

Performance Work Statement

SCIENTIFIC, ENGINEERING, RESPONSE & ANALYTICAL SERVICES CONTRACT (SERAS)

I. INTRODUCTION

A. BACKGROUND

The U.S EPA's Environmental Response Team provides scientific and engineering services in support of the Office of Solid Waste and Emergency Response (OSWER), EPA Regional On-Scene Coordinators (OSCs), Remedial Project Managers (RPMs), and other Agency groups. Technical support shall include on site work at Edison, NJ; Research Triangle Park, NC and Las Vegas, NV; as well as site specific work throughout the United States of America, and at various international sites as specified by the individual work assignments.

The Scientific, Engineering, Response & Analytical Services Contract (SERAS) supports the U.S. EPA's Environmental Response Team (ERT) East, located in Edison, NJ, the Environmental Response Team West, in Las Vegas, NV and small satellite offices located in Cincinnati, OH, Erlanger, KY, and Research Triangle Park, NC. The SERAS contract utilizes government-owned equipment and facilities in Edison, Las Vegas and Research Triangle Park to provide technical support to the ERT in conducting Agency missions under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), Oil Pollution Act (OPA), Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), Clean Water Act (CWA), Clean Air Act (CAA), National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Presidential Decision Directives (PDD) 39, 62, and 63, as well as the National Response Framework (NRF), Robert T. Stafford Natural Disaster Act and other legislative acts.

B. PURPOSE

The contractor shall provide technical, analytical, and management support to ERT in its development and oversight of clean-up activities and evaluation of specific sites. The technical and analytical support being provided will support the development and implementation of clean-up activities at other sites. The contractor shall be tasked, in cases of national incidents, to provide 24-hour response and support capability. A response team is usually activated within 24 hours to the designated location to provide technical support, ranging from taking samples, providing expert advice, and providing technical assistance to the ERT team. The team usually brings specialized skills to the incident, such as a dive team or air monitoring through the Trace Atmospheric Gas Analyzer (TAGA) vehicle. The team averages 1-2 emergency activations a month, the remainder of the time is spent in the field supporting Superfund staff responding or cleaning-up sites. The 24-hour response capability may be for national and international releases of oil and hazardous materials and

uncontrolled hazardous waste sites. The contractor shall also provide technical support in cases of deliberate release of weapons of mass destruction by terrorist activities at all types of locations and special events throughout United States (i.e., National Conventions, National Sporting Events).

Technical services shall be provided in the following areas:

- analytical and laboratory support
- biological/ecological studies
- engineering/remediation studies (treatability/feasibility investigations, technology evaluations, process reviews, and plant inspections)
- multimedia studies (geological investigations, soil gas surveys, risk assessments, field analytical surveys)
- health and safety activities
- quality assurance programs
- incident preparation exercises and training
- management support for planning, preparing and responding to incidents, and
- other technical support services associated with the implementation of those listed above, including equipment maintenance and support.

The contractor may be required to perform any of these technical services during Agency related response, preparedness and prevention efforts. This may include but will not be limited to participation in predeployments for National Security Special Events (NSSE), drills, simulations, and exercises.

C. LOCATIONS

The base operations for this contract is located in Edison, New Jersey, with a smaller facility in Las Vegas, NV. Contractor operations may also take place at EPA locations in Cincinnati, OH; Erlanger, KY; and Research Triangle Park (RTP). It is anticipated that tasks for contract operations at the Las Vegas location will support emergency air response, Trace Atmospheric Gas Analyzer (TAGA) instrumentation, radiation response, equipment maintenance and calibration and hydrogeology. The functions at RTP will support the operation and maintenance of the transportable TAGA.

D. GENERAL REQUIREMENTS

The contractor is responsible for managing the following items in relation to this contract:

- For emergency responses, the contractor shall be required to provide emergency contacts 24 hours/day, 7 days/week for the rapid mobilization of the appropriate equipment and personnel.

