

APPENDIX A

PERFORMANCE WORK STATEMENT

FOR THE

Engineering Evaluation/Cost Analysis Additional Sampling at Charlie Area Fort McClellan, Alabama

Prepared for:



**U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Ms. Sherri Anderson-Hudgins)
4820 University Square
Huntsville, Alabama 35816-1822**

**U.S. Army Engineer Division, South Atlantic
Attn: CESAD-PM-H (Ms. S. Ernst)
77 Forsyth Street, S.W.
Atlanta, Georgia 30335-6801**

**Contract: W912DY-04-0018
Task Order: 0024
Purchase Request Number: W31RYO92058499**

Prepared by:



**2229 Old Highway 95
Lenoir City, Tennessee 37771**

May 2010



**APPENDIX A
PERFORMANCE WORK STATEMENT**

The Performance Work Statement can be found behind this page.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE J	PAGE OF PAGES 1 26
---------------------------------	--------------------------------

2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 30-Dec-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE	5. PROJECT NO. (if applicable)
6. ISSUED BY US ARMY ENGINEERING & SUPPORT CENTER HUNTSVILLE ENGINEERING & SUPPORT CENTER P.O. BOX 1600 HUNTSVILLE AL 35807-4301		7. ADMINISTERED BY (If other than item 6) DIRECTORATE OF CONTRACTING - HNC ATTN: JEFFEREY BALL 256-895-1259 HUNTSVILLE AL 35807	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) EOD TECHNOLOGY, INC. MATT KAYE 2229 OLD HWY 95 LENOIR CITY TN 37771-6747	9A. AMENDMENT OF SOLICITATION NO.
	9B. DATED (SEE ITEM 11)
	X 10A. MOD. OF CONTRACT/ORDER NO. W912DY-04-D-0018-0024
	X 10B. DATED (SEE ITEM 13) 29-Jul-2009

CODE **ONEH5** FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer is extended, is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;
 or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
FAR 52.243-4, Changes

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
 Modification Control Number: a0ctejab101012

See Continuation Page.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Erik S. Quist, General Counsel	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Richard J. Mullady
15B. CONTRACTOR/OFFEROR Erik S. Quist (Signature of person authorized to sign)	16B. CONTRACTING OFFICER Richard J. Mullady (Signature of Contracting Officer)
15C. DATE SIGNED 12/30/09	16C. DATE SIGNED 30 Dec 09

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

MOD 01 NARRATIVE: This Task Order issued to EOD Technology, Inc., to provide Additional Sampling at Charlie Area and Revisions to Finalize the Charlie Area EE/CA Report at Fort McClellan, Alabama is modified as follows:

- a. The current Performance Work Statement is replaced with Performance Work Statement Revision 4, Dated 16 Dec 09;
- b. Optional Task 5.1, 2 Noncontiguous DGM Grids (FFP) is added and priced at \$31,983.74;
- c. Additional FUPs added under Task 5A to task listing (see bold print in Task Listing);
- d. Optional Task 5B, Field Office (FFP) is added and priced at \$3779.70; and
- e. Period of Performance completion date is extended from 31 Mar 10 to 31 Dec 10.

As a result of this modification total task order funding remains the same. Period of Performance completion date is extended to 31 Dec 10. All other terms and conditions remain the same.

Changes to Task Listing are identified in bold print:

Task, Title, Type	Qty	Unit	Price	Funded
1, Addendum to Existing Final Charlie Area EE/CA Work Plan (FFP)	1	LS	\$24,554.34	\$24,554.34
2, Document and Data Analysis (FFP)	1	LS	\$9,218.01	\$9,218.01
3, Provide Comment Responses (FFP)	1	LS	\$11,501.09	\$11,501.09
4, GeoSpatial Data (FFP)	1	LS	\$7,682.46	\$7,682.46
5, EE/CA Field Activities (FFP)	1	LS	\$168,310.05	\$168,310.05
5.1, (Optional) 2 Noncontiguous DGM Grids (FFP)	1	LS	\$31,983.74	
5A, (Optional) Additional Field Activies Task (FFP)	1	LS	\$2,992.46	
Analog Transects Per Acre (FUP)	1	Ea	\$9,543.79	
Contiguous Digital Transects Per Acre (FUP)	1	Ea	\$27,080.97	
Analog Grids, per 50' x 50' grid, (FUP)	1	Ea	3,514.21	
Digital Grids, per 50' x 50' grid, (FUP)	1	Ea	\$5,644.19	
Mob/Demob, per mob/demob, (FUP)	1	Ea	\$37,323.59	
Civil Survey, per acre, (FUP)	1	Ea	\$2,851.28	
Vegetation Removal (light), per acre, (FUP)	1	Ea	\$2,292.61	
Vegetation Removal (medium), per acre, (FUP)	1	Ea	\$2,623.02	
Vegetation Removal (heavy), per acre, (FUP)	1	Ea	\$2,855.15	
5B, (Optional) Field Office, (FFP)	1	LS	\$3,779.70	
6, Addition to & Rev of existing Draft Final EE/CA Rpt (FFP)	1	LS	\$30,337.83	\$30,337.83
7, Action Memorandum (FFP)	1	LS	\$8,462.68	\$8,462.68
8, Community Relations Support (FFP)	1	LS	\$30,689.67	\$30,689.67
Additional Meeting (FUP)	1	Ea	\$7,508.55	
9, Project Documentation (FFP)	1	LS	\$9,543.79	\$9,543.79
			Total Task	\$300,299.92

**Performance Work Statement
Engineering Evaluation/Cost Analysis
Additional Sampling at Charlie Area and Revisions to Finalize the Charlie Area EE/CA Report
Fort McClellan, AL
9 April 2009
Revision: 4
Revision Date: 16 December 2009**

Moved changes from Revision 3 into Task 5A.

Task 3.5.1: changed “2 grids” to “2 noncontiguous grids”.

Task 3.5.1.1: added “The Contractor shall provide unit prices for activities listed in the cost spreadsheet.”

1.0 OBJECTIVE: The objective of this task order is to obtain acceptance of an Action Memorandum meeting the requirements of ER 200-3-1 and CX Interim Guidance 06-04. Work to be accomplished includes the additional supplemental sampling and subsequent document revision in order to finalize the existing Draft Final Charlie Area Engineering Evaluation/Cost Analysis (EE/CA) and all necessary activities required to accomplish this objective.

2.0 BACKGROUND: Work required under this Performance Work Statement (PWS) falls under the Base Realignment and Closure (BRAC) Program. USACE examined the existing EE/CA information in order to determine potential data gaps. As a result, five (5) areas located in the Charlie Area at Fort McClellan are proposed for supplemental sampling in order to complete the Charlie Area EE/CA: Areas 1-4 in the Risk Sector FWS-1L-FM, and Area 5 in Risk Sector FWS-2L-FM. The USACE Analysis resulted in the following sampling:

- Reacquisition and investigation of six (6) grids (C102, C116, C118, C131, C140 and A044) that were not previously investigated.
- Investigation of an additional two (2) new grids at 0.25 acres per grid.
- Investigation of 18 new transects totaling approximately 31,873 feet in length.
- No additional sampling for mountainous regions with slopes > 40%

2.1 Location: Fort McClellan is located northeast of the City of Anniston, Calhoun County, Alabama. To the west is the area known as Blue Mountain. To the North are the areas known as the City of Weaver and Jacksonville. The Talladega Forest is to the east of the post. Areas 1 and 2 are located between the north boundary of the Main Post and Risk Sector FWS-1H-FM. Area 2 is located east of French Truitt Hill. Area 3 is between Risk Sectors FWS-1H-FM and FWS-4H-FM. Area 4 is located between Risk Sector FWS-4H-FM and Ridge Road, and north of Bains Gap Road. Area 5 is east of FWS-3H-FM. Maps of the areas showing grid and transect locations are attached as Sheets 1 of 3, 2 of 3, and 3 of 3.

2.2 History: Fort McClellan has been used for artillery training of troops and the National Guard as early as 1898 to the present day. In 1941, McClellan became site of the Chemical Corps Training Command. In 1962, the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency moved to Fort McClellan. In 1973, the Chemical Corps School along with the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency closed. In 1979, the U.S. Army Chemical Corps School re-established along with a Training Brigade for Basic Training. Fort McClellan was closed in September 1999 under the BRAC program.

2.3 Previous Investigations: The US Army Corps of Engineers contracted to complete site characterization activities and EE/CA document production for the site in 2002. The US Fish and Wildlife Service (USFWS) review of the Draft Final EE/CA (December 2004) resulted in postponement of the final EE/CA. USFWS concerns have been resolved; however the Final EE/CA is postponed pending completion of supplemental sampling requirements requested by ADEM.

2.4 Recent Activities: Signs, gates and barriers were installed and a clearance to depth performed on certain roads/firebreaks and three sites known as high use areas [FWS Land Transfer Area (Roads, Firebreaks, and High Use Areas)] during the period April 2003 - December 2004. In accordance with Administrative Order No. 04-086-EHW, a reinvestigation of Segments 55, 56, 62, and 63 located in the FWS Land Transfer Area (Roads, Firebreaks and High Use Areas) was completed from August 2004 – September 2004. An additional 39 segments were reinvestigated from October 2004 – November 2004 in accordance with Consent Order 05-009-CHW. A clearance to depth was performed on Bains Gap Road from January 2006 – April 2006. There will be a removal action occurring in and around this project location, for four specific locations within Charlie Area of Fort McClellan. These Removal Action locations will require the EE/CA Contractor to coordinate with the Removal Action Contractor for safety and exclusion zone requirements.

3.0 SPECIFIC TASKS: Methods to be used to achieve task order objectives at the specified level of performance shall be determined by the Contractor. The Contractor will be evaluated periodically during each of the following tasks to ensure compliance with the PWS and to document that quality objectives, delivery schedule, and the overall completion date are being met. This evaluation will be performed according to a Quality Assurance Surveillance Plan (QASP). A programmatic QASP modified for the specific task order requirements will be provided by the government. The QASP will be updated upon acceptance of the Contractor's Quality Control Plan (QCP). Failure to adequately complete any service or submittal to at least a satisfactory level of quality or timeliness may result in a repeat of the work, or a poor performance evaluation, or both. Performance metrics are provided in Section 6.0. Minimum requirements for contractor performance and QC are provided in Section 7.0.

