PROGRAM ANNOUNCEMENT FOR THE ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM (ESTCP)

Demonstration of Advanced Electromagnetic Induction (EMI) Classification Technologies on Munitions Response Sites

Broad Agency Announcement (BAA) Proposal Submission Instructions

(Reference: BAA October 8, 2010, U.S. Army Corps of Engineers Humphreys Engineering Center Support Activity)

1. INTRODUCTION

The Environmental Security Technology Certification Program (ESTCP) is the Department of Defense’s (DoD) demonstration and validation (Dem/Val) program for environmental technology. ESTCP is seeking proposals for innovative technology demonstrations of advanced electromagnetic induction (EMI) sensors and analysis methods for classification at munitions response sites. This Broad Agency Announcement (BAA) solicitation is open to private sector offerors only. DoD or other Federal organizations may partner with BAA responders, but may not serve as a lead organization on a proposal.

1.1 BACKGROUND

The purpose of ESTCP is to demonstrate and validate the most promising innovative environmental technologies that target DoD’s most urgent environmental needs and are projected to pay back the investment through cost savings, improved efficiencies, or improved outcomes. The goal is to enable promising technologies to receive regulatory and end-user acceptance and be fielded and commercialized more rapidly. To achieve this goal, ESTCP projects create a partnership between technology developers, responsible DoD organizations, and regulators.

ESTCP demonstrations are conducted under operational conditions at DoD facilities or locations for which DoD holds environmental responsibility. Candidate technologies are expected to have successfully completed laboratory testing and, when applicable, initial small scale field testing. The demonstrations are intended to generate supporting cost and performance data for acceptance or validation of the technology. ESTCP demonstration projects are also required to support the future implementation of the tested technology through the development of appropriate guidance, design, and/or protocol documents.

The Military Munitions Response Program (MMRP) is charged with characterizing and, where necessary, remediating munitions-contaminated sites. When a site is cleaned up, it is typically mapped with a geophysical system, based on either a magnetometer or EMI sensor, and the locations of all detectable signals are excavated. Many of these detections do not correspond to munitions, but rather to other harmless metallic objects or geology; field experience indicates that often in excess of 90% of objects excavated during the course of a munitions response are
found to be nonhazardous items. Current technology, as it is traditionally implemented, does not provide a physics-based, quantitative, validated means to discriminate between hazardous munitions and nonhazardous items.

With no information to suggest the origin of the signals, all anomalies are currently treated as though they are intact munitions when they are dug. They are carefully excavated by certified unexploded ordnance (UXO) technicians using a process that often requires expensive safety measures, such as barriers or exclusion zones. As a result, most of the costs to remediate a munitions-contaminated site are currently spent on excavating targets that pose no threat. If these items could be determined with high confidence to be nonhazardous, some of these expensive measures could be eliminated or the items could be left unexcavated entirely.

Classification is a process used to make a decision about the likely origin of a signal. In the case of munitions response, high-quality geophysical data can be interpreted with physics-based models to estimate parameters that may be useful for classification. The parameters in these models are related to the physical attributes of the object that resulted in the signal, such as its physical size and aspect ratio. The values of these parameters may then be used to estimate the likelihood that the signal arose from an item of interest, that is, a munition.

Significant progress has been made in developing and demonstrating explicit classification technology. Reports describing the results of demonstrations at the former Camps Sibert and San Luis Obispo are available at www.serdp-estcp.org/Featured-Initiatives/Munitions-Response-Initiatives/Classification-Applied-to-Munitions-Response. Implementation of these classification technologies will require demonstrations at a number of sites spanning a wide range of munitions and site conditions.

1.2 REQUIREMENTS OF AN ESTCP PROJECT

ESTCP projects must:

1. Execute the technology demonstration to validate the technology’s performance and expected operational costs:
   - Each project develops a demonstration plan to govern the technical execution and management of the demonstration. Guidance describing the requirements of the ESTCP Demonstration Plan can be found at www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources. The demonstration plan is reviewed and must be approved by the ESTCP Office prior to beginning any fieldwork.
   - Each project is expected to generate sufficient pertinent and high quality data to scientifically prove the validity of all claims made for the technology.
   - Cost and environmental performance data will be collected during the demonstration(s) to allow realistic estimates to be derived for full scale implementation of the technology at the demonstration site and other DoD sites.

2. Transfer the technology:
   - Work with the intended DoD user community to achieve their acceptance and feedback on the usefulness of the technology.
3. Provide data and support to achieve regulatory and end-user acceptance:
   - ESTCP has established an Advisory Group for the Classification Pilot Program. Its role is to contribute to the program design, definition of the metrics for success, data review, and development of major program conclusions. Demonstration results must support the Advisory Group’s goal of developing a rigorous, transparent approach to classification at munitions response sites.

1.3 GENERAL INFORMATION FOR PRIVATE SECTOR PROPOSERS

Funding decisions will be made based on evaluation of the written proposal; there will be no other input required. Based on this evaluation, each proposal submitter will be notified as to whether the Government wishes to enter into negotiation for the award of a contract. Offerors are advised that only the Contracting Officer is legally authorized to commit the Government. ESTCP reserves the right to select for award any, all, or none of the proposals received. ESTCP also reserves the right to select a portion of the work proposed in any single proposal for award. There is no commitment by ESTCP to make any contract awards, nor to be responsible for any money expended by the offeror before contract award is made for a demonstration.

