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Work Plan Addendum

Date	18 August 2011
To	Bob Brock (USACE), Joe Malen (DPW), Debra Caillouet (ADEC), Jacques Gusmano (EPA)
From	Terry Heikkila, PE, PMP
Subject	**Former Communications Site Hotspots Removal Action (Final)**

This Work Plan Addendum describes procedures to be followed to support the additional investigation and removal of two hotspots identified in soil characterization samples 08FW-A-EXBLD24-19.4, located between Building 22 and Building 24, and 07FW-A-EXBldg4806R1B, located near Building 48. Field activities will include investigation and delineation of the hotspots through the excavation and containerization of contamination above the Alaska Department of Environmental Conservation (ADEC) cumulative (multi-chemical) risk threshold of 1×10^{-5}.

This document is presented as an addendum to the *Fort Wainwright Post Wide Work Plan* (U.S. Army Corps of Engineers [USACE 2011]).

Project Description

Construction planned for the Former Communications Site during 2011 includes installation of new and replacement utilities, roadways, driveways, and drainage ditches for completion of the Army Family Housing Replacement project (Figure 1). These activities may include excavation up to 6 feet below ground surface (bgs).

Upon completion of the risk assessment (RA) for the remedial investigation (RI), two areas were identified with contaminant concentrations above the cumulative (multi-chemical) risk threshold where site workers could be exposed. Sample location 08FW-A-EXBLD24-19.4 exceeded the risk threshold for 1,2,3-trichloropropane at 4 feet bgs; and sample location 07FW-A-EXBldg4806R1B exceeded the risk threshold for n-nitrosodimethylamine, dibenzo(a,h)anthracene, and benzo(a)pyrene at 8 feet bgs. These two sample locations will be excavated as part of proposed construction activities (Figure 2).

Methodology

The objective of this action is to investigate the soil surrounding samples 08FW-A-EXBLD24-19.4 and 07FW-A-EXBldg4806R1B and to determine the vertical and horizontal extent of contamination. Investigation-derived waste (IDW) will be segregated and stored as detailed below. Sampling procedures to be followed are outlined in the *Fort Wainwright Post Wide Work Plan* (USACE 2011).

A detailed breakdown of planned activities is presented below:

- Using global positioning system (GPS) equipment, the sample locations will be re-located. The coordinates (UTM 6 North WGS 84) of the sample location 08FW-A-EXBLD24-19.4 are: Northing 3959284.404, Easting 1381550.715. The coordinates of the sample location 07FW-A-EXBldg4806R1B are: Northing 3959232.791, Easting 1381129.767.
- Soil will initially be excavated to a depth 2 feet below the original sample depth. Horizontally, the soil will be excavated on a 10-foot by 10-foot grid centered on the sample location. The area was backfilled with imported fill and graded in 2009, and the sample location may have been buried by more than 1 foot of fill. Imported fill material will be segregated and used for backfill.
- If imported fill material is determined to exceed 3 feet bgs, the excavation will continue until native material is reached. After native material has been reached, the excavation will proceed at least 2 feet further in depth to remove contaminated soil. Backfill material is identified by the gray cobble gravel component that creates a clear stratification between the native organic silt/clay materials.
- Samples will be collected from the base of the excavation and from every sidewall composed of native soil (i.e., backfill will not be sampled). Soil will be excavated until laboratory sample results confirm that the vertical and horizontal extent of contamination has been identified. Soil samples will be collected from biased locations if signs of contamination (such as soil staining or odor) are present. Soil samples will be analyzed for the analytes presented in Table 1.

Table 1
Soil Sampling Details

Analytes	Method	Turn-Around Time
GRO	AK101	7 days
DRO/RRO	AK102/103	
SVOCs/PAHs	SW8270/SW8270 SIM	
VOCs	SW8260	
RCRA Metals	SW6020/7471	
PCBs	SW8082	
Herbicides	SW8151	
Pesticides	SW8081	

- 1,2,3-TCP, n-nitrosodimethylamine, dibenzo(a,h)anthracene, and benzo(a)pyrene results will be compared to ADEC Method Two cleanup criteria and the project screening levels. All other analytes will be compared to ADEC cleanup criteria only.
- Excavation and sampling activities will continue until results are below ADEC Method Two cleanup criteria and/or project screening levels are met. If additional excavation is necessary, it will advance 5 feet horizontally and 1 foot vertically from the location of the exceedance. Samples will be collected from the new side wall and the new floor of the excavation.
- Excavated soil will be stockpiled onsite either in Super Sacks® or within a lined stockpile located in a U.S. Army-approved area. This soil will be transported to an appropriate treatment, storage, and disposal facility (pending sample results) in accordance with applicable waste regulations.
- IDW characterization samples will be collected in accordance with the Work Plan (USACE 2010). If the excavation does not extend beyond a 10-foot by 10-foot by 5-foot grid, approximately 20 cubic yards of soil will be generated and one waste characterization sample will be required. If additional IDW is generated and additional samples are required, they will be collected in accordance with the Field Sampling Plan (USACE 2010). IDW characterization samples will be analyzed for gasoline-range organics (GRO), diesel-range organics (DRO), residual-range organics (RRO), semivolatile organic compounds (SVOC), polycyclic aromatic hydrocarbons (PAH), volatile organic compounds (VOC), pesticides and herbicides, and Resource Conservation and Recovery Act (RCRA) metals prior to disposal.
- Upon completion of excavation activities and receipt of sampling results, Jacobs Engineering Group Inc. (Jacobs) will provide a draft report which will be forwarded to the Project Team for review via USACE, Alaska District. The Project Team will provide written comments in accordance with the Fort Wainwright Federal Facility Agreement. When direction has been given by USACE, the excavation will be backfilled with clean, imported fill in accordance with the Work Plan (USACE 2010).

