



December 2010

Electrical Safety Occurrences

The number of electrical safety events for December decreased from eleven in November to eight. There was one event in which non-electrical workers felt a minor shock (tingle) through their wet gloves while plugging in and unplugging a grinder from an extension cord in wet conditions. A ground fault circuit interrupter (GFCI) was being used but it did not trip. Work planners need to consider environmental conditions particularly when cord-and-plug equipment or tools are used that could be exposed to wet environments. Workers should always use a GFCI, wear appropriate PPE, inspect power cords and extension cords for damage, and consider battery-operated or air-powered hand tools as an alternative. There were only two electrical intrusion events this month. Both involved the accidental cutting of energized electrical conductors, one by a concrete saw, and the other by a water jet. The location of both electrical conductors was hidden by concrete.

As we close out the calendar year, a positive indicator is the low number of events involving lockout/tagout (LOTO) and job planning. This is the third month in a row in which we've seen low numbers in these areas. However, improvement is still needed. We continue to see LOTO events that occur because workers fail to hang their locks when required or they fail to obtain permission before removing them. Managers and supervisors need to continue to emphasize procedure compliance for hazardous energy control and workers need to take the time to do it right. When we effectively control the hazard we reduce the potential for contact with the hazard.

The following table shows a breakdown of the electrical safety events for December.

Number of Events	Involving:
1	Electrical Shocks
0	Electrical Burns
3	Hazardous Energy Control
1	Inadequate Job Planning
1	Inadvertent Drilling/Cutting of Electrical Conductor
1	Excavation of Electrical Conductors
0	Vehicle Intrusion of Electrical Conductors
2	Electrical Near Miss
3	Electrical Workers
5	Non-Electrical Workers
5	Subcontractors

In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month (excluding Significance Category R reports), and for the following ORPS "HQ keywords": 01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical), 08A – Electrical Shock, 08J – Near Miss (Electrical), 12C – Electrical Safety

Using the key words above, eight events were identified.

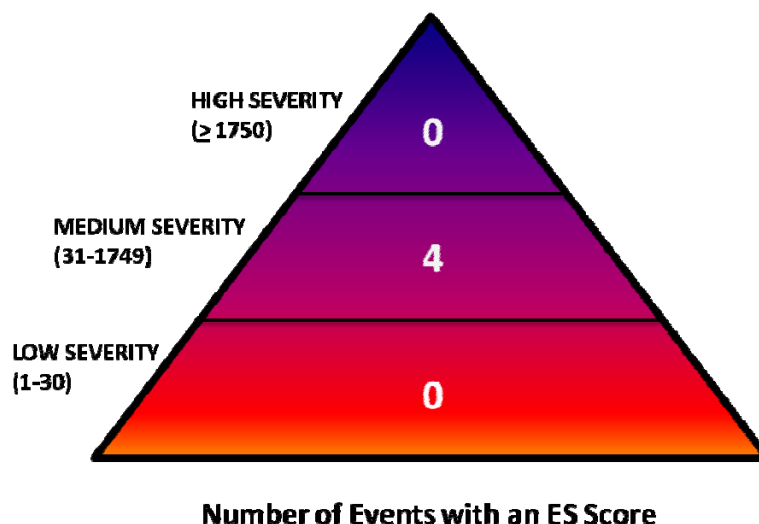
Below is the current summary of 2010 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
December	8	1	0	0
November	11	2	0	0
October	17	2	0	0
September	17	1	0	0
August	13	4	2	0
July	22	5	0	0
June	13	4	0	0
May	7	1	0	0
April	13	2	0	0
March	13	2	0	0
February	13	4	0	0
January	8	0	0	0
2010 total	155 (avg. 12.9/month)	28	2	0
2009 total	128 (avg. 10.7/month)	25	3	0
2008 total	113 (avg. 9.4/month)	26	1	0
2007 total	140 (avg. 11.7/month)	25	2	0
2006 total	166 (avg. 13.8/month)	26	3	0
2005 total	165 (avg. 13.8/month)	39	5	0
2004 total	149 (avg. 12.4/month)	25	3	1

The eight events in December 2010, brings the monthly average for the year to 12.9 events, which is approximately three more events per month over the rate of electrical safety occurrences in 2009.

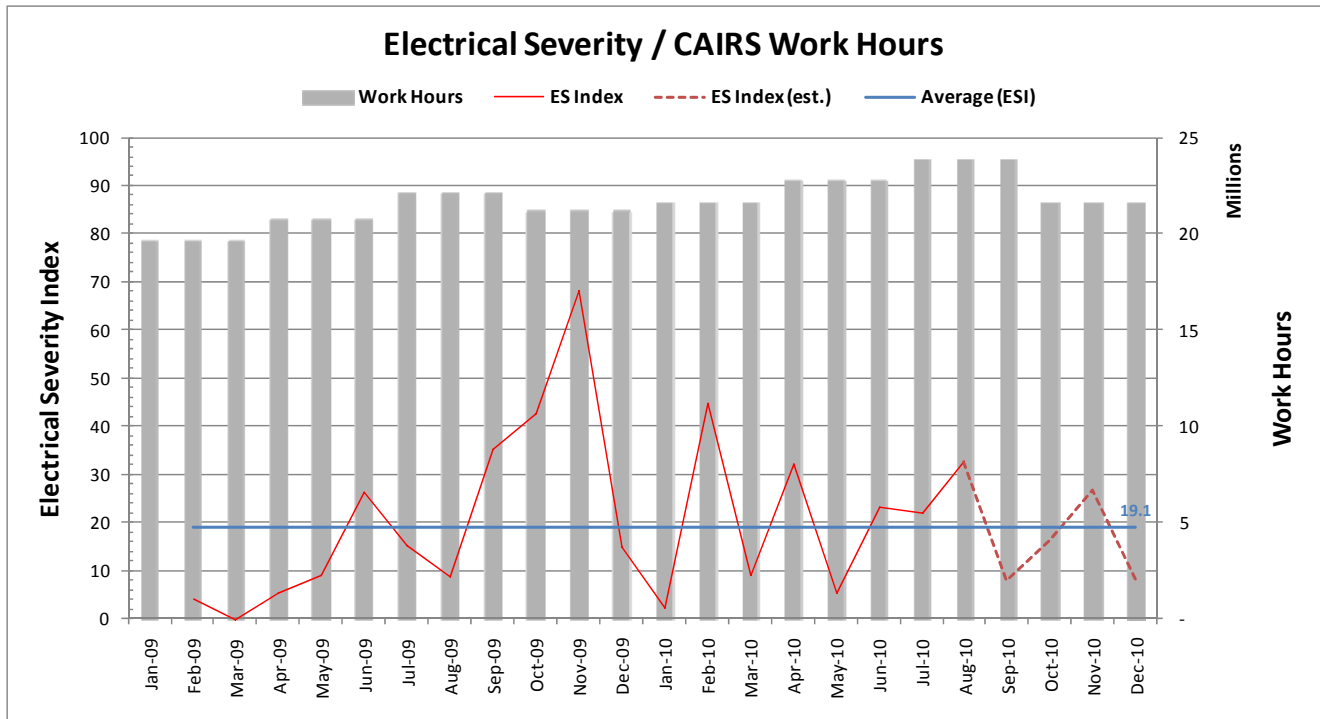
Continue to evaluate electrical events using the Electrical Severity Measurement Tool. The electrical severity scores are calculated using Revision 2 of the Electrical Severity Measurement Tool, which was released October 20, 2010.

Four of the electrical events were determined to have no Electrical Severity (ES) score. The other four events were distributed as shown below, with the highest ES score being 550.



Electrical Severity Index

The following chart shows a calculated Electrical Severity Index (ESI) for the DOE complex.