The solicitation will be managed by the ESTCP Office along with the U.S. Army Corps of Engineers’ Humphries Engineering Center Support Activity (HECSA) at Fort Belvoir, Virginia. For contractual information, please contact Ms. Susan Hill at HECSA via telephone at 703-428-6420 or by e-mail at Susan.M.Hill@usace.army.mil. Procedural questions may be referred to the ESTCP Office at 703-696-2127. For technical questions regarding this announcement, contact:

Dr. Herb Nelson
Program Manager for Munitions Response (MR)
Environmental Security Technology Certification Program (ESTCP)
901 North Stuart Street, Suite 303
Arlington, VA 22203
Phone: 703-696-8726
E-mail: Herbert.Nelson@osd.mil
### 1.4 EVALUATION SCHEDULE

**Table 1. ESTCP Project Selection Schedule**

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 8, 2010</td>
<td>BAA Released</td>
</tr>
<tr>
<td>November 8, 2010; 4 pm Eastern Time</td>
<td>Proposals Due to ESTCP Office</td>
</tr>
<tr>
<td>November 2010</td>
<td>Project Selection</td>
</tr>
<tr>
<td>March 2011</td>
<td>Award of Contract/Project Initiation</td>
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</tbody>
</table>
2. DESCRIPTION OF PROPOSALS SOUGHT

2.1 OBJECTIVE OF PROPOSED WORK

Proposals are requested to demonstrate and validate the use of advanced EMI sensors and/or analysis methods at munitions response sites to significantly reduce the costs of remediation by classifying detected subsurface items as either targets of interest or not. Technologies proposed must be ready for demonstration and validation in a production environment; this usually requires a prior successful demonstration at one of the Standardized UXO Test Sites or other site that provides neutral third-party scoring.

Application of classification methods to munitions response typically proceeds in three stages. First, high-quality geophysical data are collected, these data are analyzed to extract target characteristics that enable discrimination of targets of interest from all other targets, and finally, an anomaly list is prepared ranked by the likelihood that the item causing the anomaly is a target of interest. It has been demonstrated repeatedly over the past five years that advanced EMI sensors, defined here as multi-channel, multi-axis sensors based on digital electronics, and the application of advanced analysis methods to data from production sensors are able to accomplish this task.

The ESTCP Live Site Classification Program has a number of objectives:

- demonstrate innovative EMI sensors,
- demonstrate the use of advanced analysis methods applied to data from either advanced sensors or carefully deployed production sensors, and
- facilitate the adoption of these advanced sensors and analyses in the production environment.

Demonstrations proposed must be able to contribute to one or more of these objectives and be able to contribute to acceptance of these methods by regulators and other stakeholders for production use.

Accordingly, demonstrations in one or more of the following areas are sought:

- data collection with advanced EMI sensors,
- data collection with production EMI sensors coupled with advanced analysis,
- innovative data collection methodologies,
- advanced technologies for data analysis and anomaly classification, and
- use of these advanced techniques in the production environment.

Proposals for demonstrations are solicited in one or a combination of these areas by either individual performers or teams of performers. Demonstrations that involve the use of these technologies as they would be used on production sites or with production teams are of particular interest. Proposals involving the application of standard production sensors or their obvious variants must be coupled with advanced analysis techniques to be responsive. Activities that can be described as field support work are only responsive to the extent that they support one of the five objectives above. Proposals addressing only detection are not of interest.
Proposals that focus only on data analysis and signal processing technologies can expect data sets from one, or more, of the following advanced sensors to be available:

- MetalMapper (ESTCP Project MR-200603);
- TEMTADS (ESTCP Project MR-200601);
- Man-Portable Vector sensor (ESTCP Project MR-201005);
- Handheld BUD (SERDP Project MR-1667);
- Man-portable TEMTADS (ESTCP Project MR-200909).

Details of each of these sensors can be found at www.serdp-estcp.org/Program-Areas/Munitions-Response/Land/Sensors. Carefully collected data from an EM61-MK2 sensor is solicited above and will be made available for those proposing to focus on analysis of production data. Additionally, a MetalMapper system will be available as Government-furnished Equipment for proposers seeking to perform data collection demonstrations.

Demonstrations will be conducted at sites amenable to the use of towed arrays and other large platforms as well as sites on which smaller cart and man-portable sensors will be appropriate. Some sites will be open, with good sky view, while others will have vegetation and other obstructions that restrict access to GPS signals. The first two demonstrations are planned for the Pole Mountain Target and Maneuver Area, WY and the former Camp Beale, CA. The Pole Mountain site is a typical high grasslands area – relatively flat, low grass, and minimal interference from larger vegetation. Good sky view is available throughout the demonstration area. The Camp Beale site is a mix of valley areas and wooded areas without good sky view. This site is planned as a demonstration of man-portable instruments.

Proposers with technologies that may be applicable to only a subset of demonstration sites and conditions should specify in the proposal the conditions under which their technology will operate most effectively. Proposals selected for funding will be matched with a demonstration site(s) based on these restrictions; therefore, it is imperative that proposers provide a clear description of applicable operating conditions.

The government expects to fund more than one proposal to attain the objectives of this program, as different combinations of technologies are expected to be optimum depending on site conditions (geology, topography, and vegetation) and the particular munitions of concern.

2.2 COST AND DURATION OF PROPOSED WORK

The cost and time of proposed demonstration projects are at the discretion of the proposer. For purposes of proposal costing, proposers should assume work will be conducted in the continental United States. Four demonstration sites will be selected by ESTCP staff and will be on the order of 50 acres containing 2,000 to 3,000 geophysical anomalies.

Proposers contemplating work at more than one site should provide costing for each site individually. Proposals concerning both data collection and analysis should separate those two components on the cost-by-task worksheet.

