
STATEMENT OF CAPABILITIES

For

ENVIRONMENTAL ALTERNATIVES, INC.



Environmental Alternatives, Inc.

Environmental Alternatives, Inc.

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1.0 INTRODUCTION

Environmental Alternatives, Inc. is pleased to have this opportunity to present our capabilities and experience in nuclear decontamination, project management, site support, technical services and decontamination technology development for D&D of nuclear facilities. In concert with our clients, **EAI is committed to helping provide cost effective and technically sound solutions for nuclear decommissioning and environmental restoration projects.**

EAI is a Small Business that provides turnkey environmental restoration, decontamination and decommissioning (D&D), project management, and waste management services to federal clientele such as DOD, DOE, NNSA and DHS.

EAI was founded in 1989, and specializes in decontamination and remediation of radioactive and hazardous contaminants. Services include environmental investigation, site assessments, project planning, onsite technical support services, contaminant control, and development and deployment of cutting-edge decontamination technologies to achieve clean-up objectives and site restoration. EAI's services have supported decommissioning projects, property transfer, alternate use conversion, and final site closure activities. EAI maintains a corporate office in Keene, New Hampshire, and project offices at various locations around the country.

Our company has a 20 year history of successfully completed projects and fully implemented contracts with unbeatable technical abilities. **Our management/technical abilities and customer responsiveness will provide your organization with the environmental restoration services and attention to customer satisfaction our other clients have come to expect. Our senior managers, scientists, and technicians bring "big business" expertise, integrated with a focus on client responsiveness and satisfaction.** As a small business, EAI can perform a broad range of work under direct contract or can play the role of subcontractor when needed. The following capability statement briefly summarizes our capacity to execute a range of specialized services for the nuclear industry. EAI points of contact are as follows:

Table 1.1. EAI Points of Contact

Randy Martin, Vice President 640 Marlboro Street, Route 101 Keene, NH 03431 (603) 352.3888 [w]; (603) 352.3899 [f] rmartin@eai-inc.com	Christopher J. Norton, President 640 Marlboro Street, Route 101 Keene, NH 03431 (603) 352-3888 [w]; (603) 352-3899 [f] cnorton@eai-inc.com
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2.0 TECHNICAL AND MANAGEMENT CAPABILITIES

Our extraordinary corporate experience in the nuclear decontamination and technical support service arena is presented in the following text and illustrates EAI's competency and capacity to fully execute a majority of work assignments in these areas.

EAI personnel have successfully completed multiple projects related directly to the decontamination and deactivation of DOE and commercial nuclear sites. EAI is a **technology based, efficiently-managed, small business** with the following recent corporate experience:

- EAI is managed by technical professionals. EAI provides **cutting edge decontamination and environmental restoration services** for clients such as Rocky Flats (DOE), Los Alamos National Laboratory (DOE), U.S. Army Corps of Engineers, Maine Yankee Atomic Power Company, West Valley Nuclear Service Company, Shaw Environmental and Infrastructure, Inc.,

The Washington Group International, Bechtel Power Corporation, Fluor Hanford Company and CH2MHILL.

- **Innovative technologies**, such as the Rad Release and ND line of chemical extraction processes, save our clients significant time, money, and safety concerns. EAI recently completed a rapid response contract utilizing the first **Homeland Security** monies. The remedial technology employed **saved an estimated \$1,000,000** by performing chemical decontamination, extraction and removal of radioisotopes from a variety of components and building surfaces that improved efficiencies, minimized waste streams, reduced health risks, and expedited scheduled milestones.
- **EAI has managed well over \$30 Million in nuclear decontamination and environmental restoration projects.**
- Through current, long-term **decontamination and technical support** contracts using a variety of leading edge technologies, personnel manage, organize, and conduct decontamination, waste processing and volume reduction services for several federal agencies (i.e., DOE and DOD).
- EAI managers are experienced in all aspects of management and administration of large task order type contracts to ensure that the work is completed on time and within budget.
- Resources include **equipment and supplies** (e.g., decontamination / remediation equipment, trucks, trailers, containment structures, air supply systems, generators, HEPA ventilation systems, special remote handle tooling and robotics, etc.).

