig was not able to advance deeper than 116 feet.

In 2018, 12 soil borings were advanced to further delineate the contamination at the Former Tank Farm. 22 primary and two duplicate samples were collected and analyzed for DRO and RRO. DRO exceeded the most stringent cleanup level in 23 of the 24 soil samples and nine sample results exceeded the maximum allowable concentration with the highest detection at 28,000 mg/kg.

In 2021, 740 cubic yards of DRO-contaminated soil were excavated and landspread in a decision unit (DU1) adjacent to the Former Tank Farm site. Confirmation sampling results from the excavation indicated remaining exceedances of the 10,000 mg/kg target level for DRO, and an additional 500 cubic yards of soil were excavated and landspread in a second decision unit (DU2). The final excavation measured 50 feet by 125 feet ranging from 7 feet to 9.5 feet in depth. The final confirmation samples indicated that all analytes were below their maximum allowable concentrations, although DRO, GRO, ethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and total xylenes had remaining exceedances of their migration to groundwater cleanup levels.

The excavated soil was spread in an approximately 18-inch layer on the ground adjacent to the Former Tank Farm site and signs were posted informing site visitors of the contaminated soil. Incremental Sampling Methodology (ISM) samples were collected from both decision units and analyzed for GRO, DRO, RRO, BTEX, PAHs, EPH, and VPH. Analytical ISM results indicated exceedances of the migration to groundwater cleanup levels for DRO, 1-methylnaphthalene, and 2-methylnaphthalene. Additionally, naphthalene was non-detect with the limit of detection exceeding the migration to groundwater cleanup level. However, all analytical results were below the applicable human health/maximum allowable concentrations for soil.

Remaining Contamination

The maximum concentrations of contaminants remaining at the site are shown in Tables 2a and 2b. These concentrations are all below their respective approved cleanup levels. Sample locations referred to in Tables 2a and 2b are shown in the attached Figures 2-4.

Table 2a – Maximum Remaining Concentration in Soil at the Former Tank Farm

Contaminant	Sample Location	Sample ID	Date Sampled	Soil (mg/kg)
GRO	Base	FWL21SS-016-TF	6/8/2021	347
DRO	Base	FWL21SS-015-TF FWL21SS-017-TF	6/8/2021	8,170
Ethylbenzene	Base	FWL21SS-017-TF	6/8/2021	0.671
1-methylnaphthalene	Sidewall	FWL21SS-021-TF	6/8/2021	13.6
2-methylnaphthalene	Sidewall	FWL21SS-021-TF	6/8/2021	21.3
Naphthalene	Sidewall	FWL21SS-021-TF	6/8/2021	6.07
Xylenes	Base	FWL21SS-016-TF	6/8/2021	17.2

mg/kg = milligrams per kilogram

Table 2b – Maximum Remaining Concentration in Soil at the Former Tank Farm Landspread

Contaminant	Sample Location	Sample ID	Date Sampled	Soil (mg/kg)
GRO	DU1 ISM	FWL21SS-00499-TFLS	6/18/2021	28.3
DRO	DU1 ISM	FWL21SS-0049-TFLS	6/18/2021	8110
Ethylbenzene	DU1 ISM	FWL21SS-00499-TFLS	6/18/2021	0.0346
1-methylnaphthalene	DU1 ISM	FWL21SS-00499-TFLS	6/18/2021	9.66
2-methylnaphthalene	DU1 ISM	FWL21SS-0049-TFLS	6/18/2021	6.97
Naphthalene	DU1 ISM	FWL21SS-004-TFLS	6/6/2021	ND [0.0625]
Xylenes	DU1 ISM	FWL21SS-00499-TFLS	6/18/2021	1.47

mg/kg = milligrams per kilogram

ND = non-detect

Cumulative Risk Assessment

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index (HI) of 1 across all exposure pathways.

Based on a review of the environmental record, DEC has determined that residual contaminant concentrations meet the human health cumulative risk criteria for residential land use.