The proposal should incorporate the appropriate time schedule and cost requirements to accomplish the scope of work proposed either during the spring and summer of 2011 or the
spring and summer of 2012. ESTCP staff will evaluate the cost and duration of the project plan in light of the scope of work proposed.
3. PREPARATION AND CONTENT

All proposals will be submitted electronically, via WebPTS (see instructions below). Proposals shall contain four sections, Cover Page, Technical Section, Cost Section, and Appendices, submitted as one document. Each section is described in detail below. Proposals shall be prepared in accordance with the following:

- Type size should not be less than 11 point, any font.
- All margins (top, bottom, left, and right) should not be less than 1 inch.
- Table of contents, introduction, executive summary, tabs, binding, or any other elements not prescribed by this guidance are neither required nor desired.

3.1 COVER PAGE

Each proposal must include a completed ESTCP cover page prepared via the Web Proposal Tracking System (WebPTS) module within the SERDP and ESTCP Management System (SEMS).

1. Log in at https://sems.serdp-estcp.org and click on the WebPTS tab at the top of the screen if you are not already on that page. As you make entries in the cover page, you may save data that has been entered or submit a completed cover page. A cover page must be completed and submitted before a proposal can be submitted via WebPTS. When the cover page has been submitted, a proposal number will be generated and you will receive online confirmation.

2. From the “My cover pages” screen, click “view.” This will allow you to review, print, and sign your cover page for inclusion as the first page of the proposal. A web-generated signed cover page must be submitted as the first page in the proposal. A signature is required by an individual authorized to bind your organization. Proposals lacking a Cover Page or submitted with an unsigned Cover Page will be considered unresponsive. A cover letter beyond this Cover Page is neither required nor desired.

If you require assistance with WebPTS, contact Amy Kelly at Amy.Kelly.ctr@osd.mil or by telephone at 910-579-8052, or the ESTCP Office at 703-696-2127.

3.2 TECHNICAL SECTION

The technical section must contain all of the content elements outlined here and must not exceed 15 pages. It is expected that each section will provide information that responds directly to the evaluation criteria. The emphasis should be on the technical approach.

1. Short Descriptive Title

2. Lead Organization: Project lead, organization, address, telephone number, fax number, and e-mail address.

3. Abstract: In one page or less, provide a brief summary of the following information. Use the headers as listed below:

   a) Objective: Provide a succinct statement of the project’s overall objective in the context of classification as applied to munitions response. Include specific technical objectives.
b) **Technology Description:** Describe the proposed technology, in particular the innovative aspects of the technology that will be demonstrated in the project. Summarize what the project will attempt to demonstrate and what will constitute success.

c) **Expected Benefits:** Briefly describe the anticipated cost and performance benefits of the use of the technology to the DoD as compared to current practice or state-of-the-art technology, if one exists.

Note: For successful offerors, the abstract will be the basis for the fact sheet to be posted on the ESTCP web site. As such, it should be a stand-alone summary that is professionally written and edited.

4. **Technology Description:** The technology description should include the following information:

   a) **Technical Objective:** Discuss the objective(s) of the proposed effort.
   
   b) **Technology Description:** Describe the technology in sufficient detail to provide an accurate and factual understanding of its theory, functionality, and operation. If appropriate, provide an overall schematic of the technology. Discuss how the technology is innovative. Discuss specific geophysical sensors, systems, and analysis approaches that are proposed.
   
   c) **Technology Maturity:** Provide evidence that the technology is mature enough for demonstration. This will generally require testing that has been verified by a neutral third party, either at the Standardized UXO Test Sites or other sites that have supported such testing. Include any prior performance data in the Appendix, as well as references and funding history. Discuss any training, development or design work that is required prior to demonstration. The demonstration schedule will support only minimal pre-demonstration activity.
   
   d) **Technical Approach:** Provide a detailed overview of how the project will be conducted to address the technical objectives. For clarity, proposers should present this section in terms of specific tasks. Within this construct, the proposer should ensure that the following issues are addressed:

   - A total of four demonstrations are planned. Two demonstrations sites have been selected. These are at Pole Mountain, WY and the former Camp Beale, CA, and are described in Section 2. Two additional sites will be selected by ESTCP. For planning and costing purposes, assume that the two additional sites are comparable in scope and within the continental US. Offerors may propose to demonstrate at any or all of the four sites. ESTCP reserves the right to select one or more of the proposed demonstrations from a proposal. Include a brief description of site characteristics suitable to your technology and desired characteristics of additional demonstration sites such as topography, munitions characteristics (e.g large projectiles, mortars, etc.) and vegetation.
   
   - Provide the performance objectives for the technology. These are the primary criteria established by the investigator for evaluating the performance and costs of the technology. Primary performance objectives will be specified by the ESTCP Office in the site-specific Demonstration Plan for each site. Example performance objectives from past pilot program demonstrations can
be found at: www.serdp-estcp.org/content/download/8626/105312/version/2/file/Example+Classification+Program+Performance+Objectives.pdf. In the proposal, discuss data required to evaluate the performance objectives and the criteria to determine whether objectives are successfully met and propose any additional performance objectives that will be technology specific.

- Provide a broad overview of the experimental design. Discuss the scope of the proposed demonstration and relate the planned data collection and analyses to the performance objectives. Indicate which demonstration activities you are proposing (i.e., site preparation, data collection, processing and analysis, validation). It is assumed that multiple data collection technologies and multiple processing technologies will be supported at each demonstration site. Offerors wishing to propose only data analysis tasks may assume that at least one data set from a production instrument, such as an EM61, will be available, and that at least one data set from an advanced instrument, such as MetalMapper, TEMTADS, BUD or their equivalent, will also be available for each site. Include any assumptions that have been made for costing purposes. Proposals for only site preparation tasks will be considered nonresponsive.

