

DOE Corporate Operating Experience Program

presented to: Environmental Radiation Assistance Directory Webinar January 16, 2013

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- 1) To provide an overview of DOE'S Corporate Operating Experience Program
 - Operating Experience Program Documents
 - Operating Experience Committee
 - Corporate Lessons Learned Program and Database
 - Operating Experience resources and communication
- 2) To encourage development and sharing of Operating Experience
- 3) To discuss Office of Analysis (HS-24) initiatives





DOE O 210.2A, DOE Corporate Operating Experience Program

- PURPOSE-
 - To institute a <u>Department of Energy (DOE) wide program for the management of operating experience complex-wide</u> to prevent adverse operating incidents and facilitate the sharing of good work practices among DOE sites, while enabling tailored local operating experience programs based on the nature of work, hazards, and organizational complexities. Operating experiences can be found in all disciplines.
 - To provide the <u>systematic review</u>, identification, collection, screening, evaluation, and dissemination of operating experience from U.S. and foreign government agencies and industry, professional societies, trade associations, national academies, universities, and DOE and its contractors.
 - To define the <u>DOE Corporate Operating Experience Program so that it can be</u> <u>integrated into major management programs</u> - reinforcing the core functions and guiding principles of DOE's Integrated Safety Management System (ISMS) - and enhance mission accomplishment, quality assurance, safety and reliability.





Operating Experience (OE) Program Main Components:

- OE Documents (see DOE O 210.2A, Appendix A)
 - Levels 1-3
 - Summaries
 - Suspect /Counterfeit Items Data Collection Sheets
 - o Lessons Learned Reports
- OE Committee
 - o OE Wiki
 - Recent OE Documents
 - OE Wiki Videos
 - OE Summary Blog
- Corporate Lessons Learned Program and Database





- **OE Documents include:** OE Level 1-3 Documents, OE Summaries, S/CI or DI Data Collection Sheets, and Lessons Learned Reports
- OE Level 1 Documents inform the DOE complex of the most significant events or trends that concern DOE management.
- OE Level 2 Documents inform the DOE complex (or affected sites) of potentially significant safety issues.



Operating Experience Level 1-3 Documents (cont'd)



OE Level 3 Documents

inform the DOE complex when an event or a trend warrants management attention.

Highlights important environment, safety, and health issues for senior management's attention and potential action.

- Recent OE-3 Documents include:
 - Importance of Conduct of Operations and Training for Effective Criticality Safety Programs
 - Safe Practices for Working with Nanomaterials in Laboratories



Office of Health, Safety and Security **Operating Experience Level 3**



OE-3: 2012-05

August 2012

Safety Concern: Occurrences of Crushing Injuries **To Operators of Industrial Equipment**

PURPOSE

This Operating Experience Level 3 (OE-3) document provides information about a safety concern related to the dangers of crushing injuries faced by workers who operate various types of equipment, including electric carts, skid-steers, and lift equipment (Figure 1).



Figure 1. Equipment involved in worker injuries reported through the Occurrence Reporting and Processing System

BACKGROUND

Recent Department of Energy (DOE) events demonstrate the importance of training workers on the dangers of equipment they operate, reviewing and following manufacturers' instructions regarding safety devices/systems, and maintaining situational awareness while operating electric cart. skid-steer, and lift industrial equipment.

On March 14, 2012, at the Portsmouth Gaseous Diffusion Plant, a worker driving an electric cart received significant leg injuries when he turned too close to a building column, trapping his leg between the cart and the column. The driver's compartment in these types of carts is not always compatible with larger-built drivers. These conditions contributed to the driver's inability to maintain his leg inside the cart as it was turning. Subsequent investigation determined that there was no required training for cart operators, cart warning labels were either not posted or were indistinguishable from other labels, and there was no facility traffic control plan or painted lines to establish required cart travel lanes and keep carts away from columns. (EM-PPPO-FBP-FUEF-2012-00021