Exposure Pathway Evaluation

Following investigation and cleanup at the AOC, exposure to the remaining contaminants was evaluated using DEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De Minimis Exposure or Pathway Incomplete. A summary of this pathway evaluation is included in Table 3.

Table 3 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De Minimis	Residual concentrations remaining in surface soil (0-2 feet bgs) are below the 18 AAC 75 Table B1/B2 Human Health cleanup levels.
Subsurface Soil Contact	De Minimis	Residual concentrations remaining in subsurface soil are below the 18 AAC 75 Table B1/B2 Human Health cleanup levels.
Inhalation – Outdoor Air	De Minimis	Residual concentrations of volatile contaminants are well below 18 AAC 75 Table B1/B2 Human Health cleanup levels. Residual soil contamination is not expected to impact outdoor air.
Inhalation – Indoor Air (Vapor Intrusion)	De Minimis	No buildings are currently present at this remote site and DEC determined the migration to groundwater pathway to be incomplete for this source area. Residual concentrations remaining in subsurface soil are below the 18 AAC 75 Table B1/B2 Human Health cleanup levels.

Pathway	Result	Explanation
Groundwater Ingestion	Pathway Incomplete	DEC has made a determination that the migration to groundwater pathway is incomplete at FAA Farewell.
Surface Water Ingestion	Pathway Incomplete	Contaminants are not expected to migrate to surface water. The nearest surface water is approximately 260 feet away.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Residual contamination is in the subsurface and detected concentrations were below the applicable cleanup levels. Additionally, the contaminants of concern are not bioaccumulative.
Exposure to Ecological Receptors	Pathway Incomplete	There are no concerns about adverse impacts to ecological receptors.

Notes:

1. “De Minimis Exposure” means that, in DEC’s judgment, the receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination.
2. “Pathway Incomplete” means that, in DEC’s judgment, the contamination has no potential to contact receptors.

DEC Decision

Soil and groundwater contamination at the Former Tank Farm AOC have been cleaned up to concentrations below the approved cleanup levels suitable for residential land use. DEC approval is required for movement and disposal of soil and/or groundwater subject to the Site Cleanup Rules, in accordance with 18 AAC 75.325(i). Please contact DEC for information about applicable regulations and requirements. A “site”, as defined by 18 AAC 75.990, means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

Movement or use of contaminated material in an ecologically sensitive area or in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited. Furthermore, groundwater throughout Alaska is protected for use as a water supply for drinking, culinary and food processing, agriculture including irrigation and stock watering, aquaculture, and industrial use. Contaminated site cleanup complete determinations are based on groundwater being considered a potential drinking water source. If, in the future, groundwater from this site is to be used for other purposes, additional testing and treatment may be required to ensure the water is suitable for its intended use.

This determination is in accordance with 18 AAC 75.380 and does not preclude DEC from requiring additional assessment and/or cleanup action if information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

Informal Reviews and Adjudicatory Hearings

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC’s “Appeal a DEC Decision” web page <https://dec.alaska.gov/commish/review-guidance/> for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

If you have any questions about this no further action decision, please contact me at (907) 451-1682 or via email at sophia.bracio@alaska.gov.

