

WM2015 Conference Panel Report

PANEL SESSION 019: **US DOE ETTP Accelerated Gaseous Diffusion Plant (GDP) Cleanup Approaches**

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Panelists:

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- **Kevin Adkisson**, *President, Knoxville Building and Construction Trade Council*
- **Heather Cloar**, *Sr. Contracting Officer, US DOE OREM*
- **Kenneth Rueter**, *President and Project Manager, URS / CH2M Oak Ridge LLC (UCOR)*

A panel was convened at the 2015 Waste Management Symposium. The panel brought together representatives from three of the many stakeholders in the cleanup of the Department of Energy's (DOE) East Tennessee Technology Park (ETTP) site in Oak Ridge, TN to discuss approaches which have allowed for the accelerated cleanup of the Gaseous Diffusion Plant (GDP) facilities. The panel was composed of representatives from DOE, a government contractor, and a labor representative. During the session, panelists presented audience members with the perspective on what is contributing to the accelerated cleanup at the ETTP. Audience members asked probing questions to understand what nuggets can be mined from the ETTP experience to help with their specific locations. A summary of the panel discussion of the lessons learned and applied to the contracting approach is presented below.

Summary of Presentations:

The DOE Oak Ridge Reservation (ORR) was created in 1943 as part of the World War II Manhattan Project to support the development of the world's first atomic weapon. The ORR is comprised of three sites: (1) the Oak Ridge National Laboratory (ORNL); (2) Y-12 National Security Complex (Y-12); and (3) ETTP which produced highly enriched uranium. Since that time, the missions of these sites have changed, with each site having a different purpose: ORNL is DOE's largest science, technology and energy national laboratory; Y-12 manufactures, stores, and disassembles nuclear weapon components; and ETTP is being environmentally restored for conversion into a private sector industrial park.

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Environmental Management (EM) is a multi-million dollar DOE program in Oak Ridge, with cleanup programs under way to correct the legacies remaining from several years of energy research and weapons production. Because of past practices, portions of land and facilities on the 33,750-acre ORR are contaminated with radioactive elements, mercury, asbestos, polychlorinated biphenyls, and industrial wastes. The ORR is on the U.S. Environmental Protection Agency's National Priorities List and is being cleaned up under a Federal Facility Agreement with the Environmental Protection Agency (EPA) and the State of Tennessee. In 2009, the program focused on cleanup efforts at ETTP with the most visible project the ongoing demolition of the massive K-25 Building, a Gaseous Diffusion Plant (GDP). Significant progress has been made in cleaning up large gaseous diffusion buildings. K-25 has been demolished and there are currently two GDP facilities remaining at the ETTP site, K-31 and K-27. K-31 is currently 50% complete with demolition activities and K-27 is 50% complete with deactivation activities.

In an environment of declining budgets, the application of innovative approaches has resulted in the successful acceleration of Deactivation and Demolition (D&D), providing many valuable lessons learned.

Synopsis of Panel Discussion

During the session, panelists and members of the audience provided perspectives and lessons learned related to D&D projects. The purpose of the panel was to share with the audience best practices used at ETTP in project planning, work execution techniques, workforce/labor relationships, regulatory relationships, and contractual framework, all anchored in an environment where safety is the highest priority, which have benefitted the project.

The ultimate goal for the DOE at the ETTP site is to safely complete the risk-based cleanup to address environmental and human health risk issues to achieve a reindustrialized site end state allowing for future use and economic development in the Oak Ridge, TN area. In order to achieve that end state it is important that all stakeholders are working toward the same goal. That includes the DOE, contractors, regulators, workforce, and other stakeholders which are all equally important.

The foundation for accomplishing any work whether it is high hazard work such as D&D or lower hazard work such as Surveillance and Maintenance (S&M) is safety. The DOE, UCOR and the ETTP workforce have partnered to institute a robust Integrated Safety Management System (ISMS) and Work Control. By using Safety Conscious Work Environment (SCWE) the project team strives for ZERO injuries. Safe work is the driver and basis for productivity. If it is the other way around and productivity becomes the driver, safety will suffer and in turn so will productivity.

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Project flexibility is a must when safe work is driving productivity and accelerating the project. With DOE Order 413.3B, Program and Project Management for the Acquisition of Capital Assets (DOE O 413.3B), being applicable to the ETTP GDP facilities, it is important to ensure that the Critical Decision (CD) process, as outlined in the order, is managed. The CD process is important to the DOE's initiative to improve project performance on capital asset projects and therefore receiving CD approval at times may require an investment in people and schedule. The projects must take into account the amount of time that may be required in order to receive approval to begin demolition activities which fall under the auspices of DOE O 413.3B. It is important to line up approvals in order to ensure an available pipeline of work to keep your resources fully engaged and efficient.

Partnering between the DOE, contractor, workforce, regulators and other stakeholders is another important element in the success of any cleanup project. It is included as a voluntary clause with the ETTP contract, but was embraced as a must have by both DOE and UCOR. Additionally this partnering attitude extends to the ETTP workforce as well as to the regulators. The use of collaborative regulatory project teams has helped facilitate the acceleration of work scope. Without the regulators willingness to review and process documents in a timely fashion it would be likely to have resources idled waiting for paper to begin work. The workforce, including organized labor, have partnered with UCOR management to elevate issues and concerns so that they may be addressed before they become impediments to completing the work. Without this willingness to create a pathway for success projects can be subject to poor morale which can affect safety and therefore productivity.

The proper contract structure can prove to be a conduit to accomplishing work. A contract that is cumbersome and difficult to work within will be a burden on the project team and may be a barrier to a successful project. Change on a large clean-up project is inevitable. Years before a request for proposal (RFP) is issued careful planning must take place to ensure the needs of all stakeholders can be met. The contract must include a balanced approach to allow the customer to incentivize and reward the contractor when it is warranted. It must also have the teeth to get the attention of a contractor who is straying from the goals of the integrated project team. At ETTP a Federal Acquisition Regulation (FAR) based Cost-Plus Award Fee (CPAF) contract was awarded in April 2011. The contract emphasized the need for a robust project management organization and a strong Earned Value Management System (EVMS) culture. The contract included priced option Contract Line Item Numbers (CLINs) which would incentivize the contractor, along with the award fee structure, to build what they had sold in their proposal. Strong performance would lead to both increased fee as well as additional work scope.

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Organized labor is a valuable partner on DOE clean-up projects. ETTP has shown that the goals of both management and labor are not mutually exclusive. The workforce is an equal with management in their commitment to the ISMS process and living the SCWE culture. Their participation in all safety programs is an important factor in facilitating the accelerated clean-up at ETTP. The endorsement by all the represented unions at ETTP of UCOR's drive to achieve DOE Voluntary Protection Program (VPP) Star Status is a further testament to their commitment.

Conclusions

The accelerated complete of the GDP facilities at ETTP is an important part in the clean-up of the cold war legacy. Completing clean-up ahead of schedule will allow funds to be re-allocated to other clean-up tasks to assist with the reindustrialization of the ETTP site allowing economic development to continue and accelerate in the Oak Ridge, TN area. This can only occur through a committed partnership between all stakeholders pulling in the same direction. Having safety of the workers and community at the forefront of all activities will allow for increased productivity. A well thought out and planned contract is a conduit to a successful project. Motivated management and labor with the same goals can never hurt the progress of a D&D project. All these things have come together at ETTP allowing for the integrated project team to accelerate the work scope saving tax payer money.