

## Work Plan Addendum

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**Date** 17 June 2011  
**To** Bob Brock (USACE), Joe Malen (DPW),  
Debra Caillouet (ADEC), Jacques Gusmano (EPA)  
**From** Terry Heikkila, PE, PMP  
**Subject** **Former Communications Site Hot Spot Removal Action, Final**

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This Work Plan Addendum describes the procedures to be followed to support additional investigation and removal of a hotspot identified in soil characterization sample 07FWAMW62-3.0, located at monitoring well (MW) 62, on the northern edge of the Former Communications Site (FCS). Field activities will include investigation and delineation of the hotspot as well as the excavation and removal of the benzo(a)pyrene and dibenzo(a,h)anthracene contamination above the Alaska Department of Environmental Conservation (ADEC) cumulative (multi-chemical) risk threshold of  $1 \times 10^{-5}$ . Groundwater sampling of MW62 will be conducted prior to excavation activities.

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

### **Situation**

Construction planned for the FCS during 2011 includes installation of 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), one area was identified with concentrations of chemicals above the cumulative (multi-chemical) risk threshold where site workers could be exposed. Benzo(a)pyrene and dibenzo(a,h)anthracene exceeded the threshold criteria in sample 07FWAMW62-3.0 at (see Figure 2). This sample location will be excavated due to the shallow depth of contamination (3 feet bgs).

### **Methodology**

The objective of this action is to investigate the soil surrounding sample 07FWAMW62-3.0 and to determine the vertical and horizontal extent of benzo(a)pyrene and dibenzo(a,h)anthracene

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*.

A detailed breakdown of planned activities is presented below:

- Using GPS equipment and the monitoring well location, the sample location will be re-located. The coordinates (UTM 6North WGS 84) of the sample location are: Northing 3959878.960, Easting 1380960.754.
- Prior to excavation activities a groundwater sample will be collected from MW-62 and analyzed for GRO, DRO, RRO, SVOCs, PAHs, VOCs, pesticides and herbicides, with an anticipated 7-day turn-around time.
- Soil will initially be excavated to a depth of 5 feet bgs (anticipated to be 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. 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 which creates a clear stratification between the native organic clay materials.
- If the integrity of the existing monitoring well (MW-62) is compromised, the well will be decommissioned in accordance with the Work Plan and ADEC's *Monitoring Well Guidance* (ADEC 2009), and a new well will be installed after excavation activities are completed.
- 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            |                  |

- Benzo(a)pyrene and dibenzo(a,h)anthracene results will be compared to ADEC Method Two cleanup criteria and the project screening levels (PSL) (0.049 mg/kg for both analytes). 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 (PSL) 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.
- Excavation characterization results will be provided to CH2MHill for inclusion in the Human Health Risk Assessment Report.
- Excavated soil will be stockpiled onsite either in Super Sacks<sup>®</sup> or within a lined stockpile located in an 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. 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 FSP. IDW characterization samples will be analyzed for GRO, DRO, RRO, SVOCs, PAHs, VOCs, 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 will provide a draft report which will be forwarded to the Project Team for review via the U. S. Army Corps of Engineers (USACE), Alaska District. The Project Team will provide written comments in accordance with the *Fort Wainwright Federal Facility Agreement* (FFA). When direction has been given by USACE, the excavation will be backfilled with clean, imported fill in accordance with the Work Plan.