- Contractors on-site at EPA facilities must comply with Homeland Security Presidential Directive 12 (HSPD-12). Attachment A to this Performance Work Statement provides the procedures which must be followed by contract personnel for compliance.
- The nature of the work to be performed under this contract is inherently hazardous. The contractor shall be responsible for the safety of its employees and subcontract employees on site. The contract personnel shall satisfy all applicable Occupational Safety and Health Administration (OSHA) requirements and EPA Health and Safety requirements (e.g., including but not limited to 29 CFR 1910.120/40 CFR 311/Emergency Responder Health and Safety Manual-OSWER Directive 9285.3-12) for field and other contract activities.
- The contractor will provide transportation for staff and materials to the response or support location. This may involve travel to remote locations and heavy loads. The field work and field response activities involved under the contract often require off-road travel to remote sites. Therefore, it is important that the contractor staff have access to vehicles that can reach the work sites. Vehicles used in the past include a dual rear wheeled four-wheel drive extra cab truck, with a trailer towing package, and with a gross vehicle weight rating (GVWR) of 15,000 to 20,000 pounds (truck net weight plus load to be carried); or a half ton or three-quarter ton, 4-wheel drive utility vehicle.

II. TASKS

A. OPERATIONS FUNCTION

The contractor shall provide technical support in general operations, biology, engineering/remediation, geology, and health physics as follows:

1. General Operations

- a. Operate and maintain government-furnished property in support of general operations. In addition, track/manage equipment on the EPA Emergency Response Equipment Management Tracking System.
- b. Perform state of the art multi-media sampling which includes preparation and shipment of samples.
- c. Prepare environmental assessments including review of available historical reference information, photographs, electronic information, news archives, etc.
- d. Provide statistical analysis in support of field projects, reports, and technical assessments.

- e. Provide technical drafting support in association with preparation of field site plans, related technical and engineering computer aided design drawings/mappings and geographical system compilation, utilizing EPA-approved standard software.
- f. Perform technical data management to support field activities, access technical information, and perform technical data management tasks.

2. Biology/Risk Evaluation

- a. Develop and/or implement technical options for conducting and evaluating state-of-the-art assessments of risk and/or impact to the environment relative to the ERT approved Data Quality Objectives as specified in work assignments.
- b. In accordance with ERT procedures and EPA guidance, investigate and develop options for the application of new or innovative techniques for assessing impacts and estimating qualitative and quantitative risks to human health and the environment.
- c. In accordance with ERT- approved criteria, evaluate sites and areas to be investigated based on terrestrial and aquatic habitats and delineations of specific areas of interest including wetlands.
- d. Conduct multimedia sampling for contaminant analyses, including tissue residue analyses, in support of the evaluation of bioavailability of contaminants and risk assessments.
- e. Conduct residue analysis on indicator species for use in food chain models related to either human health or ecological risk assessments.
- f. Develop technical options for conducting and evaluating state-of-the-art assessments of environmental fate and transport related to and including the bioavailability of contaminants.
- g. Provide state-of-the-art sampling and data interpretation of ecosystem health inclusive of terrestrial plant systems, soil ecosystems (macro invertebrates and micro organisms), soil microbial systems, and aquatic ecosystems.
- h. Implement the presentation of risk-related information in multiple formats including GIS based data presentation.
- i. Utilize EPA's Ecological Risk Assessment for Superfund: Process for Designing and Conducting Ecological Risk Assessments.

- j. Utilize the latest version of the Risk Assessment Guidance for Superfund, (RAGS) Volume 1- Human Health Manual (Part D, Standardized planning reporting, and review of Superfund risk assessment), in conducting the risk assessment.
- k. Collect appropriate field information and data, related to the measurement endpoints.
- l. Develop a site conceptual model as a first step in the human health and environmental risk assessments.
- m. Risk assessments shall address:
 - Hazard Identification
 - Dose Response Assessment
 - Preparation of Conceptual Exposure/Pathway Analysis
 - Characterization of Potential Receptors
 - Exposure Assessment
 - Risk Characterization
 - Identification of Limitations and Uncertainties
 - Final Site Conceptual Model
- n. Prepare and deliver technical papers and posters. Present technical papers approved by the contract-level Contracting Officer Representative (COR) related to site-related work assignments.