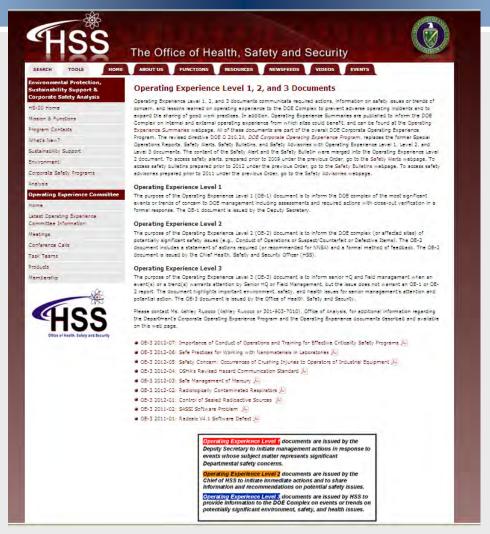
On March 8, 2012, at Princeton Plasma Physics Laboratory (PPPL), an equipment operator was pinned between the boom and cab of his John Deere model 250 skid-steer while he and another worker were attempting to install an auger attachment. They had left the engine running. which violated the safety features and allowed the boom and other controls to operate. When the operator reached out of the cab to connect the auger hydraulic hose with the boom, the boom raised and pinned his shoulder between the boom and the cab. His left shoulder blade was fractured and his chest was cut. (SC--PSO-PPPL-PPPL-2012-0001)

On March 1, 2010, a Bonneville Power Administration heavy equipment operator was killed at White Bluffs Substation when he became trapped between a backhoe attachment and the



Operating Experience Level 1-3 Documents- HSS Website





 All OE Level 1-3 Documents are located on the HSS Office of Analysis website at: <u>http://www.hss.doe.gov/SESA/analysis/oel.html</u>

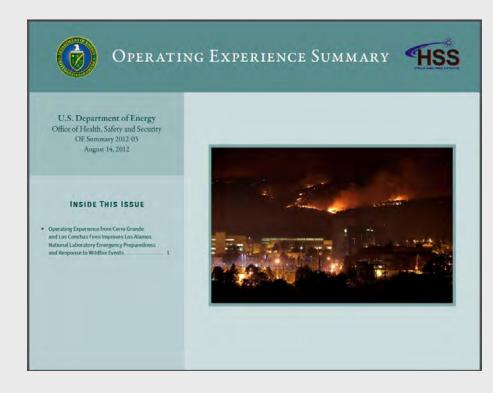




• **OE Summaries** inform the DOE complex of DOE or external operating experience from which sites could benefit. Consists of a compilation of informative operating experience-based articles.

Recent OE Summary Articles include:

- •Operating Experience from Cerro Grande and Las Conchas Fires Improves Los Alamos National Laboratory Emergency Preparedness and Response to Wildfire Events
- •Improper Use of Dewar Carts Results in Serious Hand Injuries
- •Strategic Petroleum Reserve Investigation Results — Fatality at the Bryan Mound Site





TOOL

Sustainability Support & Corporate

Environmental Protection,

Operating Experience Summaries-Websites







All OE Summaries are located on the HSS Office of Analysis website at: http://www.hss.doe.gov/SESA/a nalysis/oel.html



OPERATING EXPERIENCE SUMMARY

OFFICE OF CORPORATE SAFETY ANALYSIS

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Operating Experience from Cerro Grande and Las **Conchas Fires Improves Los Alamos National** Laboratory Emergency Preparedness and Response to Wildfire Events

OE Summary 2012-03, Article 1

July 30, 2012

Moderator's Introduction: The following article provides a summary of the lessons learned and key actions from Los Alamos National Laboratory (LANL) as a result of the 2011 Las Conchas Fire in New Mexico. The Las Conchas Fire consumed more than 156,593 acres in just over a month, including a 1-acre spot fire on LANL property, LANL's lessons learned from the Cerro Grande Fire in 2000 were proven to be beneficial during the 2011 Las Conchas Fire.