### **References**

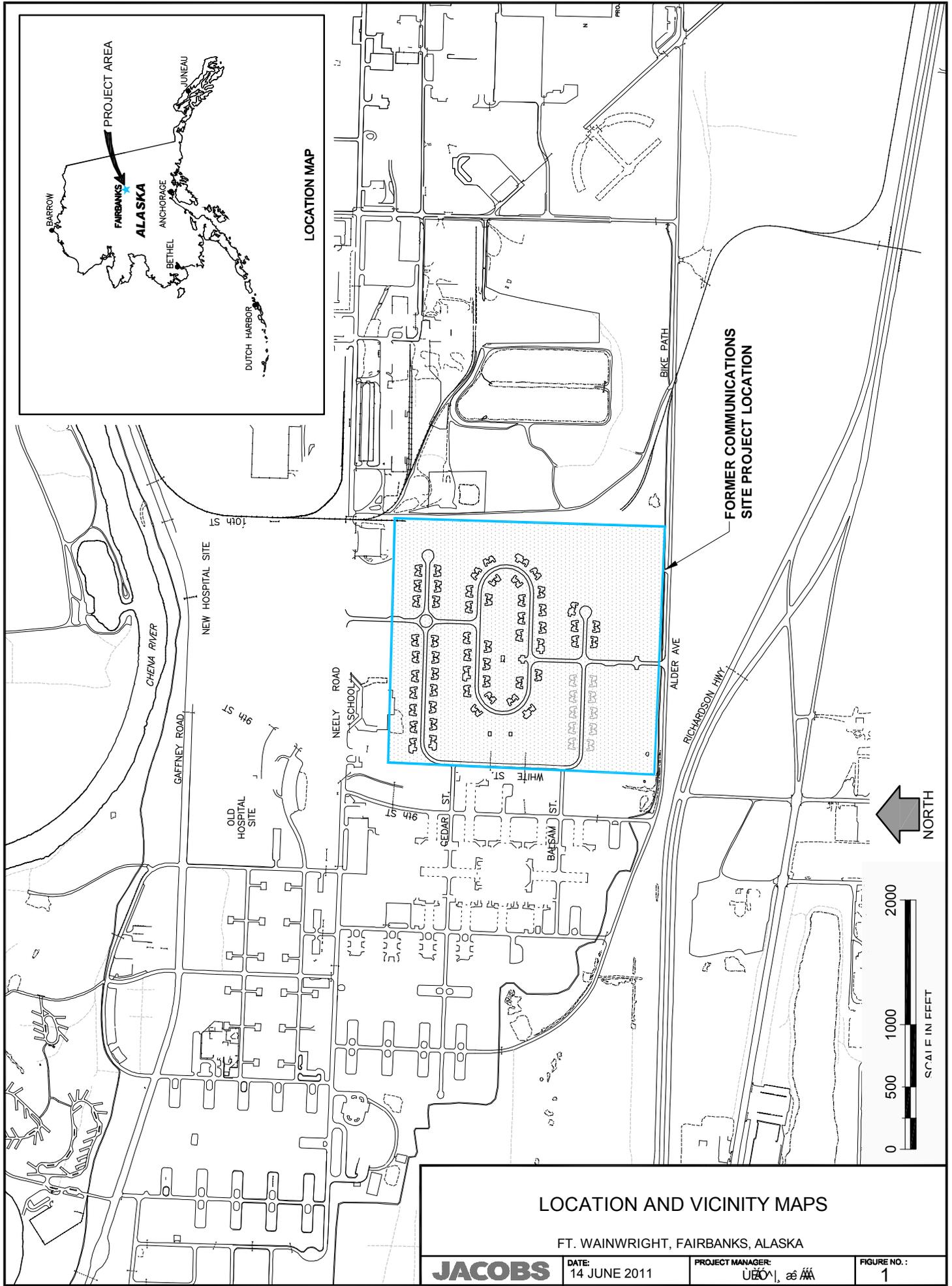
U.S. Army Corps of Engineers (USACE), Alaska District. 2011. *Fort Wainwright Post Wide Work Plan*. Prepared by Jacobs Engineering Group Inc.

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

### **Attachments**

Figure 1: Location and Vicinity Maps

Figure 2: Location of 2011 Investigation



### LOCATION AND VICINITY MAPS

FT. WAINWRIGHT, FAIRBANKS, ALASKA

**JACOBS**

DATE:  
14 JUNE 2011

PROJECT MANAGER:  
URON, et al

FIGURE NO. :  
1



Path: P:\Taku\_Gardens\MXD\FIG2\_2011Investigation\_85X11P.mxd



Coordinate System: Alaska State Plane Zone 3  
 Projection: Transverse Mercator  
 Datum: North American 1983  
 Units: Foot US  
 1:3,000



**Legend**



Samples Exceeding ADEC Risk Threshold Criteria

**LOCATION OF 2011 INVESTIGATION  
 TAKU GARDENS  
 FORT WAINWRIGHT, FAIRBANKS, ALASKA**

**JACOBS**

DATE:  
14 JUNE 2011

PROJECT MANAGER:  
S. BELWAY

FIGURE NO.:  
2