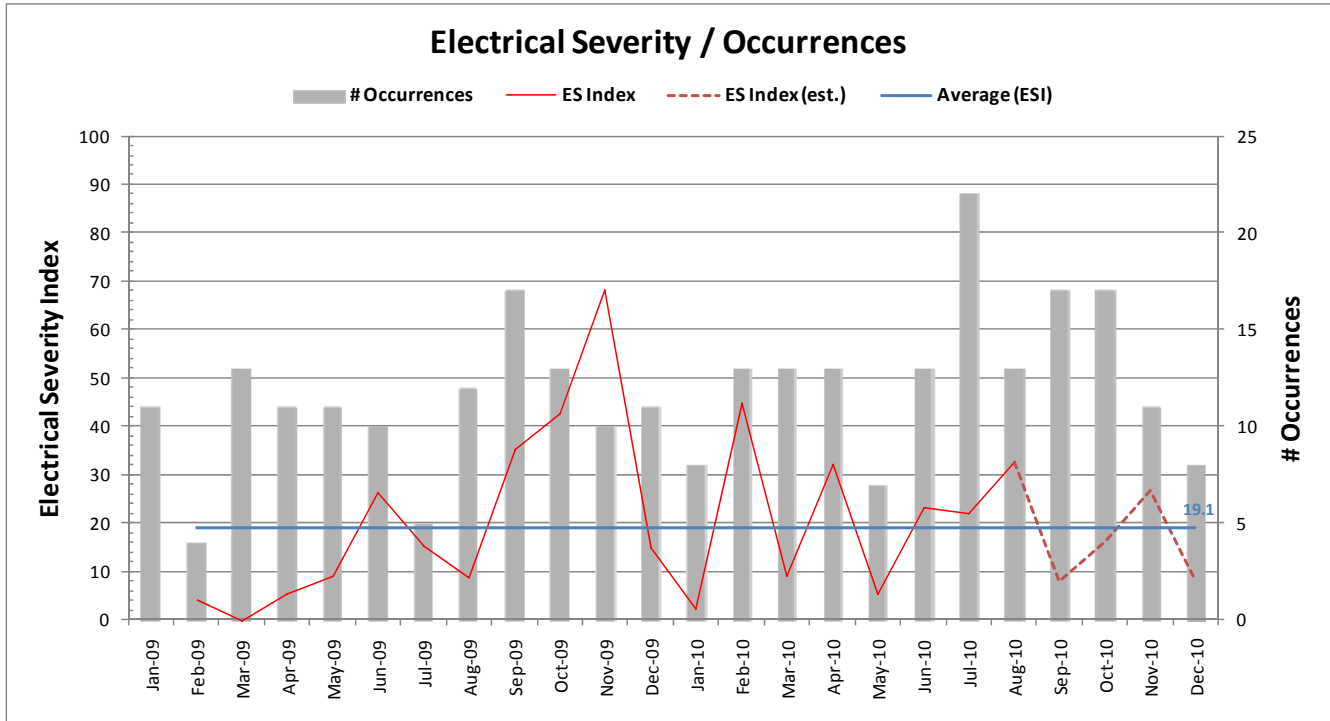
Note: An estimated ESI is calculated until accurate CAIRS man-hours are available. The chart will be updated monthly.

Category	November	December	Δ
Total Occurrences	11	8	-3
Total Electrical Severity	2,870	890	-1500
Estimated Work Hours	21,581,355* (22,449,113)	21,578,874	-2,481
ES Index	26.60* (25.57)	8.25	-18.35
Average ESI	19.4	19.1	-0.3

* These are estimated CAIRS work hours for November and ES Index based on the estimated hours. The estimated hours and ES Index based on the estimated hours (as reported in November) are shown below in parentheses.

$$\text{Electrical Severity Index} = (\sum \text{Electrical Severity} / \sum \text{Work Hours}) 200,000$$

The following chart shows ESI with the number of Occurrences instead of work hours.

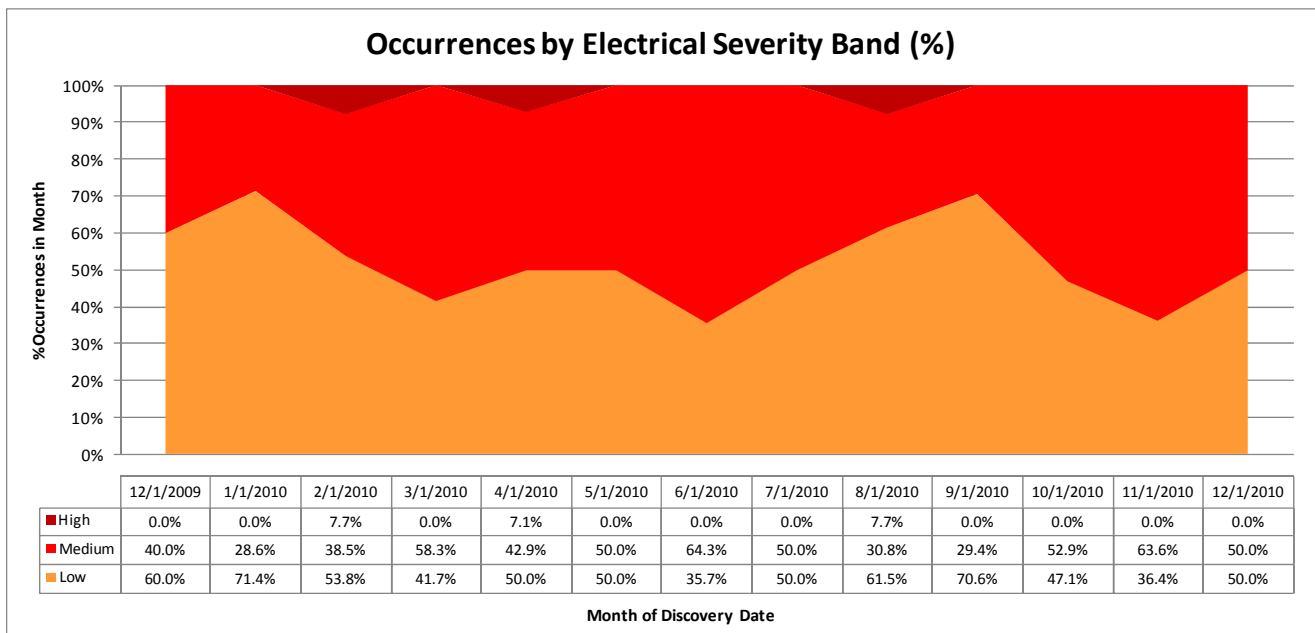


Summary of Occurrences by Severity Band

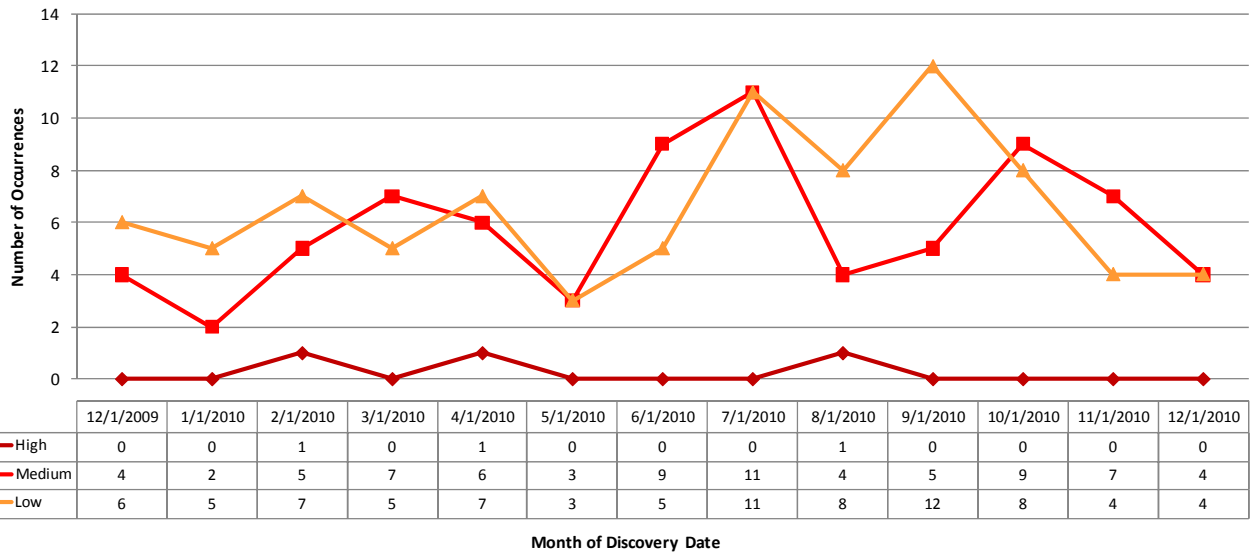
For the interval December 2009 through December 2010 (current month and the past 12), the two charts below summarize occurrences by severity band and month of discovery date:

- By percentage of total occurrences in month
- By number of occurrences in month

The key observation is that Medium severity occurrences as a group increased in CY2010.



