THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 108.38.117

February 1, 2022

Department of the Army
Directorate of Public Works
ATTN: AMIM-AKP-E (P. Baker)
1046 Marks Road
Fort Wainwright, AK 99703

Re: Decision Document: Fort Wainwright Bldg 3498 Parking Lot Drain
Cleanup Complete Determination

Dear Mr. Baker:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Fort Wainwright Bldg 3498 Parking Lot Drain at Fort Wainwright, Alaska. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on site 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 Cleanup Complete determination is based on the administrative record for the Fort Wainwright Bldg 3498 Parking Lot Drain, which is located in the ADEC office in Fairbanks, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:
Fort Wainwright Bldg 3498
Parking Lot Drain
Southeast Corner of the Parking Lot
near Building 3498
Fort Wainwright, AK 99703

Name and Mailing Address of Contact Party:
U.S. Army Garrison – Fort Wainwright
1046 Marks Road
Fort Wainwright, Alaska 99703

DEC Site Identifiers:
File No.: 108.38.117
Hazard ID.: 25893

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background
Building 3498 is the vehicle maintenance building located within the main cantonment of Fort Wainwright, Alaska (FWA) that is used year-round for staging gas- and diesel-powered military equipment. A gravel drainage swale is located south of the Building 3498 parking lot along Rhineland Avenue (See Figure 2 enclosed). Surface water run off collects in the southeast corner of the parking lot, into a French drain with a shut-off valve that, when opened, discharges from three separate pipes into the gravel drainage swale. The shut-off valve is currently kept locked by the Directorate of Public Works (DPW) staff to prevent any unauthorized discharges into the stormwater drainage system. The Building 3498 Parking Lot Drain site is being managed under the Multi-Sector General Permit (MSGP) authorized by ADEC permit number AKS055859. Fort Wainwright's MSGP Storm Water Pollution Prevention Plan (SWPP) describes the measures used to treat and/or recycle contaminated stormwater runoff. During excavation associated with utilidor construction along Rhineland Avenue in 2009, petroleum contamination in soil was identified.

Contaminants of Concern
During site characterization and cleanup activities at this site, samples were collected from soil, groundwater, surface water and sediment and analyzed for: gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and lead. No contaminants were detected above the applicable cleanup levels.

Characterization and Cleanup Activities
Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in 2009. These activities are described below.

In 2009, soil contamination was identified in the southeast corner of the Building 3498 parking lot drainage swale during excavation associated with utilidor construction. Petroleum odors were identified with a photoionization detector (PID). Soil exceeding 20 parts per million (ppm) was excavated and disposed offsite. Soil that field screened at 20 ppm and below was placed back into the excavated area.

In 2015 six soil borings were drilled on the east end of the drainage swale in the presumed location of the contamination identified in 2009. Soil borings 15B3498-SB01 through 15B3498-SB05 were advanced to 15 feet (ft) below ground surface (bgs). Soil boring 15B3498-SB06 was advanced to 25 ft bgs and completed as a monitoring well (B3498-MW01) to assess groundwater impacts. All soil and groundwater results were either detected well below the ADEC cleanup levels or not detected at all.

During installation of the soil borings in 2015, surface water was not present. After a heavy rain event in 2015, three primary surface water and "sediment" samples were collected near the drainage pipe outlets in the swale (See Figure 3 enclosed). The "sediment" samples collected during this effort are most appropriately compared to soil cleanup levels, as the swale is sporadically filled with stormwater. DRO, RRO, bis(2-ethylhexyl)phthalate, and several metals were detected in the "sediment" samples but at levels below ADEC's most stringent soil cleanup levels. RRO was detected in surface water sample 15B3498-SW03-0 at a concentration of 1,200 micrograms per liter (µg/L) and did not exceed any surface water standard. RRO was also detected in soil samples below cleanup levels. Bis(2-ethylhexyl)phthalate was detected in two surface water samples (15B3498-SW01-0 and 15B3498-SW02-0). Results from 15B3498-SW02-0 were below ADEC cleanup levels and the Alaska Water Quality Standard (AWQS) of 6 µg/L. Results from 15B3498-SW01-0 were detected at a concentration of 6.8 J µg/L. Even though the result was above the AWQS of 6 µg/L, this contaminant was not detected

at concentrations above the most stringent cleanup levels in soil borings at the site. Bis(2-ethylhexyl)phthalate is commonly used in plastics and was likely detected as a result of runoff from the parking lot. All analytes associated with total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) were not detected in the surface water samples.