3.1 Task 1, Addendum to Existing Final Charlie Area EE/CA Work Plan (WP): This is a Firm Fixed Price task. The objective of this task is the Contractor to prepare, submit for acceptance an addendum to the existing Final Charlie Area EE/CA WP that is a detailed and comprehensive plan covering all aspects of the supplemental sampling in accordance with data item description (DID) MR-001 and EM 1110-1-4009. The Addendum shall describe the specific work proposed in order to meet the objectives and requirements of this PWS. The WP Addendum shall include any necessary revisions in order to meet the requirements Data Item Descriptions (DID) to ensure applicability and compliance: MR-005-10, Environmental Sampling and Analysis Plan; MR-005-12, Environmental Protection Plan; MR-005-13, Investigative Derived Waste Plan; MR-005-06, Accident Prevention Plan, including the Site Safety and Health Plan; and MR-005-11, Quality Control Plan and any new or revised USACE regulations or guidance. The contractor shall consider technical requirements for the site as well as safety, security, environmental regulations, endangered species, and habitat preservation and protection, engineering controls, evacuations, and road closures applicable to this site

3.2 Task 2, Document and Data Analysis: This is a Firm Fixed Price task. The contractor shall analyze all electronic and hard copy data collected and documentation produced, but not finalized or completed, in the previous EECA effort. The contractor shall assemble and catalog the information regarding geophysical mapping, terrain, slope, probable MEC, etc. The resulting database shall be used to accommodate ongoing revisions to boundaries, remedy recommendations, OE (or MEC) clearance depths, future use scenarios, and other pertinent factors to achieve substantive, risk-based conclusions for probable alternatives.

3.3 Task 3, Provide Comment Responses: This is a Firm Fixed Price task. As part of this effort, in coordination with the COE and Ft. McClellan Transition Force, the contractor shall evaluate and respond to comments provided by reviewing agencies on previous submittals of the Charlie Area EE/CA. These responses shall be complete and shall be in a format suitable for submission to regulatory agencies. A review meeting is included under Task 6 to present and clarify proposed responses.

3.4 Task 4, GeoSpatial Data: This is a Firm Fixed Price task. The objective of this task is for the Contractor to utilize the existing GIS, and to expand on the existing GIS to track activities required by this PWS. The Government will provide any existing GIS data available. The existing GIS will be used to build upon and manage IAW DID MR-005-07.01. A pre- and post-project response action geospatial data analysis shall be performed using a GIS. All available existing data that is applicable to the project shall be consolidated into the GeoDatabase and analyzed to relay pertinent information to the PDT. The analysis of previous findings and new data from the GIS shall support all conclusions of the Final EE/CA Report. The information attained through the pre-EE/CA analysis shall be documented in the work plan. The information attained in the post-EE/CA shall be documented in the EE/CA report. The pre-EE/CA analysis shall encompass social, environmental and/or economic entities that will be or may be impacted by response-action activities. The post-EE/CA shall detail entities impacted by EE/CA activities and impacts of future response action activities (if applicable). The pre and post-EE/CA may detail the fieldwork strategies, areas of concern, survey requirements, environmental concerns, milestones and/or other factors that affect product delivery and future action planning. Entities that may be affected by response actions include but are not limited to: landowners, homeowners, rental tenants, schools, utilities, roads, businesses, recreational areas, air traffic, water bodies and/or industries. The GeoDatabase shall be a living repository that is refined throughout the life of the project. The Contractor shall incorporate layers that overlay on maps of the site that identify physical features, and MPPEH/MD and Range-Related Debris found during the investigation. Examples include: streets, anomalies, MEC positively identified, identifiable MD, sampling location, cultural resources, environmental, biological, and socio-economic variables. Archeological site location(s) will not be released to the public without written permission from USACE. The Contractor shall perform civil surveys IAW EM 1110-1-4009 and DID MR-005-07.01.

3.5 Task 5, EE/CA Field Activities: This task is a Firm Fixed Price/Unit Price task.

3.5.1 The objective of this task is for the Contractor to perform all necessary field activities to meet the overall objective of this task order and the DQOs established for this project. The Contractor shall determine if a removal action is needed by developing and evaluating effective response alternatives, identify the area requiring the removal action and determine the cost of the removal action. This task shall include all field activities necessary to execute this task except MC sampling. MC soil sampling will not be required for this additional OE Sampling effort. Specific requirements: The Contractor shall perform 31,873 feet of transects, 2 *noncontiguous* grids of OE Sampling, and reacquisition and investigation of six (6) grids (C102, C116, C118, C131, C140 and A044) that were not previously investigated ~~and DGM of grids and transects as directed~~. For this task order 1 acre of transects equals 8712 feet of five foot wide transects and 1 acre of grids equals 4 - 100' x 100' grids. The Contractor shall provide unit price per acre of transects and a unit price for acre of grids in Appendix A price spreadsheet which will be used for price increase based on the final level of effort required.

Transects will consist of 290 foot segments that are 5 feet wide. No brush clearing will be required. The teams will dig all anomalies as found up to a total of 40 within each 290-foot segment. Once the team has investigated 40 anomalies along a given segment they will then investigate every other anomaly up to 100 anomalies. If more than 100 anomalies are excavated within a 290-foot segment, and none of the anomalies are HE fragmentation or UXO items, then no further excavations are required along that segment. This segment will be considered to have sufficient data for classification. More than 1 anomaly per 3 foot segment will have been reached.

If the team discovers a UXO item they will mark the item so that it can be easily located by the demolition team. Any further investigations required because of the discovery of a UXO item will be included as part of an optional task.

3.5.1.1 Task 5A (Optional) Additional Field Activities: This is a Firm Fixed Price/Unit Price Task. The contractor is required to fully investigate a 50 foot x 50 foot grid with the centroid being the location of the previous UXO item. This entire grid will be investigated to determine if the UXO item was a single anomaly or part of a larger impact area. The Contractor shall provide a *separate* unit price per 50' x 50' grid *for analog and DGM investigation. The Contractor shall provide unit prices for activities listed in the cost spreadsheet.*

3.5.1.2 Task 5B (Optional) Field Office: This is a Fixed Unit Price Task. The contractor shall set up an on-site field office for daily operations and central file storage. The contractor shall be responsible for all utility connections and conform to all local, state, and federal regulations.

3.5.2 MEC Disposal: The Contractor shall be responsible for the destruction of all MEC encountered during project activities.

3.5.3 Backfilling Excavations: All access/excavation/detonation holes shall be backfilled by the Contractor. The Contractor shall restore such areas to their prior condition.

3.5.4 MEC Accountability: The Contractor shall maintain a detailed accounting of all MEC items/components encountered. This accounting shall include the amounts of MEC, nomenclature and condition, location and depth of MEC, and disposition. The accounting system shall also account for all demolition materials utilized to detonate MEC on site. The Contractor shall take digital photographs of identifiable MEC found during the investigation.

3.5.5 Disposal/Disposition of MPPEH: All MPPEH and munitions debris shall be handled in accordance with Chapter 14, EM 1110-1-4009 and Errata Sheet No. 2.

3.6 Task 6, Addition to and revision of existing Charlie Draft Final EE/CA Report: This task is a Firm Fixed Price task. The objective of this task is for the Contractor to prepare and submit for acceptance a complete reformatted revision of the existing Draft Final Charlie Area EE/CA Report based on agreements reached between the Army and FWS during dispute resolution, ADEM comments on the Draft Final EECA report, and in accordance with EM CX Interim Guidance 06-04. The Contractor also shall incorporate all available data from investigations and removal actions that have occurred since initial publication of the EE/CA, data from this additional sampling effort and data from the removal action at the 81mm Mortar Range, Range 20, Range 24A, and Bains Gap Road Ranges that is currently underway into this EE/CA. This will include all previous data as well as new data into a single conclusion document. The Contractor shall attend, by teleconference, an onboard review after receiving comments on the revised new Draft EE/CA Report.

3.7 Task 7, Action Memorandum: This task is a Firm Fixed Price task. The objective of this task is for the Contractor to prepare and submit for acceptance an Action Memorandum for the Charlie Area in accordance with ER 200-3-1 FUDS Program Policy and MM CX Interim Guidance 06-04. The contractor shall evaluate any comments provided by the Contracting Officer and shall incorporate them as directed by the Contracting Officer. The format for the Action Memorandum shall be similar to the format used for the Iron Mountain Road Addition Action Memorandum.

3.8 Task 8, Community Relations Support: This task is a Firm Fixed Price/Unit Price task. The objective of this task is for the Contractor to successfully complete public meetings and support the U.S. Army Transition Force with community relations. The Contractor shall attend and participate in one public meeting and two meetings with the DoD, regulatory, and civilian agencies as directed by the CO. These meetings will be held in the Fort McClellan/Anniston, AL area. The Contractor shall provide a unit price per meeting for possible additional meetings. The meetings shall last one day each and be held at Fort McClellan, AL. The contractor shall provide assistance and support for the facilitation of one Restoration Advisory Board (RAB) meeting to occur at Ft. McClellan. The support of all meetings shall include, but is not limited to: preparation and delivery of briefings, graphics, maps, posters, and support of question and answer sessions. The Contractor shall also obtain the meeting site, perform public notification and prepare any correspondence necessary to meeting the objectives of this task. The USACE shall approve all correspondence, public notices and other materiel being presented to the public before use. These actions are independent of the field activities that involve interaction with the community.

3.9 Task 9, Project Documentation: This task is a Firm Fixed Price task. The objective of this task is for the contractor to provide full and complete copies of any and all Final documentation and deliverables generated in the duration of the project. These files shall be suitable for placement on the PIRS web site Standard Operating Procedure for Formerly Used Defense Sites (FUDS) Records Management, Revision 5, dated January 2008. The contractor shall submit 1 hard copy, and 1 CD/DVD each to USAESCH and the U.S. Army Transition Force.

4.0 SUBMITTALS AND CORRESPONDENCE:

4.1 Computer Files: All final text and spreadsheet files generated by the Contractor under this task order shall be furnished to the Contract Officer in MS Office Suite 2003 compatible format. Other computer files shall be in accordance with the DIDs. All computer files shall be submitted on CD or DVD.

4.2 PDF Deliverables: In addition to the paper and digital copies of submittals, all versions of any and all reports and/or plans shall be submitted in their entirety (including appendices), uncompressed, on CD or DVD in Adobe Portable Document Format (PDF) format along with a linked table of contents, linked tables, linked photographs, linked graphs and linked figures, all of which shall be suitable for viewing on the Internet. In the case of large reports, the appendices can be provided as one .pdf file separate from the narrative .pdf file. PDF files shall be produced from source documents wherever possible.

4.3 Identification of Responsible Personnel: Each submittal shall identify the specific members and title of the Contractor's and subcontractor staff that had significant input into the report's preparation or review. All submittals shall be signed by a registered Professional-In-Charge.

4.4 Public Affairs: The contractor shall not publicly disclose any data generated or reviewed under this contract. The Contractor shall refer all requests for information concerning site conditions to the USACE Mobile District PAO with a copy furnished to the USAESCH Project Manager. Reports and data generated under this contract are the property of the DoD and distribution to any other source by the contractor, unless authorized by the Contracting Officer, is prohibited.

4.5 Submittals: The contractor shall furnish copies of the plans, maps, and reports as identified in Table 4-1 to each addressee listed below in the quantities indicated in the Submittal Guidance table, Section 4.7. The Contractor shall submit 1 copy on CD with each hard copy of all submittals (WPs, Reports, Plans, etc) in accordance with paragraphs "Computer Files" and "PDF Deliverables". All hard copies shall have spines.

