Operating Experience Summary

Office of Health, Safety and Security

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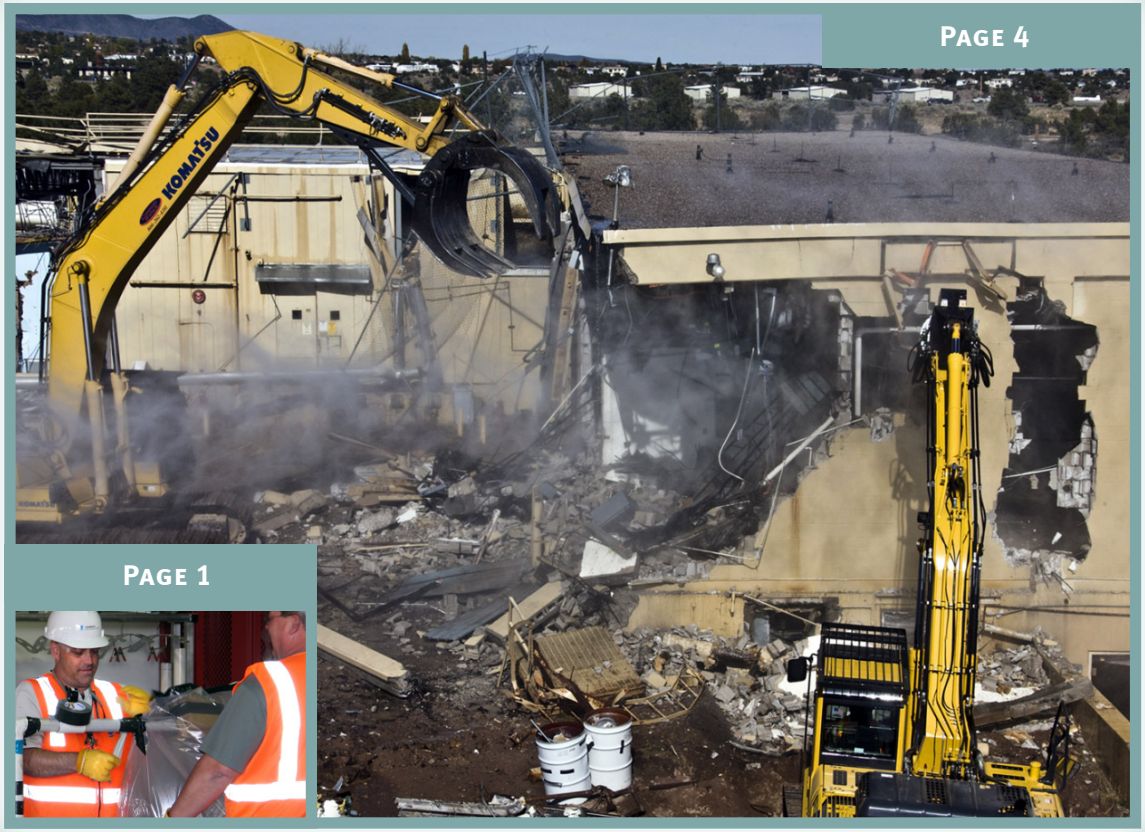

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Good Work Practices: Training and Mentoring ARRA Hires

1

The following article discusses some innovative learning techniques that Department of Energy (DOE) sites used when presented with a large influx of new workers as a result of the American Recovery and Reinvestment Act (ARRA) of 2009. Many of these workers were not trained in the work that they were hired to perform and had little knowledge of worker health and safety issues. The training and mentoring methods that were employed are good work practices that can be used at any time to develop worker skills and qualifications and ensure that work tasks are performed safely.

After reading the article, we encourage you to visit the Operating Experience Summary *Blog at* http://oesummary.wordpress.com *and rate the article in terms of value to you and provide a comment on the article and/or identify topics that would be of interest to you for future articles. We also encourage readers to submit articles of their own for sharing in the* Operating Experience Summary. *Please let us know if you have something to share.*

With the advent of the American Recovery and Reinvestment Act (ARRA) of 2009, the Department of Energy (DOE) saw a surge in newly hired workers, many of whom had little or no experience with the specific work tasks they would be performing or any knowledge of worker safety and health issues. These workers not only needed initial training to perform work they may have never performed before, but they also benefitted from additional mentoring when they were on the job in the field to ensure that they worked safely. Two submittals to the Lessons Learned Database may have applicability to other sites across the Complex when hiring new, inexperienced workers.