Sincerely,

Sophia K. Bracio

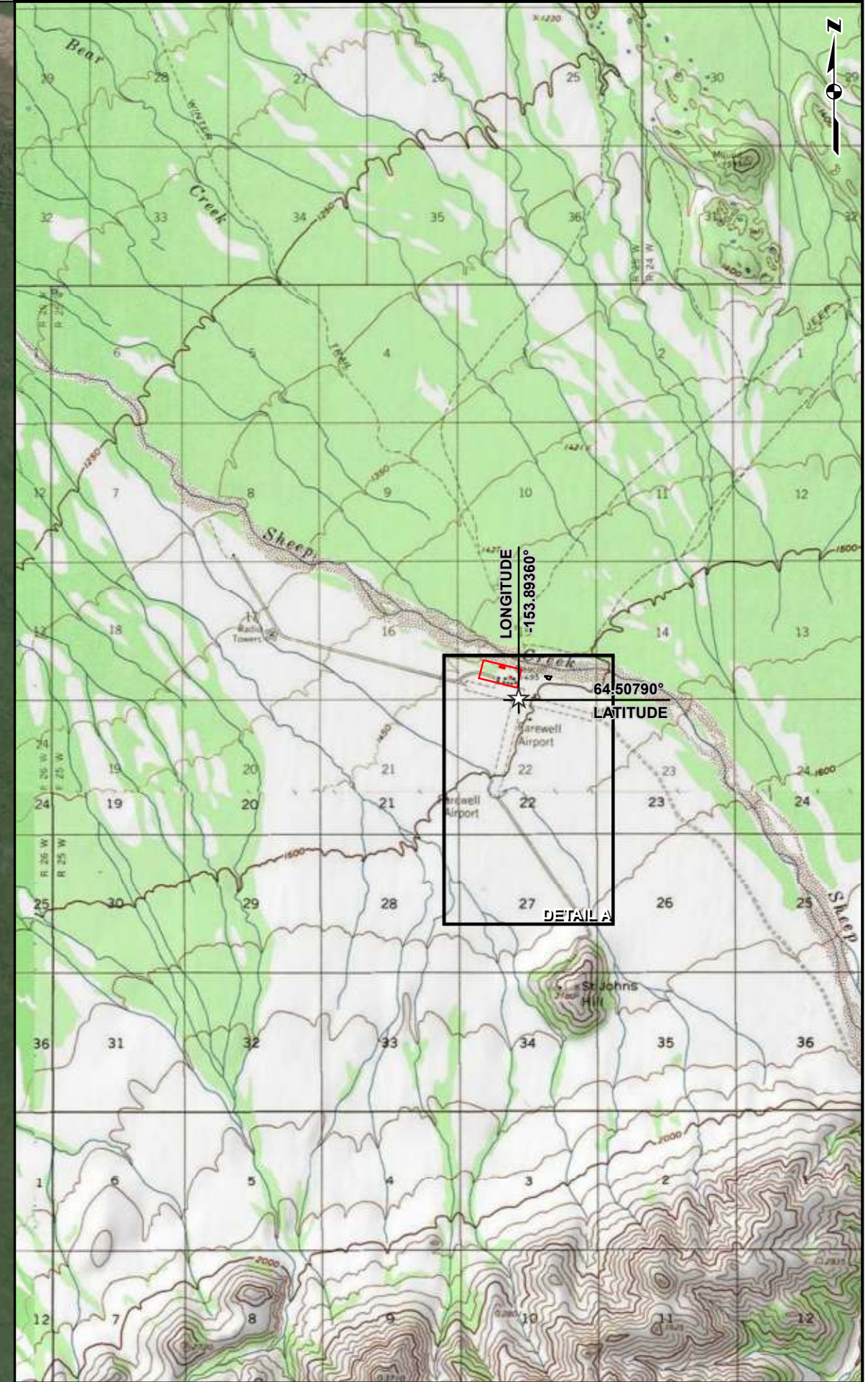
Sophia K. Bracio
Environmental Program Specialist

Enclosure(s): Figure: Site Vicinity (Brice 2022)
 Figure: 2021 Landspread ISM Results (Brice 2022)
 Figure: 2021 Excavation Sample Results DRO (Brice 2022)
 Figure: 2021 Excavation Sample Results GRO, RRO, BTEX, and PAHs (Brice 2022)