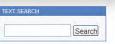
After reading the article, we encourage you to rate the article in terms of value to you and provide a comment on the article itself and/or identify topics that would be of interest to you for future articles.

We also encourage readers to submit articles of their own for future sharing on the Operating Experience Summary Blog. Please let us know if you have something to share. Thank you!

ORPS Report NA--LASO-LANL-LANL-2011-0002

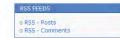
Lessons Learned

The 2011 Las Conchas Fire reaffirmed the principle that, in order to be effective, emergency management should be regarded as an ongoing activity, not one that occurs only in reaction to an initiating event. Los Alamos National



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Readers are cautioned that review of the OE Summary should not be a substitute for a thorough review of interim and final Occurrence Reports. Users can now subscribe to the OE Summary e-mail notification feature right here to ensure prompt Sustainability Support notification when a new Summary is available for review. To subscribe or unsubscribe to this service, please complete a subscription request. Corporate Safety Programs

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FUNCTIONS

lessons-learned information between DOE facilities.

comments to Ashley.Ruocco@hq.doe.gov.

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2012 Operating Experience Summaries

NEWSFEEDS

The Office of Health, Safety and Security (HSS) Office of Analysis publishes the Operating Experience Summary to exchange

We would like to hear from you regarding how we can make our analytical products better and more useful. Please forward any

VIDEOS

EVENTS

To search all Operating Experience Summaries, please use the HSS Search capability above

This page was last updated on July 16, 2012

OE Summaries are also located on the OE Summary Blog: http://oesummary.wordpress.com/





 Suspect/Counterfeit or Defective Items Data Collection Sheets (DCS) provide information on Suspect/Counterfeit or Defective Items with potential impact to DOE operations.

Register to review DCS at:

http://www.hss.doe.gov/se sa/corporatesafety/sci/



Counterfeit Underwriters Laboratories Mark on Compact Fluorescent Lamp

Tracking Number	Source of Issue	Source Tracking Number
DCS 1743	UL	12PN-49 10-31-12

UL Warns of Counterfeit UL Mark on Compact Fluorescent Lamp (Release 12PN-49)

Northbrook, IL - October 31, 2012 - UL is notifying consumers and retailers that the Compact Fluorescent Lamp, (CFL), identified below bears a counterfeit UL Mark for the United States. The compact fluorescent lamp has not been evaluated by UL to the appropriate Standards for Safety and it is unknown if this compact fluorescent lamp complies with the UL safety requirements for the United States.

Name of Product: Supersun Model SPST 13SM

Identification:

On the product: The product bears a counterfeit UL Mark and the following:



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DOE Lessons Learned Reports provide information on identified program/mission-specific lessons learned across the DOE complex.

LESSONS LEARNED DATABASE

OFFICE OF HEALTH, SAFETY AND SECURITY

You are Here: DOE > HSS > CSA > Analysis Text size: Smaller - Normal - Larger - Largest Lessons Learned Database Search Results Defense Nuclear Security Lessons YELLOW - Vendor Contact with Energized Electrical Wire - Emphasized Second Independent Review of Work Packages Establish Profile Lesson ID: 2012-SR-SRR-0004 (Source: User Submitted) Search Database Originating Organization or Contracting Company: Savannah River Remediation (SRR) Change Password Date: 11/29/2012 Contact: Savannah River Remediation - Saltstone Operations Manager - Bruce Long (803) 803-208-9551 Classifier: Reviewer Corporate Operating Experience Review Program Statement: Use a second independent review of work packages containing electrical << lock out>>s to prevent single point approval failures. The Facility's relevant controlled drawings should always be reviewed during the Corporate Safety Analysis approval process. In this event a hazardous energy source was not identified during preparation and approval of a work package for vendor use in repairing an air compressor controller. Savannah River Remediation (SRR) has implemented additional controls, above and beyond those required by Site Manual 8Q, Procedure 32, to ensure certain types of lockouts receive a second independent review by a reviewer authorized by SRR. These additional controls were extended to subcontract technical representative (STR) initiated vendor work as one of the corrective actions