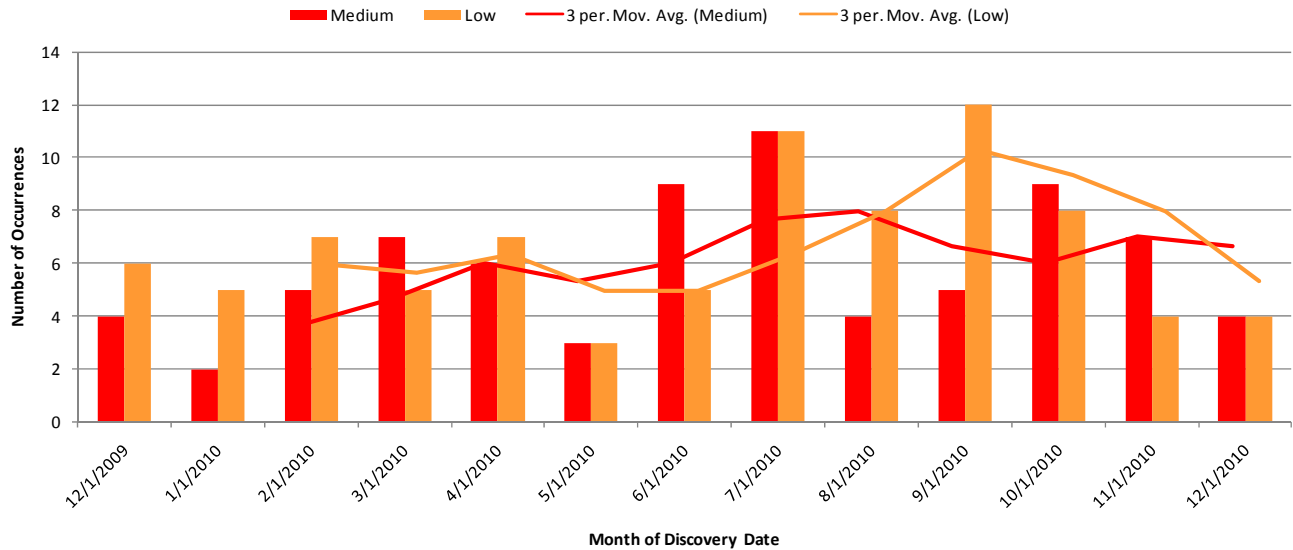
Occurrences by Electrical Severity Band (#)



Medium and Low Severity with Trend

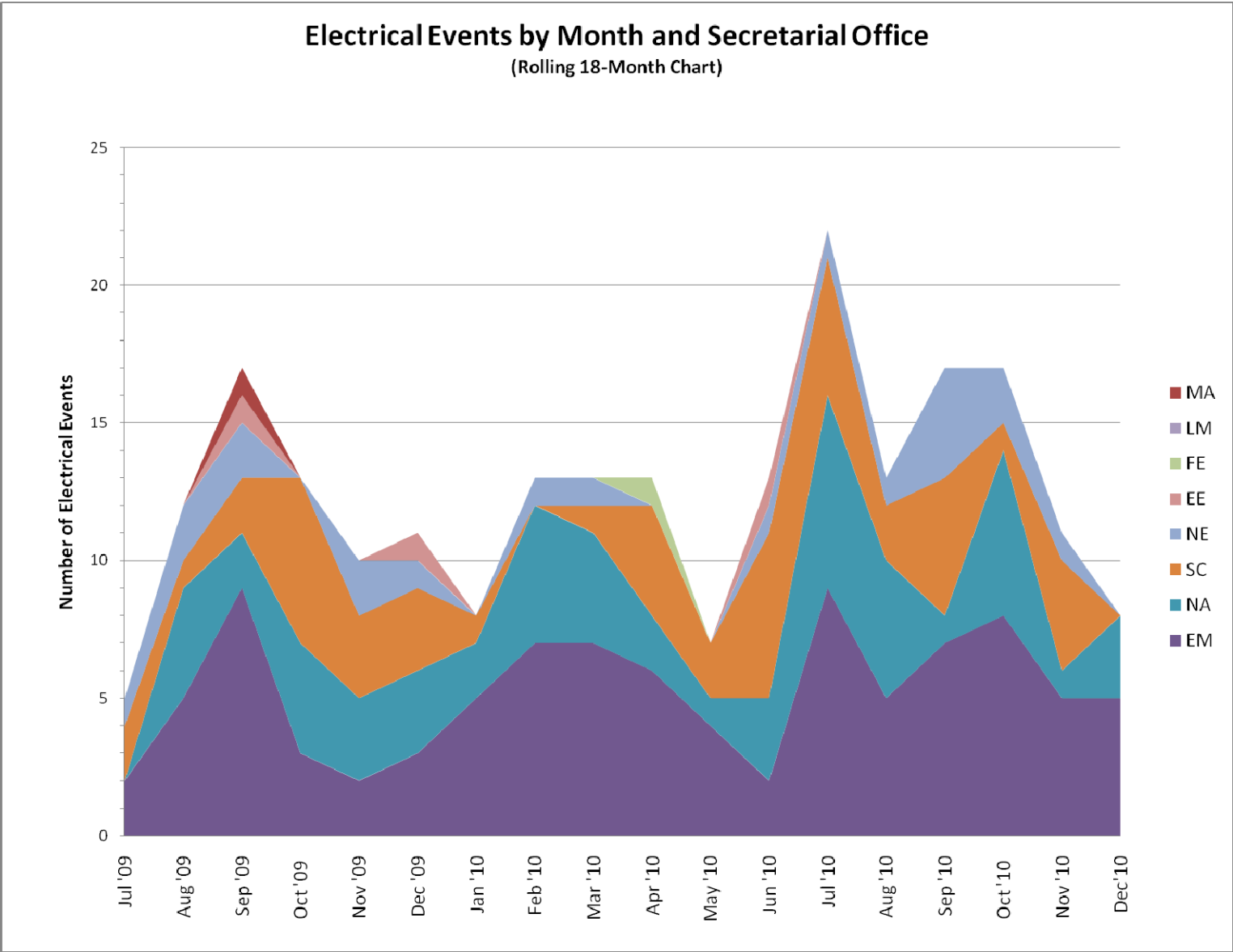
The following chart focuses on the Medium and Low severity data series for December 2009 through December 2010. Trend lines are included for each, using a 3-month moving average.