2.1 Service Quality

EAI's work quality is exemplified by projects being completed on time, within budget, and in accordance to regulatory provisions and work scope. Commendation letters testify to our ability to exceed client expectations. For example, EAI recently completed a **Large Scale Demonstration Deployment Program at the Los Alamos National Laboratory** in New Mexico. The project demonstrated our innovative remediation technology. Based upon the demonstration, the Shaw Group Program Manager, Mr. John McFee, wrote, *"Kevin Barbour has finished our demonstration of decontamination techniques and you're the clear winner". "The EAI chemical extraction technology was the only process capable of achieving the reuse standard by lowering contamination levels from greater than 1 million dpm/100 cm² to less than 50K dpm/100 cm² on all surfaces of the glove box."*

Additionally, this patented technology is **saving one federal agency approximately \$100M** by improving worker safety, accelerating cleanup schedules, limiting liability, and significantly lowering hazardous waste volumes.

2.2 EXPERIENCE AND PAST PERFORMANCE

Although EAI is a small business, we **provide large business capability with small business responsiveness**. We understand environmental restoration projects and procedures; we have performed directly related work; we have outstanding personnel with exceptional credentials and accreditations; and we are familiar with government expectations, procedures, and goals.

Providing high quality, cost effective environmental services to federal, state, and private clients is EAI's primary business focus. **Our personnel have been performing environmental/nuclear remediation work for more than 25 years**. EAI has successfully completed environmental projects under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act (TSCA).

2.3 RELEVANT PROJECT EXPERIENCE

For the decontamination and technical services typical to complex D&D projects, a detailed description of **select relevant contract /project experience** and associated achievements are presented in the following pages to outline our breadth and depth of directly related experience to the nuclear D&D market.

CLIENT	Fluor Hanford Company
CONTRACT No.	23150-3
PERFORMANCE PERIOD	5/27/04 – 9/30/06
CONTRACT TITLE	Decontamination Methods and Technical Support for Cleaning PFP Transuranic Contaminated Glove Boxes
Contract Scope	
<p>EAI supported Fluor Hanford Company at the Plutonium Finishing Plant in Richland, WA to provide our chemical extraction technology and fulltime onsite technical support for the decontamination of glove boxes and components used in past weapons production.</p> <p>The project goal was to decontaminate the components in the facility to reduce contamination levels from high level Transuranic down to low level SCO to eliminate the costly disposal of these waste streams at WIPP. The components were decontaminated and placed into the onsite ERDF disposal cell and helped the client achieve tremendous project cost reductions as well as acceleration of the project schedule. EAI's work scope included:</p> <ol style="list-style-type: none">1. Project management, procedures and work plan preparation.2. Full time on site technical representative to train union workers and oversee decontamination initiatives for plutonium contaminated glove boxes and process equipment.3. Project planning and development of remote deployment techniques for the 232-Z Scrubber cell.4. Chemical modeling and protocol development for a variety of substrates with varying isotope matrixes and contamination levels.5. Elimination of health and safety risks for size reduction activities using the new technology to achieve disposal criteria for Surface Contaminated Objects (SCO).6. Assistance in schedule acceleration and achieving quarterly earned value milestones.	

