

Technical Memorandum

Date 6 May 2009
To Bob Brock/USACE
From Terry Heikkila, PE
Subject Taku Gardens EM61 Hotspot Excavation Tech Memo

The purpose of this technical memorandum is to describe the procedures that will be followed in 2009 to investigate remaining EM61 anomalies at Buildings 15/17, 11, and 35 at Taku Gardens. The objective of work described herein is to confirm that all metal debris has been removed from remaining hot-spot anomalies. This work will be conducted in accordance with Section 3.3.4 of the 2008 Drum and Debris Work Plan (Final) (hereafter referred to as the Drum and Debris Work Plan)

Excavation and Sampling Activities

The purpose of this investigation is to identify and subsequently remove metal debris, munitions-related items, drums, and other underground hazards that could potentially contaminate soil and groundwater at Buildings 15/17, 11, and 35. In general, excavations will begin at the center of each anomaly and extend to a minimum of 2 feet deeper than original excavation depths. If metallic debris is encountered, excavation will continue until no more metal is observed in the excavation or until groundwater is reached, whichever occurs first.

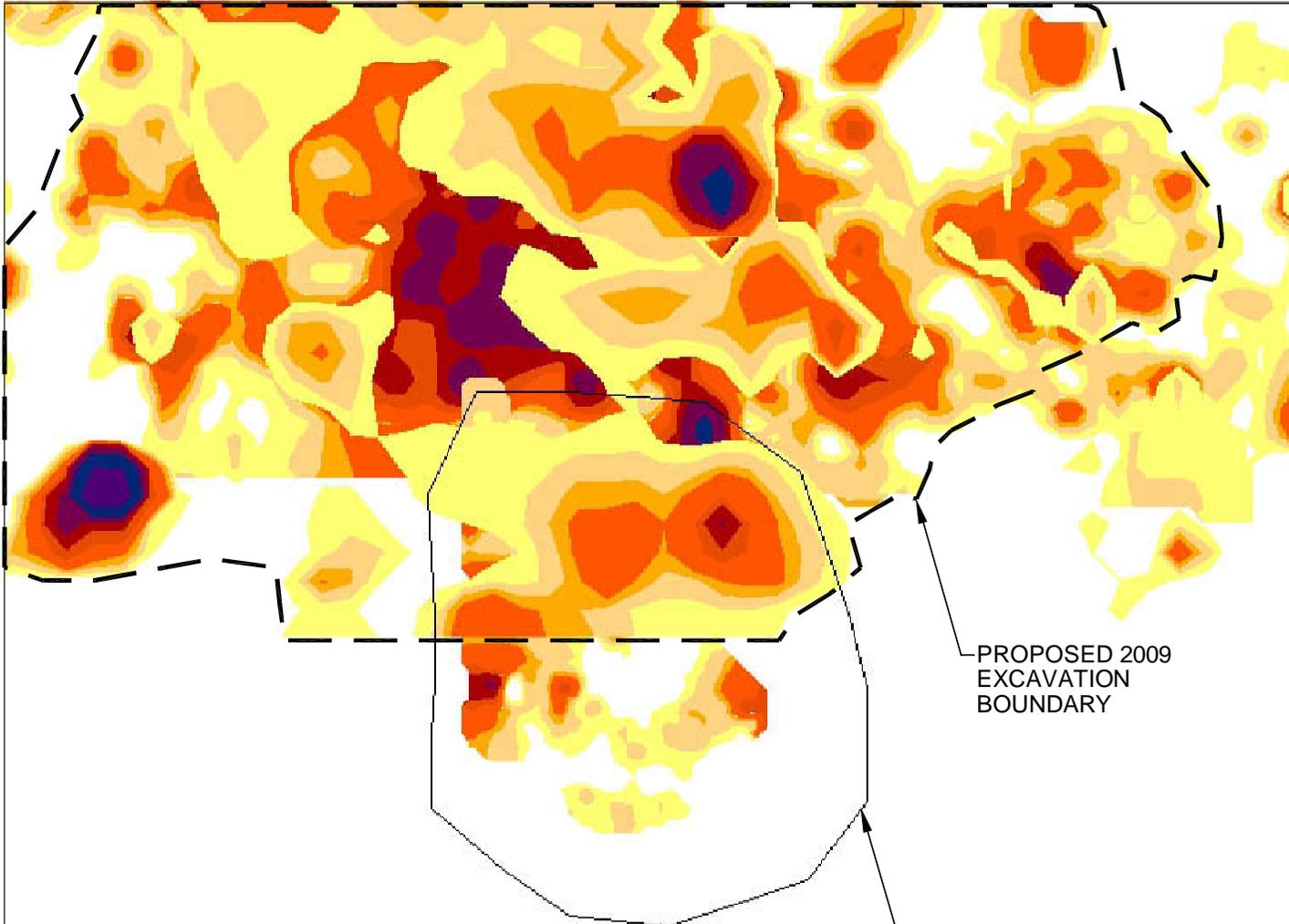
Site work will be conducted using a phased approach, as detailed in Section 3.3.4 of the Drum and Debris Work Plan. The following tasks will be completed at the location of each anomaly at Buildings 11 and 15/17 (Figures 1 and 2, respectively) to complete this effort:

- Due to the hazardous fragmentation distance/clearance radius of 534 feet of potentially explosive munitions-related items, excavation activities will occur during evening hours, when nearby businesses and schools will be closed for the day.
- Excavation will continue to a minimum depth of 2 feet below original excavation depth in conjunction with magnetometer sweeps for metal debris and munitions-related items clearance and PID field screening to locate potential soil contamination.

- All metal debris and munitions-related items will be removed from each excavation and disposed of in accordance with the Drum and Debris Work Plan and 2008 Munitions and Explosives of Concern Work Plan (Final).
- Identification and segregation of all waste streams will be conducted at each excavation, if necessary, in accordance with Section 3.3.4 of the Drum and Debris Work Plan.
- If present, contaminated soil will be excavated and stockpiled. Stockpiled soil will be sampled as described in Appendix A the Field Sampling Plan of the Drum and Debris Work Plan as soon as practicable and will remain covered during project activities.
- If soil contamination is present in any excavation, soil characterization samples will be collected following soil removal as described in Section 2.1.2 of the Drum and Debris Work Plan. Exhumed containers with potentially hazardous materials or waste shall be sampled in accordance with Section 2.0 of the 2008 Drum and Debris Work Plan.
- Each excavation will be cleared with a Schonstedt by UXO technicians once all metallic debris has been removed.
- A new EM61 survey will be conducted at the Building 11 and 15/17 excavations upon completion of clearance activities.
- Excavations will be backfilled with clean, offsite backfill following the procedures outlined in the Drum and Debris Work Plan.

Excavation size may be limited by groundwater or onsite structures. Excavation will not continue below the groundwater table except for removal of drums that are visible above the water table. Excavation in close proximity to housing will occur only where there is evidence of munitions-related items or contamination, in accordance with the Drum and Debris Work Plan.

The investigation at Building 35 (Figure 3) will include the excavation of a series of test pits for this field effort. Anomalies detected in the most recent EM61 survey are probably due to small metal debris mixed in with backfill at the excavation site. Test pits will be excavated to ensure that no metal debris, munitions-related items, or drums remain at the site and will continue to a minimum depth of 2 feet below the original excavation grade. If soil contamination, drums, or any other potential contaminative items are located in any test pits, excavation and sampling activities will be performed as described in the bullets above for Buildings 11 and 15/17. Two test pits are anticipated for Building 35; however, this is subject to change, depending on the type and extent of material encountered in these excavations. Excavated material will be transported to the landfill for disposal if there is no indication of soil contamination. Test pits will be backfilled with clean, offsite backfill and will not require another EM61 survey.



Legend

- BUILDING
- 2008 EXCAVATION

2008 EM61 Results (mV)
<all other values>

ZLEVEL

- 30
- 50
- 75
- 100
- 200
- 300
- 500
- 1000
- 2000



PROPOSED 2009
EXCAVATION
BOUNDARY

2008 EXCAVATION
BOUNDARY

11

BUILDING 11		
2009 EM61 HOTSPOT EXCAVATION		
FT. WAINWRIGHT, ALASKA		
PROJECT MANAGER: T. Heikkila	FILE NAME: Bldg 11.dwg	DATE: May. 06, 09
DRAWN BY: JE AV	LAYOUT TAB: Bldg 11	FIGURE NO.: 1
FILE LOCATION: ERS-UR \ 05F50701 \ 2009 TM_WP		