- Include a description of the data analyses that will be conducted to determine whether the success criteria for the performance objectives have been met.

e) Technical Risks: Identify potential issues of concern and technical risks in taking the technology from the research phase to the proposed scale of the demonstration. Identify any assumptions that have been made that, if not realized, could impact the successful implementation of the project. Discuss how risks will be managed. If the demonstration is not at full scale, discuss any scale-up issues that will remain at the conclusion of a successful demonstration.

f) Related Efforts: Provide information on any relationship to other similar projects. Identify funding sources for these efforts.

5. Schedule of Milestones: Provide a project schedule with expected milestones and deliverables for the duration of the project in the form of a Gantt chart. Ensure that all required ESTCP deliverables are included in the Gantt chart. Reporting requirements are found in Section 7.

- Assume a start date of April 1, 2011 for the data collection work at the former Camp Beale and June 1, 2011 at Pole Mountain. Assume that demonstrations 3 and 4 will take place on approximately the same schedule in 2012.

- Estimate the time required for the demonstration. Include the planned initiation and completion dates for critical events, including but not limited to equipment deployment, fieldwork, data analysis, and other key activities as appropriate.

- Include expected submission dates to the ESTCP Office for the first draft and completed final document for Demonstration Plans, Decision Memoranda, Final Reports, and Cost and Performance Reports. Separate first draft and final submission dates by two months if possible to allow time for ESTCP review.
6. **Technology Transition:** Describe the method by which the technology will be transitioned to end user(s) or commercialized. Discuss opportunities for successful technologies to be deployed on future production munitions response projects. Describe how the demonstration will provide data that will foster the use of the technology on production munitions response actions. Specify how technology transfer methods will differ to reach appropriate audiences (i.e., regulators, contractors, DoD project managers). Describe any proposed guidance documents that will assist in future implementation (i.e., guidance, design, and/or protocol documents).

7. **Government Furnished Equipment and Geophysical Data:** A MetalMapper system will be made available to data collectors as Government Furnished Equipment. Proposers exercising this option should discuss their experience or training requirements to collect high quality data with this system. Geophysical data from all data collection systems deployed to each site will be made available to all processing teams as desired.

8. **Disposition of Equipment:** ESTCP does not anticipate that the work solicited will require the purchase of any major equipment. If a proposal requires such a purchase, the equipment should be itemized and the costs justified. Indicate plans for disposition of major equipment to be purchased by the government. At the conclusion of a contract, the options for equipment disposition are that the contractor purchase the equipment from the government, that the equipment be transferred to another government contract, or that the equipment be returned to the government.

9. **Performers:** List the name and organization of the lead person(s) for each organization involved in the proposed demonstration and their expected contributions. In the appendix, provide a one-page curriculum vitae for each of the key performers.

10. **Acronym List:** Include a list defining all acronyms used in the proposal.

### 3.3 COST SECTION

The cost section of the proposal is an estimate of the total project cost. The required cost section template is available at [www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations/Munitions-Response-Special-Solicitation](http://www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations/Munitions-Response-Special-Solicitation). Cost sections in formats other than this template will not be accepted. The cost sheet for the lead organization should reflect the entire project costs. Separate cost sheets are required for each co-performer or sub-contractor whose costs exceed $50,000. **Cost information must be rounded to the nearest dollar.**

Projects funded under this solicitation will be funded in a single increment covering all actives at all demonstration sites. Funds required should be broken out by demonstration site. If demonstrations at more than one site are proposed, separate cost sheets should be provided for each site. For planning purposes, proposers should assume a project initiation date of March 1, 2011.

1. **Labor Costs:** Show the projected labor rates in units of hourly rate or annual salary to be charged by the PI(s), associates, and assistants. Key individuals should be listed by name. Indicate in the footnote to the cost table the units you are using. In the units column, indicate the number of hours or the fraction of annual salary to be charged. The total column is the amount per year to be paid to each performer on the project. Labor costs should be unburdened.
2. **Indirect Charge #1:** Indicate burden or fringe rate applied to salaries and the total cost per year. Provide an explanation in the table footnote of what is included in this indirect charge.

3. **Indirect Charge #2:** Indicate other relevant indirect charges such as G&A. Provide an explanation in the table footnote of what is included in this indirect charge and to which cost elements it is applied.

4. **Major Equipment:** Provide an itemized list of permanent equipment to be acquired in support of the project, showing the cost for each item. Permanent equipment is any article of non-expendable tangible property having a useful life of more than two years and an acquisition cost of $5000 or more per unit.

5. **Materials, Supplies and Consumables:** Provide a general description and total estimated cost of expendable equipment and supplies.

6. **Subcontracts and Government Partners:** For any co-performer or subcontract totaling $50,000 or more, provide a breakout of the tasks and associated costs in a separate cost estimate using the sample cost spreadsheet at www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations/Munitions-Response-Special-Solicitation. Government partners will be provided a separate allocation of funds directly based upon this separate estimate. The cost sheet for the lead organization should include all costs for sub-contractors and co-performers.

7. **Travel Costs:** Estimate total travel costs. List the number of trips, their destinations, and purposes for all proposed travel. For planning purposes, ESTCP sponsors an annual symposium in or near Washington, D.C. and conducts an annual in-progress review of management and technical status of each project in Arlington, VA. Investigators are expected to attend the symposium annually for the duration of the project. Projects funded under this solicitation will present their first in-progress review in October/November 2011, with additional annual reviews in October/November 2012. One demonstrator planning meeting for each site will be held at a location near the site.