References

USACE (U.S. Army Corps of Engineers), Alaska District. 2011*. Fort Wainwright Post Wide Work Plan*. Prepared by Jacobs Engineering Group Inc.

ADEC (Alaska Department of Environmental Conservation). 2009 (February). *Monitoring Well Guidance.*

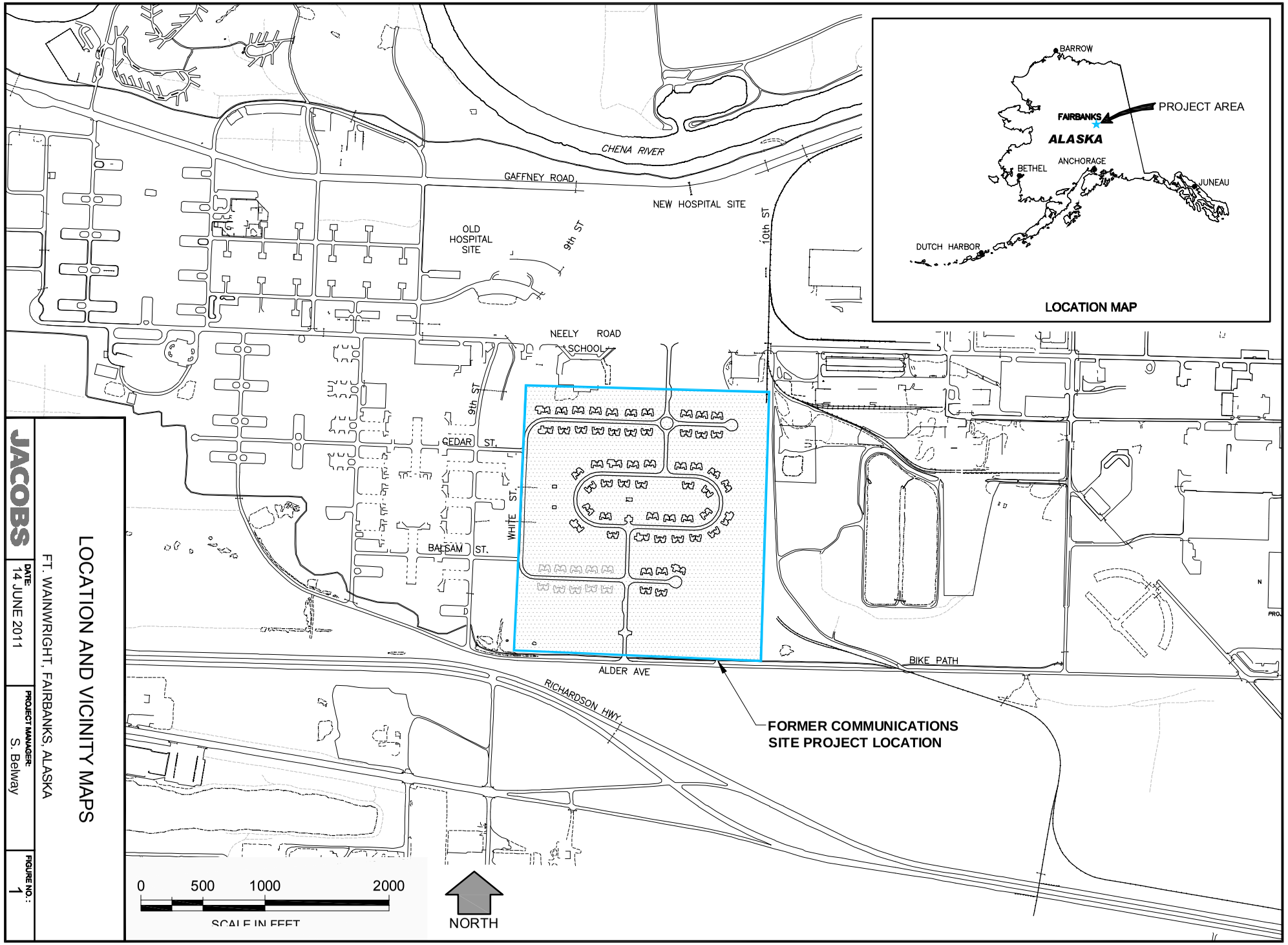
Figures

Figure 1 Site Location and Vicinity

Figure 2 Proposed Excavation Area and Sample Locations

FIGURES

G:\Autocad\ERS-UR\05F50701\2009 RI Rpt\Fig 1-1 Location & Vicinity Maps.dwg Sep 30,2010 -tiedemam