3. Engineering/Remediation

The contractor shall provide technical services in support of EPA's evaluation and selection of cleanup technologies or techniques for the Oil and Superfund removal and remedial actions as follows:

- a. Perform environmental assessments relating to treatment at hazardous waste sites, spills, and oil and hazardous waste emergencies. Assessments shall include the following areas: extent of chemical contamination, physical parameters of contaminated matrices, volume and/or mass contaminants, migration pathways, and topographical and meteorological characteristics of the site.
- b. Operate and maintain an Engineering Evaluation Unit (EEU) to conduct feasibility studies and comparative evaluations of technical alternatives for remedy selection.
- c. Conduct feasibility studies, engineering evaluations/cost analyses (EE/CAs) for site cleanup alternatives.

- d. Conduct process reviews to include equipment sizing, processing schemes, and cost estimates of selected treatment options.
- e. Provide field support in monitoring full-scale site cleanups, and re-vegetation with emphasis on the use of native plants. Design full-scale re-vegetation and restoration plans including bioengineered solutions for erosion, stream bank stabilization, and contaminants immobilization and degradation.
- f. Recommend a plan or design for conducting treatability studies for potential treatment technologies from the bench scale (laboratory phase) through field scale. The studies will be applicable to soil, groundwater, sediments, and in-situ systems. The treatment technologies to be reviewed include, but are not limited to:

- Soil Washing/Extraction
- Soil Flushing
- Immobilization
- Dewatering
- Soil Vapor Extraction
- Process Simulation
- Reverse Osmosis
- Phase Separation
- Phytoremediation
- UV Oxidation
- UV Ozonation
- Biological Treatment
- Other Innovative Technologies
- Chemical Dehalogenation
- Physical/Chemical Treatment
- Incineration/Pyrolysis
- Carbon Adsorption
- Thermal Desorption
- Wet Air Oxidation
- Volume Reduction by Size
- Separation
- Chemical oxidation
- Ion Exchange
- Bioengineered Site Restoration

- g. Determine performance efficiencies for treatment technologies in accordance with EPA Treatability Study Guidelines. This includes estimation of the environmental fate of contaminants and the final achievable concentrations in air, water, soil, and mixed media.
- h. Conduct engineering studies for containment, cleanup, and disposal actions during emergency response activities and at hazardous waste sites. Perform emergency response and maintain continuous emergency response capabilities.
- i. Recommend and review short- and long-term response plans related to emergency episodes, hazardous waste sites, and oil spills, which include procedures for containment and cleanup, decontamination of equipment and buildings, personnel safety, and monitoring.
- j. Conduct evaluations of oil and hazardous material process equipment and plants for efficiency, effectiveness, and prevention of catastrophic releases.

- k. Assess biological/chemical agent threats or the after effects of weapons of mass destruction due to terrorist activities. This will include specific cleanup methods and/or technologies for clean up.
- l. Conduct site assessment and cleanup evaluations after incidents of national significance (INS) in level A, B, C and D conditions.
- m. Prepare and deliver technical papers and posters. Present technical papers approved by the contract-level COR related to site-related work assignments.

4. Geology

The contractor shall provide technical support in the design and implementation of multi-media extent of contamination and risk assessment surveys. Surveys include rapid assessments on an emergency response basis and detailed chemical transport and fate studies at hazardous waste sites.

The ERT-approved representative sampling programs developed and implemented by EPA define the transport and fate of hazardous chemicals in surface waters, the vadose zone (including soil gas transport), and in complex groundwater systems.

The contractor shall perform field studies to identify the presence and movement of contaminants in soil, sediments, surface water, and groundwater. Technical services shall be provided in the following areas:

- a. Utilization of geologic data bases and aerial photography to evaluate current and previous operating conditions at hazardous waste sites.
- b. Design multi-media sampling plans for review and approval by the EPA.
- c. Design hydrogeological studies for review and approval by the EPA.
- d. Conduct multi-media sampling, including and hydrogeological studies.
- e. Conduct site mapping and surveying.
- f. Design new sampling, analytical, and risk assessment techniques for review and approval by the EPA.
- g. Conduct surface geophysical surveys.
- h. Conduct borehole geophysical surveys and downhole camera studies.
- i. Conduct X-Ray fluorescence surveys.

