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## Technical Project Planning Memorandum – No. 1

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**Subject:** FUDS Military Munitions Response Program Documentation of Technical Project Planning Project Team Meeting for a Remedial Investigation/Feasibility Study (RI/FS)

**Site:** Former Camp Croft, Spartanburg, SC

**Contract:** Contract Number W912DY-10-D-0028, Task Order 0005

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The Technical Project Planning (TPP) meeting was conducted on 16 March 2011 at the Spartanburg Marriott at Renaissance Park in Spartanburg, South Carolina from 8:30am to 3:30pm. The Project Delivery Team (PDT) is composed of the participants listed below; all were present (sign-in sheet attached). Meeting participants introduced themselves.

1. Shawn Boone Project Manager, US Army Corps of Engineers (USACE), Charleston District
2. Spencer O’Neal Project Manager, US Army Engineering and Support Center, Huntsville (USAESCH)
3. Teresa Carpenter Technical Lead, USAESCH
4. Deb Edwards Geophysicist, USAESCH
5. Susan Byrd South Carolina Department of Health and Environmental Control (DHEC)
6. John Moon South Carolina Department of Parks, Recreation & Tourism (DPRT), Croft State Natural Area
7. Jason Shiflet Project Manager, Zapata Incorporated (ZAPATA)
8. Suzy McKinney Quality Control Manager, ZAPATA

### ***Meeting Discussion Summary:***

The purpose of the meeting was to establish the PDT team and to begin the TPP process for the RI/FS at the former Camp Croft. Mr. Shiflet opened the meeting with a brief presentation to explain the RI/FS process and where this task is within that process. The project includes Munitions Response Sites (MRS) 1, 2, and 3, Areas of Potential Interest (AoPI) 3, 5, 8, 9E, 9G, 10A, 10B, 11B, 11C, 11D, and Lakes Craig and Johnson. The presentation and general discussions about the Former Camp Croft RI/FS task order led to numerous questions (for clarification) from Mr. Moon. These general discussions continued until just before noon, when Mr. Moon had to leave. After a short break, the PDT continued project specific discussions until the meeting adjourned at 3:30pm. The outcome of these discussions resulted in the refinement of the preliminary conceptual site model, the conceptual site exposure model, and preliminary MEC DQOs, and established the framework for the Draft Work Plans. The bullet points listed below are highlights from the day’s discussions.



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- 1) The Croft State Natural Area allows three two-day bow hunts for deer between September and November, each year.
- 2) The Croft State Natural Area hosts Horse Shows on the third Saturday of each month between February and November, each year.
- 3) Shawn has had recent discussions with the public regarding the potential existence of various munitions items in and around the Former Camp Croft. For example, Jimmy Tobias noted that “howitzer like munitions” were found in and along the creek (*possibly Fairforest Creek*) during the bridge construction along SC Highway 150. Mr. Tobias also noted that he’s seen lots of military munitions east of AoPI 9G and north of AoPI 12A. The PDT agreed that it would be prudent to solicit site-specific information from local, knowledgeable persons.
- 4) The PDT agreed that Spartanburg County Sheriff’s Office munitions responses should be incorporated into the project Geographic Information System (GIS).
- 5) The PDT agreed that Lieutenant Dyas of the Spartanburg County Sheriff’s Office should be invited to the next TPP meeting.
- 6) Previously cleared areas (i.e., areas where removal actions have been completed) should be incorporated into the project GIS.
- 7) Soil sample analytical results for munitions constituents (MC), namely explosives and metals (Cu, Pb, Sb, and Zn), will first be compared to the EPA Regional Screening Level (RSL) Summary Table (dated November 2010). These can be found at <http://www.epa.gov/region9/superfund/prg/>. Once any contamination is delineated to the RSL table, EPA Region IV Ecological Screening Values will be used for ecological risk assessment purposes. These can be found at <http://www.epa.gov/region4/waste/ots/epatab4.pdf>.
- 8) If a risk assessment is required, the munitions Center of Expertise (CX) may require that surface and subsurface samples be included in the risk assessment. The USAESCH agreed to discuss the issue with the CX. If both surface and subsurface samples are required for the risk assessment, then those similar depth intervals would likely be required for background samples.
- 9) The PDT agreed that all soil samples will be discrete. Those samples will be collected from the ground surface to a depth of two inches. If burrowing animals are present, deeper samples may be required.
- 10) Background soil sampling will not be required unless there are analytical results that exceed the EPA RSLs. If background soil sampling is required, field teams must document the soil type during sampling so that sample results can be compared to similar soil types. DHEC recommended that ZAPATA should consider submitting a Freedom of Information Act (FOIA) request to local agencies requesting available background data sets.
- 11) The PDT discussed data collection needs on golf course property, particularly in the fairways and greens. It was agreed that the USACE should initiate a meeting with the golf course