8. **Publication and Report Costs:** Estimate the costs of publishing and reporting results, including the direct charges for clerical preparation, page or illustration charges, and distribution. The ESTCP reporting requirements are found in Section 7.

9. **Fixed Fee:** Eligible organizations shall list the fixed fee, if any, applied to the demonstration project. Indicate in the footnote to the table the cost elements included in the basis for the fixed fee.

10. **Cost by Task Summary Table:** A cost matrix with breakout of cost per task must be included. One should be provided for each site proposed. The second Tab the template found at www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations/Munitions-Response-Special-Solicitation provides a template for the Cost by Task table. The Cost by Task summary table must use the cost elements listed in the template. Additional rows may be added as needed to cost each proposed data collection and each proposed data set to be analyzed separately.
3.4 APPENDICES

*Required:* Abbreviated Curricula Vitae (*1 page each*) are required for all key technical personnel at the lead organization and the lead individual for all co-performers or subcontractors.

*Required, if literature is cited:* Provide literature citations for any material cited in the technical section or the supporting technical data.

*Optional:* Supporting technical data (*limited to 5 pages*) may include data sheets, charts, and excerpts from referenced research.
4. EVALUATION FACTORS FOR PROPOSALS

The following evaluation factors will be the sole basis for reviewing proposals submitted in response to this BAA. Relevance and technology maturity are pass/fail criteria: proposals not passing these gates will not be further evaluated. Among the evaluation factors, Technical Merit is most important, followed by Transition Potential, and Cost.

Based on evaluation of the written proposal, each proposal submitter will be notified as to whether the Government wishes to enter into negotiation for the award of a contract. Offerors are advised that only the Contracting Officer is legally authorized to commit the Government. ESTCP reserves the right to select for award any, all, or none of the proposals received. ESTCP also reserves the right to select a portion of the work proposed in any single proposal for award. There is no commitment by ESTCP to make any contract awards, nor to be responsible for any money expended by the offeror before contract award is made.

ESTCP Relevance
An assessment will be made whether the submission responds to the DoD environmental requirement as described in Section 2.

Technical Maturity
An assessment will be made of the appropriateness of the proposed technology for demonstration and validation. Proposed technologies should have completed required proof-of-concept work and have evidence of the technology's capabilities. Technologies should be mature enough that within three months of project initiation any required shakedown testing will be completed and a field-ready system can be deployed for testing. This will generally require testing that has been verified by a neutral third party, either at the Standardized UXO Test Sites or other sites that have supported such testing. Minor variations in practice using standard commercially available instruments or approaches currently deployed at DoD sites will be considered too mature. ESTCP will not consider project submissions that fall in the categories of basic research (scientific foundation) or exploratory development (bench-scale applied research).

Technical Merit
An assessment of the technical merit of the proposal will be made. Factors to be considered include: (a) the methodology is scientifically sound, transparent and its principles well-documented; (b) the technology is innovative and is the current state-of-the-art; (c) the technical risks are well characterized; and (d) the technical team is qualified to execute the proposed project.

Transition Potential
An assessment as to the potential for a successful transfer of the technology for use by the DoD will be made. Successful transition can be defined as the demonstration of cost and performance of innovative advanced sensors and processing or the demonstration of emerging methods under production conditions. Factors to be considered include: (a) the offeror demonstrates an understanding of the roles of the DoD project manager, contractor and regulator in the munitions response process; and (b) there are clearly identified activities that will support and enhance the transfer of the technology to all of these parties.
Cost of Proposal
An assessment as to the reasonableness of the proposed cost will be made. Costs should be appropriate and traceable to the level of effort required to execute the project.
5. SUBMITTAL INSTRUCTIONS

The solicitation is managed by the ESTCP Office along with the U.S. Army Corps of Engineers’ Humphreys Engineer Center Support Activity (HECSA) at Fort Belvoir, Virginia. For contractual information, contact Ms. Susan Hill at HECSA, via telephone, 703-428-6420, or by email at Susan.M.Hill@usace.army.mil. Procedural questions may be referred to the ESTCP Office, at 703-696-2127. For technical information, contact the individual listed at the end of the Section 2.

Your proposal will be considered officially submitted upon the on-line submission of a PDF of your complete proposal package via WebPTS. No hard copies are required. Proposals must be submitted prior to 4:00 PM Eastern Time on November 8, 2010.

**NEW** ALL Proposals are now submitted through WebPTS. Once your proposal has been finalized, create a single PDF that contains all required sections. Make sure to insert the signed and scanned cover page as the first page in the PDF. You are now ready to upload your proposal.

Log in to SEMS at https://sems.serdp-estcp.org and go to the WebPTS Tab. Go to “My Cover Pages” in the left navigation column. Your active cover page(s) will be listed. Select “Upload Proposal” for the appropriate cover page and your information will appear. Follow the on-screen instructions.

Once your proposal has been uploaded you will receive an on-line confirmation message. NOTE: You may continue to modify your cover page and upload revisions to your proposal until the due date. Should you need to re-upload a proposal or revise your cover page, select “Edit” and follow the instructions. Make sure any changes to the cover page are made first. Prior versions of your proposal will be over-written and only the last version uploaded will remain in the system.

If you require assistance with WebPTS, contact Amy Kelly at Amy.Kelly.ctr@osd.mil or by telephone at 910-579-8052, or the ESTCP Office at 703-696-2127.
6. REQUIREMENTS FOR PROPOSALS SELECTED FOR FUNDING

Please be aware of the following requirements for proposals that are selected for funding. These requirements are considered part of the proposal process and the associated costs are to be borne by the proposer.