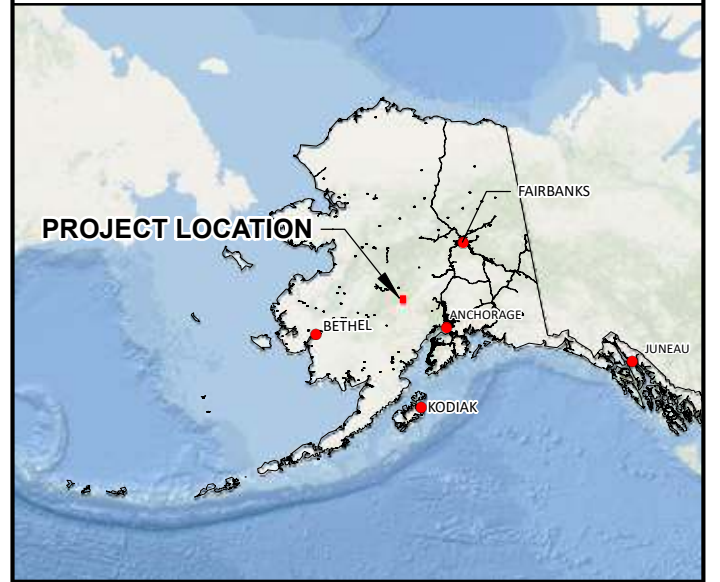
cc, via email: Jamie McKellar, DEC
 Tim Sharp, DEC



DETAIL A



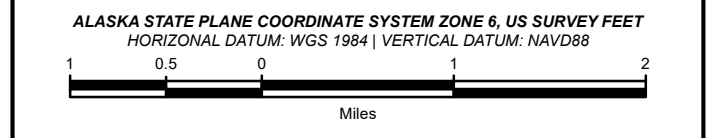
FAREWELL REMEDIAL ACTION REPORT
FAREWELL, ALASKA
SITE VICINITY AND OVERVIEW



- Legend**
- Road
 - Burial Pit
 - Site Features

Notes
1. For conceptual purposes only. All locations are approximate.

References
1. Imagery source: Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



PROJECT No.: 700215	DATE: 9/7/2021	FIGURE: 1
P.M.: M.O.	DRAWN: J.C.	

FAREWELL REMEDIAL ACTION REPORT
 FAREWELL, ALASKA
**FORMER TANK FARM (RTH AOC 5) 2021
 LANDSPREAD BOUNDARIES AND ISM RESULTS**



FWL21SS-001-TFLS (pre-landspread)	
Analyte	Concentration (mg/kg)
DRO	62.8 [11.7]

DU01
LANDSPREAD AREA

FWL21SS-003-TFLS (post-landspread)	
Analyte	95% UCL
DRO	3921
2-methylnaphthalene	1.376

FWL21SS-002-TFLS (pre-landspread)	
Analyte	Concentration (mg/kg)
DRO	74.2 [11.8]

DU02
LANDSPREAD AREA

FWL21SS-004-TFLS (post-landspread)	
Analyte	95% UCL
DRO	8419
1-methylnaphthalene	10.12
2-methylnaphthalene	7.28

Legend

- Decision Unit
- Tank Farm Excavation Area
- Tank Farm Landspread Area
- Former Tank Farm ASTs
- Former Tank Farm Pad

Abbreviations

- [] limit of detection
- AOC area of concern
- DU decision unit
- ISM incremental sampling methodology
- mg/kg milligram(s) per kilogram
- PSL project screening level
- UCL upper confidence level

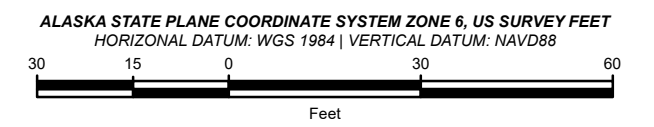
Notes

- Site features and samples located using GPS surveying techniques by Brice Environmental Services, July 2021.