ENVIRONMENTAL ALTERNATIVES, INC	
CLIENT	Shaw Environmental & Infrastructure, Inc. Gulf Nuclear Decommissioning Project
CONTRACT NO.	198300 OP
PERIOD OF PERFORMANCE	6/12/02-4/14/03
CONTRACT TITLE	Decontaminate Am / Be and Cs glove boxes, components and rooms from greater than Class C (GTCC) waste to Class A waste for disposal.
CLIENT REPRESENTATIVE	Shaw Environmental & Infrastructure, Inc. 1430 Enclave Parkway. Houston, TX 77077
<p>CONTRACT SCOPE</p> <p>EAI was contracted by Shaw E&I under an Army Corps rapid response contract number DACA-A45-98-D-003, DS 21 to complete the decontamination and remediation of a former radioactive source-manufacturing complex that was abandoned by the former owner. The project was overseen by USACE, US EPA and state regulators. The project received a high priority under the Homeland Security Act to ensure that the radioactive materials were removed and disposed of properly to prevent the material from falling into unfriendly hands for use in building "Dirty Bombs". The equipment in the buildings (primarily of glove boxes), as well as, the building surfaces themselves were contaminated at levels that exceeded Class C. Since this was a commercially operated facility, there was no path to disposal for the greater than Class C waste. The project required that all equipment such as glove boxes, furnaces, encapsulators, air handling units, and duct work along with building surfaces be decontaminated from greater than Class C waste to low-level Class A waste so that it could be disposed of at Envirocare rather than being placed into long term monitored storage. The client estimates that the decontamination success contributed to over \$1 million in savings by avoiding long term monitored storage. The glove boxes in this facility were most comparable to the Analytical and Standards Lab style boxes. The dimensions of the boxes were generally 6'X4'X3' and constructed of both stainless steel and mild steel with leaded glass windows. In addition, there were numerous high-level radioactive sources that had been stored throughout the facility. These sources had to be located, characterized, retrieved and packaged for disposition under the National Source Recovery Program. The general scope of services under this project scope included the following:</p> <ul style="list-style-type: none"> ▪ Sampling and characterization of the buildings, glove boxes and components. ▪ Radioactive Source retrieval and packaging. ▪ Gross decontamination of equipment, rooms and components from greater than Class C to low-level Class A Waste. ▪ Post decontamination sampling and characterization to ensure that waste acceptance criteria had been achieved. ▪ Disconnect and remove equipment and components from the building. ▪ Package waste for shipment to disposal site. ▪ Decontamination of rooms and building surfaces to allow demolition of the facility to progress. ▪ Supply equipment and hardware such as portable HEPA ventilation systems, equipment removal tooling, mobile decontamination trailer based facility and other support equipment necessary to complete the work. ▪ Erection of containment barriers and furnish and install temporary HEPA ventilation systems with environmental monitoring systems to mitigate the spread of contamination. ▪ Preparation of work plans, procedures and schedules to support final site closure. ▪ Project Management, health and safety oversight and coordination of work activities with the client, USACE, EPA, state regulators and other contractors. 	

ENVIRONMENTAL ALTERNATIVES, INC.	
CLIENT	Kaiser-Hill Company, LLC Rocky Flats Environmental Technology Site
CONTRACT No.	KH 010180
PERIOD OF PERFORMANCE	11/01/01-12/10/03
CONTRACT TITLE	Decontamination and Technical Support 776/777 Cluster Project
CONTRACTING OFFICER	Ken Degenhart
CLIENT TECHNICAL REPRESENTATIVE	David Nichols
PROJECT SCOPE	
<p>EAI was contracted to Kaiser-Hill Company who is under contract with the US Department of Energy for the closure of the Rocky Flats site. EAI provided decontamination technologies and technical support using our new Chemical Extraction technology, to reduce high-level TRU waste to low-level for disposal. Prior to EAI's involvement, the only options for removal of the large object TRU contaminated equipment required an extensive labor effort to erect tents and size reduce the components for disposal at WIPP. EAI's process has allowed the large objects to be reclassified as low-level waste under the SCO criteria (less than 100 nano-curies/gram), packaged into cargo containers and disposed of at NTS rather than WIPP. As a result of the work that EAI performed, an Immediate Risk Reduction Action Plan (IRRAP) was issued by Jesse Roberson of DOE EM Headquarters recommending that EAI's technology be considered for use across the complex. The general scope of services included in this project scope include the following:</p> <ol style="list-style-type: none"> 1. Project management, procedures and work plan preparation. Provide on site technical representative to revise technical procedures, train union workers and oversee all decontamination initiatives for plutonium contaminated glove boxes and process equipment. Furnishing all chemical formulations and reagent chemistry along with the decontamination technology and decontamination tooling required to complete the work. Project planning and development of remote deployment techniques for the D&D of the Advanced Size Reduction Facility (ASRF). Assessment of decontamination requirements and analysis of results. Development of decontamination protocol for process equipment internal to the glove boxes to eliminate commodity removal requirements. Chemical modeling and protocol development for a variety of substrates with varying isotope matrixes and contamination levels. Elimination of health and safety risks for size reduction activities using the new technology to achieve disposal criteria for Surface Contaminated Objects (SCO). Assistance in schedule acceleration and achieving quarterly earned value milestones. <p>Glove box sizes varied from 4'X3'X3' up to 20'X12'X6'. Both wet chemistry and dry process glove boxes were decontaminated along with hoods, plenums, filter housings, chainveyors and the complete Advanced Size Reduction Facility which measured approximately 50'X40'X30'. In all, EAI decontaminated over 600 glove boxes, hundreds of linear feet of chainveyor and many of other components. The success rate was nearly 100%. The project was originally estimated to take 3 years to complete, but due to the speed and success rate of the process, was completed nearly one year ahead of schedule and resulted in a project savings of over \$100 Million dollars.</p>	