Training

At the DOE Hanford site, ARRA workers are performing tasks that include cleaning up waste sites (removing contaminated soil and retrieving solid waste), removing contaminated equipment from buildings, demolishing buildings, installing and improving groundwater treatment systems, and expanding disposal capabilities so wastes generated during site cleanup activities can be permanently disposed of at the site Environmental Restoration Disposal Facility. To provide the ARRA workers with the quality of training they needed to be quickly and safely assimilated into the workforce, several Hanford prime contractors collaborated to develop a plan to train them and still meet scheduling needs. (Lessons Learned ID: RCCC–09–011)

The first group of 3,500 to 4,500 ARRA new hires at Hanford included nearly 100 Decontamination and Decommissioning (D&D) workers. The innovative training process developed by the prime contractors focused on getting all of the required training completed up front so that when the workers reported to the field all of their basic training requirements were met. The training program was condensed to 6 weeks, instead of the usual 3 to 6 months, by bringing the instructors and tools to the trainees

The three-phase training program for the D&D workers focused on specific safety and health courses (e.g., radiation worker training and Hazardous Waste Operations and Emergency Response training) in the first phase and specific craft worker training (e.g., Certified Asbestos Work and hands-on training in D&D tools) in the second (Figure 1-1). In the final phase, which was designed to quickly integrate the new D&D workers into the workforce, trainees completed on-the-job training with the specific equipment and techniques unique to their assigned area of work (Figure 1-2). As a result of the training, individuals with very little knowledge of D&D work became qualified, skilled, and functional D&D workers in weeks instead of months.

Figure 1-1. New D&D hires practicing containment wrapping

Figure 1-2. New worker being coached by trainer (in orange) on safe use of reciprocating saw

Some of the following elements of this innovative training approach may facilitate development of a similar approach at other DOE sites.

- A pre-training Joint Needs Analysis was performed by the respective training departments to identify challenge areas.
- A new course was developed that covered topics such as Integrated Safety Management Systems (ISMS), Voluntary Protection Program (VPP), Human Performance Improvement (HPI), and Conduct of Operations.
- ISMS processes were applied throughout the planning and training cycles.
- New D&D workers were shown how their individual tasks would help fulfill the overall remediation plans for the site.
- Hands-on training was provided that included using tools on working mock-ups that simulated typical D&D tasks.
- Seasoned employees were brought to the training area to answer questions and offer advice on how to use the tools of the trade.

Mentoring

At the West Valley Demonstration Project, management began to provide additional oversight and mentoring of ARRA workers in the field after a newly qualified ARRA worker exited a work area and radiological contamination above the reportable limits was discovered on his arm. The worker had been sorting through previously generated radiological waste in a fume hood, separating prohibited items, and containerizing the acceptable items. Investigators found that the worker wore the proper Personal Protective Equipment (PPE), but they could not identify the exact cause of the contamination. (Lessons Learned ID: 2010–OH–WVES–002)

Following the event, management began to provide additional oversight and mentoring of ARRA workers in the field, which gave them an opportunity to witness actual work practices, provide on-the-spot guidance to newly qualified workers, and evaluate the overall process for improvements. The mentoring and oversight process resulted in management identifying improvements to radiological control methods and the work process and implementing these improvements. Management was also able to resolve conflicts between radiological safety and industrial safety PPE needs, evaluate tooling and equipment, and assign additional personnel to assist with communications to increase efficiency and reduce the potential for contamination.

Conclusion

Using a training methodology similar to the innovative program developed at Hanford and increasing management oversight and mentoring in the field when newly qualified workers begin performing work tasks, as implemented at West Valley, are good work practices that can result in developing worker skills and qualifications and ensure that work tasks are performed safely. These good work practices help to reduce injuries and radiological exposures and also provide efficiencies in completing tasks.

KEYWORDS: Good practice, lessons learned, ARRA, training, mentoring, decontamination and decommissioning, D&D

ISM CORE FUNCTIONS: Perform Work within Controls, Provide Feedback and Continuous Improvement

EM Launches New Approach to Capturing and Communicating Lessons Learned

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The following article, written by the Department of Energy's (DOE) Office of Environmental Management (EM), discusses their new exciting program to capture and share, on a real-time basis, project management lessons learned (LL) that are discovered during the cleanup lifecycle of facilities from the Cold War era. This important program is being implemented through a partnership between EM and DOE's Office of Health, Safety and Security (HSS), which manages DOE's Corporate Lessons Learned Database and other operating experience resources, such as Operating Experience Summary *articles. By tapping into an already existing program, EM has been able to implement their new approach in a very time- and cost-efficient manner, with the added benefit that the DOE Complex is already well informed of and participates in HSS' existing Operating Experience Program.*

After reading the article, we encourage you to visit the Operating Experience Summary *Blog at* http://oesummary.wordpress.com *and rate the article in terms of value to you and provide a comment on the article itself and/or identify topics that would be of interest to you for future articles. We also encourage readers to submit articles of their own for future sharing in the* Operating Experience Summary. *Please let us know if you have something to share.*

In its continual pursuit of excellence, the Department of Energy's (DOE) Office of Environmental Management (EM) has instituted an intensive, results-focused program to capture, share, and expand project management lessons learned that emerge in the cleanup of the Cold War legacy. Rather than waiting until the end of each project, EM now prepares and distributes the lessons more frequently—in real time, throughout the project lifecycle—in a move that helps boost organizational knowledge and influences successful project execution.