4.6 Submittals and Due Dates.

Table 4-1 List of Deliverables

Submittals

AAPP
Explosives Siting Plan

Proposed schedule
Draft Addendum to Final Charlie Area EE/CA Work Plan
Draft Final Addendum to Final Charlie Area EE/CA WP
Final Addendum to Final Charlie Area EE/CA Work Plan

Draft addition to and revision of existing
Draft Final EE/CA Report w/ GIS on CD/DVD

Draft Final addition to and revision of existing
Draft Final EE/CA Report

Final addition to and revision of existing EE/CA Report

Draft Action Memorandum
Draft Final Action Memorandum
Final Action Memorandum
Responsive Summary
Final Administrative Record (On CD/DVD)
Daily QC Report for Environmental Sampling
Analytical Data Submittal for QA Evaluation
Electronic Laboratory Data Submittal
Final GIS Files on CD

Due Dates (Calendar days)

14 days prior to site visit
Separate MACOM approval before intentional physical contact with MEC on site
7 days after kick-off conference call
21 days after DQOs are determined
14 days after receipt of comments
14 days after receipt of comments

60 days after completion of fieldwork

14 days after receipt of comments

14 days after on board Review

14 days after acceptance of EE/CA Report
7 days after receipt of comments
7 days after receipt of comments with final Action Memorandum
Upon completion of the Record
Daily during Environmental Sampling Activities
30 days after completion of fieldwork
45 days after completion of fieldwork
End of Project

4.7 Addressees and Submittal Quantities

The Contractor shall furnish copies of the plans and reports as indicated to each addressee listed below in the quantities indicated. The following addresses shall be used in mailing submittals:

ADDRESSEE	Draft and Draft-Final Submittals	Final Submittals
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-OE-DC (Ms. Sherri Anderson-Hudgins) 4820 University Square Huntsville, Alabama 35816-1822	4	4
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-CT-E (Lydia Tadesse) 4820 University Square Huntsville, Alabama 35816-1822	1	1
Commander US Army Engineer Division, South Atlantic ATTN: CESAD-PM-H (Ms. S. Ernst) 77 Forsyth St., SW Atlanta, GA 30335-6801	NA	1
Alabama Department of Environmental Management ATTN: Mrs. Brandi Little	1	1

Engineering Services Section Governmental Hazardous Waste, Land Division 1400 Coliseum Boulevard Montgomery, AL 36110-2059		
U.S. Army Transition Force ATTN: Mrs. Lisa Holstein 291 Jimmy Parks Blvd. Fort McClellan, AL 36205-5000	2	4
Mountain Longleaf National Wildlife Refuge ATTN: Steve Miller 664 Powers Ave, Suite 200 Fort McClellan, AL 36205	2	2
UXO Pro Inc. ATTN; Jim Pastorick 811 Duke St Alexandria VA 22314	1	1
Calhoun County McClellan Development Authority ATTN: Miki Mahan Schneider 4975 Bains Gap Road Anniston, AL 36205	1	1
Matrix Environmental Services ATTN: Richard Satkin 283 Rucker St., Bldg 3165, Anniston, AL 36205	1	1
Daphne Field Office, USFWS ATTN: Pete Tuttle 1208-B Main Street Daphne, AL 36526	1	1

Note: Addresses may have to be verified by the Contractor.

4.8 Review Comments: Various reviewers will have the opportunity to review submittals made by the Contractor under this contract. The Contractor shall review all comments received through the Project Delivery Team/Contracting Officer and evaluate their appropriateness based upon their merit and the requirements of the PWS. The Contractor shall issue to the Project Manager a formal, annotated response to each. The Contractor shall not non-concur with a comment without discussing with the PM and/or comment maker. Where comments refer to a specific paragraph of a document and the paragraph number has changed since the comment was made, the Contractor shall note the new paragraph number in the annotated response to the comment.

4.9 Schedule: A final schedule shall be submitted a minimum of 7 days after kick-off conference call in a format compatible with Microsoft Project. A PDF version shall also be submitted. This is an electronic submittal only. The Contractor shall update the schedule in accordance with DID MR-085 Project Status Report.

4.10 Telephone Conversations/Correspondence Records/Meeting Minutes: The Contractor shall keep a record of each phone conversation, written correspondence concerning this Task Order and meeting minutes in accordance with DID MR-055 and DID MR-045. A copy of these records shall be attached to the Project Status Report.

4.11 Project Status Reports: The Contractor shall prepare and submit Project Status Reports in accordance with DID MR-085 and include any other items required in the PWS.

4.12 Period of Performance: The Completion Date for this Task Order is 31 March 2010.

4.13 Milestone Payments for firm fixed price tasks: Milestones will be considered met or completed when the required QC documentation has been submitted, QA completed and the submittal and/or product is accepted. Any payment vouchers submitted that do not coincide with the final accepted milestones or do not have the appropriate QC documentation will be rejected. All payments will be made utilizing an agreed upon Payment Milestone Schedule.

5.0 REFERENCES:

5.1 Refer to “Basic Contract.”

5.2 Data Item Descriptions: are available at the following: <http://www.hnd.usace.army.mil/oew/didsindex.aspx>. DIDs MR-005-05, MR-005-05A, MR-005-07 and MR-005-10 have been revised. The new DIDs are MR-005-05.01, MR-005-07.01 and MR-005-10.01. MR-005-05A is no longer used.

6.0 PERFORMANCE METRICS:

6.1 Performance Metrics for Performance Assessment Record (PAR)

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
PAR Category: Quality of Product or Service					
<i>Performance indicator: Document reviews</i>					
<i>Draft</i> Plans, Reports, and documents [Plans, documents and reports are considered draft until accepted as final by the Government]	All contract-milestone documents accepted as submitted	One or more documents or subplans were accepted as submitted, but exceptions were noted. Resubmissions were not required.	One or more documents or subplans required revisions to be resubmitted for acceptance prior to proceeding. Resubmission of an entire document or subplan was not required.	One or more documents or subplans required revisions to be resubmitted for acceptance prior to proceeding. Resubmission of an entire document or subplan was required.	One or more documents or subplans did not comply with contract requirements, or one or more documents or subplans required more than one resubmission of the entire document or subplan prior to its acceptance.
<i>Performance indicator: Project Execution</i>					
Process Compliance	Zero Corrective Action Requests (CAR)	1-5 CARs for non-critical WP violations (no impact to overall cost and schedule resulting from the non-compliance)	6 or more CARS for non-critical violations (no impact to overall cost and schedule resulting from the non-compliance)	>1 CAR where non-compliance adversely impacted overall cost or schedule	Repeated non-compliance with WP requirements resulted in cost overruns or repeated schedule extensions
Quality Control	Zero QA failures, 90% or more QC measures accepted, zero repetitive QC failures	Zero QA failures, 90% or more QC measures accepted, one or more repetitive QC failure occurred	Zero QA failures, less than 90% of QC measures accepted, or, One or more non-repetitive QA failures occurred	1-5 repetitive QA failures occurred	>5 repetitive QA failures occurred
Task Completion			All QC documentation submitted and accepted		Final QC documentation submitted but not accepted

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
PAR Category: Schedule					
Performance indicator: Timely completion of tasks					
<i>Final</i> Plans and Reports, project milestones, T.O. invoices	All document submittals and task order milestones and invoices complete and accepted by T.O date, project closed out/final invoice approved ahead of schedule	Project closed out/final invoice accepted ahead of schedule	project closed out/final invoice accepted on T.O. date	Project closed out/final invoice accepted within 30 calendar days after T.O. date.	Project closed out/final invoice accepted more than 30 calendar days after T.O. date.
Project status reports accurate			Yes		No
Performance indicator: Impacts to schedule					
Impacts caused by Contractor or other causes identified, in writing to HNC CO/ PM, in a timely manner to apply acceptable corrective actions.			Yes		No
PAR Category: Cost Control (N/A for FFP)					
Performance indicator: No unauthorized cost overruns					
Unauthorized cost overruns			No		Yes
Total Project Costs	Total contract invoices less than 98% of T.O. authorized amount	Total contract invoices greater than 98% but less than 99.99% of T.O. authorized amount	Total contract invoices between 99.99% and 100% of T.O. authorized amount	Total contract invoices greater than 100% but less than 105% of T.O. authorized amount	Total contract invoices greater than or equal to 105% of T.O. authorized amount
Performance indicator: Monthly cost report					
Monthly cost reports accurate			Yes		No
Performance indicator: Impacts to cost					
Impacts caused by Contractor or other causes identified, in writing to HNC CO/PM, in a timely manner to apply acceptable corrective actions.			Yes		No
PAR Category: Business Relations					
Performance indicator: Met contractual obligations					
Corrective Actions taken			Yes		No

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
were timely and effective (Refer to CARs issued to Contractor)					
<i>Performance indicator: Professional and Ethical Conduct</i>					
Meetings and correspondences with Public, project delivery team and other stakeholders	Zero letters of reprimand, grievances, or formal complaints AND one or more unsolicited letters of commendation		Zero letters of reprimand, grievances, or formal complaints	One letter of reprimand, grievance or formal complaint that was resolved through negotiation	More than one letter of reprimand, grievance or formal complaint that were resolved through negotiation OR removal of one or more project personnel as a results of a letter of reprimand, grievance or formal complaint.
<i>Performance indicator: Customer has overall satisfaction with work performed</i>					
Customer survey results for rating period	4.0-5.0	3.0-3.9	2.0-2.9	1.0-1.9	<1.0
<i>Performance indicator: Personnel responsive and cooperative</i>					
Key personnel responsive, and cooperative	Always		Most Times		Almost Never
PAR Category: Management of Key Personnel and Resources					
<i>Performance indicator: Personnel knowledgeable and effective in their areas of responsibility</i>					
Personnel assigned to tasks	All personnel proposed by Contractor were assigned to project, some personnel were substituted by higher qualified individuals.		All personnel proposed by Contractor were assigned to project, some personnel were substituted by equally qualified individuals.	All personnel proposed by Contractor were assigned to project, some personnel were substituted by equally qualified individuals, Letter of reprimand received for personnel conduct from HNC.	All personnel proposed by Contractor were assigned to project, some personnel were substituted by lesser qualified individuals or HNC requested, in writing, removal of assigned personnel for poor performance.
<i>Performance indicator: Personnel able to manage resources efficiently</i>					
Instances when resource management had negative impact on project execution	0	1-2	3-4	5-6	>6

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
PAR Category: Safety					
Performance indicator: Accidents and Violations					
*No Class A Accidents, Contractor at fault	0 No class A accidents IAW AR 385-40	No class A accidents IAW AR 385-40	<1 non-explosive related Class D, accidents, or <2 non-explosive Class C accidents IAW AR 385-40.	<2 non-explosive related Class C accidents, or 1 non-explosive Class B accident, IAW AR 385-40 2 non-explosive safety violations.	1 Any Class A accident IAW AR-385-40, or Any explosive related accident.
*Major safety violations	0 accidents/injuries No safety violations	0 accidents/injuries No safety violations	0 accidents/injuries 1 non-explosive related safety violation.	3 safety violations	>1 any violation of procedures for handling, storage, transportation, or use of explosives IAW the WP, and all Federal, State and local laws/ordinances
*Minor safety violations	No safety violations	1 safety violation	2 safety violations.		>3 safety violations

Classes of Accidents:

- **Class A:** Fatality or permanent total disability (Government Civilian, Military Personnel, and/or Contractor), or >\$1,000,000 property damage.