CLIENT	Fluor Hanford Company
CONTRACT No.	20373
PERFORMANCE PERIOD	7/31/03 – 4/29/05
CONTRACT TITLE	PFP 232-Z Incinerator Glove Box Decontamination and Technical Support
CONTRACTING OFFICER	Fluor Hanford Company P.O. Box 1000 Richland, WA 99352
BUYER'S TECHNICAL REPRESENTATIVE	Paul Sato
Contract Scope	
<p>EAI supported Fluor Hanford Company at the Plutonium Finishing Plant in Richland, WA to provide decontamination of the 232-Z incinerator facility three-station glove box and associated equipment. EAI used its chemical extraction process to complete the work.</p> <p>The project goal was to decontaminate the components in the facility to reduce contamination levels from transuranic levels down to low level SCO to eliminate the costly disposal of these waste streams at WIPP. The three station glove box and associated components were successfully decontaminated and removed from the building for direct disposal onsite. The components are being placed into the onsite ERDF disposal cell. The use of the chemical extraction process is expected to achieve tremendous project cost reductions as well as aid in meeting the project schedule outlined in the Tri-party agreement. EAI's work scope included:</p> <ol style="list-style-type: none"> 1. Project management, procedures and work plan preparation. 2. Full time on site technical representative to train workers and oversee decontamination initiatives for plutonium contaminated glove boxes and process equipment. 3. Project planning and development of remote deployment techniques for other parts of the 232-Z facility. 4. Chemical modeling and protocol development for a variety of substrates with varying isotope matrixes and contamination levels. 5. Elimination of health and safety risks for size reduction activities using the new technology to achieve disposal criteria for Surface Contaminated Objects (SCO). 	

CLIENT	Maine Yankee Atomic Power Company Maine Yankee Nuclear Plant D&D Project	
CONTRACT NUMBER	08196-C-040	
PERIOD OF PERFORMANCE	12/15/01 – 3/27/03	
CONTRACT TITLE	Building Decontamination and Remediation Services	
CONTRACTING OFFICER	Michael D. Evringham	
CLIENT REPRESENTATIVES	Terry Peacock Maine Yankee Plant 321 Old Ferry Road Wiscasset, Maine 04578	Steve Evans Maine Yankee Plant 321 Old Ferry Road Wiscasset, Maine 04578

CONTRACT SCOPE

Commencing in December 2001, EAI began decontamination and remediation of selected buildings at the Maine Yankee Nuclear Plant Decommissioning Project. The contract was awarded to support the decommissioning of the former nuclear power plant and closure of the site. It was determined that by taking advantage of derived concentration guideline levels (DCGL), various buildings could be decontaminated and below grade portions of the facilities could be left buried in place rather than completely removed and still meet the requirements of the License Termination Plan. The Maine Yankee Plant is licensed by the Nuclear Regulatory Commission requiring varied and diverse remedial actions for final closure, as well as requirements mandated by the Maine Department of Environmental Protection (Maine DEP). EAI's work elements under this contract entailed a broad scope of activities that is briefly outlined below.

- Assist senior management in strategic planning to identify and implement strategies, innovative technologies, and other techniques to **reduce project cost and accelerate project schedules**; and **identify schedule, or technical risks** to ensure successful building decontamination for final demolition and closure. EAI personnel worked with the client to implement strategies to eliminate, mitigate, or avoid the risks associated with complex decommissioning, and deactivation programs. Specifically, EAI's work entailed supporting targeted schedules and work activities for the ultimate purpose of preparing the Primary Auxiliary Building and Containment Spray Building for final survey and compliance with the DCGL protocol. Throughout the project, EAI personnel aided the client in identifying and implementing improvements, accurate tracking and forecasting of project metrics, identifying future project risks and assisted in the mitigation, elimination or avoidance of risks,
- Providing technical support services to support decontamination activities associated with the decommissioning project. Services include, but are not limited to, **planning, field data collection and documentation, project controls, waste management and packaging, project management and supervision, and Health and Safety**. Examples of specific work elements include analyses and feasibility studies for technology development and decommissioning and decontamination (D&D) program activities (e.g., decontamination optimization, dismantlement / demolition methodology, waste minimization techniques, waste collection and packaging, and strategy development); providing supervision, oversight, and technical guidance for implementing the decontamination and selective demolition methods used to complete the PAB and CSB portion of the project.
- Preparing and reviewing documents to support decontamination and selective demolition technology development and implementation, weekly and monthly status reports and progress tracking documentation; proposed action memorandum and data summary reports; and **field implementation plans** and standard operating procedures.

