

Sandia National Laboratories

Lessons Learned

Program



Lessons Learned

Issues:

- **Drivers for revamping the Lessons Learned Program:**
 - There was no formal Lessons Learned Program
 - Opportunity for improvement from past audits
- **Examples from ISMS Verification:**
 - “There is no systematic method to filter, evaluate, and integrate all sources of Lessons Learned and to ensure that the Lessons Learned disseminated to a particular organization or facility are applicable and pertinent to their operations.”



Lessons Learned

- “[SNL] Managers indicated that feedback and improvement was the weakest ISM core function and that Lessons Learned was one of the weakest links.”
- “SNL has not defined a Laboratory-wide Lessons Learned program...resulting in inconsistent implementation at the division level.”
- **Existing Lessons Learned information was old and out-of-date**



Lessons Learned

Solutions:

- **Formalize Lessons Learned Program**
- **Develop a formal Lessons Learned tool**
- **Develop Lessons Learned Hazard Categories with access via:**
 - Lessons Learned Home Page
 - Sandia Subscription with e-mail notification



Subscription Service - Netscape

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Bookmarks Netsite: <http://www-irm.sandia.gov/cgi-bin/subscribe/subscribe.pl>



Update

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- [Human Resources](#)
- [Lessons Learned](#)
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Lessons Learned

- [All - Lessons Learned](#)
Choose this item to subscribe to all **Lessons Learned** categories.
Last notice sent: Tue Nov 30 10:58:23 MST 1999
- [Biological Agents](#)
Includes such topics as: bloodborne pathogens, dangerous plant or animal life, hantavirus, training, other.
Last notice sent: Tue Nov 23 9:12:21 MST 1999
- [Confined Space Entry](#)
Includes such topics as: injury and fatality prevention activities, training, other.
- [Electrical Safety](#)
Includes such topics as: recalls, work practices and procedures, power strips, GFCIs, batteries, high voltage, electrical shocks, training, other.
Last notice sent: Tue Nov 23 9:03:30 MST 1999
- [Emergency Preparedness](#)
Includes such topics as: evacuation, emergency plans, drills/exercises, emergency response, training, other.
Last notice sent: Mon Nov 29 14:33:12 MST 1999
- [Environmental Protection](#)
Includes such topics as: pollution prevention, recycling, spills, training, other.
- [Fall Prevention](#)
Includes such topics as: recalls, ladders, scaffolds, elevating work platforms, fall protection, training, other.

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Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irm.sandia.gov/esh/lessonslearned_prgm/

Feedback & Improvement Lessons Learned

[Feedback & Improvement Homepage](#) [Subscribe to Lessons Learned](#) [Hot News](#) [Submit Lessons Learned](#) [Priority Descriptor Definitions](#)

Lessons Learned Project Manager: [Chris Tolentino](#)

Lessons Learned - Good work practices or innovative approaches that are captured and shared to promote repeat application. Lessons learned may also be adverse work practices or experiences that are captured and shared to avoid recurrence.

Introduction

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Lessons Learned - Netscape

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Introduction

The Lessons Learned Program is part of the Feedback and Improvement Program. The purpose of the Lessons Learned program is to gather, screen and communicate useful and timely lessons learned to Sandia personnel. These lessons learned will enable Sandia personnel to learn from the experiences of others to perform work safely and efficiently. The program identifies and encourages use of processes and proactive behaviors that enhance work planning and performance while avoiding adverse ES&H events.

Lessons Learned Program

The Lessons Learned Program consists of:

[Lessons Learned](#) by Hazard Category

Internal and external lessons learned are filtered into hazard categories, which were derived from the ES&H Manual chapters.

The lessons learned on this page are extracted from the following sources: DOE Lessons Learned Homepage, DOE ListServ, ORNL

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Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/

Lessons Learned by [ISMS Management Function](#)

Internal and external lessons learned are filtered by the ISMS management functions as a tool for planning the work process.

[Porcelain Press](#)

The Porcelain Press is an informal mechanism for disseminating general safety information to line personnel. It is also used to report on lessons learned from occurrence reports.

[Formal Lessons Learned](#)

Formal lessons learned are used when an event results in a lessons learned being disseminated to others to make them aware of potential hazards and to avoid a similar event in the future.