- **Class B:** Permanent partial disability or inpatient hospitalization of 3 or more persons (Government Civilian, Military Personnel, and/or Contractor), \$200,000< \$1,000,000 property damage.

- **Class C:** Lost Workday (Contractor) or Lost Time (Government Civilians), \$20,000< \$200,000 property damage.

- **Class D:** \$2,000< \$20,000 property damage.

* From Section C of Solicitation Number W912DY-04-R-0003, Amendment 0001 (may be included but are not limited to these).

The following guidelines are provided for issuing ratings that are subjective in nature, these ratings will be supported by the weight of evidence documented during the government's surveillance efforts:

Exceptional: Performance *meets* contractual requirements and *exceeds many* to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with *few minor problems* for which corrective actions taken by the Contractor were *highly effective*.

Very Good: Performance *meets* contractual requirements and *exceeds some* to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with *some minor problems* for which corrective actions taken by the Contractor were *effective*.

Satisfactory: Performance *meets* contractual requirements. The contractual performance of the element or sub-element contains *some minor problems* for which corrective actions taken by the Contractor *appear or were satisfactory*.

Marginal: Performance *does not meet all* contractual requirements. The contractual performance of the element or sub-element being assessed reflects a *serious problem* for which the Contractor has *not yet identified corrective actions*. The Contractor's proposed actions appear only *marginally effective or were not fully implemented*.

Unsatisfactory: Performance *does not meet most* contractual requirements and *recovery is not likely* in a timely manner. The contractual performance of the element or sub-element contains *serious problems* for which the Contractor's corrective actions *appear or were ineffective*

7.0 CONTRACTOR MINIMUM PERFORMANCE AND QC REQUIREMENTS: The Contractor shall include in their QC plan specific tests that are itemized below. The values listed in the various requirements below may be adjusted upon request, provided the Contractor supplies supporting documentation and rationales for Government concurrence. All reported QC results from these tests will be reviewed as part of the QASP. In the event a requirement is not met and the contractor submits the data to the Government, the contractor shall provide rationales for accepting them. All such rationales will be reviewed as part of the QASP. If the rationales are either insufficient or technically unfeasible, or are attempts to justify non-conformances that should be corrected to meet project needs, the Government will issue a CAR to the contractor and the submittal(s) will be rejected. Some performance standards are default values and may be changed by the PDT to suit project needs. These requirements are marked with an asterisk (*). Included in the assumptions for these requirements is that the data will be used to obtain 'costs to complete' and that grids will be fully investigated.

Performance Requirements for EE/CA using DGM Methods¹

Requirement	Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure ²
Static Repeatability (instrument functionality) ³	All	Response (mean static spike minus mean static background) +/-10% of GPO/original value on all channels	Min 1 daily	Day's data fails unless seed item is mapped that day with repeatable anomaly characteristics (see Dynamic Detection Repeatability)
Along Line Measurement Spacing	All	98% <=25cm along line ⁴	By dataset	Dataset submittal fails
Speed	Transects without seeds ⁵	95% within max project design speed or demonstrated speed	By dataset	Dataset submittal fails unless new max speed successfully demonstrated at GPO.
Coverage(*)	Grids	>90% coverage at project design line spacing. ⁶	By dataset or grid ⁷	Submittal fails unless gaps filled, additional data collected, or government refund for missing acreage.
Dynamic Detection Repeatability	Grids	Test item anomaly characteristics (peak response and size) repeatable with allowable variation +/-25%. ⁸	1 test item per grid or dataset. ^[7]	Submittal fails
	Transects	(a) #anomalies on repeat segment w/in +/-20% or +/-8 of original or within range of adjacent sections (b) Test item (in test strip or on transect) anomaly characteristics (peak response and size) repeatable with allowable variation +/-25%. Or Fit coefficient ⁹ over test strip is acceptable.	(a) repeat 2% per lot ¹⁰ or (b) repeat test strip once per system per lot or daily; or 2 test items per system per lot	(a) Lot submittal fails or (b) Lot (or day's data) fails
Dynamic Positioning Repeatability	Grid coverage	Position offset of Test item target <=35cm + 1/2 line spacing ¹¹ (<=50cm + 1/2 line spacing for fiducially positioned data).	1 test item per grid or dataset ^[7] (same item as Dynamic Detection Repeatability)	submittal fails
	Transects with reacquisition/digging	(a) Demonstrate reacquisition by reproducing randomly chosen anomaly signals (reac amplitude >= original & offset <= 1m) ¹² or (b) Test item anomaly characteristics (peak response and	(a) 2 targets per system per lot or (b) 2 test items per system per lot (can be same as detection repeatability test items)	Lot submittal fails

Requirement	Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure ²
		size) repeatable with allowable variation +/-25% and position offset <=1m.		
Target Selection	All	All dig list targets are selected according to project design (zero unselected and not over-selecting)	By grid or dataset ⁷¹	submittal fails
Anomaly Resolution(*) ¹³	Verification checking by DGM re-mapping ¹⁴ Or Verification checking with original instrument of anomaly footprint after excavation ¹⁵	If MEC ¹⁶ : 70% confidence <10% unresolved anomalies ¹⁷ If no MEC: 90% confidence <5% unresolved anomalies Accept on zero.	Rate varies depending on lot size. ¹⁸ See Acceptance Sampling Table.	Lot submittal fails
Geodetic Equipment Functionality(*)	All	Position offset of known/temporary control point within expected range as described in the approved work plan. ¹⁹	Daily	Redo affected work or re-process affected data
Geodetic Internal Consistency	Grids with line/fiducial positioning	Grid corners are internally consistent within 30cm on any leg or diagonal.	Per Grid	Redo affected work (corner placement & data collection, or data processing)
Geodetic Accuracy	Points used for RTK or RTS base stations	Project network must be tied to HARN, CORS, OPUS or other recognized network ²⁰ . Project control points that are used more than once must be repeatable to within 5cm	For points used more than once, repeat occupation ²¹ of each point used, either monthly (for frequently used points) or before re-use (if used infrequently ²²).	Re-set points not located at original locations or resurvey point following approved work plan.
Geodetic Repeatability(*)	Grid centroids or corners/transect points without anomaly reacquisition	Measured locations are reoccupied within 10m. ²³	1 per lot	Lot submittal fails

¹ These are the critical requirements for EE/CA DGM methods. Contractors shall use additional methods/frequencies that they deem beneficial and as required in their SOPs.

² All failures also require a Root Cause Analysis.

³ Item should be placed on a jig that ensures consistent geometry between the sensor and item to ensure repeatability, response not to exceed 500 units, or optionally use the Geonics calibration coil. Duration of data collection needed TBD by the contractor. Must compare to original to ensure instrument is consistent throughout the

project. It is recognized that this QC requirement may be redundant and could contradict results from seeding QC, however, in the event of seed failure, information from this test may aid in determining cause of failure, i.e. instrument or processing.

⁴ 25cm based on institutional knowledge and common instrument physical dimensions. Assumes speed used achieves detection. This requirement can be relaxed if supporting documentation is provided to the Government for concurrence.

⁵ Needed because increase in speed can reduce SNR and increase # false hits (alternatively this test can be supplanted by repeatable anomaly characteristics of seed items within the dataset).

⁶ Recommended default line spacing is 0.6m for items of interest the size of 40mm grenades and smaller, else 0.8m

⁷ The terms “grid” and “dataset” refer here to logical groupings of data or data collection event. Logical groupings of data are contiguous areas mapped by the same instrument and in the same relative time-frame. These can be grids, acres, or some other unit of area. A data collection event is similar to logical groupings of data but refers to data collected over a contiguous time frame, such as “morning”, “afternoon”, “battery life”, or some other measure of contiguous time. It is recognized that physical marking of corners on the ground is not always beneficial to the government. Additionally, size and shape of the grid is not specified.

⁸ A standard test item shall be placed within the grid (i.e. a small pipe or flat plate with a small area response. Item can be placed flush with the surface or buried at a standard depth and standard orientation). This test does not demonstrate the detection capabilities of the MEC of interest. The standard response to this test item must be defined prior to the start of production field activities. Response repeatability to this standard test item in the mapping data will indicate data quality is consistent and sufficient for detection of the MEC items of interest.

⁹ Fit Coefficient means how well the repeated data matches the original data. Method of calculation and acceptance criteria can be proposed by the Contractor, and could be based on the UX-Process repeatability σ_x value.

¹⁰ Contractor shall propose the lot size and criteria for designation (i.e. woods vs. open)

¹¹ For 0.8m line spacing, this would be a 0.75m allowable error radius (or 0.9 for fiducial).

¹² Does not necessarily mean the peak response or actual item location (i.e. for transect data the response could still be ramping up off-line). This could also be demonstrated through blind seed items.

¹³ Resolved is defined as 1) there is no geophysical signal remaining at the flagged/selected location, or 2) a signal remains but it is too low or too small to be associated with UXO/DMM, or 3) a signal remains but is associated with surface material which when moved results in low, or no signal at the interpreted location, or 4) a signal remains and a complete rationale for its presence exists.

¹⁴ Mapping shall cover the required number of anomaly locations. This is used in-lieu of checking individual anomalies for those instances where it is quicker to re-map sections of land rather than return to individual anomalies. Only the data at the anomaly locations is reviewed for resolution.

¹⁵ This may require leaving flags at excavated locations until QC is complete. It is up to the contractor to indicate which holes knowingly have metal left in them where the PDT has agreed such is acceptable. It is the contractor’s responsibility to not put hot material back in the hole before QC is complete. As part of this requirement location accuracy must also be demonstrated (i.e. cleared location is within dynamic positioning error radius as described above). Contractor SOPs that incorporate post-excavation inspections using digital geophysical instruments can be used to meet the excavation verification need of this requirement provided appropriate QC protocols are in place to monitor and document the SOPs are followed. Acceptance sampling or alternative QC protocols to monitor and document the reacquisition SOP would be required to demonstrate the correct locations are excavated.