6.1 REVISED PROPOSAL

Proposals selected for funding may require revision following the selection process and prior to contract award. Common revisions include adjustments to schedule, task structure, funding profile, or specification of required deliverables.

6.2 PROJECT PLAN

A simple project plan, to be submitted via an online reporting system, will be required prior to project initiation. This plan will reflect the tasks and milestones in the final proposal.

6.3 SUBCONTRACTING PLAN

If your proposal is selected for funding, you may be required to submit a Subcontracting Plan if the criteria below apply to your proposal. In accordance with the Federal Acquisition Regulation (FAR) Subpart 19.7, all businesses, other than small business concerns are required to submit a subcontracting plan for contract proposals that exceed $650,000. The subcontracting plan should reflect realistic, challenging, achievable positive percentage and dollars goals for subcontracting with Small Business concerns. The subcontracting plan must address a goal for each of the statutory required elements: Small Business, Small Disadvantaged Business, Woman-Owned Small Business, Service-Disabled Veteran-Owned Small Business, Veteran-Owned Small Business and Historically Underutilized Business Zones. The Subcontracting plan must be reviewed, negotiated and accepted by the Contracting Officer and Deputy of Small Business/Small Business Administration prior to contract award. The HECSA Small Business Office web site at www.hecsa.usace.army.mil provides information on how to prepare a subcontracting plan, along with links to find small businesses to participate. For guidance on creating an acceptable subcontracting plan or for information on locating small business concerns, contact Ms. Kimberli Gray at kimberli.r.gray@usace.army.mil or 703-428-7385.

6.4 ACCOUNTING AND AUDIT REQUIREMENTS

ESTCP projects are generally awarded as cost-type contracts. To be eligible for such an award, a contractor must have an approved accounting system and an accepted up-to-date government audit. Details on these requirements can be found at the websites for Defense Contract Audit Agency (www.dcaa.mil) and Defense Contract Management Agency (www.dcma.mil). Contractors selected for award who do not meet these requirements should inform their program manager immediately, as the process for approval can be time consuming. In some cases, if the requirements for a cost-type contract cannot be fulfilled, successful offerors will be given the opportunity to enter into a firm-fixed price contract.
7. REPORTING REQUIREMENTS FOR SELECTED PROPOSALS

7.1 OVERVIEW

All ESTCP-funded projects are required to submit the following Management and Technical reports.

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Submission Requirements/Due Date</th>
<th>Description/Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact Sheet (FS)</td>
<td>Prepared by ESTCP staff based on the proposal abstract. Reviewed by PI in the ESTCP Reporting module of SEMS at the beginning of the project.</td>
<td>FS is posted on the ESTCP website and provides a means for interested parties to find project and contact information. Includes: Objective, Technology Description, and Benefits. FS is updated by ESTCP at the completion of the project.</td>
</tr>
<tr>
<td>Execution Plan (EP)</td>
<td>Entered by PI into the ESTCP Reporting module of SEMS. Due upon request from the ESTCP Office.</td>
<td>EP provides project’s financial plan. Includes: Expenditure Plan and Funding Distribution by Performer.</td>
</tr>
<tr>
<td>Monthly Financial Report (MFR)</td>
<td>Entered by PI into the ESTCP Reporting module of SEMS by the 15th of every month.</td>
<td>MFR provides monthly, incremental financial expenditure data.</td>
</tr>
<tr>
<td>Quarterly Progress Report (QPR)</td>
<td>Entered by PI into the ESTCP Reporting module of SEMS quarterly: 15 January, 15 April, 15 July, and 15 October.</td>
<td>QPR is used to track technical progress, including milestone completion dates, updates of progress in the past quarter, and concerns. Includes: Milestones, Add Progress Past Quarter, and Add Concerns.</td>
</tr>
</tbody>
</table>

Technical Reports – Go to: [www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources](http://www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources) for guidance on the reports listed below.

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Description/Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstration Plan</td>
<td>PI provides an electronic copy 2 months prior to initiating field work. The Demonstration Plan states what the demonstration will attempt to prove, the metrics for success, and the measurements made to confirm success.</td>
</tr>
<tr>
<td>Decision Memorandum</td>
<td>PI provides an electronic copy after receiving training data and before work begins on analysis of blind test data. The Decision Memorandum specifies the criteria used to make decisions in all steps of the classification process.</td>
</tr>
<tr>
<td>Demonstration Report</td>
<td>PI provides an electronic copy upon completion of each demonstration. Projects with multiple demonstration sites with unique characteristics will be required to submit a separate demonstration report for each site.</td>
</tr>
<tr>
<td>Cost and Performance Report</td>
<td>PI provides an electronic copy at the end of the project. A first draft should accompany the final version of the final report. The Cost and Performance Report is a 15 to 30 page executive summary of the ESTCP project’s activities, results, and conclusions.</td>
</tr>
</tbody>
</table>

Notes:* SEMS is the SERDP and ESTCP Management System and can be accessed at [https://sems.serdp-estcp.org](https://sems.serdp-estcp.org). Questions about the system should be directed to the designated Program Area PMA.
7.2 MANAGEMENT REPORTS

This section includes specific definitions of each report as well as report preparation and submission guidelines. The SERDP and ESTCP Management System (SEMS) is used for all project management reporting needs. ESTCP Principal Investigators (PIs) have access to the ESTCP Reporting module in SEMS for this purpose.

Regardless of whether the project has a federal or non-federal lead, the technical lead organization is responsible for gathering the information from all participating performers, compiling it, and submitting it via the ESTCP Reporting module of SEMS.