Lessons Learned Tools

Following are tools to help create Lessons Learned for internal or DOE distribution:

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Start PointCa... Distiller... Microso... Inbox - ... **Lesso...** HotDog... 9:01 AM

Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/

Lessons Learned Tools

Following are tools to help create Lessons Learned for internal or DOE distribution:

- Lessons Learned template ([Word file](#))
- [Porcelain Press Guidance](#)
- Search the [DOE Lessons Learned ListServ Database](#)

Lessons Learned Web Sites

INTERNAL

SNL Divisions

- [1000](#)
- [2000](#)
- [7800/7900](#)
- [8000](#)

ES&H Committees

- [Electrical Safety](#)
- [Explosives Safety](#)
- [Hoisting & Rigging](#)
- [Packaging & Transportation](#) (see P&T)

Document: Done

Start PointCa... Distiller... Microso... Inbox - ... Lesso... HotDog... Double Click to Run 3Com NIC Diagnostics 9:02 AM

Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/

Lessons Learned Web Sites

INTERNAL

SNL Divisions

- [1000](#)
- [2000](#)
- [7800/7900](#)
- [8000](#)
- 9000/15000 (see the [9000 Newsletters](#))
- [14000](#)
- Security (see the [Security Insights](#) newsletters)

ES&H Committees

- [Electrical Safety](#)
- [Explosives Safety](#)
- [Hoisting & Rigging](#)
- [Packaging & Transportation](#) (see P&T Newsletters)
- [Pressure Safety](#)
- [Sandia Radiation Protection Safety Committee](#) (RPSC)
- [Traffic](#)

EXTERNAL

- [DOE ES&H Lessons Learned](#)
- [DOE Office of Environmental Restoration Lessons Learned](#)
- [DOE Operating Experience Lessons Learned](#)

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Start PointCa... Distiller... Microso... Inbox - ... Lesso... HotDog... 9:03 AM

Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/

EXTERNAL

- [DOE ES&H Lessons Learned](#)
- [DOE Office of Environmental Restoration Lessons Learned](#)
- [DOE Operating Experience Lessons Learned](#)
- [DOE Operating Experience Weekly Summaries](#)
- [DOE Society for Effective Lessons Learned \(SELLS\)](#)
- [DOE Technical Information Services](#)
- [Lessons Learned at Other DOE Sites](#)
- Army page of [misc. links](#) (Joint Service, Government, International, Army, Air Force, Marine Corps, Navy, and Coast Guard)
- [LANL Operating Experience Summary](#)
- OSHA - [Fatal Facts](#) (Click on any of the underlined topics to view Fatal Facts)
- [National Institute for Occupational Safety and Health \(NIOSH\)](#)
- [Consumer Product Safety Commission \(CPSC\) Recalls](#)
- For potential urban legends click [here](#) or [here](#)

Lessons Learned Documents

[Lessons Learned Program Document](#)

ES&H Manual [Chapter 22](#) - Feedback and Improvement Processes, [Section 22C](#) - Lessons Learned

Document: Done

Start Distill... Inbox... HotD... Contr... Les... FW: ... 10:26 AM



Lessons Learned



Lessons Learned Categories

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Click on points of the star to go to "Lessons Learned" categorized by the five Integrated Safety Management (ISMS) functions.

Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/index.htm#cats

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Click on points of the star to go to "Lessons Learned" categorized by the five Integrated Safety Management (ISMS) functions.

SNL
Integrated Safety
Management
System (ISMS)

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Start PointCa... Distiller... Microso... Inbox - ... Lesso... HotDog... 9:06 AM

Lessons Learned - Netscape

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Bookmarks Netsite: http://www-irm.sandia.gov/esh/lessonslearned_prgm/lcat/index.htm#cats