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- EAI maintained a strong focus on integrated safety management and employed full time onsite health and safety personnel to manage the health and safety program. All aspects of industrial and radiological safety were managed for EAI personnel and craft labor assigned to this portion of the work. In addition, monitoring programs were established to check for hazards such as silica dust, lead and radiological particulate.
 - EAI managed the collection and packaging of all waste generated during the decontamination of the 66,200 ft² portion of the facilities that were below grade.
 - EAI employed selective demolition techniques for removal of embedded steel, removal of trenches and sump pit liners in order to prepare the areas for final survey.
 - EAI's site management team integrated the local union work force for all craft labor disciplines required to complete the work. This included all decontamination activities, demolition work and scaffolding erection, as well as equipment operation.
 - Prior to the demolition and removal of the sump pit liners, decontamination of piping systems and removal of sludge from the sumps was required. Following the removal of the sludge, the sumps were decontaminated and the steel liners were pulled so that surveys could be performed on the concrete surfaces behind the liners.
 - In addition to the decontamination of the concrete surfaces within the structures, EAI personnel worked with the client to establish a core boring/sampling system to track migration of contamination in cracks and other surface imperfections. The program was used to determine locations that required further remediation prior to final survey.

ENVIRONMENTAL ALTERNATIVES, INC.

CLIENT	Los Alamos National Laboratory Large Scale Demonstration Deployment Program
CONTRACT NUMBER	1978780P Shaw Environmental & Infrastructure
PERFORMANCE PERIOD	09/09/02 – 09/20/02
CONTRACT TITLE	LSDDP Capability Demonstration
CONTRACTING OFFICERS	Shaw E&I 335 Central Park Square Los Alamos, NM 87544
CONTRACTING OFFICER REPRESENTATIVES	Shaw E&I 335 Central Park Square Los Alamos, NM 87544

PROJECT SCOPE

EAI personnel were responsible for implementing a Large Scale Demonstration Deployment Program (LSDDP) at Los Alamos National Laboratory. The purpose of the LSDDP was to evaluate five technologies against the site baseline technology to determine if improvements could be achieved. EAI assisted the project technical manager in the preparation of a test plan, decontamination procedures, job hazard analysis and other program compliance requirements prior to mobilizing to the site. Work was performed over a one-week period, and EAI personnel were responsible for project oversight, management, training and technical guidance of the Lab workers who applied the chemical extraction formulations.

The project objective was to determine if a decontamination technology could effectively remove high contamination levels of TRU (plutonium/americium) contamination from process glove boxes to a reuse standard of less than 50K dpm/100cm². The TA-55 area of the lab had been tasked with a new mission. Thus if the glove boxes could be cost effectively decontaminated to the reuse standard, a tremendous cost savings would be recognized through elimination of the need to remove and replace all of the glove boxes. Our chemical extraction process was once again used following the protocol developed during our work at Rocky Flats. The glove box chosen for the demonstration measured approximately 6' X 4' X 3' and was constructed of stainless steel with leaded glass windows. Initial contamination levels exceeded 2.4 million dpm/100cm². Two workers, under the direction of EAI personnel, decontaminated the glove box in 6.5 hours. The average contamination levels post-decon were 24K dpm/100cm² and the demonstration was deemed a complete success. Based on the results of the comparison against the lab baseline and other technologies tested, EAI was declared the winner. The technology is now being planned for use for several applications at Los Alamos including decontamination of stock piles of legacy waste.