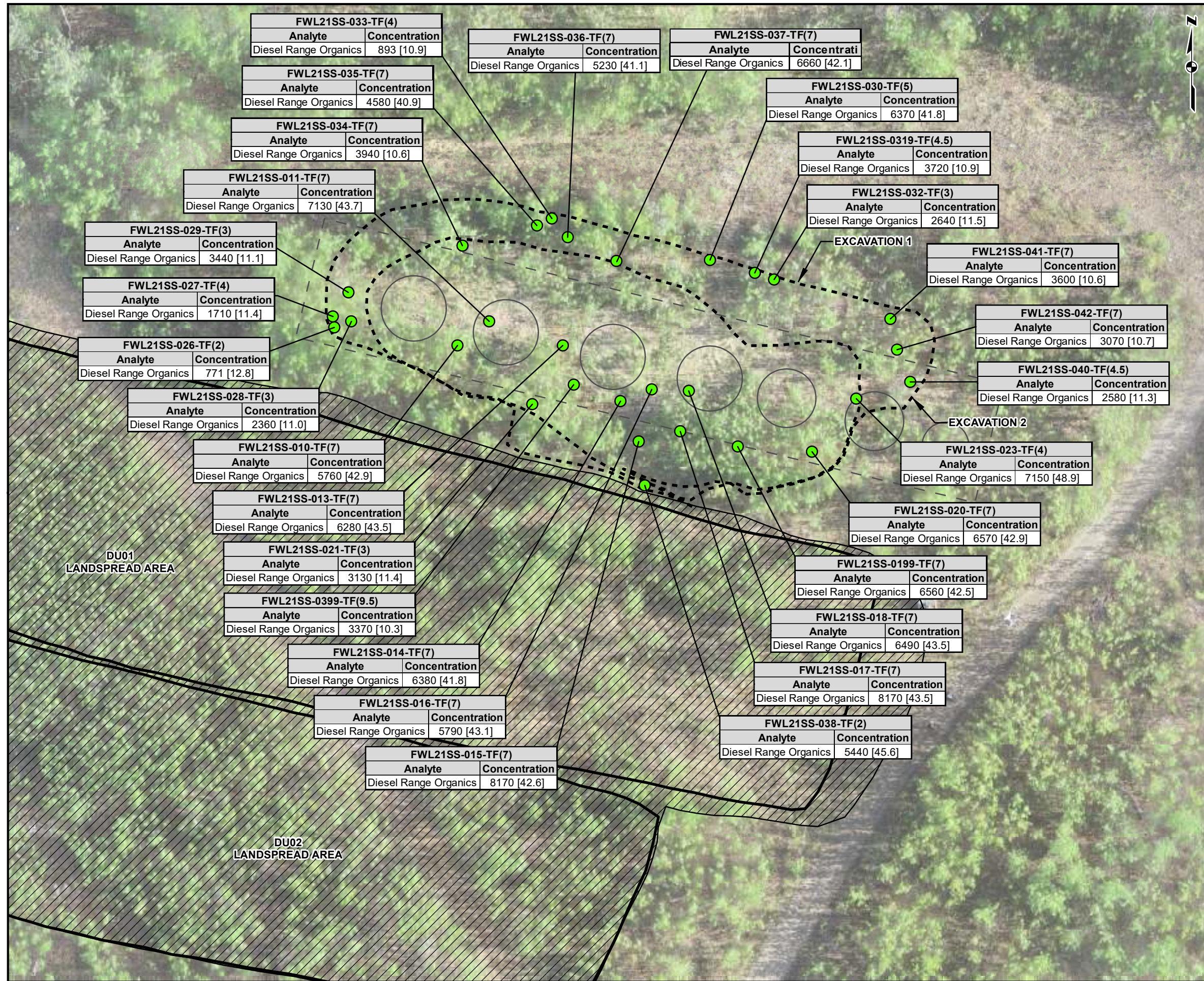
Chemistry Notes

- Gasoline range organics sample results measured in mg/kg, all other results measured in µg/kg.
- Red** indicates that the result exceeds the most stringent ADEC 18 AAC 75, Method Two cleanup level.
- PSLs are the most stringent Method Two cleanup levels for the Under 40-Inch Zone in ADEC 18 AAC 75 Tables B1 and B2.