¹⁶ If MEC (or intact or partial training or practice rounds) are not detected in a lot then the information from that lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

¹⁷ This is a statistical test number. It does not imply there are 10% bad units. It tests there are fewer than 10% bad units, including zero bad units. Values for confidence levels will be determined by the PDT and are dependent on the information needed. Stopping rules will take precedence over this standard (i.e. for high MEC density, decision could be made to stop because the team has enough data for characterization)

¹⁸ For example, if lot size is 500 anomalies, to achieve a 90% confidence that there are less than 5% unresolved anomalies, 44 anomalies must be re-checked. If any one of the 44 is unresolved, then the confidence level has not been met, the lot submittal fails and all anomalies in that lot must be re-checked (i.e. accept on zero). The contractor shall propose the lot size for government concurrence (i.e. The contractor determines the amount of risk they are willing to take. The larger the lot, the less

sampling needs to be done, but the larger the risk of increased costs/rework if failure occurs.) For anomaly resolution, in order to use statistics/confidence levels, it is based on number of anomalies, not grids.

¹⁹ Most high-accuracy systems should demonstrate repeatability between 5cm and 10cm. Typical accuracies achievable for some high-accuracy systems are: 2cm to sub-centimeter for RTK DGPS and RTS units depending on manufacturer and site conditions. Less accurate systems should demonstrate repeatability within manufacturer published ranges. Typical accuracies for less accurate systems are 5m to sub-meter for WAAS or satellite correction service DGPS units depending on manufacturer, correction service and site conditions, and 30m to 1m for USCG beacon corrected units depending on manufacturer.

²⁰ The plan for tying the project network to a common reference network must be described in the approved work plan. If monumentation is part of the plan, specific monumentation procedures and data quality objectives will also need to be specified and installation of monumentation or network control points shall follow all guidance and accuracies specified in EC 1110-1-73 – “Standards and Specifications for Surveys, Maps, Engineering Drawings, and Related Spatial Data Products”.

²¹ Repeat occupation means demonstrate the control points being used can be recovered and reoccupied and that they have not moved more than the requirement specification. This can be accomplished using the same methodology used to initially tie the local network to a HARN, CORS, OPUS, or other recognized network, or it can be accomplished by other means that achieve this requirement.

²² An example of frequently used control points would be points used as RTK DGPS base stations. Infrequently used points could be those used during RTS operations where the control point was used during mapping and then again at some later time for reacquisition and QC statistical sampling. Infrequently used points could also include grid corners they are used for line and fiducial positioning and then subsequently re-used for reacquisition or QC statistical sampling.

²³ The exact location of a single transect/grid is not critical when the information is used only for characterization by interpolating over large areas (e.g. transect spacings are larger than geodetic accuracies). The acceptable accuracy may be tightened by the PDT if more exact positioning is needed (e.g. trying to characterize extents of small MRS's). If specific anomalies/locations must be recovered this metric must be revised to meet project needs and will likely have the same accuracy needs as the Geodetic Accuracy requirement.

Performance Requirements for EE/CA using Analog Methods¹

Requirement	Limited Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure ²
Repeatability (instrument functionality)	All	All items in test strip detected (trains ear daily to items of interest) ³	Min 1 daily ⁴	Remedial training and additional remedial measures as described in the approved work plan if due to operator error, or replacement of faulty equipment. ⁵
Dynamic Repeatability	Transects used only for density estimates	Repeat a segment of transect & show #Counts repeated w/in the greater of +-20% or +-8, or w/in range of adjacent segments.	2 nd party repeat of 2% per lot	Redo lot
	Transects with digging	Repeat a segment of transect & show extra flags/digs not greater than the greater of 20% or 8 flags/digs, or w/in range of adjacent segments.	2 nd party repeat of 2% per lot	Redo lot
Coverage(*)	Grids	Blind coverage seeds and blind detection seeds recovered ⁶ : 75% if MEC 90% if no MEC ⁷	Variable rate at 2, 3 or 4 times # operators, per lot.	Redo lot.
Detection & Recovery (*)	No DGM QC remapping	Blind detection seeds recovered: 80% if MEC 100% if no MEC	Per operator per lot: variable 1-2 large/deep and 1-3 small/ shallow ⁸	Redo lot
	With DGM QC remapping	If MEC ⁹ : 70% confidence <10% unresolved anomalies ¹⁰ If no MEC: 90% confidence <5% unresolved anomalies Accept on zero. ¹¹	Rate varies depending on lot size. [Table showing acreage rates per lot size for varying confidence levels will be provided] ¹²	Redo lot
Anomaly Resolution(*) ¹³	Verification checking of excavated locations (analog or digital instrument)	2 nd party checks open holes to determine: If MEC: 70% confidence <10% anomalies unresolved ¹⁴ If no MEC: 90% confidence	Rate varies depending on lot size. See Acceptance Sampling Table. ¹⁵	Redo lot

Requirement	Limited Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure ²
		<5% anomalies unresolved		
	Verification checking by DGM remapping ¹⁶	Same as Detection & Recovery	Rate varies depending on lot size. See Acceptance Sampling Table.	Redo lot
Geodetic Equipment Functionality (*)	All	Position offset of known/temporary control point within expected range as described in the approved work plan. ¹⁷	Daily	Redo affected work
Geodetic Accuracy	Points used for RTK or RTS base stations	Project network must be tied to HARN, CORS, OPUS or other recognized network ¹⁸ . Project control points that are used more than once must be repeatable to within 5cm	For points used more than once, repeat occupation ¹⁹ of each point used, either monthly (for frequently used points) or before re-use (if used infrequently ²⁰).	Re-set points not located at original locations or resurvey point following approved work plan.
Geodetic Repeatability (*)	Grid corners/transect points without anomaly reacquisition	Measured locations are reoccupied within 10m. ²¹	1 per lot	Redo affected work

¹ These are the critical requirements for EE/CA analog methods. Contractors shall use additional methods/frequencies that they deem beneficial and as required in their SOPs.

² All failures also require a Root Cause Analysis.

³ The requirement is that each operator demonstrates positive detection on a daily basis of the smallest and largest expected MEC of interest when it is placed at both its best and worst orientations and buried between 95% and 100% of their respective maximum consistent detection depth. Maximum consistent detection depth is defined as producing any above background response on a minimum of the first three time gates of the EM61MK2 optimized for site conditions and having a 0.9m² size or more as calculated using the Geosoft Oasis Montaj UCEAnalyseTarget.NET or equivalent routine.

⁴ Random blind reconfiguration of test strip is also required (i.e. moving/adding items) at a frequency determined by the contractor and approved in the work plan, to address the potential for simply memorizing seed locations.

⁵ Some examples of additional remedial measures are: removal of operator from mapping for one day, retesting on new blind strip meeting the same requirements for seed items (could move location of items in same area), 100% QC re-inspection of initial lanes by that operator, etc.

⁶ Coverage seeds are small pieces of metal that will produce relatively large amplitude anomalies over small areas, such as small nails or ball bearings. Known location accuracy of placement is not critical. See endnote #6 for description of blind detection seeds.

⁷ If MEC (or intact or partial training or practice rounds) are not detected in a grid/lot then the information from that grid/lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

⁸ Detection and recovery must be consistently demonstrated for the hard to detect items; therefore, the largest expected MEC and the smallest expected MEC shall be placed between 95% and 100% of their respective maximum consistent detection depth

⁹ If MEC (or intact or partial training or practice rounds) are not detected in a lot then the information from that lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

¹⁰ This is a statistical test number. It does not imply there are 10% bad units. It tests there are fewer than 10% bad units, including zero bad units. Values for confidence levels will be determined by the PDT and are dependent on the information needed. Stopping rules will take precedence over this standard (i.e. for high MEC density, decision could be made to stop because the team has enough data for characterization)

¹¹ Unresolved anomaly for 'Detection & Recovery Testing' means a significant signal remains without a complete rationale for its presence. Default values for such a 'significant signal' are peak amplitude on sum channel $\geq 30\text{mv}$ & anomaly width $\geq 1.2\text{m}$ or anomaly size $\geq 0.9\text{m}^2$. This value may change but must be agreed upon by the PDT up front.

¹² The statistical calculations for this test are in progress. This is different from sampling of excavated holes, in that a portion of the acreage is re-mapped, and the amount re-mapped must be statistically valid to show, to some confidence level, that anomalies did not go undetected.

¹³ This requires leaving flags at excavated locations until QC is complete. If shovel called to a flag during QC then the failure has already occurred—it is not important that something large or small comes out of the hole. Assumption here is “mapping coverage” is addressed through other means. It is up to the contractor to indicate which holes knowingly have metal left in them where the PDT has agreed such is acceptable. It is the contractor's responsibility to not put hot material back in the hole before QC is complete.

¹⁴ Resolved is defined as 1) there is no geophysical signal remaining at the flagged/selected location, or 2) a signal remains but it is too low or too small to be associated with UXO/DMM, or 3) a signal remains but is associated with surface material which when moved results in low, or no signal at the interpreted location, or 4) a signal remains and a complete rationale for its presence exists.

¹⁵ For example, if lot size is 500, to achieve a 90% confidence that there are less than 5% unresolved anomalies, 44 anomalies must be re-checked. If any one of the 44 is unresolved, then the confidence level has not been met, the lot submittal fails and all anomalies in that lot must be re-checked (i.e. accept on zero). The contractor shall propose the lot size for government concurrence (i.e. The contractor determines the amount of risk they are willing to take. The larger the lot, the less sampling needs to be done, but the larger the risk of increased costs/rework if failure occurs.) For anomaly resolution, in order to use statistics/confidence levels, it is based on number of anomalies, not grids.

¹⁶ Mapping shall cover the required number of anomaly locations. This is used in-lieu of checking individual anomalies for those instances where it is quicker to re-map sections of land rather than return to individual anomalies. Only the data at the anomaly locations is reviewed for resolution.

¹⁷ Most high-accuracy systems should demonstrate repeatability between 5cm and 10cm. Typical accuracies achievable for some high-accuracy systems are: 2cm to sub-centimeter for RTK DGPS and RTS units depending on manufacturer and site conditions. Less accurate systems should demonstrate repeatability within manufacturer published ranges. Typical accuracies for less accurate systems are 5m to sub-meter for WAAS or satellite correction service DGPS units depending on manufacturer, correction service and site conditions, and 30m to 1m for USCG beacon corrected units depending on manufacturer.

¹⁸ The plan for tying the project network to a common reference network must be described in the approved work plan. If monumentation is part of the plan, specific monumentation procedures and data quality objectives will also need to be specified and installation of monumentation or network control points shall follow all guidance and accuracies specified in EC 1110-1-73 – “Standards and Specifications for Surveys, Maps, Engineering Drawings, and Related Spatial Data Products”.

¹⁹ Repeat occupation means demonstrate the control points being used can be recovered and reoccupied and that they have not moved more than the requirement specification. This can be accomplished using the same methodology used to initially tie the local network to a HARN, CORS, OPUS, or other recognized network, or it can be accomplished by other means that achieve this requirement.

²⁰ An example of frequently used control points would be points used as RTK DGPS base stations. Infrequently used points could be those used during RTS operations where the control point was used during mapping and then again at some later time for reacquisition and QC statistical sampling. Infrequently used points could also include grid corners they are used for line and fiducial positioning and then subsequently re-used for reacquisition or QC statistical sampling.