Medium and Low Severity with Trend



Electrical Events by Month and Secretarial Office

(Rolling 18-Month Chart)



EE - Energy Efficiency and Renewable Energy, EM - Environmental Management, FE - Fossil Energy, LM - Legacy Management, MA - Management, NA - National Nuclear Security Administration, NE - Nuclear Energy, SC - Science

Electrical Safety Occurrences – December 2010

No	Report Number	Event Summary	SHOCK	BURN	ARCF ⁽¹⁾	LOTO ⁽²⁾	PLAN ⁽³⁾	EXCAV ⁽⁴⁾	CUT/D ⁽⁵⁾	VEH ⁽⁶⁾	SC ⁽⁷⁾	RC ⁽⁸⁾	ES ⁽⁹⁾
1	EM-RL--CPRC-GENLAREAS-2010-0024	Workers failed to hang their AWL during backfill after a damaged conduit for temporary lighting was repaired.				X	X				3	2C(2)	0
2	EM-RL--CPRC-PFP-2010-0020	Electricians removed a LOTO without getting authorization from the shift manager.				X					3	2C(2)	0
3	EM-RL--CPRC-PFP-2010-0022	Electricians replaced a fuse without following proper hazardous energy controls.				X					3	2C(2)	0
4	EM-RL--WCH-DND-2010-0011	Ironworkers felt a minor tingle in their hands while plugging and unplugging a grinder from a wet electrical extension cord.	X								4	10(2)	110
5	EM-RL--WCH-ERDF-2011-0001	Worker cut an energized 277-V line during concrete pad work.							X		3	2C(2)	550
6	NA--LASO-LANL-ADOADMIN-2010-0001	Carpenters observed a flash from a cable that was left in place with exposed conductors.									4	10(2)	0
7	NA--PS-BWP-PANTEX-2010-0074	Energized 110-V conductor cut during concrete slab preparation.						X			3	2C(2)	110
8	NA--SS-SNL-NMSITE-2010-0003	An electrical contractor (without PPE) broke the limited approach barrier of an electrical panel.									3	10(3)	120
	TOTAL		1	0	0	3	1	1	1	0			

Key

(1) ARCF = significant arc flash, (2) LOTO = lockout/tagout, (3) PLAN = job planning, (4) EXCAV = excavation/penetration, (5) CUT/D = cutting or drilling, (6) VEH = vehicle event, (7) SC = ORPS significance category, (8) RC = ORPS reporting criteria, (9) ES = electrical severity

ES Scores: High is ≥ 1750 , Medium is 31-1749, and Low is 1-30

Electrical Safety Occurrences – December 2010

No	Report Number	Event Summary	EW ⁽¹⁾	N-EW ⁽²⁾	SUB ⁽³⁾	HFW ⁽⁴⁾	WFH ⁽⁵⁾	PPE ⁽⁶⁾	70E ⁽⁷⁾	VOLT ⁽⁸⁾		C/I ⁽⁹⁾	NEUT ⁽¹⁰⁾	NM ⁽¹¹⁾
										H	L			
1	EM-RL--CPRC-GENLAREAS-2010-0024	Workers failed to hang their AWL during backfill after a damaged conduit for temporary lighting was repaired.		X	X		X				X			
2	EM-RL--CPRC-PFP-2010-0020	Electricians removed a LOTO without getting authorization from the shift manager.	X				X				X			
3	EM-RL--CPRC-PFP-2010-0022	Electricians replaced a fuse without following proper hazardous energy controls.	X				X				X			
4	EM-RL--WCH-DND-2010-0011	Ironworkers felt a minor tingle in their hands while plugging and unplugging a grinder from a wet electrical extension cord.		X	X	X					X			
5	EM-RL--WCH-ERDF-2011-0001	Worker cut an energized 277-V line during concrete pad work.		X	X	X					X			X
6	NA--LASO-LANL-ADOADMIN-2010-0001	Carpenters saw a flash from a cable that was left in place with exposed energized conductors.		X			X				X			
7	NA--PS-BWP-PANTEX-2010-0074	Energized 110-V conductor cut during concrete slab preparation.		X	X	X					X			
8	NA--SS-SNL-NMSITE-2010-0003	An electrical contractor (without PPE) broke the limited approach barrier of an electrical panel.	X		X		X	X	X		X			X
	TOTAL		3	5	5	3	5	1	1	0	8	0	0	2

Key

(1) EW = electrical worker, (2) N-EW = non-electrical worker, (3) SUB = subcontractor, (4) HFW = hazard found the worker, (5) WFH = worker found the hazard, (6) PPE = inadequate or no PPE used, (7) 70E = NFPA 70E issues, (8) VOLT = H (>600) L (≤600), (9) C/I = Capacitance/Inductance, (10) NEUT = neutral circuit, (11) NM = near miss

ORPS Operating Experience Report

ORPS contains 55011 OR(s) with 58321 occurrences(s) as of 1/11/2011 9:58:40 AM
 Query selected 8 OR(s) with 8 occurrences(s) as of 1/11/2011 11:56:14 AM

Download this report in Microsoft Word format. 

1)Report Number:	EM-RL--CPRC-GENLAREAS-2010-0024 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	Plateau Remediation General Facilities		
Subject/Title:	Authorized Worker Locks were not applied to Controlling Organization Lock - ARRA		
Date/Time Discovered:	12/15/2010 16:30 (PTZ)		
Date/Time Categorized:	12/15/2010 16:40 (PTZ)		
Report Type:	Final		
Report Dates:	Notification	12/16/2010	11:54 (ETZ)
	Initial Update	12/30/2010	18:43 (ETZ)
	Latest Update	01/03/2011	11:00 (ETZ)
	Final	01/03/2011	11:00 (ETZ)
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:	A4B1C01 - Management Problem; Management Methods Less Than Adequate (LTA); Management policy guidance / expectations not well-defined, understood or enforced A4B4C11 - Management Problem; Supervisory Methods LTA; Assignment did not consider worker's ingrained work patterns		
ISM:	1) Define the Scope of Work		
Subcontractor Involved:	Yes Skanska, Watts Construction		
Occurrence Description:	On 12/14/2010 at approximately 1500 hours after repair of a damaged conduit that was providing power to temporary lighting at the 200 West Pump and Treat, a violation to the DOE- 0336, Hanford Site Lockout/Tagout occurred. Controlling Organization (CO) lock and appropriate Authorized Worker Locks (AWL) were use to de-energize the circuit to allow repairs to made to a damaged		

	<p>conduit. Subsequent to the repair it was decided to keep the circuit locked out during trench backfilling activities, and the CO lock was left in place. Workers deployed to complete backfill operations did not apply their AWL to the CO before performing the backfill activities. At no time during the backfill work evolution were workers subject to hazardous energy.</p> <p>During the ensuing investigation on 12/15/2010 of the damaged conduit event, management determined that a noncompliance with DOE- 0336 occurred when the workers performing backfill activities did not apply their AWL to the CO.</p>
Cause Description:	<p>A4B1C01 - Management policy guidance/expectations not well-defined, understood or enforced.</p> <p>A4B5C11 - Changes not adequately communicated.</p> <p>During backfilling of a trench, a 3/4 inch temporary lighting conduit was damaged due to insufficient fill material being placed beneath the conduit. The temporary lighting circuit was properly locked out and repairs were completed. Construction Management made the decision to leave the lighting circuit locked out for the duration of the backfilling activity. This change in the work process was not adequately communicated to the workers performing the backfill operation after the conduit repair. There was an informal pre-job for the workers returning to perform the backfilling, but it did not cover in adequate detail the requirements for workers to install Lockout/Tagout.</p> <p>The work package to perform the backfilling requires that live utilities be de-energized prior to performing any excavation activity within 5 feet of the utility. Construction Management initially applied this requirement to only the initial excavation and then determined it should be applied to the entire excavation activity, including the backfilling. This change in the overall process contributed to the event.</p> <p>Corrective Actions 3 and 4 address the apparent causes.</p>
Operating Conditions:	Does not apply
Activity Category:	Construction
Immediate Action(s):	<ul style="list-style-type: none"> - Verified the area was a safe configuration - Initiated an investigation - Initiated an extent of condition review
FM Evaluation:	Lockout/Tagout violations of this nature have occurred at other CHPRC projects and as such Corrective Action 1 was generated as a lessons learned for other facilities, and Corrective Action 2 will mitigate the potential for similar instances to occur at the 200W Pump and Treat.
DOE Facility Representative Input:	
DOE Program Manager Input:	

