



EDi No. 283



21. DOE Y-12 National Security Complex, Bldg. 9202, Foundry – Beryllium D&D

22. Year Completed Professional Service:	Year Completed (if applicable) Construction:	Oak Ridge, TN
2009	n/a	
CAGE Code: ID1U3	DUNS Number: 61.680.5073	Contract Role: <input checked="" type="checkbox"/> Prime Contractor <input type="checkbox"/> Subcontractor

23 a. Project Owner/Customer:	23 b. Point of Contact Name:	23 c. POC Contact Info.:
U.S. Department of Energy c/o B&W Technical Services Y-12, LLC P.O. Box 2009 Oak Ridge, TN 37831-8178	Terry Ferguson Manager, Procurement Operations	865.576.6095, voice 865.576.3741, fax tf3@y12.doe.gov

Key Personnel:			
Michael Bradshaw	EDi/Albuquerque Office	mbradshaw@edi-nm.com	505.341.3578
Christopher Edgmon	EDi/Albuquerque Office	cedgmon@edi-nm.com	505.341.3578

24. (Include scope, size, and cost) Brief Description of Project and Relevance to this Contract:	
Awarded Price: \$3,102,070.00	Final/Projected Cost: \$3,228,806.00*
Award Date: 02.03.2009	Contract No.: 4300068924
Period of Performance: 02.03.2009 – 12.22.2009	Final or Projected Schedule: 12.22.2009
Contract Type:	<input checked="" type="checkbox"/> Firm Fixed Price <input type="checkbox"/> Cost Reimbursement <input type="checkbox"/> Time and Materials <input type="checkbox"/> Cost Plus Fixed Fee <input type="checkbox"/> Cost Plus Award Fee <input type="checkbox"/> Performance Based
Type of Work Performed:	562910/Remediation Services
% of Work Self Performed:	73%
% of Work as Subcontractor:	27%
Notes:	As a result of work well done, EDi was awarded additional scope in work through four (4) modifications totaling an additional \$126,000.00

Technical Representative (if applicable):	Tech Rep. Agency & Address:	Tech Rep. Contact Info.:
Robert Monleon, STR	B&W Technical Services Y-12, LLC P.O. Box 2009, MS 8178 Oak Ridge, TN 37831-8178	865.574.7557, voice 865.574.2882, fax monleonrr@y12.doe.gov

Background

The National Nuclear Security Administration’s (NNSA’s) Y-12 National Security Complex (Y-12) is located in the Bear Creek Valley of East Tennessee, adjacent to Oak Ridge, Tennessee. The Complex was constructed as part of the World War II Manhattan Project. The first site mission was the separation of uranium -235 from natural uranium by the electromagnetic separation process. In the years following World War II, Y-12 evolved into a high-precision manufacturing assembly and inspection facility while maintaining the nation’s uranium and



Y-12 Campus as it appears from an aerial view in 2010 and projected footprint (goal of 2040).

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lithium technology base. The Y-12 Mission is to meet the needs of the U.S. Department of Energy (DOE), the NNSA, other government agencies, and private industry through a commitment to excellence in the use of a technology-based manufacturing center. Current mission includes:

- production/rework of complex nuclear weapon components and secondaries;
- receipt, storage, and protection of special nuclear materials;
- quality evaluation/enhanced surveillance of the nation’s nuclear weapon stockpile;
- dismantlement of weapon secondaries and disposition of weapon components;
- prevention of the spread of weapons of mass destruction; and
- support to DOE, other federal agencies, and other national priorities.



RCTs decontaminating surfaces high and low.

Scope of Work

The 9202 building foundry area and certain adjacent laboratories became contaminated with beryllium over the years. The requirement for beryllium decontamination stemmed from federal regulations, which require that federal facilities be maintained in a manner, which ensures the health and safety of employees without reliance on personal protective equipment.

EDi was awarded this fixed-firm price contract in January 2009 and the project was complete in December 2009. The goal for the project was to decontaminate beryllium contamination to meet B&W Y-12 criteria. Other contaminants of concern included radioactive materials, PCBs and Mercury. The work evolved the first and second floors of the foundry, encompassing over 210,000 sq. ft. EDi provided an experienced and qualified staff of over 26 personal to execute the require scope of work, to include all materials and equipment. EDi’s staff included a Protect Manager, Site Superintendent, Health & Safety Manager, and skilled decontamination technicians. The successful on-time completion of the project was crucial to continuing mission critical operations in the facility. All work was performed in Q-cleared areas.