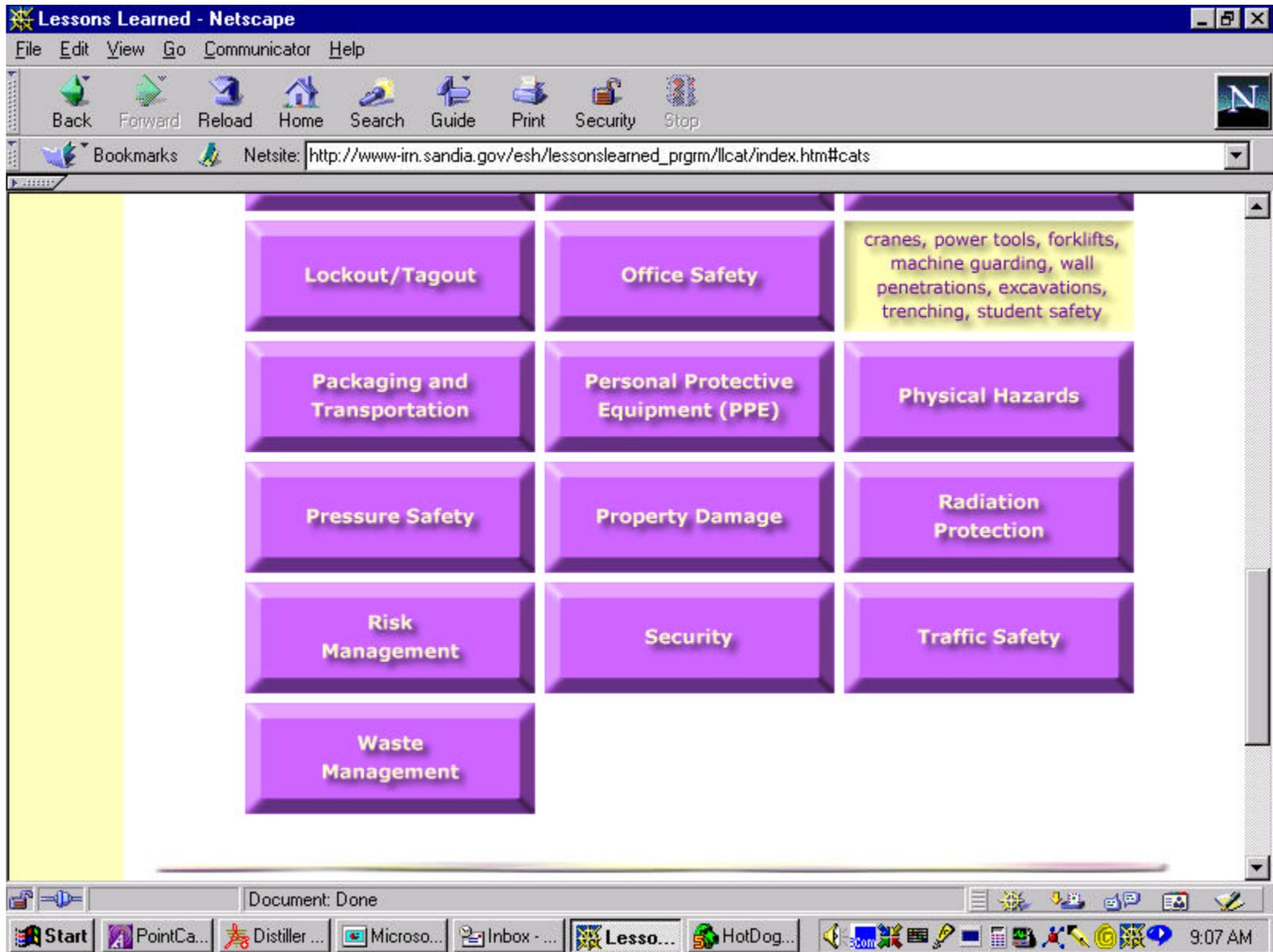
Place your mouse pointer over the buttons for a short description of topics and click to go to "Lessons Learned" categorized by hazards

Biological Agents	Confined Space Entry	Electrical Safety
Emergency Preparedness	Environmental Protection	Firearms and Explosives
Fall Prevention	Fire Protection	Health Hazards
Lockout/Tagout	Office Safety	Other Industrial Safety
Packaging and Transportation	Personal Protective Equipment (PPE)	Physical Hazards

Document: Done

Start PointCa... Distiller... Microso... Inbox - ... Lesso... HotDog... 9:06 AM

A screenshot of a Netscape browser window displaying a web page titled "Lessons Learned - Netscape". The browser's address bar shows the URL "http://www-irm.sandia.gov/esh/lessonslearned_prgm/lcat/index.htm#cats". The main content area features a grid of 15 purple buttons, each representing a different hazard category. The categories are arranged in five rows and three columns. The text on the buttons is: Row 1: Biological Agents, Confined Space Entry, Electrical Safety; Row 2: Emergency Preparedness, Environmental Protection, Firearms and Explosives; Row 3: Fall Prevention, Fire Protection, Health Hazards; Row 4: Lockout/Tagout, Office Safety, Other Industrial Safety; Row 5: Packaging and Transportation, Personal Protective Equipment (PPE), Physical Hazards. The browser's status bar at the bottom shows "Document: Done" and a taskbar with various application icons and the time "9:06 AM".