Further Evaluation is Required:	No	
Division or Project:	Central Plateau Remediation Project, EPC	
Plant Area:	200 West	
System/Building/Equipment:	200 West Pump and Treat / Near the Bio-Processing Building 2	
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)	
Corrective Action 01:	Target Completion Date: 02/25/2011	Tracking ID: CR-2010-3891
	Prepare and submit a lessons learned of this event to the CHPRC Lessons Learned coordinator.	
Corrective Action 02:	Target Completion Date: 01/20/2011	Tracking ID: CR-2010-3891
	Perform an Extent of Condition review of 200 West Pump and Treat Lock and Tags to ensure no similar issues exists.	
Corrective Action 03:	Target Completion Date: 01/21/2011	Tracking ID: CR-2010-3891
	Discuss event/causes at worker safety meeting or pre-job meeting to prevent recurrence.	
Corrective Action 04:	Target Completion Date: 01/20/2011	Tracking ID: CR-2010-3891
	Review excavation/backfill work packages to ensure appropriate LO/TO controls are in place.	
Lessons(s) Learned:		
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01P--Inadequate Conduct of Operations - Inadequate Oral Communication 01R--Inadequate Conduct of Operations - Management issues 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 13H--Management Concerns - American Recovery and Reinvestment Act (ARRA) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency	
HQ Summary:	On December 14, 2010, after repairing a damaged conduit for temporary lighting at the 200 West Pump and Treat, an administrative violation of the DOE- 0336, Hanford Site	

Lockout/Tagout occurred. Controlling Organization (CO) lock and appropriate Authorized Worker Locks (AWL) were used to de-energize the circuit to repair the damaged conduit. Subsequent to the repair, it was decided to keep the circuit locked out during trench backfilling, and the CO lock was left in place. The workers who were to complete the backfill did not apply their AWL to the CO before backfilling. At no time during the backfill were the workers exposed to hazardous energy. During the ensuing investigation on December 15, management determined that an administrative noncompliance with DOE- 0336 occurred when the workers did not apply their AWL to the CO. An extent of condition review was initiated.

- Similar OR Report Number:**
1. EM-RL--CPRC-WRAP-2010-0004
 2. EM-RL--CPRC-SNF-2009-0004
 3. EM-RL--CPRC-SOLIDWASTE-2010-0004
 - 4.
 - 5.
 - 6.

Facility Manager:

Name	Mike Ostrom
Phone	(509) 438-9808
Title	Project Director

Originator:

Name	Olsen, Rae A
Phone	(509) 376-0640
Title	QUALITY ASSURANCE ENGINEER

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
12/15/2010	16:45 (PTZ)	Kent Dorr	CHPRC
12/15/2010	17:05 (PTZ)	Brian Biro	DOE-RL
12/15/2010	17:41 (PTZ)	Davis	ONC

Authorized Classifier(AC):

2)Report Number:	EM-RL--CPRC-PFP-2010-0020 After 2003 Redesign
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	Plutonium Finishing Plant
Subject/Title:	Controlling Organization LOTO Removed without Authorization Following Chiller Substation Isolation
Date/Time Discovered:	12/06/2010 10:00 (PTZ)
Date/Time Categorized:	12/06/2010 11:45 (PTZ)

Report Type:	Notification		
Report Dates:	Notification	12/08/2010	19:53 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:			
ISM:			
Subcontractor Involved:	No		
Occurrence Description:	<p>On 12/6/2010, at the 234-5Z complex, Hanford site Electrical Utilities (EU) was at PFP and isolated power to the substation that feeds the 234-5Z complex chiller units. An EU Hold Off tag was placed on the pole. A controlling organization LOTO was hung, over-tagging the Hold Off tag. This LOTO was authorized, hung and verified, and safe condition check performed. After the work was complete and the substation was closed up, the electricians removed the LOTO without getting proper authorization from the shift manager (Controlling Organization Administrator). At no time was any personnel exposed to uncontrolled hazardous energy.</p> <p>A Critique was held.</p>		
Cause Description:			
Operating Conditions:	Normal Operations		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		
Immediate Action(s):	No immediate actions were taken or needed to place the affected system in a safe configuration.		
FM Evaluation:			
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	<p>Yes. Before Further Operation? No By Whom: Occurrence Investigator</p>		

	By When:																							
Division or Project:	Plutonium Finishing Plant Closure Project																							
Plant Area:	200 West																							
System/Building/Equipment:	234-5Z/Chiller Unit Substation																							
Facility Function:	Plutonium Processing and Handling																							
Corrective Action:																								
Lessons(s) Learned:																								
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency																							
HQ Summary:	On December 6, 2010, at the Plutonium Finishing Plant, Electrical Utilities (EU) electricians had isolated power to the substation that feeds the 234-5Z complex chiller units. They placed an EU Hold Off tag on the pole and then over-tagged the Hold Off tag with a controlling organization lockout/tagout (LOTO). This LOTO was authorized, hung, and verified, and a safe condition check was performed. After the work was completed and the substation was closed up, the electricians removed the LOTO without getting proper authorization from the shift manager (Controlling Organization Administrator). No personnel were exposed to uncontrolled hazardous energy and no immediate actions were taken or needed. A critique was held.																							
Similar OR Report Number:																								
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">John Carranco</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 376-3293</td> </tr> <tr> <td>Title</td> <td colspan="3">Deputy Project Manager</td> </tr> </table>				Name	John Carranco			Phone	(509) 376-3293			Title	Deputy Project Manager										
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Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">GIBSON, SHAWN A.</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 373-2523</td> </tr> <tr> <td>Title</td> <td colspan="3">OPERATIONS SPECIALIST</td> </tr> </table>				Name	GIBSON, SHAWN A.			Phone	(509) 373-2523			Title	OPERATIONS SPECIALIST										
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12/06/2010	10:48 (PTZ)	K M Schierman	DOE-RL																					
Authorized Classifier(AC):																								

3)Report Number:	EM-RL--CPRC-PFP-2010-0022 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	Plutonium Finishing Plant		
Subject/Title:	Fuse Replacement Activity did not Follow Proper Hazardous Energy Controls		
Date/Time Discovered:	12/14/2010 15:30 (PTZ)		
Date/Time Categorized:	12/14/2010 17:00 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	12/16/2010	19:26 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:			
ISM:			
Subcontractor Involved:	No		
Occurrence Description:	On 12/14/2010, the PFP Maintenance Manager, following preliminary investigation of information brought to their attention regarding replacement of a fuse for an electrical disconnect to MO-032, discovered the fuse replacement activity did not follow proper hazardous energy controls (DOE-0336). Initial investigation indicates that the fuse replacement is the work scope of the MSA contract, but was performed by CHPRC/PFP personnel on 11/30/2010.		
Cause Description:			
Operating Conditions:	Normal Operations		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		
Immediate Action(s):	The fuse configuration was checked and determined to be in a safe and compliant condition. No immediate actions are required at this time to ensure proper control and safety. A critique is being scheduled.		
FM Evaluation:			