Cumulative Risk Evaluation
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 of one across all exposure pathways.

Based on a review of the environmental record, ADEC 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 site, exposure to the remaining contaminants was evaluated using ADEC'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, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De Minimis Exposure	Contamination was detected, but below the most stringent applicable cleanup levels for soil.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination was detected, but below the most stringent applicable cleanup levels for soil.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination is not present in the soil above the applicable cleanup level.
Inhalation – Indoor Air (vapor intrusion)	De Minimis	Remaining concentrations and volumes of semi-volatile and volatile contaminants in soil are below the most stringent cleanup levels and unlikely to cause vapor intrusion.
Groundwater Ingestion	Pathway Incomplete	Contamination is not present in the groundwater.
Surface Water Ingestion	De Minimis Exposure	Residual range organics (RRO) were detected in the drainage swale surface water at a concentration of 1,200 µg/L. This detection would not cause an exceedance of the Alaska Water Quality Standards (AWQS). Surface water is not used as a drinking water source.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	This site is located within an industrial area of Fort Wainwright. Current and future site use is expected

		to remain industrial, and no ecological receptors are present.

Notes to Table 2: "De Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors.

ADEC Decision

Soil, groundwater, surface water and sediment contamination concentrations at the site are below the approved cleanup levels suitable for residential land use. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

1. Any proposal to transport soil or groundwater from a site that is subject to the site cleanup rules or for which a written determination from the department has been made under 18 AAC 75.380(d)(1) that allows contamination to remain at the site above method two soil cleanup levels or groundwater cleanup levels listed in Table C requires DEC approval in accordance with 18 AAC 75.325(i). A "site" as defined by 18 AAC 75.990 (115) means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership. (See attached site figure.)

2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

3. 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. In the event that groundwater from this site is to be used for other purposes in the future, such as aquaculture, 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 ADEC 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.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 555 Cordova Street, Anchorage, Alaska 99501-2617, within 20 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please feel free to contact me at (907) 451-2182, or email at erica.blake@alaska.gov.

Sincerely,

Erica Blake

Digitally signed by
Erica Blake
Date: 2022.02.01
14:06:32 -09'00'

Erica Blake
Project Manager

Enclosures: ***Figure 2 Building 3498 Site Location***
Figure 3 Building 3498 Sample Locations and Results

cc: Spill Prevention and Response, Cost Recovery Unit
Kama Mayne, FWA ENVR
Tamara Scholten, FWA ENVR
Matthew Sprau, FWA ENVR Branch Chief
Sandra Halstead, EPA
Christopher Zell, EPA
Bob Hazlett, USACE
Julie Allan, USACE
Amanda Sherman, USAEC
Cascade Galasso-Irish, ADEC
Melinda Brunner, ADEC

