

Work Plan Addendum

Date 22 March 2010

To Bob Brock (USAED), Joe Malen (DPW),
Debra Caillouet (ADEC), Jacques Gusmano (EPA)

From Terry Heikkila, PE, PMP

Subject Taku Gardens DDT Hot Spot Investigation and Delineation

Situation

A single elevated concentration of DDT was discovered during a final review of the soil sample data for the risk assessment during the preparation of the Remedial Investigation (RI) Report. Analytical results indicate that DDT exceeds the clean-up level at this one location. The exceedance was found in Sample 09-FWA-EXBLD15-20_1, which was analyzed for gasoline-range organics, diesel-range organics, residual-range organics, volatile organic compounds, semi-volatile organic compounds (SW8270C and SW8270C SIM Methods), herbicides, pesticides, explosives and metals.

This document is presented as an Addendum to the 2008 Former Communications Site Drum and Debris Investigation Work Plan (2008 Work Plan). The Addendum describes the procedures that will be followed to support the additional investigation and delineation of the dichlorodiphenyltrichloroethane (DDT) hotspot identified in Excavation Characterization Sample 09-FWA-EXBLD15-20_1 (46.5 mg/kg), located approximately 1 foot below ground surface (bgs) within the southwest sidewall of the 2009 intrusive investigation footprint north of Building 19 at Taku Gardens (Figure 1).

Methodology

The objective of this action is to investigate the soil surrounding sample location 09-FWA-EXBLD15-20_1 and to determine the vertical and horizontal extent of DDT contamination and to identify any potential sources of the contamination. The investigation-derived waste (IDW) will be segregated and stored onsite as detailed below. Sampling procedures as outlined in the 2008 Work Plan and the Field Sampling Plan (FSP), Attachment 1, will be followed.

A detailed breakdown of activities is presented below:

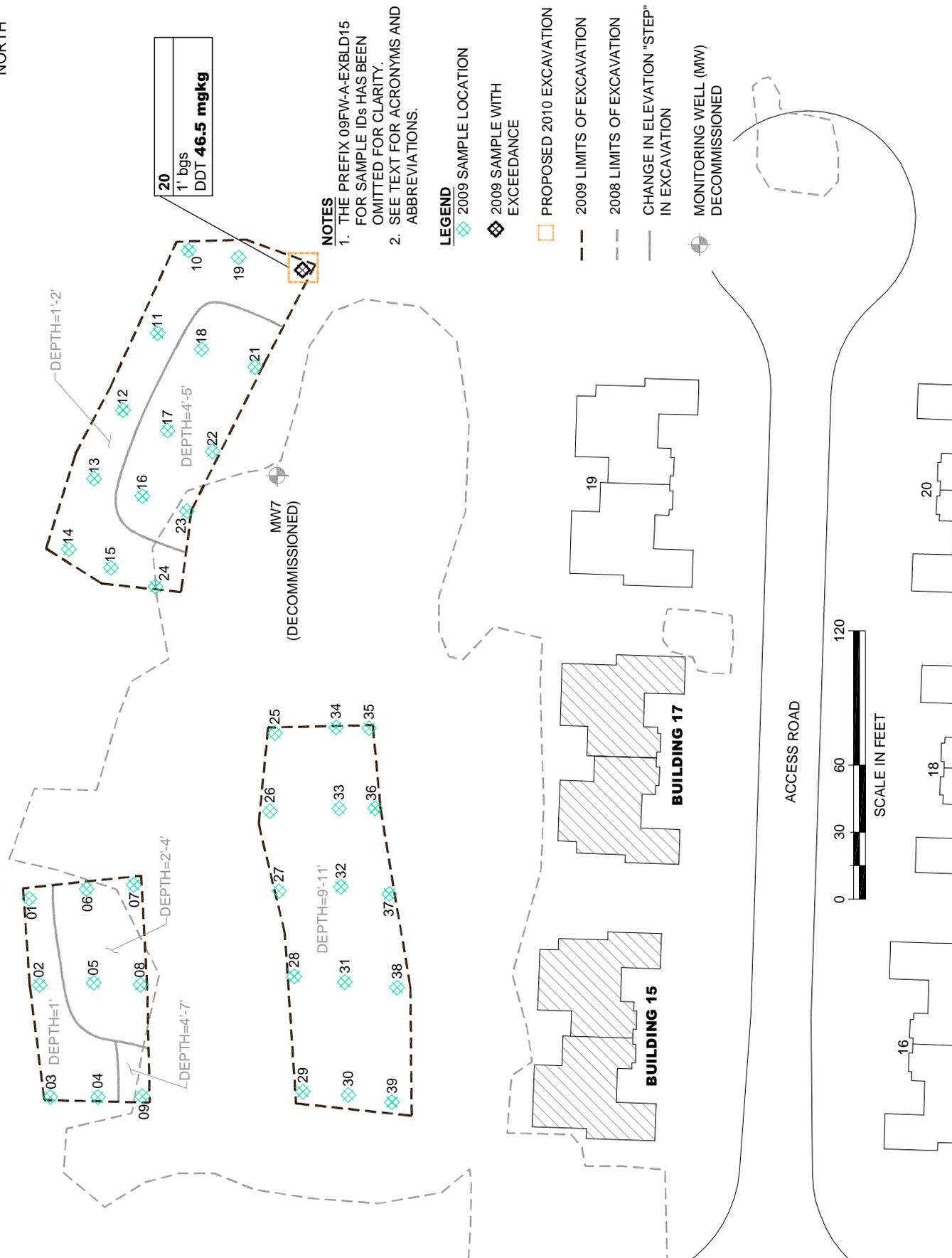
- The sample location will be relocated using GPS equipment. The coordinates of the sample location are: Northing 7189285, Easting 468640.2.
- Snow will be cleared around the sample location. Using a glycol-filled ground heater (E1100 Type), soil will be heated to thaw the ground to a depth of at least 3 feet bgs.
- Vertically, soil will be excavated until native soil is encountered. Horizontally, the soil will be excavated on a 10-foot x 10-foot grid centered on the original sample location. This area was backfilled with imported fill, and due to backfilling and grading activities in 2009, the sample location may have been buried by more than 1 foot of imported fill. If native soil material is determined to be at a depth exceeding 1 foot 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 potentially contaminated soil.
- 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 samples will be collected from biased locations if signs of contamination (such as soil staining or odor) are present. Proposed sample locations are presented in Figure 2. Samples will be analyzed for DDT, dichlorodiphenyldichloroethylene (DDE) and dichlorodiphenyldichloroethane (DDD), breakdown products of DDT. Soil will be excavated until laboratory sample results confirm that the vertical and horizontal extent of DDT contamination has been identified. Samples will be collected according to Table 1 below.

Table 1 Sampling Details

Analyte	Anticipated number of samples	Turnaround Time
DDT (SW8081A)	8 (plus 1 duplicate and 1 MS/MSD)	24 hours
DDE (SW8081A)	8 (plus 1 duplicate and 1 MS/MSD)	24 hours
DDD (SW8081A)	8 (plus 1 duplicate and 1 MS/MSD)	24 hours

- Should additional excavation be necessary, it will advance 5 feet horizontally from the edge of the wall where the sample was taken and 1 foot vertically from the location of the exceedance. Samples will be collected from the new side wall and new floor of the excavation.
- Excavation characterization samples will be collected in support of the ongoing risk assessment, and results will be provided to CH2MHill for inclusion in the Remedial Investigation/Human Health Risk Assessment Report.

- Excavated soil will be stockpiled onsite either in Super Sacks or within the existing lined stockpile located in the southwest area of the site. This soil will be transported to an appropriate treatment, storage and disposal facility pending sample results and in accordance with applicable waste regulations. If necessary, soil will be segregated according to appropriate waste classification, depending on DDT concentrations.
- IDW characterization samples will be collected in accordance with the FSP. If the excavation does not extend beyond a 10-foot x 10-foot x 3-foot grid, it is likely that approximately 11 cubic yards of soil will be generated. If so, two waste characterization samples will be required. If any additional IDW is generated, additional samples (if required) will be collected in accordance with the FSP. IDW characterization samples will be analyzed for DDT, DDE, DDD, and Resource Conservation and Recovery Act analytes, as detailed in the FSP.
- Upon completion of excavation activities and receipt of sampling results, Jacobs will provide a draft report which shall be forwarded to the Project Team via the U. S. Army Engineer District, Alaska (USAED) for review. The Project Team shall provide written comments in accordance with the Fort Wainwright Federal Facility Agreement (FFA). The excavation will be backfilled with clean imported backfill in accordance with the 2008 Work Plan when directed by USAED.