Discussion: On July 24, 2012, an I&M Industrial vendor in the Saltstone Facility at the Savannah River Site (SRS) was working on an air compressor under a Single Point Lockout/Tagout (SPLT). During his troubleshooting activities, he thought he felt a tingling sensation as he brushed up against some wires. He checked for voltage and found none. As troubleshooting continued, utilizing technical assistance, two power sources were identified within the work scope boundary that could have intermittently energized. A review of the DCS historical information the next day confirmed that those sources intermittently were powered during this time frame. Facility immediate actions had all Single Point Lockouts/Tagouts and vendor work placed on hold for Facility Manager approval.

Analysis: The root causes were that programmatic controls were less than adequate (LTA) and the Startup work package was issued without DCS circuits identified. These causes resulted in a hazardous energy source not being identified during preparation and approval of a work package for vendor use in repairing the air compressor controller

SRR has implemented additional controls, above and beyond those required by Site Manual 8Q, Procedure 32, to ensure certain types of lockouts receive a second independent review by a reviewer authorized by SRR. These **Register to Review** Lessons Learned Reports at: http://www.hss.doe.gov/s esa/Analysis/DOEll/inde x.asp





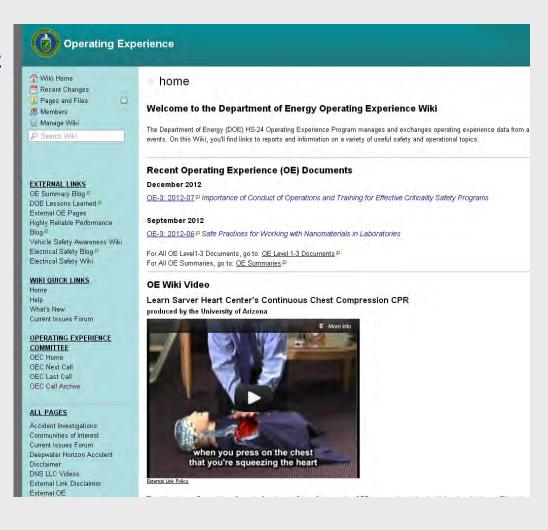
- Operating Experience Committee (OEC): A committee that performs in-depth reviews of DOE and external operating experience to determine its relevance to DOE and shares both internal and external lessons learned.
- The OEC led by HS-24 and is composed of DOE OE Program Coordinators, DOE employees, DOE contractors, and external members.
- The OEC holds monthly webinars and meets annually.
- Meetings consists of:
 - Site OE Discussions
 - External Organization OE and Lessons Learned Discussion
 - Update on Office of Analysis and Corporate OE Initiatives
 - Review of OE Program Self Assessments



Operating Experience WIki



- The OE Wiki is available at <u>http://operatingexperience.doe-</u> <u>hss.wikispaces.net/</u>. Publicly available.
- Contents
 - Recent OE Documents
 - o OE Wiki Video
 - OEC Monthly Call Documents
 - OEC information on meetings, current events and operating experience
 - o Subject-oriented Wiki pages







DOE O 210.2A, DOE Corporate Operating Experience Program

- KEY REQUIREMENTS-
- In order to prevent adverse operating incidents, <u>DOE managers and</u> <u>employees are expected to share and use good practices and lessons learned</u> <u>from operating experience</u>.
 - Departmental Elements must develop and implement an Operating Experience (OE) Program and designate an OE Program Coordinator.
 - Each organization must submit Lessons Learned (LL) from operating experience to the DOE Corporate LL Database when both:
 - 1. The operating experience has relevance to other DOE sites; and
 - 2. The information has the potential to help avoid adverse incidents, for performance improvements, or for cost saving.