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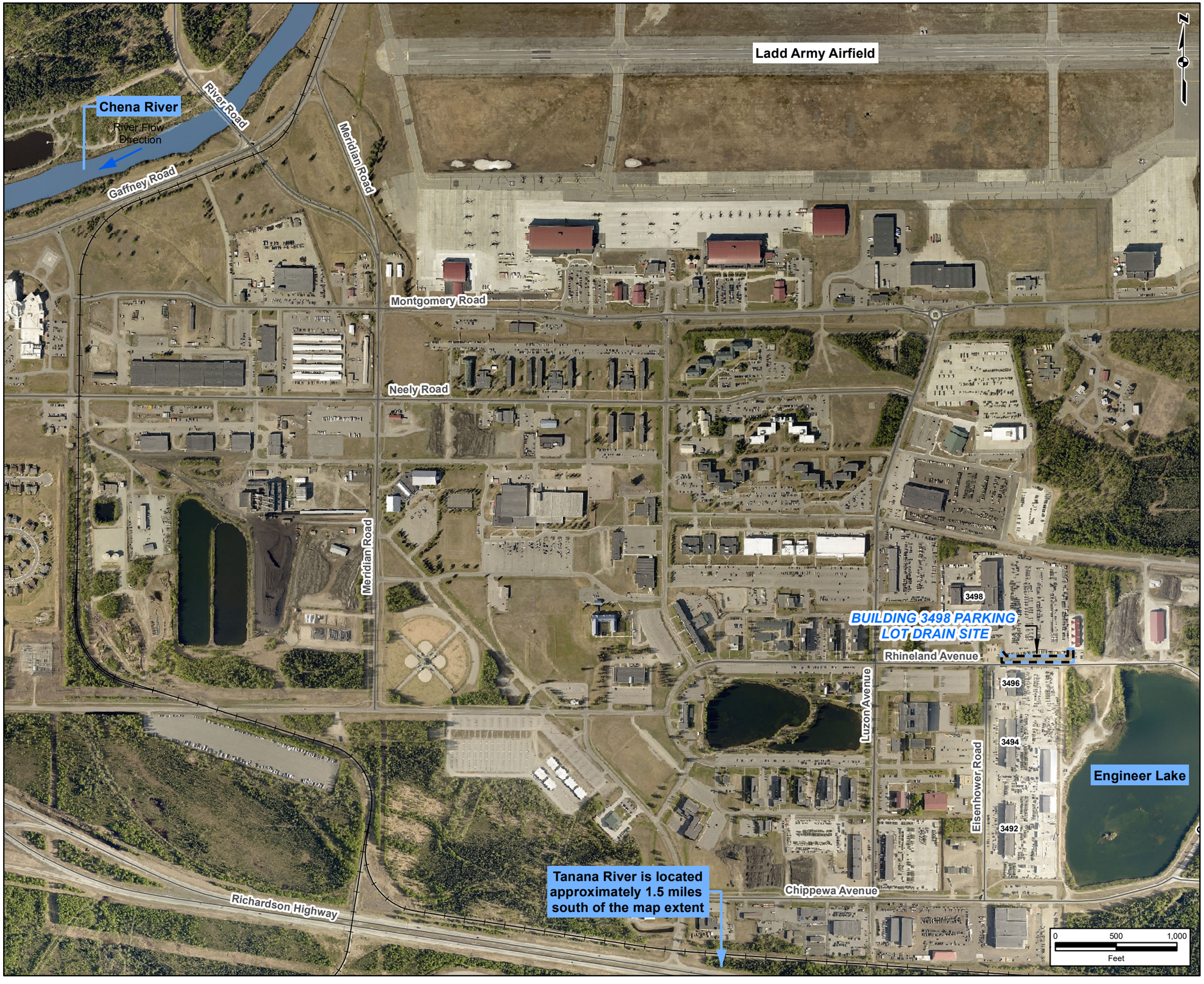
ENVIRONMENTAL SUMMARY REPORT, BUILDING 3498 PARKING LOT DRAIN SITE

US ARMY GARRISON ALASKA

BUILDING 3498 SITE LOCATION



Legend:

Owner Name

- Alaska Railroad
- Road
- Building 3498 Parking Lot Drain Site

Notes:

1. Aerial imagery (dated 2020) obtained from Fairbanks North Star Borough GIS (Geographic Information System) Department (Pictometry_2020_4in_Fairbanks.SID)
2. Geospatial data obtained from U.S. Army Garrison Alaska Directorate of Public Works, Master Planning Division, and Fairbanks Environmental Services (FES) (2019).

WORLD GEODETIC SYSTEM 1984 (WGS84)
UNIVERSAL TRANSVERSE MERCATOR (UTM), ZONE 6N, METERS
HORIZONAL DATUM: WGS84 | VERTICAL DATUM: NAVD88

PROJECT No.: 550905	DATE: 2/3/2021	FIGURE: 2
P.M.: A.S.	DRAWN: C.B.	