The results of the LSDDP have been published in an Innovative Technology Summary Report for DOE. The project **resulted in capital equipment reuse, hazard reduction, increased worker safety, and pollution prevention.**

ENVIRONMENTAL ALTERNATIVES, INC.**CLIENT****West Valley Nuclear Services Company - Large Scale Demonstration Deployment Program****CONTRACT NUMBER**

19-101809-C-LH

PERFORMANCE PERIOD

02/12/03- 02/28/03

CONTRACT TITLE

LSDDP Capability Demonstration

CONTRACTOR TECHNICAL REPRESENTATIVEJim Gramling
LSDDP Manager
West Valley Nuclear Services Co, LLC
10282 Rock Springs Road
West Valley, NY 14171**PROJECT SCOPE**

EAI personnel were responsible for implementing a Large Scale Demonstration Deployment Program (LSDDP) at the West Valley Site in upstate New York. The purpose of the LSDDP was to evaluate technologies against the site baseline technology to determine if improvements could be achieved for future Hot Cell decontamination work at the site. EAI assisted the project technical manager in the preparation of a test plan, decontamination procedures, job hazard analysis and other program compliance requirements prior to mobilizing to the site. Work was performed over a two-week period, and EAI personnel were responsible for project oversight, management, training and technical guidance of the workers who applied the chemical extraction formulations.

The project objective was to determine if a decontamination technology could effectively remove high contamination levels of mixed fission products and yet be transferable to remote operations for future hot cell and building D&D. Two areas were selected for the testing. The first area was a trench in the Fuel Receiving and Storage Building where casks containing spent fuel assemblies were once washed down. The second test involved the decontamination of cut sections from a spent fuel rack that had been immersed in radioactive water and sludge for 30 years.

The two examples illustrate the usefulness of our chemical extraction technology for both fixed, subsurface contaminants on building surfaces from incidental, but repeated contact with radioisotopes over a time and on equipment that has remained in contact with high level radioactive liquid for many decades.

The demonstration yielded impressive results that showed dramatic improvement over baseline techniques that had been used in the past as well as in side by side comparison during the demonstration testing. The process performed extremely well, removing radionuclide contamination to yield a residual contamination level close to unrestricted release, after a single application of the process. A decontamination factor of 200 was realized when the pre and post measurements were compared.

West Valley personnel concluded that the process would be readily transferable to remote deployment using PaR manipulators typically used in most hot cells.

The results of the LSDDP have been published in an Innovative Technology Summary Report for DOE.

ENVIRONMENTAL ALTERNATIVES, INC.

CLIENT	US Department of Energy
CONTRACT NUMBER	DE-AC09-03NT42008
PERFORMANCE PERIOD	10/09/03 – 9/30/06
CONTRACT TITLE	Alternatives for Characterization and Deposit Removal from Gaseous Diffusion Plant Equipment at The Portsmouth Gaseous Diffusion Plant
CONTRACTING OFFICERS	US Department of Energy Savannah River Operations Office P.O. Box A Aiken, SC 29802
CONTRACTOR TECHNICAL REPRESENTATIVE	Ker-Chi Chang EM-25/Cloverleaf Building US Department of Energy 1000 Independence Avenue, SW Washington, DC 20585

PROJECT SCOPE

EAI, under a teaming agreement with the Alpha Group & Associates, was awarded a contract with the DOE for developing alternatives for removing uranium deposits from inactive gaseous diffusion plant cascades at the Portsmouth GDP. This is a three phase contract requiring the contractor to successfully complete the goals and objectives outlined for each phase prior to being awarded any further work. EAI has completed Phase I and Phase II. Due to funding limitations, Phase III was cancelled.

The purpose of the contract is to evaluate technologies against the site baseline technology (LTLT) to determine if improvements could be achieved for future GDP dismantlement work at the site. Phase I entailed conducting an extensive review of all available and emerging technologies and down selection of the most viable process along with making a recommendation to DOE for further implementation of the chosen method. Phase II involved process development, mock up of GDP components and bench scale testing on actual uranium deposits typical of all conditions that may be encountered in the GDP cascade. Phase III will be actual floor level demonstration and decontamination of a portion of a GDP system.

During Phase I, EAI's chemical extraction technology emerged as the clear choice for further development and deployment and offered distinct advantages over any other existing technology. The chemical extraction process recommendation was accepted by DOE and testing was completed during Phase II with very successful results. The testing clearly demonstrated that the uranium, uranium oxides, Uranyl fluoride and other forms of deposits could be effectively removed from GDP substrates in a cold form without requiring a restart of the system. EAI assisted the project technical manager in the preparation of a test plan, decontamination procedures, job hazard analysis and other program compliance requirements prior to conducting the decontamination trials. Each phase includes a full topical report and briefing to DOE on the progress and results that have been achieved.