1. Fact Sheet

Requirements: Fact Sheet information is used for a variety of purposes, such as the In-Progress Review (IPR) Summaries, conference materials, and for posting on the SERDP and ESTCP web site.

Preparation Guidelines: The Fact Sheet text is extracted from the abstract of the approved proposal and entered by the ESTCP PMA into SEMS at the beginning of the project.

Project Fact Sheet: Click the “Fact Sheet” link in SEMS and review and, if needed, revise the following information:

- Objective. A brief description of the project objectives, related to the environmental problem that the proposed technology will address, emphasizing the relevancy and importance of this problem to the DoD.

- Technology Description. A succinct description of the project’s proposed technology. Summarize what the project will accomplish and how the results will be applied to the problem. Provide a succinct summary of the innovative aspects involved in the technical approach.

- Expected Benefits. A summary of the innovative technology’s anticipated cost and performance benefits to the DoD as compared to existing technology.

2. Execution Plan

Requirements: An Annual Execution Plan (EP) is required for each fiscal year (FY) in which a project receives funding. Complete the first EP within 30 days of contract award for non-federal performers or receipt of funds for federal performers. Subsequent EPs are normally due in the September/November period. Each annual EP must be reviewed and approved by the ESTCP PM before next-year funds are released.
**Preparation Guidelines:** The PI is required to enter EP data for each year of funding. Click the “Annual Execution Plan Data” link and provide information for the following fields:

- **Funding Distribution by Performer.** To promote rapid disbursal and receipt of project funds, ESTCP distinguishes between two categories of performers — Directly Funded Performer (DFP) and Second Tier Performer. A DFP is an organization that receives funds directly from ESTCP. This information will be entered by ESTCP staff. A Second Tier Performer receives its funds from a DFP. “In-House” funds are those retained and expended within the organization. “Sub-out” funds are those that a DFP forwards onto another performer. The funds assigned to all DFPs must add up to the total project allocation for the funding year; the amounts allocated to a DFP’s Second Tier Performers must be included in that DFP total. If a Second Tier Performer has yet to be determined, include the funding for that performer in the total for the DFP who will issue the contract and designate the Second Tier Performer as “To Be Determined”. ESTCP does not require you to track 3rd Tier Performers in SEMS.

- **Expenditure Plan.** The initial monthly expenditure plan should begin in the month of contract award or receipt of funds and should span the period in which funds will be expended, normally twelve months. Subsequent annual EPs should normally begin February 1 for continuing projects. If a project will be executing prior-year funds beyond February 1, the next year EP should begin when it is expected that these funds will be fully expended and continue until the following February 1. Enter the planned monthly expenditures incrementally, not cumulatively. The monthly expenditure plan should reflect total anticipated expenditures for work planned each month for all performers, not just the lead organization. (See the MFR guidance below for the definition of “expended” for the purposes of all SEMS reports.)

Inform your program area Program Manager Assistant (PMA) via e-mail upon completion of the EP, so that it can be reviewed and approved.


**Requirements:** MFRs provide the project’s current financial expenditure information for the FY of interest. MFRs are required monthly and are due the 15th of the month following the month of interest (e.g., February 15 for January information). For all projects, submission of MFRs commences after the receipt of funding. Once MFR submission is initiated, MFR entries are required until all ESTCP funds for a specific FY are expended and/or the ESTCP project is completed (i.e., the Cost and Performance and Final Reports are submitted and approved).

**Note:** It is possible that a project will be spending funds from multiple FYs concurrently. MFRs are required to report the financial status for funds from all active FYs.

**Preparation Guidelines:** Click “Monthly Financial Data” in the ESTCP Reporting module of SEMS to access and the MFR. For every year of funding, the planned monthly financial expenditures are extracted from the approved EP. Enter the funds actually
expended in the MFR. The MFR should report a single funding amount that is the sum of expenditures of all performers on the project.

For the purposes of SEMS reports, funds are considered **Expended** when some increment of work has been completed during the month and has been or will be billed to the project. If your invoicing system provides an accurate reflection of expenditures on a timely basis, this may be used as input to your MFR. If not, the MFR should be your best estimate of the amount that will be invoiced to support the work done in that month, including the work done by co-performers and sub-contractors. If actual invoiced values are not available, you should not wait for invoices to be submitted, but should make your best estimate of expenditures. Adjustments to these estimates may be accounted for in the report for the following month. **This is a management tool and not a formal auditable accounting system** and, as such, expenditures for the MFR should not be confused with invoices.

4. **Quarterly Progress Report (QPR)**

**Requirements**: The QPR documents a project’s quarterly progress and allows the PI to convey any significant technical concerns that may affect future progress. **Quarterly Progress Data** is due by the 15th day of the month following the end of the fiscal quarter (1st Qtr - January 15, 2nd Qtr - April 15, 3rd Qtr - July 15, 4th Qtr - October 15). **QPRs are required until the project is completed, that is, all Technical Reports are submitted and accepted.**

**Preparation Guidelines**: ESTCP requires technical progress updates at least on a quarterly basis, but data can be entered at anytime. Click on the ‘Quarterly Progress Data’ link in the left sidebar and update the following sections as appropriate:

- **Update Project Milestones and Report Dates.** Add completion dates where appropriate. To make changes to any Milestone dates, please contact the appropriate PMA.

- **Add Progress Past Quarter.** Before adding text to this section, make sure the correct quarter is selected on the quarter pick list. This section should constitute several substantial paragraphs that summarize work done on key tasks. Limit the entry to significant technical accomplishments related to the project for the reporting period. The reporting system does not accommodate tables or graphics.

- **Add Concerns.** Briefly describe any concerns that may affect technical or financial progress of the project.