Project Screening Level		
Analyte	Concentration	Unit
Diesel Range Organics	250	mg/kg
1-Methylnaphthalene	0.41	µg/kg
2-Methylnaphthalene	1.3	µg/kg



PROJECT No.: 700215	DATE: 3/24/2022	FIGURE: 6
P.M.: M.O.	DRAWN: J.C.	



FAREWELL REMEDIAL ACTION REPORT
FAREWELL, ALASKA
**FORMER TANK FARM 2021 EXCAVATION LIMITS
AND CONFIRMATION SAMPLE DRO RESULTS**

Legend

- Confirmation Sample
- Decision Unit
- Tank Farm Excavation Area
- Tank Farm Landspread Area
- Former Tank Farm
- Former Tank Farm Pad

Abbreviations

- [] limit of detection
- AOC area of concern
- DRO diesel range organics
- mg/kg milligram(s) per kilogram
- ND not detected

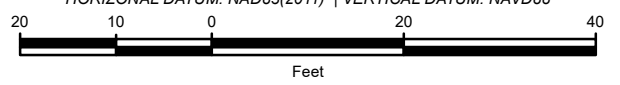
Notes

1. Site features and samples located using GPS surveying techniques by Brice Environmental Services, July 2021.

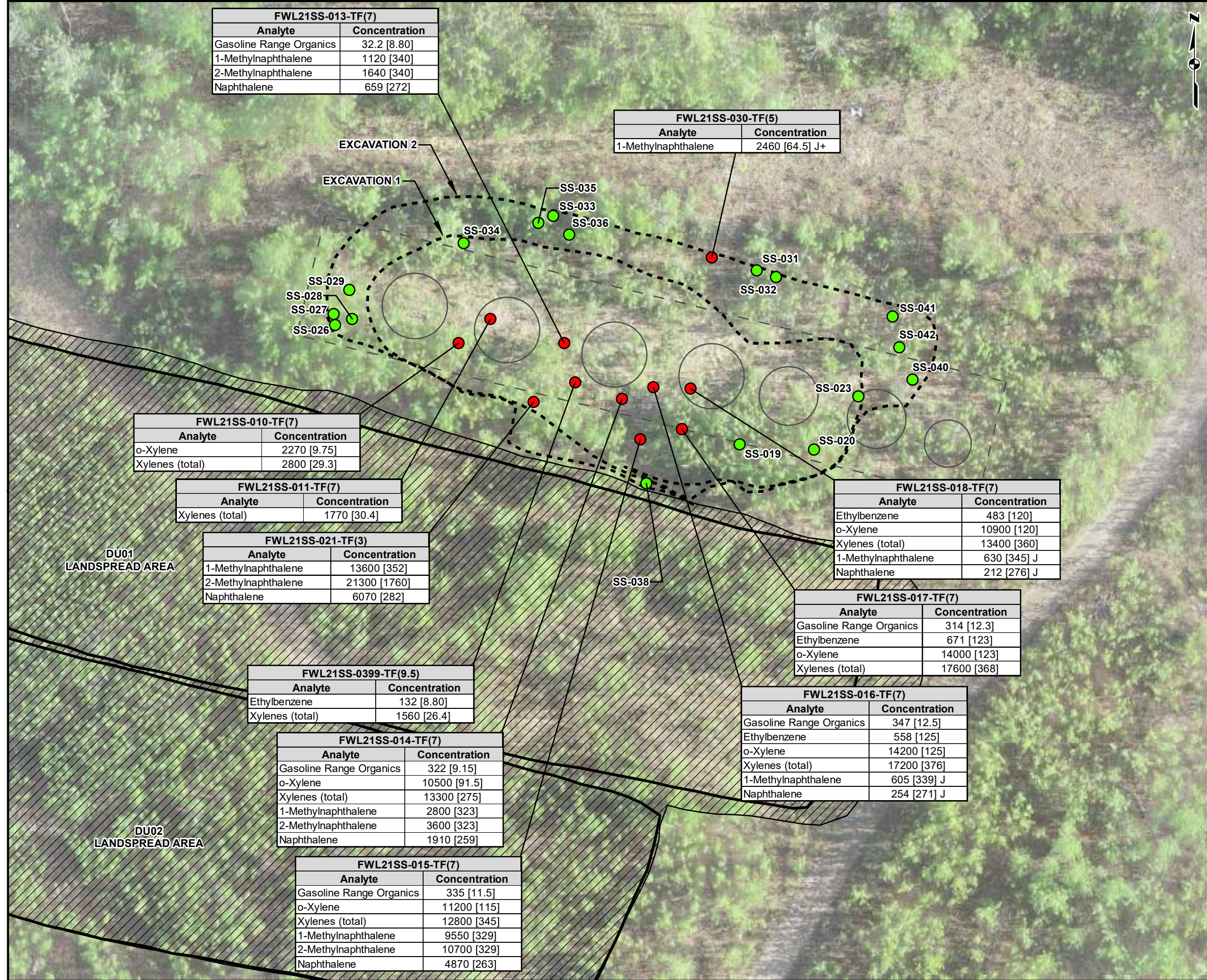
Chemistry Notes

1. All sample results measured in mg/kg.
2. Sample depth in feet below ground surface in parenthesis of sample ID.
3. Sample ID displayed in labels is abbreviated.

ALASKA STATE PLANE COORDINATE SYSTEM ZONE 6, US SURVEY FEET
HORIZONTAL DATUM: NAD83(2011) | VERTICAL DATUM: NAVD88



PROJECT No.: 700215	DATE: 3/24/2022	FIGURE: 7
P.M.: M.O.	DRAWN: J.C.	



FAREWELL REMEDIAL ACTION REPORT
 FAREWELL, ALASKA
FORMER TANK FARM 2021 EXCAVATION LIMITS AND CONFIRMATION SAMPLE GRO, RRO, BTEX, AND PAH RESULTS

Legend

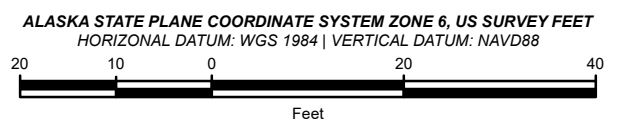
- Confirmation Sample (Result < PSL)