20
1' bgs
DDT 46.5 mg/kg

NOTES

1. THE PREFIX 09FW-A-EXBLD15 FOR SAMPLE IDS HAS BEEN OMITTED FOR CLARITY.
2. SEE TEXT FOR ACRONYMS AND ABBREVIATIONS.

LEGEND

- 2009 SAMPLE LOCATION
- 2009 SAMPLE WITH EXCEEDANCE
- PROPOSED 2010 EXCAVATION
- 2009 LIMITS OF EXCAVATION
- 2008 LIMITS OF EXCAVATION
- CHANGE IN ELEVATION "STEP" IN EXCAVATION
- MONITORING WELL (MW) DECOMMISSIONED

BUILDINGS 15/17 2009 EXCAVATION LIMITS AND SAMPLE LOCATIONS

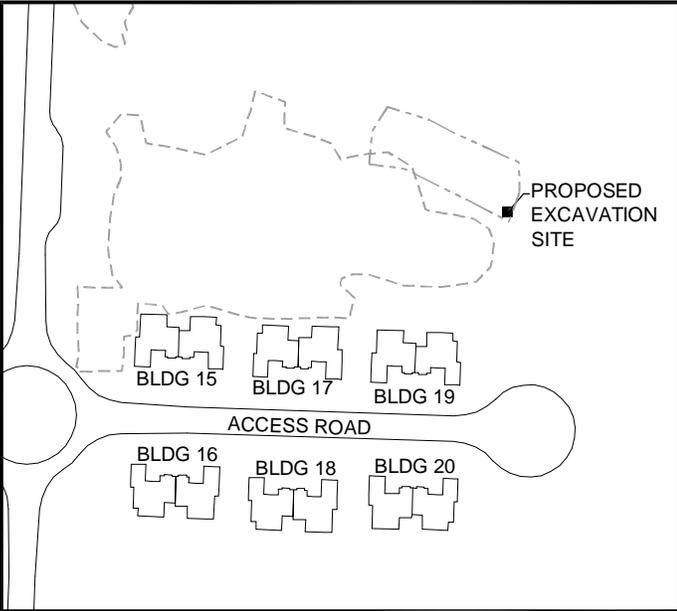
FT. WAINWRIGHT, FAIRBANKS, ALASKA

JACOBS

DATE:
15 March 2010

PROJECT MANAGER:
T. Heikkila

FIGURE NO.:
1

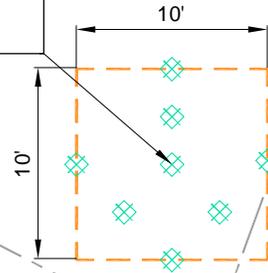


09FW-EXBLD15-10

09FW-EXBLD15-19

09FW-EXBLD15-20

09FW-A-EXBLD15-20
 1' bgs
 DDT **46.5 mg/kg**

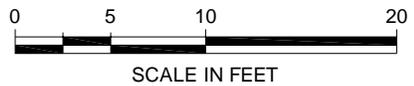


NOTES

1. SEE TEXT FOR ACRONYMS AND ABBREVIATIONS.
2. SAMPLE 09FW-EXBLD15-20 IS LOCATED AT LATITUDE 64°49'35.489" N AND LONGITUDE 147°39'38.585" W AND IS SCHEDULED TO BE RESAMPLED DURING THE 2010 FIELD SEASON.

LEGEND

- ◇ 2009 SAMPLE LOCATION
- ◇ 2010 PROPOSED SAMPLE LOCATION
- - - 2010 ESTIMATED LIMITS OF EXCAVATION
- - - 2009 LIMITS OF EXCAVATION
- - - 2008 LIMITS OF EXCAVATION



**BUILDINGS 15/17
 PROPOSED 2010 EXCAVATION AREA
 AND SAMPLE LOCATIONS**
 FT. WAINWRIGHT, FAIRBANKS, ALASKA

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JACOBS

DATE: 15 March 2010

PROJECT MANAGER: T. Heikilla

FIGURE NO.: 2