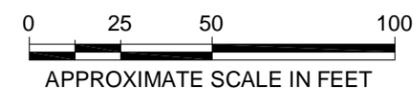
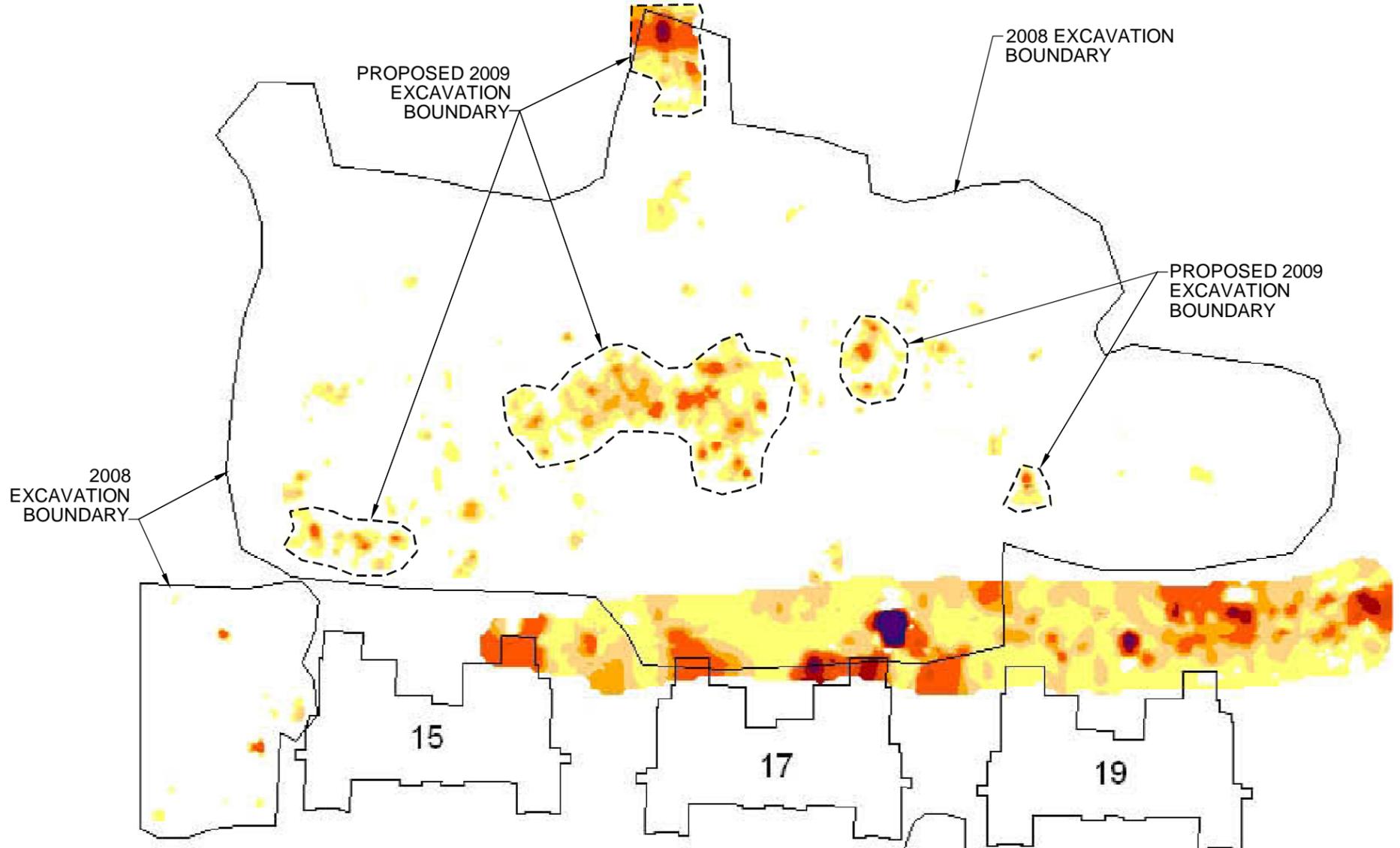
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- BUILDING
- 2008 EXCAVATION