²¹ The exact location of a single transect/grid is not critical when the information is used only for characterization by interpolating over large areas (e.g. transect spacings are larger than geodetic accuracies). The acceptable accuracy may be tightened by the PDT if more exact positioning is needed (e.g. trying to characterize extents of small MRS's). If specific locations must be recovered this metric must be revised to meet project needs and will likely have the same accuracy needs as the Geodetic Accuracy requirement, which is 30cm.

Acceptance Sampling Table for Anomaly Resolution

	Lot size = 50 anomalies	100	200	500	1000	2000	5000	10,000
70% confidence <10% unresolved ¹	11	11	12	12	12	12	12	12
80% confidence <10% unresolved	14	15	15	16	16	16	16	16
90% confidence <10% unresolved	18	20	21	22	22	22	22	22
95% confidence <10% unresolved	22	25	27	28	29	29	29	29
70% confidence <5% unresolved	17	21	23	23	24	24	24	24
80% confidence <5% unresolved	21	27	30	31	31	32	32	32
85% confidence <5% unresolved	23	31	34	36	37	37	37	37
90% confidence <5% unresolved ²	27	37	41	43	44	45	45	45
95% confidence <5% unresolved	31	45	51	56	57	58	59	59
80% confidence <1% unresolved	40	80	111	138	144	154	158	159
85% confidence <1% unresolved	43	85	123	158	172	181	186	187
90% confidence <1% unresolved ³	45	90	137	184	205	217	224	227
95% confidence <1% unresolved	48	95	155	225	258	277	290	294

* Gray boxes show number of dug locations to check post-excavation. All must be shown to be resolved to meet confidence values (accept on zero).

¹ These are the critical QC requirements for EE/CA DGM methods. Contractors shall use additional methods/frequencies that they deem beneficial and as required in their SOPs.

² All QC failures also require a Root Cause Analysis.

³ Item should be placed on a jig in the plane of the coil/sensor to ensure repeatability, response not to exceed 500 units, or optionally use the Geonics calibration coil, duration of data collection needed TBD by the contractor. Must compare to original to ensure instrument is consistent throughout the project. It is recognized that this QC requirement may be redundant and could contradict results from seeding QC, however, in the event of seed failure, information from this test may aid in determining cause of failure, i.e. instrument or processing.

⁴ 25cm based on institutional knowledge, common instrument physical dimensions. Assumes demo at GPO shows speed used achieved detection. This requirement can be relaxed to a spacing that captures a minimum of 3 above-background measurements along each anomaly response footprint if supporting documentation is provided to the Government for concurrence.

⁵ Needed because increase in speed can reduce SNR and increase # false hits (otherwise this can be demonstrated by repeatable anomaly characteristics of seed items within the dataset).

⁶ The term 'grid' is used to mean 100%/full coverage mapping. It is recognized that physical marking of corners on the ground is not always beneficial to the government. Additionally, size and shape of the grid is not specified.

1 Default for RIFS where MEC has been recovered.

2 Default for RIFS where no MEC has been recovered.

3 Default for Removal Action.

⁷ A standard test item shall be placed flush with the ground within the grid (i.e. a small pipe or flat plate with a small area response). The GPO will demonstrate the detection capabilities of the MEC of interest, as well as the standard response to this test item. Subsequently, repeatability of response to the standard test item in the mapping data will indicate data quality is equal to the GPO and sufficient for detection of the MEC items of interest.

⁸ Fit Coefficient means how well the repeated data matches the original data. Method of calculation and acceptance criteria can be proposed by the Contractor, and could be based on the UX-Process repeatability gx value.

⁹ Contractor shall propose the lot size and criteria for designation (i.e. woods vs. open)

¹⁰ Does not necessarily mean the peak response or actual item location (i.e. for transect data the response could still be ramping up off-line). This could also be demonstrated through blind seed items.

¹¹ Resolved is defined as 1) there is no geophysical signal remaining at the flagged/selected location, or 2) a signal remains but it is too low or too small to be associated with UXO/DMM, or 3) a signal remains but is associated with surface material which when moved results in low, or no signal at the interpreted location, or 4) a signal remains and a complete rationale for its presence exists.

¹² Mapping shall cover the required number of anomaly locations. This is used in-lieu of checking individual anomalies for those instances where it is quicker to re-map sections of land rather than return to individual anomalies. Only the data at the anomaly locations is looked at, all other data is discarded.

¹³ If MEC (or intact or partial training or practice rounds) are not detected in a lot then the information from that lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

¹⁴ This is a statistical test number. It does not imply there are 10% bad units. It tests there are fewer than 10% bad units, including zero bad units. Values for confidence levels will be determined by the PDT and are dependent on the information needed. Stopping rules will take precedence over this standard (i.e. for high MEC density, decision could be made to stop because the team has enough data for characterization)

¹⁵ For example, if lot size is 500 anomalies, to achieve a 90% confidence that there are less than 5% unresolved anomalies, 44 anomalies must be re-checked. If any one of the 44 is unresolved, then the confidence level has not been met and the lot submittal fails (i.e. accept on zero).

¹⁶ This requires leaving flags at excavated locations until QC is complete. It is up to the contractor to indicate which holes knowingly have metal left in them where the PDT has agreed such is acceptable. It is up to the contractor to deal with not putting hot material back in the hole before QC is complete.

¹⁷ The exact location of a single transect/grid is not critical, when the information is used only for characterization by interpolating over large areas (e.g. transects spaced at 100m). It becomes important if specific anomalies/locations must be recovered. The acceptable accuracy may be tightened by the PDT if more exact positioning is needed (e.g. trying to characterize extents of small MRS's).

Table 7-2 QC Requirements for EE/CA using Analog Methods¹

Requirement	Limited Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure²
Repeatability (instrument functionality)	All	All items in test strip detected (trains ear daily to items of interest) ³	Min 1 daily	Remedial training and removal from mapping for 1 day.
Dynamic Repeatability	Transects used only for density estimates	Repeat a segment of transect & show #Counts repeated w/in +/-20%.	2 nd party repeat of 2% per lot	Redo lot
	Transects with digging	Repeat a segment of transect & show extra flags/digs not >20% of production after digging operation.	2 nd party repeat of 2% per lot	Redo lot

Requirement	Limited Applicability (Specific to Collection Method/Use)	Performance Standard	Frequency	Consequence of Failure ²
Coverage(*)	All Grids	Blind coverage seeds recovered ⁴ : 75% if MEC 90% if no MEC ⁵	Variable rate at 2, 3 or 4 times # operators, per lot.	Redo lot.
Detection & Recovery (*)	Grids with No DGM QC remapping	Blind detection seeds recovered: 80% if MEC 100% if no MEC	Per operator per lot: variable 1-2 large/deep and 1-3 small/shallow ⁶	Redo lot
	Grids With DGM QC remapping	If MEC ⁷ : 70% confidence <10% unresolved anomalies ⁸ If no MEC: 90% confidence <5% unresolved anomalies Accept on zero. ⁹	Rate varies depending on lot size. [Table showing rates per lot size for varying confidence levels will be provided] ¹⁰	Redo lot
Anomaly Resolution(*) ¹¹	Verification checking of excavated locations (analog or digital instrument)	2 nd party checks open holes to determine: If MEC: 70% confidence <10% anomalies unresolved ¹² If no MEC: 90% confidence <5% anomalies unresolved	Rate varies depending on lot size. [Table showing rates per lot size for varying confidence levels will be provided]	Redo lot
	Verification checking by DGM remapping ¹³	Same as Detection & Recovery	Same as Detection & Recovery	Redo lot
Geodetic Equipment Functionality	All	Position offset of known/temporary control point is within 30cm, 1m, or 5m (appropriate to the instrument being used).	Daily	Day's positioning data fails
Geodetic Repeatability	Grid corners/transect points without anomaly reacquisition	Measured locations are reoccupied within 10m. ¹⁴	1 per lot	Lot fails

¹ These are the critical QC requirements for EE/CA analog methods. Contractors shall use additional methods/frequencies that they deem beneficial and as required in their SOPs.

² All QC failures also require a Root Cause Analysis.

³ The requirement is that each operator demonstrates positive detection on a daily basis of the smallest and largest expected MEC of interest when it is placed at both its best and worst orientations and buried between 95% and 100% of their respective maximum consistent detection depth. Maximum consistent detection depth is defined as producing any above background response on a minimum of the first three time gates of the EM61MK2 optimized for site conditions and having a 0.9m² size or more as calculated using the Geosoft Oasis Montaj UCEAnalyseTarget.NET or equivalent routine.

⁴ Coverage seeds are small pieces of metal that will produce relatively large amplitude anomalies over small areas, such as small nails or ball bearings. Known location accuracy of placement is not critical.

⁵ If MEC (or intact or partial training or practice rounds) are not detected in a grid/lot then the information from that grid/lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

⁶ Detection and recovery must be consistently demonstrated for the hard to detect items; therefore, the largest expected MEC and the smallest expected MEC shall be placed between 95% and 100% of their respective maximum consistent detection depth

⁷ If MEC (or intact or partial training or practice rounds) are not detected in a lot then the information from that lot may be used to support certain decisions where the confidence in the results must be greater than that for grids where MEC are detected.

⁸ This is a statistical test number. It does not imply there are 10% bad units. It tests there are fewer than 10% bad units, including zero bad units. Values for confidence levels will be determined by the PDT and are dependent on the information needed. Stopping rules will take precedence over this standard (i.e. for high MEC density, decision could be made to stop because the team has enough data for characterization)

⁹ Unresolved anomaly for 'Detection & Recovery Testing' means a significant signal remains without a complete rationale for its presence. Default values for such a 'significant signal' are peak amplitude on sum channel $\geq 30\text{mv}$ & anomaly width $\geq 1.2\text{m}$ or anomaly size $\geq 0.9\text{m}^2$. This value may change but must be agreed upon by the PDT up front.

¹⁰ For example, if lot size is 500 anomalies, to achieve a 90% confidence that there are less than 5% unresolved anomalies, 44 anomalies must be re-checked. If any one of the 44 is unresolved, then the confidence level has not been met and the lot submittal fails (i.e. accept on zero).

¹¹ This requires leaving flags at excavated locations until QC is complete. If shovel called to a flag during QC then the failure has already occurred—it is not important that something large or small comes out of the hole. Assumption here is "mapping coverage" is addressed through other means. It is up to the contractor to indicate which holes knowingly have metal left in them where the PDT has agreed such is acceptable. It is up to the contractor to deal with not putting hot material back in the hole before QC is complete.

¹² Resolved is defined as 1) there is no geophysical signal remaining at the flagged/selected location, or 2) a signal remains but it is too low or too small to be associated with UXO/DMM, or 3) a signal remains but is associated with surface material which when moved results in low, or no signal at the interpreted location, or 4) a signal remains and a complete rationale for its presence exists.