- **Publications.** Please enter the citation for Peer Review Journal articles, Conference Proceedings, Patent/Award information, or Technical Reports. Any publication resulting from your ESTCP work should include this acknowledgment: “This research was supported wholly (or in part) by the U.S. Department of Defense, through the Environmental Security Technology Certification Program (ESTCP).”
TECHNICAL REPORTS

Each ESTCP project is expected to produce sufficient technical documentation to make the project’s scientific process and findings available to the appropriate scientific and operational communities in a complete and timely manner. This documentation includes Demonstration Plans, Final Reports, and Cost and Performance Reports. Technical reports shall not contain annual or total funding information.

The PI has the responsibility to prepare the Demonstration Plan, Final Report, and Cost and Performance Report, as they are project deliverables. The PI also has the responsibility to obtain the necessary organizational approvals, if need be, before submitting these reports to ESTCP.

1. Technical Reports

(a) Demonstration Plan

Requirements: The demonstration plan should state what the demonstration will attempt to prove, what are the metrics for success, and what measurements will be made to confirm success or otherwise. It should ensure that pertinent, reliable data are collected. Demonstrators should submit a draft plan at two months prior to a planned demonstration if possible to allow for review, comment, and revisions to be completed before work begins.

Preparation Guidelines: The demonstration plan should be prepared and submitted by the PI consistent with the ESTCP guidance located at www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources. Standardized reporting and operating procedures are critical to increasing the utility of the data collected, ensuring credibility, and enhancing the organization, management, and retrieval of information. ESTCP will conduct a review of the draft Demonstration Plan to ensure that metrics, methods and analyses support the demonstration objectives and are specified in sufficient detail to conduct a successful demonstration. Please allow two months between the draft and final versions to accommodate review and revision.

(b) Decision Memorandum

Requirements: After training their algorithms with the training data provided, each classification demonstrator will submit a training memo report to the Program Office. This report will detail the criteria used to decide whether anomalies are analyzable, detail the criteria used to decide if an anomaly overlaps with another anomaly to the extent that it is not able to be individually analyzed, discuss the parameters used for classification and specify the values of all adjustable parameters that will used in the final classification process.

Preparation Guidelines: The decision memorandum should be prepared and submitted by the PI and cover the topics above as well as address any ESTCP review comments on the demonstration plan. ESTCP will conduct a review of the draft Demonstration Plan to ensure that metrics, methods and analyses support the demonstration objectives and are
specified in sufficient detail to conduct a successful demonstration. Please allow two months between the draft and final versions to accommodate review and revision.

(c) Demonstration Report

Requirements: The Demonstration Report is a comprehensive technical report documenting the activities, results, and conclusions for demonstrating a technology at an individual site. For projects with multiple demonstrations, one Demonstration Report will be required for each site.

Preparation Guidelines: The Demonstration Report should be prepared and submitted by the PI upon completion of the demonstration at an individual site using relevant sections of the Final Technical Report guidance found at www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources. The ESTCP Office will conduct a review of the draft Demonstration Report in order to ensure the scope of the demonstration is described accurately and in sufficient detail. Please allow two months between the draft and final versions to accommodate review and revision.

(d) Cost and Performance Report

Requirements: The Cost and Performance Report is a 15 to 30 page executive summary of the ESTCP project’s activities, results, and conclusions.

Preparation Guidelines: The Cost and Performance Report should be prepared and submitted by the PI upon completion of the project using guidance located at www.serdp-estcp.org/Investigator-Resources/ESTCP-Resources.
### LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAA</td>
<td>Broad Agency Announcement</td>
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<tr>
<td>BUD</td>
<td>Berkeley UXO Discriminator</td>
</tr>
<tr>
<td>DFP</td>
<td>Directly Funded Performer</td>
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<td>DoD</td>
<td>Department of Defense</td>
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<tr>
<td>EMI</td>
<td>Electromagnetic Induction</td>
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<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>EP</td>
<td>Execution Plan</td>
</tr>
<tr>
<td>ESTCP</td>
<td>Environmental Security Technology Certification Program</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Acquisition Regulation</td>
</tr>
<tr>
<td>FS</td>
<td>Fact Sheet</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>General and Administrative</td>
</tr>
<tr>
<td>HECSA</td>
<td>Humphries Engineering Center Support Activity</td>
</tr>
<tr>
<td>IPR</td>
<td>In-Progress Review</td>
</tr>
<tr>
<td>MFR</td>
<td>Monthly Financial Report</td>
</tr>
<tr>
<td>MMRP</td>
<td>Military Munitions Response Program</td>
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<tr>
<td>MR</td>
<td>Munitions Response</td>
</tr>
<tr>
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<td>Principal Investigator</td>
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<td>Program Manager Assistant</td>
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<tr>
<td>POC</td>
<td>Point of Contact</td>
</tr>
<tr>
<td>PP</td>
<td>Project Plan</td>
</tr>
<tr>
<td>PR</td>
<td>Press Release</td>
</tr>
<tr>
<td>QPR</td>
<td>Quarterly Progress Report</td>
</tr>
<tr>
<td>SEMS</td>
<td>SERDP and ESTCP Management System</td>
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<tr>
<td>SERDP</td>
<td>Strategic Environmental Research and Development Program</td>
</tr>
<tr>
<td>TEMTADS</td>
<td>Time-Domain Electromagnetic Multisensor Towed Array Discrimination System</td>
</tr>
<tr>
<td>UXO</td>
<td>Unexploded Ordnance</td>
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<tr>
<td>WebPTS</td>
<td>Web Proposal Tracking System</td>
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</table>