- Confirmation Sample (Result > PSL)
- Decision Unit
- Tank Farm Excavation
- Tank Farm Landspread
- Former Tank Farm
- Former Tank Farm Pad

Abbreviations

- [] limit of detection
- AOC area of concern
- J the result is an estimated value greater than or equal to the MDL and below the RL
- J (±) the result is an estimated value biased high/low/indeterminate due to a QC failure
- mg/kg milligram(s) per kilogram
- ND not detected
- PSL project screening level
- QC quality control
- µg/kg microgram(s) per kilogram

- Notes**
- Site features and samples located using GPS surveying techniques by Brice Environmental Services, July 2021.
- Chemistry Notes**
- Gasoline range organics sample results measured in mg/kg, all other results measured in µg/kg.
 - PSLs are the most stringent Method Two cleanup levels for the Under 40-Inch Zone in ADEC 18 AAC 75 Tables B1 and B2.
 - Only results that exceed the PSL are shown on figure.
 - Sample depth in feet below ground surface in parenthesis of sample ID.
 - Sample ID displayed in labels is abbreviated.

Project Screening Levels		
Analyte	Concentration	Unit
Gasoline Range Organics	300	mg/kg
Residual Range Organics	10000	µg/kg
Benzene	22	µg/kg
Ethylbenzene	130	µg/kg
m,p-Xylene	NS	µg/kg
o-Xylene	1500	µg/kg
Toluene	6700	µg/kg
Xylenes (total)	1500	µg/kg
1-Methylnaphthalene	410	µg/kg
2-Methylnaphthalene	1300	µg/kg
Naphthalene	38	µg/kg



PROJECT No.: 700215	DATE: 3/24/2022	FIGURE: 8
P.M.: M.O.	DRAWN: J.C.	