DOE Facility Representative Input:									
DOE Program Manager Input:									
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Occurrence Investigator By When:								
Division or Project:	Plutonium Finishing Plant Closure Project								
Plant Area:	200 West								
System/Building/Equipment:	MO-032 of the 234-5Z Complex								
Facility Function:	Plutonium Processing and Handling								
Corrective Action:									
Lessons(s) Learned:									
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency								
HQ Summary:	On December 14, 2010, the Plutonium Finishing Plant (PFP) Maintenance Manager, following a preliminary investigation of information brought to their attention regarding replacement of a fuse for an electrical disconnect to MO-032, discovered that the fuse replacement did not follow proper hazardous energy controls (DOE-0336). Initial investigation indicates that the fuse replacement is in the work scope of the MSA contract, but was performed by CHPRC/PFP personnel on November 30. The fuse configuration was checked and determined to be in a safe and compliant condition. No immediate actions are required at this time to ensure proper control and safety. A critique was scheduled.								
Similar OR Report Number:									
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>John Carranco</td> </tr> <tr> <td>Phone</td> <td>(509) 376-3293</td> </tr> <tr> <td>Title</td> <td>Deputy Project Manager</td> </tr> </table>	Name	John Carranco	Phone	(509) 376-3293	Title	Deputy Project Manager		
Name	John Carranco								
Phone	(509) 376-3293								
Title	Deputy Project Manager								
Originator:	<table border="1"> <tr> <td>Name</td> <td>GIBSON, SHAWN A.</td> </tr> <tr> <td>Phone</td> <td>(509) 373-2523</td> </tr> <tr> <td>Title</td> <td>OPERATIONS SPECIALIST</td> </tr> </table>	Name	GIBSON, SHAWN A.	Phone	(509) 373-2523	Title	OPERATIONS SPECIALIST		
Name	GIBSON, SHAWN A.								
Phone	(509) 373-2523								
Title	OPERATIONS SPECIALIST								
HQ OC Notification:	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> </tbody> </table>	Date	Time	Person Notified	Organization	NA	NA	NA	NA
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NA	NA	NA	NA						
Other Notifications:	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>12/14/2010</td> <td>17:06 (PTZ)</td> <td>LE Ebbeson</td> <td>CHPRC</td> </tr> </tbody> </table>	Date	Time	Person Notified	Organization	12/14/2010	17:06 (PTZ)	LE Ebbeson	CHPRC
Date	Time	Person Notified	Organization						
12/14/2010	17:06 (PTZ)	LE Ebbeson	CHPRC						

	12/14/2010	17:08 (PTZ)	KM Schierman	DOE-RL
	12/14/2010	17:12 (PTZ)	JM Carranco	CHPRC

Authorized Classifier(AC):

4)Report Number:	EM-RL--WCH-DND-2010-0011 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	Decontamination & Decommissioning		
Subject/Title:	Minor Tingle Felt from an Electrical Extension Cord		
Date/Time Discovered:	12/02/2010 14:40 (PTZ)		
Date/Time Categorized:	12/02/2010 15:30 (PTZ)		
Report Type:	Notification/Final		
Report Dates:	Notification	12/07/2010	20:41 (ETZ)
	Initial Update	12/07/2010	20:41 (ETZ)
	Latest Update	12/07/2010	20:41 (ETZ)
	Final	12/07/2010	20:41 (ETZ)
Significance Category:	4		
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)		
Cause Codes:			
ISM:	5) Provide Feedback and Continuous Improvement		
Subcontractor Involved:	Yes Wm Dickson/Intermech		
Occurrence Description:	On Thursday, 12/2/2010, during work evolutions to place a decommissioned reactor building into Interim Safe Storage (ISS), subcontracted employees on top of the 109N building were working underneath a partially constructed, elevated, metal roof. Adjacent to the covered area was the old flat roof that had an accumulation of snow on it. In order to manage the water on the entire surface of the old roof (and under the new roof), numerous 2 inch channels had been made in the 4-6 inch thick, hardened foam roofing. The iron workers had set up a temporary work bench underneath the metal roof to place electrical tools on and underneath the work bench was a drainage channel. The electricity for the tools on the work bench was supplied by a series of junction boxes or spider boxes that had been set up by electricians. The two involved iron workers were wearing		

Level D Personal Protective Equipment (PPE) which included leather work gloves, fire resistant outer clothing and face shields. At two different times, in quick succession, each iron worker attempted to either plug or unplug a grinder from an electrical extension cord and both felt a minor tingle in their hands. Their work was stopped, the equipment was taken out of service and the event was reported.

During the performance of a Hot Work permit underneath the new metal roof for the ISS project, an iron work (IW1) was plugging an electric grinder into an extension cord from a spider box and felt a mild tingle in his finger tips. IW1 immediately put the grinder and electrical extension cord down on the work bench. Before IW1 could warn anyone, a second iron work (IW2) walked to the work bench and picked up the grinder's electrical cord to unplug it and felt a minor tingle in his hands. The iron workers communicated what they had both experienced and reported the event to their foreman. The foreman unplugged the electrical cord at the spider box and replaced it with a new cord. The Ground Fault Circuit Interrupter (GFCI) on the associated spider box was inspected and it had not tripped. Project management sent the iron workers to a first aid station for a medical evaluation. The iron workers were returned to work with no injuries noted. Subsequent to the event project management ordered electricians to begin an investigation. The suspect cord and grinder were removed from the work site and secured in an office. A stop work for all corded power tools was ordered.

The following day, Friday 12/3/2010, a fact finding meeting was held with project management, where electricians discussed the results of their investigation and equipment inspections. In order to replicate the event conditions, the suspect cord and grinder were returned to the scene. The electricians inspected/tested the double insulated electrical cord and grinder, both were found to be in acceptable condition and were safe to use again. The electricians reported the roof work area has an electrical system of spider boxes and extension cords that were inspected/tested and found to be in an acceptable configuration and condition. The gloves worn by the Iron workers appeared to have some moisture.

It was determined that the presence of accumulated snow, running water in the channels and the cold humid air near the river, combined to make the work conditions very moist. The moisture was absorbed into the work gloves and collected on the electrical cords. Also reported was the iron workers did not wipe the moisture from the equipment before attempting to plug/unplug the power cords. These enhanced conditions allowed the Iron workers to feel a tingle on their hands when they attempted to plug/unplug the grinder from the electrical extension cord. The electricians reported that the GFCI

	would have tripped if three or more milli-amps of electricity were involved in the event. In this case it was determined that only 1 to 2 milli-amps of electricity were involved in the event.
Cause Description:	
Operating Conditions:	Does not apply
Activity Category:	Facility Decontamination/Decommissioning
Immediate Action(s):	<p>The extension cord was taken out of service until it could be inspected by an electrician who deemed the cord to be acceptable for service.</p> <p>The Project discontinued the use of corded power tools but allowed the use of battery operated tools until the event could be reviewed.</p> <p>The Iron Workers were transported to an onsite first aid station for a medical evaluation and returned to work the same day with no injuries were noted.</p> <p>Notifications were made to management and the DOE Facility Representative.</p> <p>WCH scheduled a fact-finding on 12/03/2010 to investigate the event.</p> <p>Project Management requested electricians to inspect and test all equipment involved in the event. All equipment was found to be acceptable for use as there was no damage.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	D4 Operations
Plant Area:	100N
System/Building/Equipment:	extension cord, electrical grinder
Facility Function:	Environmental Restoration Operations
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01Q--Inadequate Conduct of Operations - Personnel error</p> <p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock</p> <p>11D--Other - Natural Phenomena</p>

	11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency															
HQ Summary:	<p>On December 2, 2010, two ironworkers, at two different times, felt a minor tingle in their hands while either plugging in or unplugging a grinder from an electrical extension cord. The ironworkers told the foreman of their experience. The foreman then unplugged the electrical cord at the spider box and replaced it with a new cord. The Ground Fault Circuit Interrupter (GFCI) on the associated spider box was inspected and it had not tripped. The ironworkers were evaluated at a first aid station and returned to work with no injuries noted. The suspect cord and grinder were removed from the work site and secured in an office. The two ironworkers were wearing leather work gloves, fire resistant outer clothing, and face shields. It was determined that the work conditions were very moist because of accumulated snow and cold humid air. Moisture was absorbed into the work gloves and had collected on the electrical cords. The ironworkers did not wipe the moisture from the equipment before attempting to plug/unplug the power cords. Electricians reported that the GFCI would have tripped if 3 or more milliamps of electricity had been sensed; however, it was determined that there was only 1 to 2 milliamps of electricity. The Project discontinued the use of corded power tools but allowed the use of battery operated tools until the event could be reviewed.</p>															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">SMITH, BOBBY</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 372-9411</td> </tr> <tr> <td>Title</td> <td colspan="3">DIRECTOR, D4 OPERATIONS</td> </tr> </table>				Name	SMITH, BOBBY			Phone	(509) 372-9411			Title	DIRECTOR, D4 OPERATIONS		
Name	SMITH, BOBBY															
Phone	(509) 372-9411															
Title	DIRECTOR, D4 OPERATIONS															
Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">TELLER, DONALD S</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 372-9722</td> </tr> <tr> <td>Title</td> <td colspan="3">OCCURRENCE INVESTIGATOR</td> </tr> </table>				Name	TELLER, DONALD S			Phone	(509) 372-9722			Title	OCCURRENCE INVESTIGATOR		
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12/02/2010	15:05 (PTZ)	Deanne McCranie	DOE FR													
12/02/2010	15:40 (PTZ)	Ken Davis	DOE ONC													
Authorized Classifier(AC):																
5)Report Number:	EM-RL--WCH-ERDF-2011-0001 After 2003 Redesign															
Secretarial Office:	Environmental Management															