DOE O 210.2A, DOE Corporate Operating Experience Program

- CONTRACTOR REQUIREMENTS DOCUMENT, REQUIREMENTS:
 - Share contractor-specific lessons learned from operating experience with the DOE complex, through the DOE Corporate Lessons Learned Database, when both (1) the operating experience has relevance to other DOE facilities, sites, or programs; and (2) the information has the potential to help avoid adverse operating incidents, for performance improvements, or for cost savings.

DOE-STD-7501-99, The DOE Corporate Lessons Learned Program

- Establishes the framework for the Lessons Learned program, and provides a description of its elements and the method by which lessons learned are developed, entered and shared.
- Currently under review since the last update to the STD was in 1999.





- The Lessons Learned Database is a web-based tool designed to facilitate information sharing in the form of Lessons Learned Reports.
- Potential subjects for the database are identified by reporting organizations throughout the complex and from HQ, and entered into a Lessons Learned Report form.
- Registration is required to access the Lessons Learned Database.





Basic elements in Lessons Learned Reports, include:

- 1. A clear statement of the lesson.
- 2. A background summary of how the lesson was learned.
- 3. Benefits of using the lesson and suggestion on how the lesson may be used in the future.
- 4. Contact information for additional detail.
- 5. Key data fields to aid in searching.
- 6. Priority descriptor that assigns a level of significance to the lesson.
 - Red/Urgent: A lesson from an actual event with adverse consequences.
 - Yellow/Caution: A lesson from a potential event or condition.
 - Blue/Information: A fact or discovery of benefit to others.
 - Green/Good Work Practice: A practice promoting or resulting in a positive outcome; a success story.



Lessons Learned Reports



- Once the reports are reviewed and approved, they are:
 - Searchable in the database.
 - Disseminated to registered users via e-mail.
- LL Database log-in: <u>http://www.hss.energy.gov/sesa/</u> <u>Analysis/DOEII/index.asp</u>

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Office of Analysis Continuous Improvement Initiatives:

- Improve the Corporate Lessons Learned Database, and the quantity and quality of lessons learned submitted and maintained in the database.
- Formally verify existing and identify new OE Program Coordinators; ensure OE Coordinators are fulfilling their responsibilities and implementing OE requirements per DOE O 210.2A.
- Continue to improve the productivity of the OE Committee; the conduct and quality of monthly OE Committee meetings; and the engagement of appropriate site subject matter experts in sharing and discussing operating experience from site, national, and international sources.
- Verify that, as part of self-assessments conducted to evaluate organizational performance in ISM, Line Programs and contractors are including an assessment of the effectiveness of the organization's operating experience program. Utilize the OE Committee in discussing lessons learned and areas needing improvement from these self-assessments.





- Improve the process to evaluate, publish, and disseminate operating experience from external sources (e.g., other Federal agencies; international sources).
- Continually improve performance trending and analysis of information from operating experience; develop more OE documents, to include a greater focus on nuclear safety.

HS-24's Continuous Improvement Request to ERAD:

- Collaborate with HS-24 in identifying OE document topics. We will work with you to produce OE documents.
- Provide Lessons Learned Reports on occurrences and enter into the Lessons Learned Database (within ERAD an emphasis on radiological events should be seen).
- Participate in OEC meetings and provide OE and Lessons Learned and insight to the committee.





Questions/Comments

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OE Documents (HSS) - <u>http://www.hss.doe.gov/SESA/Analysis/oel.html</u> OE Summaries (HSS) - <u>http://www.hss.doe.gov/sesa/Analysis/oesummary/index.html</u> Operating Experience Wiki: <u>http://operatingexperience.doe-hss.wikispaces.net/</u> Operating Experience Summary Blog: <u>http://oesummary.wordpress.com/</u>