Other Industrial Safety - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/oisafety.htm

Lessons Learned  **Lessons Learned Categories**

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Other Industrial Safety

[Cranes and Hoisting and Rigging](#) | [Power Tools](#) | [Forklifts](#) | [Machine Guarding](#) | [Wall Penetrations](#) | [Excavations and Trenching](#) | [Student Safety](#) | [Construction](#) | [Injury Prevention](#) | [Training](#) | [Other](#)

Go to the [Sandia Hoisting and Rigging Safety Committee](#) homepage

Cranes and Hoisting and Rigging

[Valley Alert](#) - November 29, 1999 - [Potential Failure of Chain Hoists](#)

Document: Done

Start PointCa... Distiller... Microso... Inbox - ... Other... HotDog... 9:08 AM

Other Industrial Safety - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/oisafety.htm

Other Industrial Safety

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Go to the [Sandia Hoisting and Rigging Safety Committee](#) homepage

Cranes and Hoisting and Rigging

- **Yellow Alert** - November 22, 1999 - [Potential Failure of Chain Hoists](#)
- **Red Alert** - November 16, 1999 - [Near Miss When Sheet Plate Hoist Clamp Fails](#)
- **Blue Alert** - October 19, 1999 - [Swivel Hoist Ring Fails During Cask Lift](#)
- **Blue Alert** - August 20, 1997 - [Should You Be Checking the Weather?](#)

Power Tools

Forklifts

- **Blue Alert** - [Forklift Truck Attachments](#)

http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/oisafety.htm#Wall Penetrations

Start PointCa... Distiller... Microso... Inbox - ... Other... HotDog... 9:08 AM

Potential Failure of Chain Hoists - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/ll/pot_fail_chain_hoist.htm

Lessons Learned



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Lessons Learned - Other Industrial Safety/Cranes and Hoisting and Rigging

Yellow Alert: Potential Failure of Chain Hoists
ISMS Core Function: Feedback and Improvement
Identifier: : 1999-KO-SNL-0007
Date: November 22, 1999

SNL has obtained the following information from the Naval Sea Systems Command, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160 through GIDEP(Government-Industry Data Exchange Program)

Lessons Learned:

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Potential Failure of Chain Hoists - Netscape

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Bookmarks Netsite: http://www-irn.sandia.gov/esh/lessonslearned_prgm/lcat/ll/pot_fail_chain_hoist.htm

Lessons Learned:
Chain hoist inspections reveal potential system failures.

Discussion of Activities:
During a routine inspection of a Yale chain hoist at a private shipyard, it was found that the lower block bolts had less than complete thread engagement. At a minimum, Yale requires the end of the bolt be flush with the top of the nut. During the inspection it was also found that the load chain was incorrectly installed with the chain link welds facing into the driving load sheave. The load chain link welds should be facing away from the driving load sheave in order to prevent a point load on the weld. Subsequent inspections of other makes of chain hoists revealed the same problem.

Recommended Actions:

A. For all Yale link chain or roller chain hoists with two or more parts reeving, regardless of capacity or model, inspect the lower load block bolts for adequate thread engagement. Ensure the end of the bolt is at least flush with the top of the nut, If thread engagement is less than flush with the top of the nut, contact Yale Hoist at 1(800) 999-6318 for longer replacement bolts.

B. Inspect all manual and powered welded link chain hoists (All manufacturers) for correct load chain position. The load chain link welds should be facing away from the driving load sheave. If the chain is found to be installed incorrectly, remove the chain and inspect it per the original equipment manufacturer's procedure. If the chain is defective, replace the chain in accordance with the original equipment manufacturer's recommendations. If the chain hoist was disassembled, load test and recertify the hoist

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Potential Failure of Chain Hoists - Netscape

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Bookmarks Netsite: http://www-irm.sandia.gov/esh/lessonslearned_prgm/lcat/ll/pot_fail_chain_hoist.htm

Recommended Actions:

A. For all Yale link chain or roller chain hoists with two or more parts reeving, regardless of capacity or model, inspect the lower load block bolts for adequate thread engagement. Ensure the end of the bolt is at least flush with the top of the nut, If thread engagement is less than flush with the top of the nut, contact Yale Hoist at 1(800) 999-6318 for longer replacement bolts.