2008 EM61 Results (mV)
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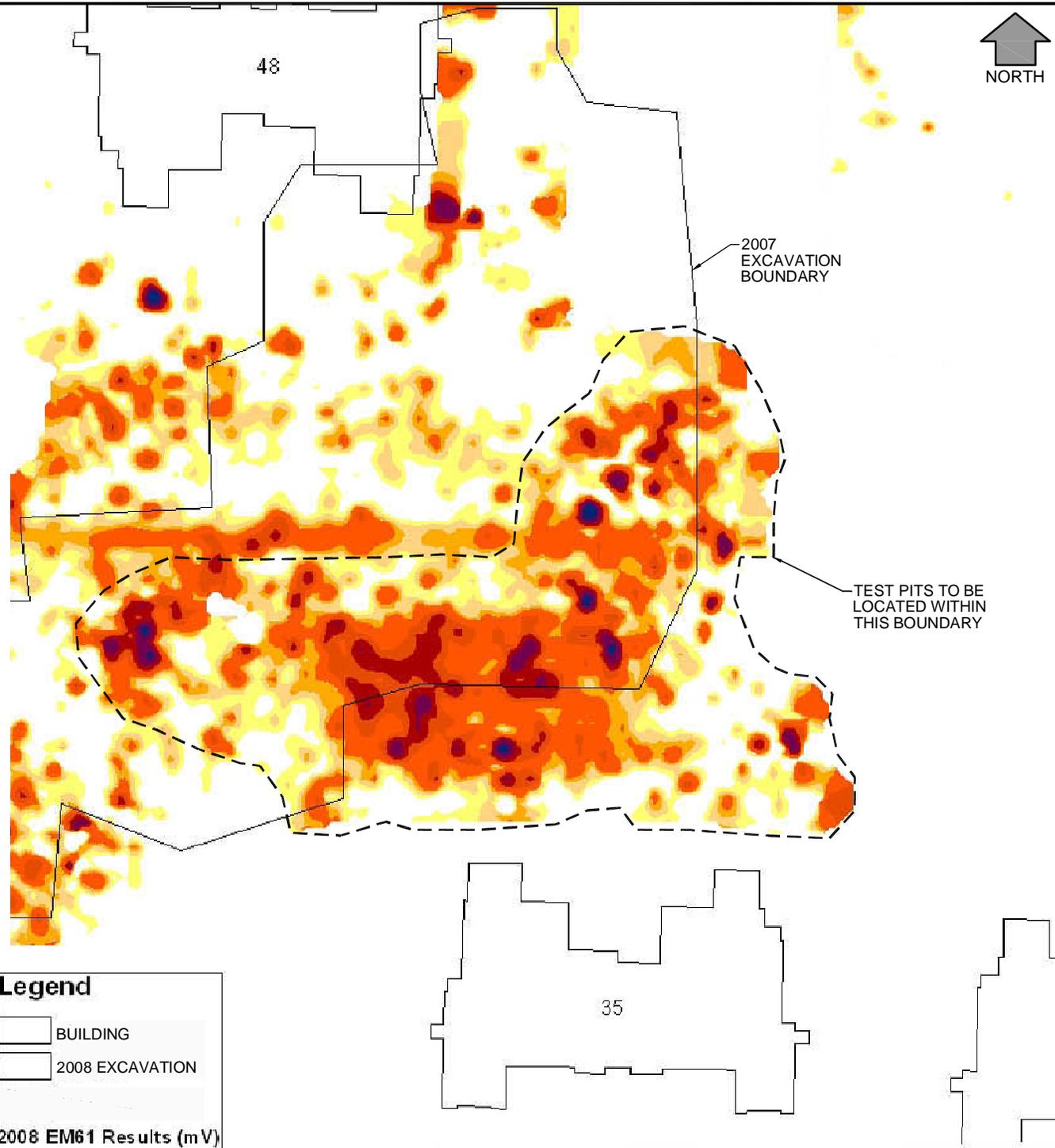
ZLEVEL

- 30
- 50
- 75
- 100
- 200
- 300
- 500
- 1000
- 2000



BUILDING 15/17		
2009 EM61 HOTSPOT EXCAVATION		
FORT WAINWRIGHT, ALASKA		
PROJECT MANAGER: T. Heikkila	FILE NAME: Bldg 15_17.dwg	DATE: May 06, 09
	LAYOUT TAB: Bldg 15_17	FIGURE NO.: 2
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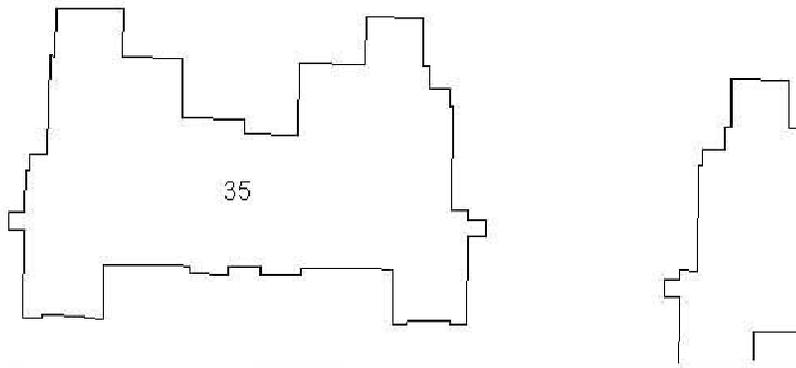
BUILDING

2008 EXCAVATION

2008 EM61 Results (mV)
<all other values>

ZLEVEL

	30
	50
	75
	100
	200
	300
	500
	1000
	2000



BUILDING 35 2009 EM61 HOTSPOT EXCAVATION FORT WAINWRIGHT, ALASKA		
PROJECT MANAGER: J.McVay	FILE NAME: Bldg 35.dwg	DATE: May 06, 09
	DRAWN BY: AV	LAYOUT TAB: Bldg 35
	FILE LOCATION: ERS-UR \ 05F50701 \ 2009 TM_WP	
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