It is expected that the full scale deployment of EAI's technology for the clean up of gaseous diffusion plant equipment, will result in a tremendous cost savings over the current baseline, result in a shortened schedule and eliminate many health and safety risks to workers associated with the dismantlement of the GDP system.

ENVIRONMENTAL ALTERNATIVES, INC.

CLIENT	Defense Advanced Research Projects Agency (DARPA) Department of Homeland Security
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CONTRACT NUMBER	HR0011-05-C-0101
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PERFORMANCE PERIOD	09/19/05 – 6/30/08
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CONTRACT TITLE	Research and Development (BAA) - Radiological Decontamination Using the EAI Chemical extraction Technology for Building Surfaces Contaminated by Various Threat Radionuclides from a Terrorist attack using a Radiological Dispersal Device.
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CONTRACT VALUE	Cost Plus Fixed Fee
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CONTRACTING OFFICERS	DARPA 3701 North Fairfax Drive Arlington, VA 22203
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CONTRACTING OFFICER'S REPRESENTATIVE	Chief, Occupational Health Physics Air Force Institute for Occupational Health 2350 Gillingham Road Brooks AFB, Texas 78235
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PROJECT SCOPE

EAI has been awarded a research and development contract under the DARPA BAA program by the special projects office to provide research, process improvements and testing of our chemical extraction technology for responding to terrorist attacks involving the use of a radiological dispersal device (RDD). The contract includes three phases.

Phase I involves compiling all of the data from the previous deployment of the technology on other radiological decontamination work performed at US Department of Energy sites and other projects and using this information to build a preliminary model whereby lab scale testing can be performed using measurable performance indicators to predict the outcome of decontamination effectiveness. The initial testing will be conducted with cobalt and cesium contamination on concrete, granite and marble substrates. Also included in Phase I will be bench scale testing on actual contaminated substrates using the assumptions from the performance model to predict the outcome so that a database and modeling software can be created. The database and modeling program will be used to develop a system that will allow first responders to access the information from the field via hand held PDA's. The database will give the wartime fighter or first responder full instructions on which formula to use and the application and removal protocol for the decontamination of any radionuclide on any type of surface based on the conditions encountered at the scene.

The Phase I work will be verified and validated at INEL and a final report documenting the results will be published and forward to the special projects office for evaluation and continuation of the program for Phase II.

Phase II will involve R&D for the full list of additional threat radionuclides, as well as, additional types of substrates and building surfaces that could be involved in an RDD event. Phase II will also include design, development and testing of equipment for large scale application, collection and removal of the spent chemical formulas and radioisotopes to provide a complete recovery package. At the conclusion of Phase II, a complete database and modeling program will be in place to provide first responders with a technology and all necessary information required to complete the decontamination and recovery of the scene along with the necessary hardware and equipment to deploy the technology.

Phase II and Phase III were de-scoped and de-funded due to a shift in responsibilities for DHS under a Presidential Directive that removed post event recovery from DHS.

The initial Phase I testing was completed by the end of 2006.

3.0 PROGRAM MANAGEMENT, COMMUNICATION, AND PERSONNEL

Successful execution of multi-faceted task order contracts necessitates communication, stability, longevity, and performance. EAI is stable, financially sound, and a highly qualified choice to support even the most demanding projects. EAI has exceptional qualifications and a streamlined (flat) organizational structure. **We realize the best evidence of our ability to provide superior service is through established communication procedures, infrastructure, profitability, and proven previous experience on similar work.** These qualifications provide our clients the following benefits:

- **Understanding the Requirements** – In the past three years, our team resources have successfully managed and **directed dozens of environmental restoration contracts.**
- **Communication** – Utilizing a flat management structure ensures streamlined communications with client, EAI, and subcontract personnel; and promotes decisiveness, responsiveness, and rapid problem resolution when necessary.
- **Proven Organizational Structure** – **EAI is one entity with a streamlined management structure** and superior experience providing project management and technical support similar to the work common to many of the DOE or government sites.
- **Established Infrastructure and Resources** – EAI has the ability to maintain a stable workforce by utilizing solid hiring practices and offering excellent compensation and training opportunities. This is evidenced through our personnel turnover rate of less than 10 percent and 94 percent growth in personnel since 1998.