Pre-Mobilization and Planning Tasks

EDi completed the pre-mobilization phase of the project on schedule. The first deliverable was the development of a site-specific health and safety plan including accident hazard analyses (AHA’s), quality assurance and quality control plans, and compliance work plans. Once the plans were approved, EDi received a limited notice to proceed to facilitate mobilization and required training.

Mobilization

Upon receipt of the limited notice to proceed all equipment, project facilities, and staff were mobilized. Field personnel setup the project facilities (office and shower trailers) and supply connex’s. Obtained utility services (lights, power, and portable toilets), and developed staging and material lay-down areas. All required B&W Y-12 training was completed

Post Mobilization Tasks

Once mobilization activities were completed EDi began implementing site controls and prep work prior to making entry into contaminated areas. Baseline contamination surveys and air monitoring was also conducted. Waste containers were lined and staged in the designated areas. The first phase of the project included gross decontamination of highly contaminated areas on the second floor followed by the packaging and removal of equipment and machinery located on both the first and second floors. The second phase of the project included the decontamination of all remaining equipment and facility components. This phase also include the decontamination of all walls, floors, ceilings, piping, ducting, and light fixtures.

Equipment and Materials Removal

The initial phase of the project evolved the removal of all materials and designated equipment and machinery. Due to the high levels of beryllium contamination associated with the second floor, EDi first performed gross decontamination of these areas



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prior to conducting intrusive activities. Subsequently, EDi conducted the removal and waste packaging of a significant quantity of miscellaneous materials and debris that had accumulated over the years. Once completed, Edi proceeded with the dismantlement and staging of all designated equipment and machinery. All such equipment and machinery was double wrap and/or encapsulated, inventoried, and placed in the appropriate transportation containers.

Facility Decontamination

After the initial gross decontamination step was performed, a physical wipe down of all surfaces, including; light fixtures, pipes, duct work, conduit, etc., was conducted using an environmentally friendly and very effective commercial cleaner. Work proceeded from the top down. Inaccessible areas were encapsulated to prevent re-suspension or removal of beryllium contamination. All such areas were labeled and documented.

Post-decontamination wipe samples were collected to assess the effectiveness of decontamination efforts. Further, these samples were biased toward areas that were deemed to be of interest based on feedback from the decontamination teams and because of visual inspections conducted by the site supervisor. All sample locations were documented by location and all other sample information was recorded on a sample data collection sheet. All samples were placed in a sample vial with a screw top cap and assigned a unique sample nomenclature, which was recorded in the sample logbook and on the COC.

Equipment/Machinery Decontamination

All remaining equipment was verified to be locked-out and tagged-out in accordance with Y-12 procedures and then decontaminated using proven methods. In some cases encapsulates were used to ensure compliance with the project clean up criteria.

25. Firms/Subcontractors involved with this Project:

	(1) Firm Name	(2) City and State	(3) Role
a.	ETE Engineering Denise C. Walker, President bwalker@eteengineering.com	P.O. Box 6226 Oak Ridge, TN 37831-6226 865.482.4053	Subcontractor, Q-cleared Escorts
b.	RPM Group, LLC Mike Redmon meredmon@rpgroupllc.com	137 Berkshire Lane Harriman, TN 37748-5333 865.250.6285 • 865.685.0165, fax	Subcontractor, Project Work Plans & Program Documents
c.	ES&H, Inc. Brandon Viars bviars@eshinc.com	10732 Dutchtown Road Knoxville, TN 37932 865.671.2274 • 865.675.6220, fax	Subcontractor, Health & Safety Program Support Services
d.	A Q Safety, Inc. Cheryl Haaker, President chaaker@aqafety.com	11024 Montgomery Blvd., NE PMB #294 Albuquerque, NM 87111 505.298.7415 • 505.503.8638, fax	Subcontractor, Health Physics, Industrial Hygiene, and Health & Safety Services