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- owners as soon as possible to discuss investigation options. Potential options include using an EM61 or the MetalMapper system, followed by some amount of intrusive investigation.
- 12) AoPI 12A is partially within MRS 3. In MRS 3 (and within AoPI 12A), transect spacings should be set at 112 ft based on a MKII grenade.
  - 13) Previous work conducted in AoPI 12B indicated the existence of a rifle grenade. Rather than compressing the transect spacing within AoPI 12B, the PDT requested that ZAPATA place a transect through AoPI 12B.
  - 14) The PDT discussed the possibility of using ZAPATA's existing geophysical prove-out (from earlier site work). The USAESCH agreed to consider the possibility and will follow up with ZAPATA.
  - 15) For mag-and-dig transects, the PDT was unable to define the anomaly density threshold that would be considered excessive and thus would trigger the need to sample only a statistically significant portion of the anomalies along the transect. Examples of 40 and 60 anomalies per 100 ft segment were provided as possible values. The USAESCH agreed to seek clarification and provide input.
  - 16) The PDT discussed collecting MC samples in areas with high anomaly densities. Tentatively, those high density areas are defined as those areas where the anomaly density count is > the 97<sup>th</sup> percentile of all anomaly densities.
  - 17) The PDT agreed that pre-blow-in-place (BIP) samples would not be used in the risk assessment (if a risk assessment is required).
  - 18) The question was raised whether there should be more coverage near the horse ring and park office, due to higher concentration of visitors/access. The USAESCH agreed to seek clarification and provide input.
  - 19) The PDT discussed tighter transect line spacing in areas where grenades have been found; perhaps a DQO using tighter line spacing in the HFD (from the boundary of the grid where the grenade was found) and increase line spacing from point at which the last grenade fragment was found. The PDT ultimately decided against this approach from an implementability stand point. If evidence of grenades is prevalent, and the PDT feels that more data are required, the PDT may elect to place grid(s) in the area, and/or add transects in between existing transects for better characterization.
  - 20) The PDT discussed AoPI 3 and the need (or lack thereof) for additional data. Extensive activities have been conducted in and around AoPI 3. Based on the amount of data available from those previous activities, the question of whether or not the nature of contamination at AoPI 3 has been defined was posed. Furthermore, since the PDT has defined the lateral extent of MEC in the data quality objectives (DQO) table as the distance equal to the transect spacing determined for the respective area (i.e., 112 ft for AoPI 3) beyond the last MEC discovered, it is possible to place a 112 ft buffer around AoPI 3 and conclude that both the nature and extent of the contamination has been defined. The USAESCH agreed to discuss the matter with the CX and provide comment to the PDT.



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- 21) The PDT agreed that grids placed in mag-and-dig areas will be digitally geophysically mapped (DGM). From those DGM grids, all MEC-like anomalies will be investigated. MEC-like anomalies will be based on results determined during the geophysical proveout; those selections will be discussed with the PDT prior to intrusive investigation. In analog instrument-assisted reconnaissance (AIR) areas, grids will be evaluated by mag-and-dig methods. In those grid, all anomalies will be intrusively investigated since the nature and extent of munitions along AIR transects will be unknown.
- 22) The PDT agreed that investigations at AoPI 11C should be conducted east of those previously conducted along Cedar Springs Drive. Investigation within the area identified as AoPI 11C in the Performance Work Statement (PWS) is not required.
- 23) DHEC requested that the Uniform Federal Policy for Quality Assurance Project Plan (UFP-QAPP) include a) rationale for how selected group of metals were determined and b) how and when the need for background samples will be determined.
- 24) The PDT requested that ZAPATA confirm Accutest and TestAmerica have certifications for South Carolina. ZAPATA has confirmed, in writing, that both labs hold South Carolina certification.
- 25) The PDT discussed the preferred format of the Work Plans. ZAPATA made some suggestions to improve clarity and readability based on recent experiences with another RI/FS. The PDT agreed to review the proposed format (see attached).

***Attachments:***

Meeting Agenda  
Sign-in Sheet  
RI/FS Presentation  
Conceptual Site Models  
Conceptual Site Exposure Models  
Munitions and Explosives of Concern Data Quality Objective Tables  
EM 200-1-2 Worksheets  
Work Plans outline  
Project Figures  
Project Schedule