¹³ Mapping shall cover the required number of anomaly locations. This is used in-lieu of checking individual anomalies for those instances where it is quicker to re-map sections of land rather than return to individual anomalies. Only the data at the anomaly locations is looked at, all other data is discarded.

¹⁴ The exact location of a single transect/grid is not critical, when the information is used only for characterization by interpolating over large areas (e.g. transects spaced at 100m). It becomes important if specific anomalies/locations must be recovered. The acceptable accuracy may be tightened by the PDT if more exact positioning is needed (e.g. trying to characterize extents of small MRS's).

**Appendix A
Price Spreadsheet**

Fort McClellan – Additional Sampling for the Charlie Area EE/CA						
				If priced per unit		
<i>Task</i>	<i>Task Name</i>	Task Pricing	Unit Price	Units	Number of Units	Total Price
1	Addendum to Existing Final Charlie Area EE/CA Work Plan	FFP		LS		
2	Document and Data Analysis	FFP		LS		
3	Provide Comment Responses	FFP		LS		
4	GeoSpatial Data	FFP		LS		
5	EE/CA Field Activities	FFP		LS		
5A	Optional Task	FUP				
	Analog Transects	Unit Price		per acre		
	Digital Transects	Unit Price		per acre		
	Analog Grids	Unit Price		per 50'x50' grid		
	Digital Grids	Unit Price		per 50'x50' grid		
	Mob/Demob	Unit Price		LS		
	Civil Survey	Unit Price		per acre		
	Vegetation Removal (light)	Unit Price		per acre		
	Vegetation Removal (medium)	Unit Price		per acre		
	Vegetation Removal (heavy)	Unit Price		per acre		
5B	Field Office	FUP		LS		
6	Addition to and revision of existing Draft Final EE/CA Report	FFP		LS		
7	Action Memorandum	FFP		LS		
8	Community Relations Support	FFP		LS		
	Additional Meeting	Unit Price		per meeting		
9	Project Documentation	FFP		LS		
					TOTAL	

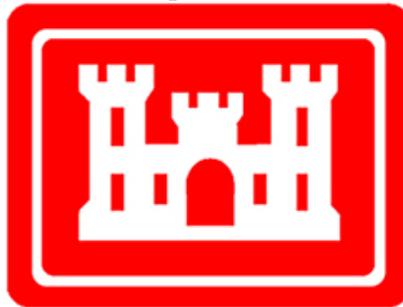
APPENDIX B

SITE MAPS

FOR THE

Engineering Evaluation/Cost Analysis Additional Sampling at Charlie Area Fort McClellan, Alabama

Prepared for:



**U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Ms. Sherri Anderson-Hudgins)
4820 University Square
Huntsville, Alabama 35816-1822**

**U.S. Army Engineer Division, South Atlantic
Attn: CESAD-PM-H (Ms. S. Ernst)
77 Forsyth Street, S.W.
Atlanta, Georgia 30335-6801**

**Contract: W912DY-04-0018
Task Order: 0024
Purchase Request Number: W31RYO92058499**

Prepared by:



**2229 Old Highway 95
Lenoir City, Tennessee 37771**

May 2010



APPENDIX B SITE MAPS

This appendix can be found behind this page.

- B-1 Site Location Map
- B-2 Charlie Area Map
- B-3 Supplemental Transect Area
- B-4 Supplemental Grids