B. Inspect all manual and powered welded link chain hoists (All manufacturers) for correct load chain position. The load chain link welds should be facing away from the driving load sheave. If the chain is found to be installed incorrectly, remove the chain and inspect it per the original equipment manufacturer's procedure. If the chain is defective, replace the chain in accordance with the original equipment manufacturer's recommendations. If the chain hoist was disassembled, load test and recertify the hoist.

Originator: Glen Coleman for GIDEP (703) 6078-2446, E-mail: colmangw@navsea.navy.mil

Authorized Derivative Classifier: SNL has obtained the following information from the Naval Sea Systems Command, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160 through GIDEP(Government-Industry Data Exchange Program

Project Leader: [Chris Tolentino, cdtolen@sandia.gov](mailto:cdtolen@sandia.gov)
Web Maintainer: [Lisa A. Kaneshiro, lakanes@sandia.gov](mailto:lakanes@sandia.gov)

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Hot News - Netscape

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Lessons Learned



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HOT NEWS

Thanks go to the following people for being the first to submit formal Lessons Learned under the new Lessons Learned Program:

1999-KO-SNL-0006 - Laboratory Energy-producing Device Hazardsw and Emergency Response Preparedness
Dennis Johnson

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Hot News - Netscape

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Bookmarks Netsite: <http://lessonslearned.sandia.gov/hotnews.htm>

1999-KO-SNL-0007 - Potential Failure of Chain Hoists
Danny Donald

1999-KO-SNL-0008 - Worker Receives Electrical Shock During Light Fixture Installation
Carla Lamb and Bryan Drennan

Hot News

- **Red Alert** - November 16, 1999 - [Near Miss When Sheet Plate Hoist Clamp Fails](#)
- **Red Alert** - November 10, 1999 - [Results of DNA Damage Tests, JCO Criticality Accident](#)
- **Red Alert** - November 8, 1999 - [Status of patients from the JCO Criticality - Update 11/08](#)
- **Red Alert** - October 19, 1999 - [Acid Spray Burns Nuclear Chemical Operator](#)
- **Red Alert** - October 6, 1999 [Criticality Accident](#)

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Priority Descriptor Definitions - Netscape

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Bookmarks Netsite: http://www-irm.sandia.gov/esh/lessonslearned_prgm/lcat/ppdef.htm



Lessons Learned **Work Safely** Lessons Learned Categories

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Priority Descriptor Definitions

<p>Red/Urgent priority lessons learned contain information from actual events that have affected worker or public safety, involved significant violations of federal or state laws, or resulted in major loss or damage to equipment, property, or facilities.</p>	<p>Blue/Informational lessons learned contain information that may protect workers, the public, or the environment, improve compliance or management performance, or benefit public relations.</p>
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http://www-irm.sandia.gov/esh/lessonslearned_prgm/lcat/index.htm

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Priority Descriptor Definitions - Netscape

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Bookmarks Netsite: http://www-ir.n.sandia.gov/esh/lessonslearned_prgm/lcat/ppdef.htm

Priority Descriptor Definitions

<p>Red/Urgent priority lessons learned contain information from actual events that have affected worker or public safety, involved significant violations of federal or state laws, or resulted in major loss or damage to equipment, property, or facilities.</p>	<p>Blue/Informational lessons learned contain information that may protect workers, the public, or the environment, improve compliance or management performance, or benefit public relations.</p>
<p>Yellow/Cautionary priority lessons learned contain information on potential events or conditions that could result in the same types of adverse conditions caused by Red/Urgent events.</p>	<p>Green/Good Work Practice lessons learned provide subscribers with a means to share good work practices. These messages may include information on actions, activities, or practices that maintain or improve practices that maintain or improve process or equipment reliability, safety, or efficiency. They may also communicate initiatives that can reduce costs and improve efficiency.</p>

<http://www-ir.n.sandia.gov/cgi-bin/subscribe/subscribe.pl>

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