Lab/Site/Org:	Hanford Site		
Facility Name:	Env.Restoration Disposal Facility		
Subject/Title:	Concrete Saw Cuts an Energized Lighting Line		
Date/Time Discovered:	12/29/2010 09:45 (PTZ)		
Date/Time Categorized:	12/29/2010 11:30 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	01/04/2011	11:43 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:			
ISM:	4) Perform Work Within Controls		
Subcontractor Involved:	Yes Fowler - Acore		
Occurrence Description:	While performing modifications to upgrade the transportation maintenance facility (TMF) at the Environmental Restoration Disposal Facility (ERDF), a subcontractor cut an energized 277 volt line during concrete pad cutting activities. This resulted in a circuit breaker being tripped. There were no injuries or equipment damage.		
Cause Description:			
Operating Conditions:	Does not apply.		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		
Immediate Action(s):	The subcontractor stopped work and notified ERDF management. The breaker was locked/tagged out and a fact finding was initiated.		
FM Evaluation:			
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	No		

Division or Project:	Waste Operations															
Plant Area:	600															
System/Building/Equipment:	concrete saw															
Facility Function:	Environmental Restoration Operations															
Corrective Action 01:	Target Completion Date:		Actual Completion Date:													
	1															
Lessons(s) Learned:																
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01Q--Inadequate Conduct of Operations - Personnel error 07D--Electrical Systems - Electrical Wiring 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency															
HQ Summary:	On December 29, 2010, during modifications to upgrade the Transportation Maintenance Facility at the Environmental Restoration Disposal Facility (ERDF), a subcontractor cut an energized 277-volt line with a saw while cutting a concrete pad. This caused the circuit breaker for the energized line to trip open. The subcontractor stopped work and notified ERDF management. The circuit breaker for the lighting circuit was locked and tagged out and a fact finding effort was initiated. There were no injuries.															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">COVERT, BRUCE</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 373-3228</td> </tr> <tr> <td>Title</td> <td colspan="3">DIRECTOR, WASTE OPERATIONS</td> </tr> </table>				Name	COVERT, BRUCE			Phone	(509) 373-3228			Title	DIRECTOR, WASTE OPERATIONS		
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Phone	(509) 373-3228															
Title	DIRECTOR, WASTE OPERATIONS															
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12/29/2010	11:30 (PTZ)	Josh Allen	DOE FR													
12/29/2010	11:40 (PTZ)	Gary Trump	DOE FR													
Authorized Classifier(AC):																
6)Report Number:	NA--LASO-LANL-ADOADMIN-2010-0001 After 2003 Redesign															

Secretarial Office:	National Nuclear Security Administration		
Lab/Site/Org:	Los Alamos National Laboratory		
Facility Name:	ADO Administration		
Subject/Title:	Management Concern: Electrical Short in Radioactive Liquid Waste (RLW) Room		
Date/Time Discovered:	12/11/2010 15:00 (MTZ)		
Date/Time Categorized:	12/15/2010 15:00 (MTZ)		
Report Type:	Notification/Final		
Report Dates:	Notification	12/16/2010	18:01 (ETZ)
	Initial Update	12/16/2010	18:01 (ETZ)
	Latest Update	12/16/2010	18:01 (ETZ)
	Final	12/16/2010	18:01 (ETZ)
Significance Category:	4		
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)		
Cause Codes:			
ISM:	2) Analyze the Hazards		
Subcontractor Involved:	No		
Occurrence Description:	<p>MANAGEMENT SYNOPSIS: On December 11, 2010 at approximately 1500 two Los Alamos National Laboratory (LANL) Maintenance and Site Service (MSS) carpenters were framing the Radioactive Liquid Waste (RLW) ceiling on the north end of the room.</p> <p>At approximately 1305 the carpenters heard a buzzing sound in the south wall of the RLW room and observed a flash of light through a small 3/4" hole in the wall, the carpenters thought there might be a fire in the wall.</p> <p>The carpenters took a wooden handled hammer and using handle end, broke out a piece of drywall, approximately 10" x 14" and shot a fire extinguisher into the hole.</p> <p>The carpenters notified their MSS Supervisor (S1) immediately. Upon notification, S1 notified the MSS Electrical Supervisor (ES1) of the event. ES1 arrived on site at 1537 and inspected the area for hot spots and arcing and found none. ES1 did find a 12/3 MC cable left</p>		

in the wall with the end of the conductors exposed. ES1 donned appropriate PPE before he began the investigation.

At approximately 1555 The Operations Supervisor (OS) was notified.

At approximately 1555 the Operations Supervisor (S3) was contacted, the S1, S2, and S3 looked for tripped lighting circuits. they found a 50 Amp breaker (Cir. #9) in lighting panel (LPF) tripped. The panel identified this circuit as an emergency lighting inverter (EHA).

ES1 contacted the electrical field engineer (FE) for a possible explanation of the tripped 50 Amp breaker for the inverter. The FE told ES1 that it could be the 277 volt feed to the emergency lighting inverter.

The OS notified the Shift Operations Supervisor (SOS) at 1630.

At approximately 1710 operations installed a Lock Out/Tag Out (LO/TO) on breaker #9 in the LPF panel.

At approximately 1715 and zero voltage check was performed with a proximity tester then confirmed with a volt meter.

At approximately 1720 the Subcontractor Technical Representative (STR) was notified. The STR left a message with the Construction Manager (CM).

At approximately 1738 the SOS notified the Operations Manager (OM).

At approximately 1740 the Los Alamos Fire Department (LAFD) was notified.

LAFD was on scene at 1755. LAFD used a thermal detector to look for hot spots. No hot spots were detected.

The Facility Operations Director (FOD) was notified of the event between 1815 and 1900 on December 11, 2010.

Cause Description:

Operating Conditions:

Normal Operations

Activity Category:

Maintenance

Immediate Action(s):

- 1. All notification made through appropriate chain(s) of command.
- 2. LO/TO applied to circuit #9.