- j. Conduct soil gas surveys.
- k. Model chemical transport of contaminants in the vadose zone and saturated zones.
- l. Conduct groundwater flow modeling.
- m. Recommend site-specific cleanup criteria for review and approval by the EPA.
- n. Provide support for oil spill responses that are regulated under the Oil Pollution Act of 1990 (OPA). Support shall include the evaluation of appropriate recovery and treatment techniques as related to oil spill control.
- o. Utilize geostatistics, contouring packages, geophysical software, database software, spreadsheet software, and kriging techniques to perform data interpretation of hazardous waste site data.
- p. Conduct aquatic extent of contamination survey, utilizing sonar, magnetometer, or remotely operated vehicle (ROV). Conduct sediment sampling using certified divers.
- q. Prepare and deliver technical papers and posters. Present technical papers approved by the contract-level COR related to site-related work assignments.

5. Health Physics

- a. Provide radiological monitoring in support of field activities.
- b. Provide environmental sample collection for radiological analyses in support of field activities.
- c. Maintain continuous (24 hours/day, 7 days/week) capability for the rapid mobilization of the appropriate equipment and personnel to conduct real-time on-site air monitoring during chemical/radiological emergencies.

B. AIR RESPONSES

The contractor shall provide support as follows:

- a. Operate and maintain state-of-the-art instrumentation in a constant ready-state to mobilize to a site to analyze air samples collected at terrorist events, emergency responses, hazardous waste sites, and oil spills. The contractor shall perform the various analyses using EPA-approved methods (TO1, 2, 14, 14A, 15, 16, and 17), American Society of Testing and Materials (ASTM), OSHA, NIOSH and EPA/ERT TAGA Methods.

- b. For incidents of national significance and emergency responses, provide continuous (24 hour/day, 7 days/week) capability for rapid mobilization of the appropriate equipment and personnel to:
 - 1) Conduct on-site, multimedia, organic and inorganic chemical analyses.
 - 2) Conduct on-site air monitoring and multi-media sampling, including microbiological agents of concern.
 - 3) Conduct sampling operations under Level A, B, C, and D conditions.
- c. Conduct routine air monitoring/sampling at hazardous waste sites and oil spills.
- d. As part of the Site-Specific Quality Assurance Project Plans, submit for EPA approval, draft site-specific air sampling and analysis plans to include, when applicable, the use of the TAGA and other such mobile direct air sampling instruments, utilize ERT SOPs to perform air sampling plans, and submit final data reports on each site.
- e. Provide air dispersion and emission rate modeling in support of ERT assessments of air impacts of potential or ongoing chemical releases (emergency response modeling), baseline emissions from uncontrolled hazardous waste sites, air emissions associated with specific cleanup technologies, etc. The emergency response modeling capability shall be available on an on-call basis 24 hours/day, 7 days/week.
- f. Perform reviews of guidance documents as they relate to monitoring, sampling, analyses, and modeling of terrorist events, emergency responses, hazardous waste sites, oil spills, ambient air matrices, or indoor air matrices.
- g. Recommend options for evaluation and improvement of monitoring, sampling, analyses, and modeling methodologies for terrorist events, emergency responses, hazardous waste sites, oil spills, ambient air matrices, or indoor air matrices.
- h. Conduct contract-level COR-approved indoor air quality studies, which includes residential vapor intrusion studies.
- i. Provide Personal Air Monitoring and/or Air Sampling on site as per 29 CFR 1910 (i.e., 1910.120 and 1910.1000, etc.).
- j. Ensure that all information and analytical data are technically sound, statistically reliable and generated using EPA site-specific methods.

- k. Prepare and deliver technical papers and posters. Present technical papers approved by the contract-level COR related to site-related work assignments.