3.1 PERSONNEL QUALIFICATIONS

EAI knows the most important resource and technical approach we can provide for performance of the work scope lies in our proposed personnel and their commitment. We understand what you want from a technical and management subcontractor – the ability to maintain smooth, seamless operations. We realize the goal and purpose of a contract is to have consultant staff available, often on short notice, to supplement personnel on tasks. EAI personnel can and have successfully provided seamless operations support to various federal, state, and local agencies.

Credentials of our proposed staff are exceptional. Available personnel provide a competitive edge by having directly related advanced and undergraduate degrees, certifications, and extensive experience in the specialty disciplines required by our clients. Our mission is to (1) protect human health and the environment, (2) effectively reduce remedial action costs and timelines, (3) assess and minimize liability, and (4) comply with the myriad of environmental and regulatory provisions.

Table 3-1. Mix and Depth of EAI Senior Managers and Project Engineers

EAI Personnel Experience (Key Personnel)	Highest Degree	Years of Relevant Experience	Env. Investigations / Remedial Design / Remedial Action	Geotechnical / Geophysical	Env. Compliance / Quality Assurance / GIS/CAD Support	Reports/Work Plans/Decision Documents
Technical Personnel						
*Andy Gergosky	BS	22	X	X	X	X
*Christopher Norton	BS	22		X	X	X
*Mike Shubin	-	16	X	X	X	X
Travis Pfeiffer	-	11	X		X	X
*Randall Martin	-	27	X	X	X	X

- Notes:
- ¹ Includes PA/SIs; RI/FS/CMS; groundwater assessment/monitoring; environmental inventories; documentation; risk-based assessments/human and/or ecological risk based assessments; multimedia investigations; etc.
 - ² Includes remedial design/remedial action; specifications/construction plans/cost estimates; etc.
 - ³ Includes CERCLA/RCRA/NEPA and other regulatory provisions; hazardous waste inventories/recovery plans; compliance audits/assessments; environmental permitting; etc.
 - * Have previously held “Q” or “L” clearance

4.0 HEALTH AND SAFETY

EAI places emphasis and commitment to the health and safety of our employees, subcontractors, visitors, and consultants in the office and on the project site. **Safety is a number one mission of our corporate management.** The firm has in place a structured, organized, mandatory program of health and safety training applicable to all levels of technical and support personnel.

EAI’s health and safety program provides corporate policy regarding in-house and job site safety, required OSHA programs (such as a respiratory protection program, a personal protective equipment program, and a hazard communication program), and relevant forms and procedures.

EAI provides its employees with yearly medical monitoring, OSHA hazardous waste operations refresher training, cardiopulmonary resuscitation (CPR) training, and first aid training (every three years). EAI has established, in accordance with the requirements of OSHA as cited in 29 CFR 1910.120, a medical surveillance program to help assess and monitor the health and fitness of employees working with hazardous substances. EAI also provides additional, job-specific training, such as confined space entry (when applicable).

5.0 QUALITY ASSURANCE

EAI manages the quality of all work in accordance with our Corporate Quality Assurance Program and the specific requirements of each client’s project. Our QA program is fully compliant with and meets all of the required elements of NQA-1 and 10CFR50 Appendix B as evidenced by the attached table of contents from our QA manual. A full copy of EAI’s Corporate Quality Assurance program is available upon request.

6.0 CONCLUSIONS

EAI is confident that we can provide the technical competence and responsiveness needed to add value to any project. In concert with the various government agency missions, we are committed to providing the comprehensive technical and management expertise needed to execute our assigned tasks expeditiously and cost effectively.

EAI is comprised of professionals who strive to achieve the highest technical and ethical standards. **We know the type of work; we have performed similar work previously; we have outstanding, experienced personnel; and we are familiar with government contracts, expectations, procedures, and goals.** EAI meets all of the criteria – having current and directly related contract experience, the ability to manage and carry out a majority of tasks associated with typical projects within the remediation arena, and a 100 percent commitment from management to obligate the resources and infrastructure needed to execute these contracts.

Thank you for considering EAI; we appreciate the opportunity to submit our statement of capability. The entire EAI team looks forward to working closely with the project personnel to help achieve your environmental restoration objectives.