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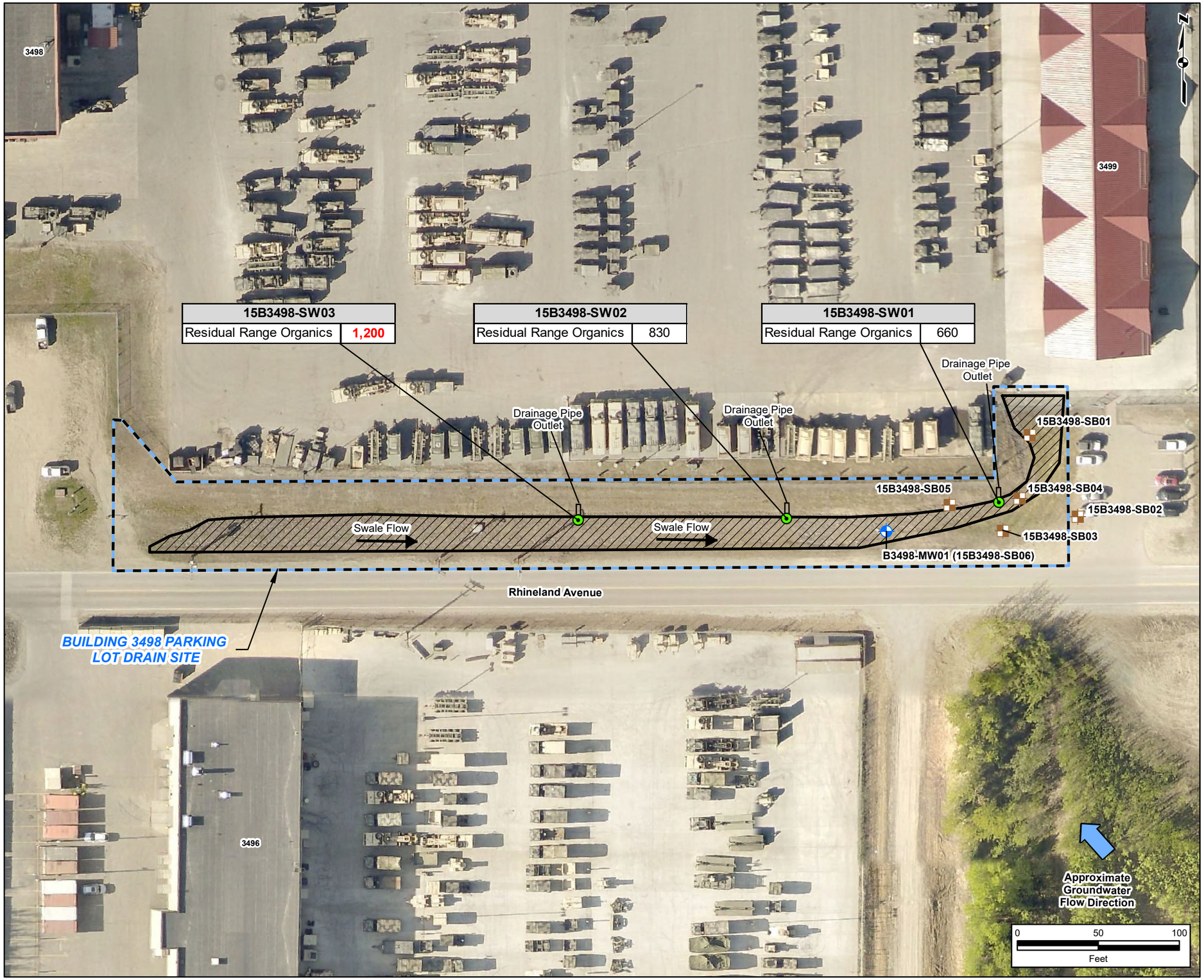

ENVIRONMENTAL SUMMARY REPORT, BUILDING 3498 PARKING LOT DRAIN SITE

US ARMY GARRISON ALASKA

BUILDING 3498 SAMPLING LOCATIONS AND RESULTS

ADEC CLEANUP LEVELS	
ANALYTE	GW HH
Residual Range Organics	1,100

Acronyms and Abbreviations:

µg/L = micrograms per liter

AAC = Alaska Administrative Code

ADEC = Alaska Department of Environmental Conservation

GW = groundwater

HH = human health

Legend:

- Sediment / Surface Water Location
- Soil Boring Sample Location
- Groundwater Monitoring Well (with co-located soil boring)
- Swale
- Building 3498 Parking Lot Drain Site

Notes:

1. Soil, groundwater, surface water, and sediment samples were collected in 2015. Additional groundwater and sediment samples were collected in 2016 and analyzed for UST metals only (USACE 2017).
2. The 2015 surface water analytical results were compared to the current ADEC GW cleanup levels presented in 18 AAC 75, GW HH Cleanup Level, Table C (ADEC 2020) and 18 AAC 70, AWQS, Water Quality Criteria for Toxic and Other Deleterious Substances (ADEC 2008).
3. Contaminant concentrations that exceed ADEC GW HH cleanup levels are shown in **red**.
4. All values reported in ug/L.

Source:

1. Aerial imagery (dated 2020) obtained from Fairbanks North Star Borough GIS (Geographic Information System) Department (Pictometry_2020_4in_Fairbanks.SID)
2. Geospatial data obtained from U.S. Army Garrison Alaska Directorate of Public Works, Master Planning Division, and Fairbanks Environmental Services (FES) (2019).

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PROJECT No.:	DATE:	FIGURE:
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P.M.: A.S.	DRAWN: C.B.	

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