C. ANALYTICAL LABORATORY FUNCTION

The contractor shall provide technical support in the following areas:

- (1) Organic Analysis
- (2) Inorganic Analysis
- (3) Special Projects
- (4) Data management

Technical services in support of this requirement shall include:

- a. Operate and maintain calibration of state-of-the-art instrumentation in a 24-hour ready-mode to analyze the soil, water, drum waste, sediments, biological tissues and air samples collected from various hazardous waste sites and emergency chemical releases. The contractor shall perform the analyses using EPA approved methods (SW846, EPA 500 series, Contract Laboratory Program [CLP] and EPA/ERT) and National Institute of Safety and Health (NIOSH) methods, whenever said methods exist.
- b. Perform sample analyses of wastes, soil, air, biological tissues, and other media. Methodology shall include both ERT-approved standard and nonstandard analytical procedures.
- c. The contractor shall perform organic and inorganic analyses on samples of water, soil and air at uncontrolled hazardous waste sites or spills/releases of oil or hazardous substances.
- d. Operate and maintain the ERT contract central laboratory in Edison NJ, the ERT contract mobile laboratories, and field analytical capabilities. Extract and perform analyses of hazardous chemicals in matrices, such as soil, sludge, water, drum waste, biological tissue, and air samples on media (Tenax, charcoal, XAD, Puffs, and other absorbing media) using EPA- approved methods.
- e. For emergency responses, the contractor shall be required to maintain continuous (24 hours/day, 7 days/week) capability for the rapid mobilization of the appropriate equipment and personnel to:
 - 1) Conduct on-site, multi-media, organic and inorganic chemical analyses.

- 2) Conduct on-site air monitoring and multi-media sampling.
 - 3) Conduct sampling operations under Level A (total-encapsulating protective gear) conditions.
- f. Recommend options for evaluation and improvement of analytical and monitoring methodologies for use on multi-media hazardous wastes.
 - g. Dispose of chemical waste generated by the contract central laboratory, the USEPA Region II laboratory, and the contractor operations in Las Vegas, NV in accordance with the Code of Federal Regulations, Title 40, Part 262 (40 CFR 262) and the New Jersey Administrative Code, Title 7, Chapter 26, Sub-chapter 7.4 (NJAC 7:26-7.4).
 - h. Extract and perform analyses of dioxins/furans and other high-hazard chemicals in matrices such as soils, sludge, drum wastes, waters, biological tissues, and air sampling media using EPA approved methods (SW 846).
 - i. Ensure that all information and analytical data are technically sound, statistically reliable and generated using standard site specific methods approved by ERT.
 - j. Maintain National Environmental Laboratory Accreditation Council (NELAC) laboratory certification/s.
 - k. Post all the analytical data on the web using the Laboratory Information Management System (LIMS) as directed by the contract-level COR.
 - l. Prepare and deliver technical papers and posters. Present technical papers approved by the contract-level COR related to site-related work assignments.

D. TECHNICAL SERVICES FUNCTION

The contractor shall provide technical support in the following areas:

1. Technical Media & Support Services

- a. Prepare technical bulletins, reports, and presentation materials with information provided by the contract-level COR.
- b. Edit technical bulletins, technical reports and other technical documents (i.e., technical papers and site related deliverables) provided by the contract-level COR.

- c. Provide photo-documentation of field operations including multi-format location and studio photography, processing, and the production of prints, slides, copy negatives, and enlargements.
- d. Provide video documentation of field operations including multi-format location and studio videography, concept and story-board development, script preparation, editing, post-production work, and duplication of completed products.
- e. Perform technical data management to support field activities, access technical information, and perform technical data management tasks.

2. Environmental Response Center

The contractor shall maintain the Environmental Response Center (ERC) technical reference library in Edison NJ. This Response Center supports the ERT in dissemination of information to the response community including EPA, other federal agencies, state, local government, tribes and private organizations. To perform this function, the contractor shall:

- a. Collect, organize, and distribute technical material in the form of reports, photos, slides, videotapes, audiotapes, microfiche, and other data storage formats.
- b. Perform technical literature searches.
- c. Arrange and implement inter-library loans.
- d. Provide access to on-line public information resources (i.e., environmental data bases).
- e. Operate ERC multi-media presentation equipment. This includes slide projectors, video camera recorders, satellite downlinks and other media presentation.