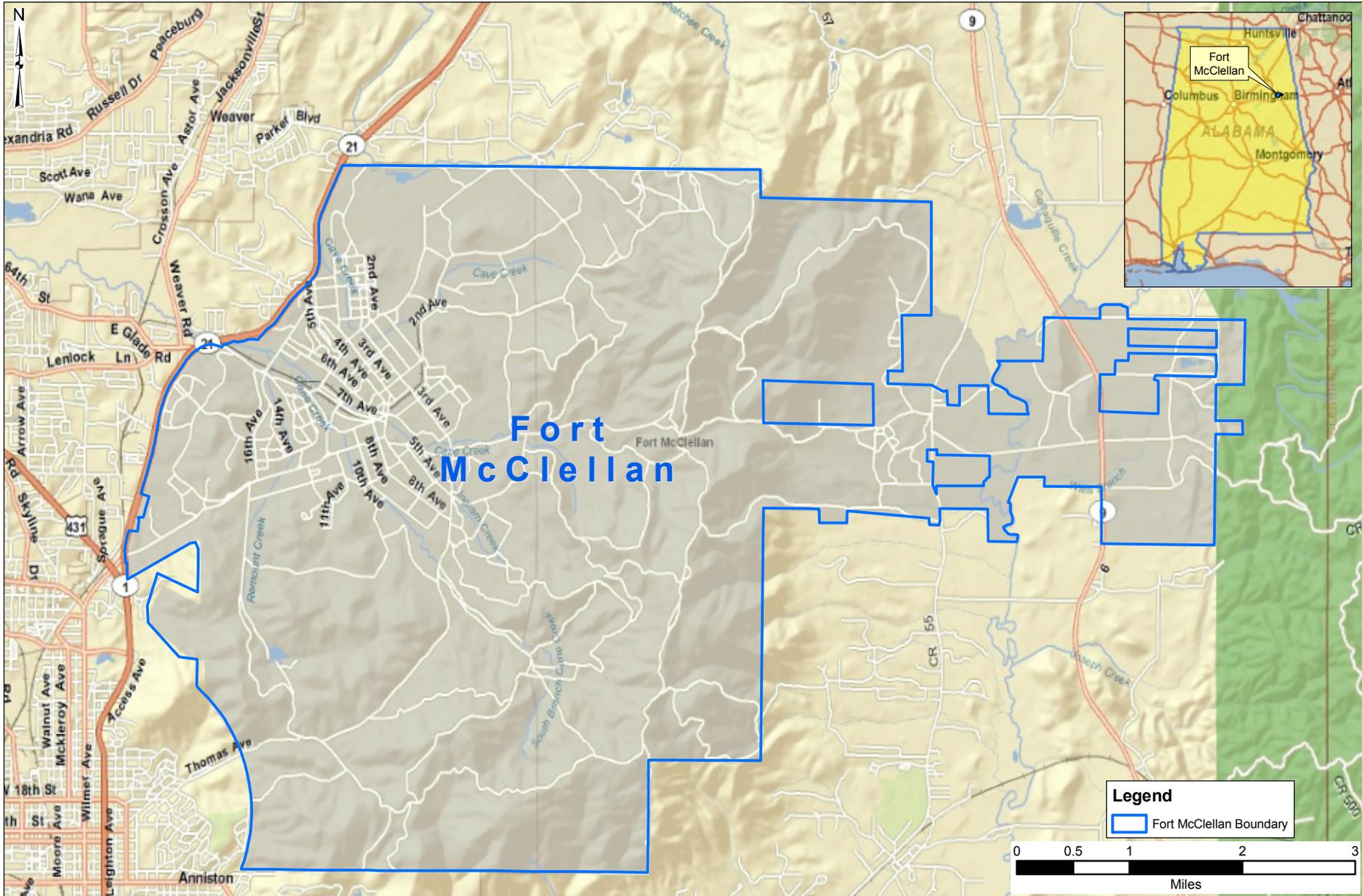


Figure B-1: Site Location Map

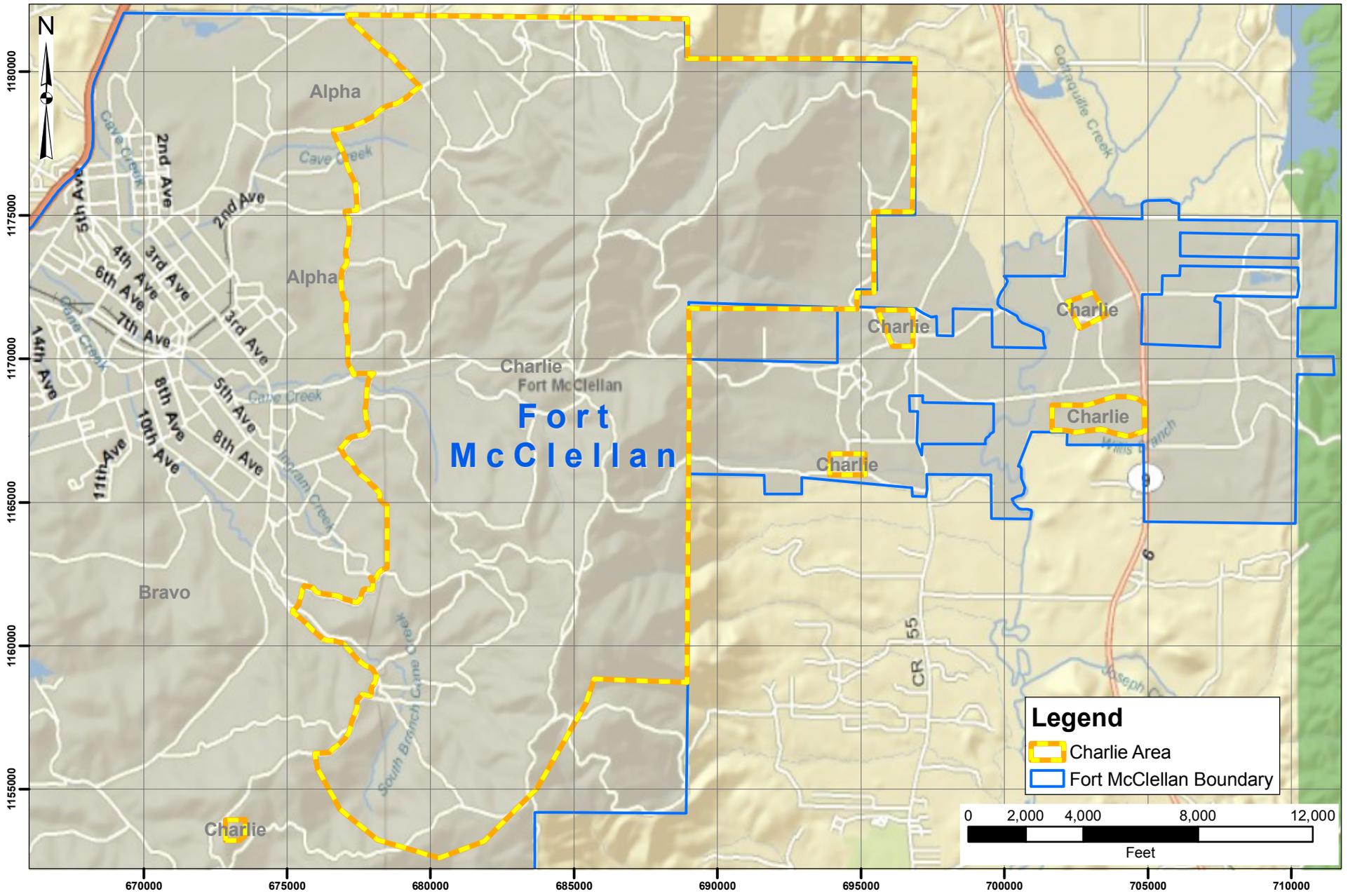


Figure B-2: Charlie Area Location Map

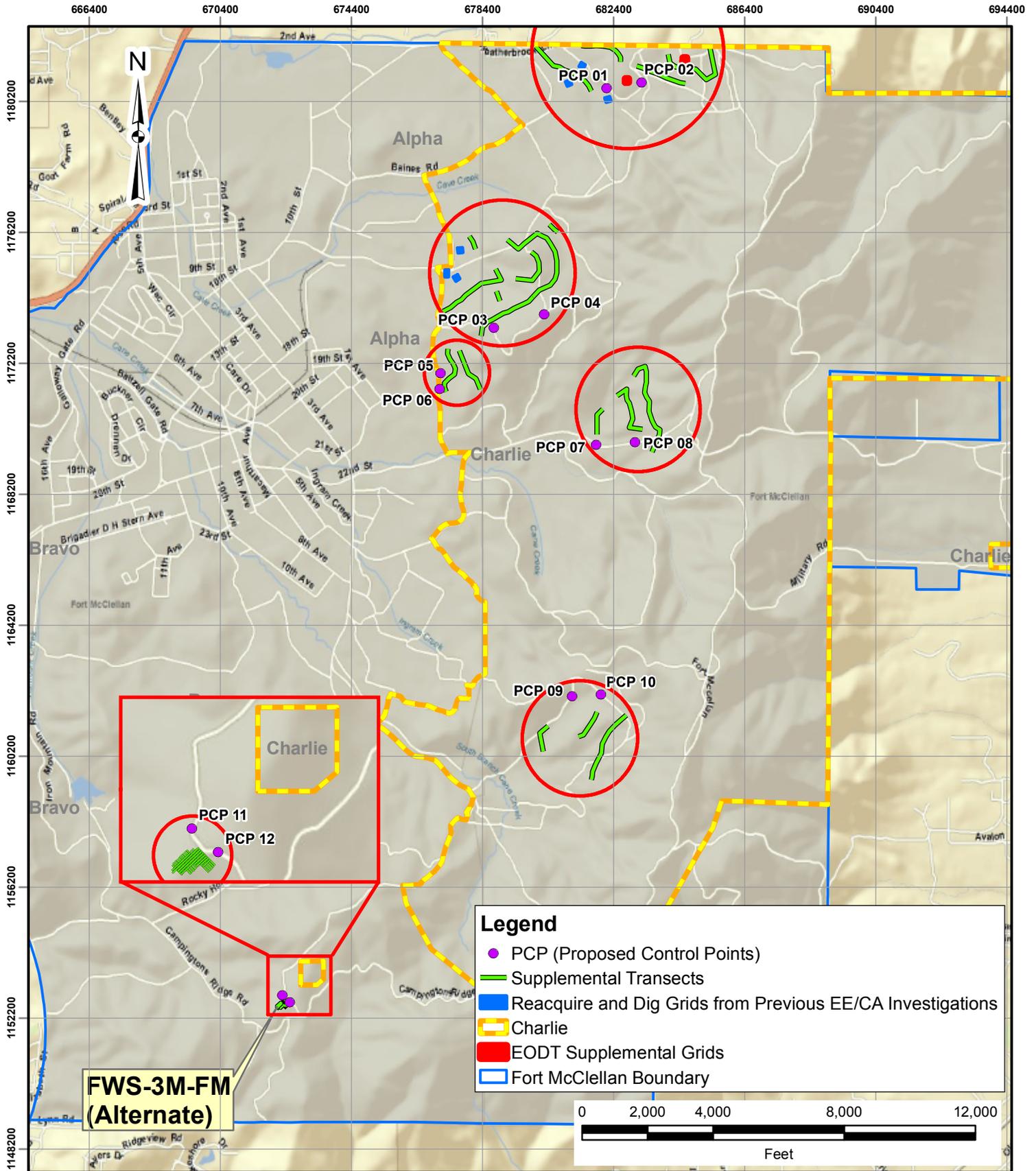


Figure B-3: Supplemental Transect Map

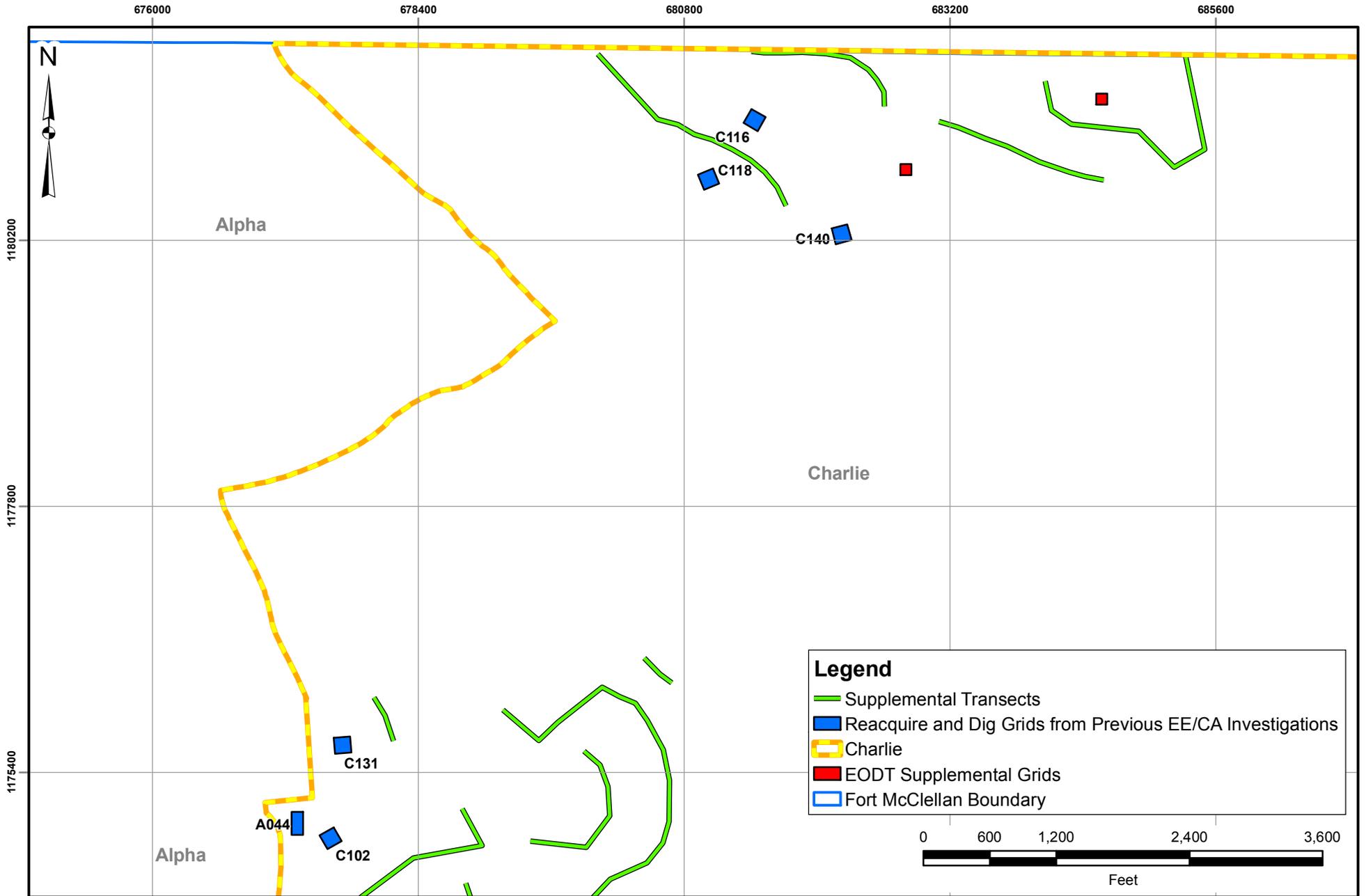


Figure B-4: Charlie Area Grid Map

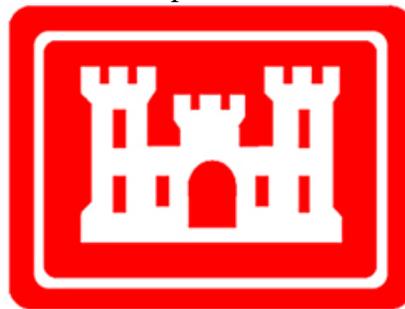
APPENDIX C

LOCAL POINTS OF CONTACT

FOR THE

Engineering Evaluation/Cost Analysis Additional Sampling at Charlie Area Fort McClellan, Alabama

Prepared for:



**U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Ms. Sherri Anderson-Hudgins)
4820 University Square
Huntsville, Alabama 35816-1822**

**U.S. Army Engineer Division, South Atlantic
Attn: CESAD-PM-H (Ms. S. Ernst)
77 Forsyth Street, S.W.
Atlanta, Georgia 30335-6801**

**Contract: W912DY-04-0018
Task Order: 0024
Purchase Request Number: W31RYO92058499**

Prepared by:



**2229 Old Highway 95
Lenoir City, Tennessee 37771**

May 2010



**APPENDIX C
LOCAL POINTS OF CONTACT**

Service/Contact	Agency/Position	Telephone Number
Sheriff	Calhoun County Sheriff Department	(256) 237-4731
Fire	Anniston Fire Department	(256) 231-7644
Ambulance	Anniston Emergency Medical Services	911/(256) 237-8572
Hospital	Jacksonville Medical Center	(256) 435-4970
National Response Center	Chemical Spills/Emergencies	(800) 424-8802
USEPA Region 4	Emergency Response Center Spill Region 4 Information	(800) 241-1754
Ms. Sherri Anderson-Hudgins	USAESCH PM	(256) 895-1510
Ms. Janice Jamar	USAESCH KO	(256) 895-1510
Ms. S. Ernst	USACE Engineer Division, South Atlantic	(404) 562-5216
Mrs. Brandi Little	Alabama Department of Environmental Management	(334) 271-7700
Mrs. Lisa Holstein	U.S. Army Transition Force	(256) 848-7455
Mr. Steve Miller	Mountain Longleaf National Wildlife Refuge	(256) 848-7085
Mr. Robin Scott	Calhoun County McClellan Development Authority	(256) 236-2011
Mr. Richard Satkin	Matrix Environmental Services, Inc.	(256)-820-1123
Mr. Pete Tuttle	U.S. Fish and Wildlife Service	(800) 832-1355
Mr. David Mayfield	EODT Program Manager	(865) 988-6063, cell 805-1234
Mr. Brian Woods	EODT Project Manager	(865) 988-6063, cell 776-2737
Mr. Kevin Corbett	Corporate Quality Control Manager	(865) 988-6063, cell 924-9172
Dr. Michael Findley, CIH	Corporate Occupational Safety and Health Manager	(865) 988-6063