JACOBS

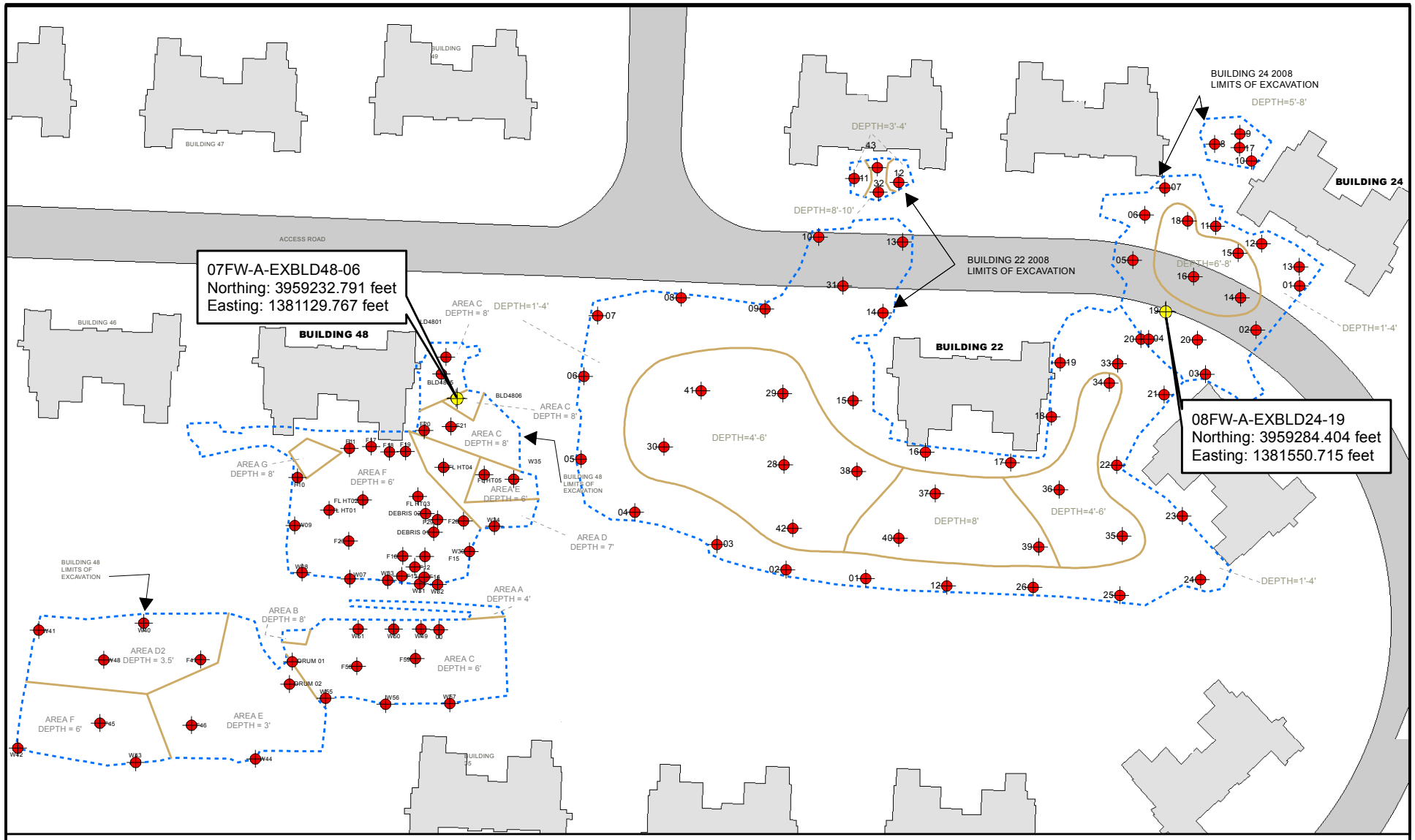
LOCATION AND VICINITY MAPS

FT. WAINWRIGHT, FAIRBANKS, ALASKA

DATE: 14 JUNE 2011

PROJECT MANAGER: S. Belway

FIGURE NO.: 1



Samples 07FW-A-EXBLD48-06 & 08FW-A-EXBLD24-19

2007 & 2008 Sample Location

2007 & 2008 Limits of Excavation

Interior Areas

Notes:
1. The prefix 08FW-A-EXBLD22- (Building 22 Sample IDs), 08FW-A-EXBLD24- (Building 24 Sample IDs), and 07FW-AEXBLD48- (Building 48 Sample IDs) have been omitted for clarity.

N

Coordinate System: Alaska State Plane Zone 3
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

0 25 50 75 100
Feet

BUILDINGS 24 & 48
PROPOSED EXCAVATION & SAMPLE LOCATIONS
FORT WAINWRIGHT, FAIRBANKS, ALASKA

JACOBS	DATE:	PROJECT MANAGER:	FIGURE NO.:
	26 JULY 2011	S. BELWAY	2

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