E. SAFETY & QUALITY ASSURANCE FUNCTION

1. Health And Safety

The contractor shall provide health and safety technical support in the performance of work under this contract. The contractor shall, as a minimum, satisfy all Federal, state and local statutes, regulations, ordinances, etc., regarding health and safety. The contractor shall implement and manage a Health and Safety Plan in compliance with all requirements and guidance documents of the EPA and OSHA, 29 CFR 1910.120/121, for activities at hazardous waste sites. The health and safety technical support includes:

- a. Conduct health and safety risk assessment related to uncontrolled hazardous waste sites and emergency response episodes.
- b. Ensure that all activities meet EPA health and safety requirements as outlined in applicable regulations and guidance documents such as 29 CFR 1910.120, EPA Standard Operating Safety Guides, U.S. EPA 1440 Series for Occupational Health and Safety, OSWER Policy, OSWER Integrated H&S Practices: For Field Personnel, and ERT Standard Operating Procedures (SOPs).
- c. Provide necessary background information for ERT development of Occupational Health and Safety Standard Operating Procedures in accordance with 29 CFR 1910.120 response activities.
- d. Provide site-specific content review and recommendations for ERT projects related to terrorist events, emergency episodes, hazardous waste sites, and oil spills for site-specific health and safety plans, decontamination of equipment, personnel safety, and monitoring.
- e. Prepare technical papers and posters, and present technical papers approved by the contract-level COR related to site-related work assignments.
- f. Prepare and participate in technology transfer sessions.
- g. Recommend designs for review by the EPA, and conduct ERT-approved health and safety monitoring, evaluations, inspections, and plan development which are required under 29 CFR 1910.120 or other federal regulations that are applicable to the Oil Pollution Act.
- h. Provide all individual protective equipment for contract personnel required to conduct field activities at uncontrolled hazardous waste sites as outlined in the EPA Standard Operating Safety Guides Table 5.5 for levels A, B, C and D.

2. Quality Assurance/Quality Control

The contractor shall provide support to EPA to assist in implementation of the Agency quality system in a manner that is fully compliant with EPA Order 5360.1-A2, dated May 5, 2000, and any subsequent updates as well as other Agency policy and guidance related to quality assurance. Implementation of the Agency-wide quality system in ERT provides the necessary management and technical practices to assure that environmental data used to support Agency decisions are of adequate quality and usability for their intended purpose. The contractor shall provide support for quality-related areas such as peer review, information quality guidelines and the science inventory.

- a. Develop and maintain a quality assurance program for laboratory and field activities consistent with Agency requirements given in EPA QA/R-5.
- b. Recommend Standard Operating Procedures for contract laboratory and field activities in accordance with Agency QA program requirements given in EPA QA/R-5.
- c. Recommend technical options for review by the EPA for conducting and maintaining a laboratory performance evaluation (PE) sample program for this requirement and the Superfund program, including periodic updates of PE samples sources.

III. DELIVERABLES

All deliverables will be approved by the contract-level COR. The contractor shall use the EPA's SCRIBE environmental data management system to document all environmental sampling performed under the contract and deliver the resultant data files to ERT as a project deliverable. The SCRIBE system software and training will be provided by ERT. The contractor shall use the EPA ERT-IMS web resource provided by EPA as an information repository for all work assignment deliverables and related materials. Individual websites will be created by ERT for each work assignment. The contractor shall upload all project related deliverables and other relevant materials to these COR-specific websites. All reports shall be submitted in Adobe PDF format. Access to the EPA ERT-IMS web resource and training on use of this resource will be provided by ERT. The contractor shall deliver all analytical data to ERT via the EPA ERT-IMS web resource in an electronic form suitable for import into the SCRIBE environmental data management system. This requirement applies to analytical data produced by both in-house and contract laboratories. Technical requirements for importing data into the SCRIBE system will be provided by ERT.

In addition, all deliverables should be provided in electronic format in a form compatible with the agency's software platform. Standard or special formats may be identified as necessary in individual work assignments.