In addition, EM is integrating these lessons into the DOE Corporate Lessons Learned Database, operated by the Office of Health, Safety and Security (HSS), accessible at http://www.hss.doe.gov/sesa/analysis/ll/oellproducts.html, as soon as they are available. EM's lessons are easily accessible from the database and can be applied throughout the Department by DOE staff and contractors to enhance the learning experience and improve performance. Database sharing is one of many efforts underway to broadly communicate lessons that materialize in the EM Complex. Figures 2-1 through 2-3 show photos of some of the remediation projects that have submitted lessons learned in real time.

Figure 2-1. Workers at Los Alamos National Laboratory (LANL) demolish a building at the DP West site, the world's first industrial plutonium processing facility. LANL submitted several lessons learned in 2011 related to the DP West site.

Figure 2-2. The demolition of Building K-33 at Oak Ridge. Lessons learned were submitted by Oak Ridge in 2011 on K-33.

EM Establishes Detailed Guide for Lesson Capturing

As part of the new program, EM created a guide for Federal Project Directors and contractor project managers to capture, validate, share, learn, and archive lessons from conception to completion. The lessons stem from capital asset projects and operations activities, including the $6 billion American Recovery and Reinvestment Act cleanup. EM is responsible for collecting all project management lessons learned and following up with improvement actions to benefit the EM Complex.

The guide, which supports existing direction from the Office of Engineering and Construction Management, calls for developing a program that can be used to ensure that improvement actions taken from the lessons are incorporated into overall project management practices. The EM Headquarters (HQ) Project Management Lessons Learned (PMLL) Point of Contact (POC), along with the site Federal Project Director, oversees the process to compile the lessons and ensure that they are added to the HSS database.

Figure 2-3. Workers at Brookhaven National Laboratory (BNL) load neutron shield pieces from the Brookhaven Graphite Research Reactor (BGRR) into a shielded container for shipment to a disposal facility. BNL submitted lessons learned in 2011 that involved BGRR.

EM Assigns Responsibilities to Ensure Lessons Learned Success

The EM HQ PMLL POC is responsible for reviewing lessons submitted by the field sites before they are incorporated into the database. EM's guidance outlines appropriate content for each lesson, from a background summary and point-of-contact information to key data fields and analyses to support improvement actions.

In addition to submitting the lessons to the HSS database, EM's extensive efforts to share the lessons inside and outside the EM Complex include the following.

- Prominently featuring lessons with photos and summaries on EM's public Web site, www.em.doe.gov.
- Distributing periodic "News Flashes" on lessons that reach EM stakeholders and other interested groups in the public.
- Posting updates on EM's project management lessons learned program on the *Operating Experience Summary* (OES) Blog.
- Providing EM's lessons to the Operating Experience (OE) Committee, OE Wiki, and OES Blog.
- Discussing the lessons at DOE field manager meetings, which provides an opportunity for field sites to communicate lessons they develop with one another.
- Reporting new lessons during EM's quarterly project reviews; at these meetings, representatives at field sites are asked how they apply the lessons to project execution planning.
- Sharing lessons with oversight offices, such as the U.S. Government Accountability Office and DOE Office of Inspector General.
- Coordinating the launch of EM's project management lessons learned program with the National Nuclear Security Administration, which recently developed a similar system.

With so many approaches to sharing the lessons, EM will thoroughly communicate the lessons across the Complex and to the public. In turn, the lessons will help increase organizational knowledge and benefit project directors and managers, workers, and others as they work to successfully complete projects in EM's pursuit of excellence. Questions related to EM's lessons learned program can be sent to EMProgramManagerLessonsLearned@hq.doe.gov.

KEYWORDS: Office of Environmental Management, EM, lessons learned program, lessons learned database, project management, operating experience, OE Wiki, OE Summary Blog, OES Blog

ISM CORE FUNCTIONS: Analyze the Hazards, Provide Feedback and Continuous Improvement

The Office of Health, Safety and Security (HSS), Office of Analysis publishes the *Operating Experience Summary* to promote safety throughout the Department of Energy (DOE) complex by encouraging the exchange of lessons-learned information among DOE facilities.

To issue the Summary in a timely manner, HSS relies on preliminary information such as daily operations reports, notification reports, and conversations with cognizant facility or DOE field office staff. If you have additional pertinent information or identify inaccurate statements in the Summary, please bring this to the attention of Mr. Stephen Domotor, (301) 903-1018, or e-mail address stephen.domotor@hq.doe.gov, so we may issue a correction. If you have difficulty accessing the Summary on the Web (http://www.hss.energy.gov/sesa/analysis/oesummary/index.html), please contact the Information Center, (800) 473-4375, for assistance. We would like to hear from you regarding how we can make our products better and more useful. Please forward any comments to Mr. Domotor at the e-mail address above.

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