	<p>3. Zero voltage checks conducted.</p> <p>4. LAFD notified.</p> <p>5. Fire Watch posted in room at all times during event.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	CMRR RLUOB
Plant Area:	CMRR RLUOB
System/Building/Equipment:	RLW Room
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01Q--Inadequate Conduct of Operations - Personnel error</p> <p>07D--Electrical Systems - Electrical Wiring</p> <p>12C--EH Categories - Electrical Safety</p> <p>14E--Quality Assurance - Work Process Deficiency</p>
HQ Summary:	<p>On December 11, 2010, two Los Alamos National Laboratory Maintenance and Site Service (MSS) carpenters were framing the Radioactive Liquid Waste (RLW) ceiling on the north end of the room, when they heard a buzzing sound in the south wall of the RLW room and observed a flash of light through a ¾-inch hole in the wall. The carpenters suspected there might be a fire in the wall. They took a wooden handled hammer and using handle end, broke out a 10-inch x 14-inch piece of drywall and directed a fire extinguisher stream into the hole. The carpenters immediately notified their supervisor, who notified the MSS electrical supervisor of the event. The electrical supervisor inspected the area for hot spots and arcing and found none but did find a cable left in the wall with the end of the conductors exposed. A search was conducted for tripped lighting circuits and a 50-Amp circuit breaker (Circuit #9) in the lighting panel was found tripped. The panel identified this circuit as an emergency lighting inverter. The electrical supervisor contacted the electrical field engineer for a possible explanation of the tripped 50-Amp breaker for the inverter. The engineer told the electrical supervisor that it could be the 277-volt feed to the emergency lighting inverter. A lockout/tagout was applied to Circuit #9. Firefighters used a thermal detector to check for hot spots and none were detected.</p>

Similar OR Report Number:				
Facility Manager:	Name	Richard Holmes		
	Phone	(505) 606-2389		
	Title	CMRR Facility Operations Director		
Originator:	Name	WATERS, MARTHA D.		
	Phone	(505) 606-0277		
	Title	OCCURRENCE INVESTIGATOR		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	12/15/2010	15:00 (MTZ)	Herman LeDeux	DOE LASO
Authorized Classifier(AC):	Martha D. Waters Date: 12/16/2010			
7)Report Number:	NA--PS-BWP-PANTEX-2010-0074 After 2003 Redesign			
Secretarial Office:	National Nuclear Security Administration			
Lab/Site/Org:	Pantex Plant			
Facility Name:	Pantex Plant			
Subject/Title:	Energized Conductor cut during concrete slab preparation			
Date/Time Discovered:	12/14/2010 08:00 (CTZ)			
Date/Time Categorized:	12/14/2010 09:19 (CTZ)			
Report Type:	Notification			
Report Dates:	Notification	12/16/2010	17:31 (ETZ)	
	Initial Update			
	Latest Update			
	Final			
Significance Category:	3			
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.			
Cause Codes:				
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls			

	5) Provide Feedback and Continuous Improvement
Subcontractor Involved:	Yes Missouri Valley Inc and PIKA Inc.
Occurrence Description:	<p>Note: The current reporting requirements for hazardous energy control allows for two selections, 2-1-(SC2) and 2-2-(SC3). During the event critique it was identified that the electrical severity measurement of 110 was applied to this event and it was recommended to be reported at a Significance Category 4. This report is being submitted as a 2-2-(SC3).</p> <p>An excavation permit was approved for a facility equipment upgrade project. As a part of this permit, a known energized electrical interference was located and subsequently marked on the accompanying permit. Physical locations were marked by placing tape on top of the concrete slab, up to one side of an existing pit, to identify a part of the interference routing location. The work scope included enlarging the pit and trench by cutting and removing the concrete on the opposite side of the trench from the applied interference markings.</p> <p>On two separate instances, utilizing different detection methods, the B&W Pantex Utility locators were unable to provide an exact location for this known interference, but stated that the identified location was within a foot of the permit drawings and tape that had been applied on the concrete up to the edge of the trench. It was up to the subcontractor's interpretation to identify the continuation of this marked line across the width of the open trench (where there were no markings).</p> <p>On 11-17-10, PIKA Inc. a subcontractor to Missouri Valley who is a B&W Pantex General subcontractor began cutting through six (6) to eight (8) inches of concrete, and supporting rebar by using a water jet process on the opposite edge of the foundation area from the identified interference. At this time, the attending Project Subcontract Technical Representative (PSTR) and PIKA discussed a path forward to prevent damaging this identified interference.</p> <p>On 12-13-10, PIKA continued vertical cutting through the six (6) to eight (8) inches of concrete with rebar on the opposite side of the trench from the interference location markings that were affixed to the top of the concrete. Within an hour, as an extra precaution to mitigate an error, PIKA stopped cutting with the water jet prior to where the interference was identified and anticipated to be located. In an attempt to accurately locate this known but previously un-located interference, PIKA hand dug down three feet and eighteen inches on all sides of the existing concrete slab at this side of the trench, but</p>

was unable to locate this interference.

At this time, the job was close to being completed as all vertical concrete sectional cuts had been completed. The only remaining job task required removal of two inch by two inch (2" X 2") one quarter inch (1/4") thick angle iron from the edges of the initial pit / trench. This angle iron was affixed to the pit edges and held in place by concrete and attached rebar.

As a result of these attempts to exactly locate the interference, PIKA and the PSTR believed that the identified interference was not located in close proximity to this area. Subsequently, PIKA used the water jet to cut through the edge of this concrete, attached angle iron and supporting rebar at a 45 degree angle in order to remove the angle iron. This process required PIKA to begin angle cutting from the opposite edge of the trench toward the side of the trench where the tape had been applied as an identifier for approximate location of the known interference.

Upon completion of the angle iron removal, and during the job clean-up, the subcontractor was using 110 V electrical outlets on an adjacent wall, in close proximity to the trench area, to operate a wet/dry vacuum. When called for, the vacuum did not energize. PIKA unplugged the vacuum from this outlet, plugged it into another adjacent outlet and verified that the vacuum was still functional. Since this defective outlet was in close proximity to the trench being cut, the subcontractor stopped work and notified the attending PSTR of the possible problem.

Upon notification, the PSTR called B&W Pantex Electrical shop and requested assistance of the plant electricians to determine the problem. The B&W Pantex Electricians arrived at the area, agreed that the electrical outlet was nonfunctional and that no circuit breaker had been thrown. Nearing the end of shift, a Lock Out Tag Out device was applied to this circuit awaiting further action the next day.

On, 12-14-10, while troubleshooting the previously identified circuit, the Electricians discovered water in and around the de-energized electrical outlet. The Electrician pulled on the wiring inside the conduit leading to the electrical outlet and it appeared loose. He continued to pull the wire from the conduit which identified that, somewhere under the concrete slab, the conduit and internal wiring (known interference) had been cut in half. Upon this discovery a subcontractor LOTO request was submitted to determine the location of the cut electrical conductor so it could be repaired.

	<p>With multiple actions taken to accurately locate the known interference (energized conductor), the subcontractor and the PSTR assumed that there was no danger of striking or cutting the conductor and therefore did not previously request a Lock Out Tag Out.</p> <p>Notifications were made to the Operations Center (OC), who in turn notified B&W Management and Pantex Site Office Duty Officer. An event critique was scheduled and conducted that afternoon.</p> <p>There was no injury to personnel, no damage to facilities or equipment (other than this conduit / wiring), nor any threat to security or the environment as a result of this event.</p>
Cause Description:	
Operating Conditions:	Facility was in normal operations
Activity Category:	Construction
Immediate Action(s):	<p>Stop work</p> <p>Make appropriate notifications to the Operations Center (OC) and B&W Pantex Electric Shop.</p> <p>Electricians arrive at area, determine cause of electrical outage and apply a LOTO.</p> <p>Make follow up event notifications to the OC.</p> <p>Schedule and Conduct an event critique.</p> <p>Subcontractor to submit a LOTO request to identify the circuit location and conduct repairs.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Projects
Plant Area:	Zone 12 North
System/Building/Equipment:	12-68
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>07D--Electrical Systems - Electrical Wiring</p> <p>08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues</p> <p>11G--Other - Subcontractor</p> <p>12C--EH Categories - Electrical Safety</p>

	14E--Quality Assurance - Work Process Deficiency															
HQ Summary:	On December 14, 2010, while troubleshooting a previously identified 110-volt circuit (a known interference) that was damaged during the cutting of a concrete slab, plant electricians discovered water in and around a de-energized electrical outlet that was located near the excavation area. An electrician pulled on the wiring inside a conduit leading to the electrical outlet and it appeared loose. He continued to pull the wire from the conduit which identified that, somewhere under the concrete slab, the conduit and internal wiring had been cut in half by the water jet that was used to cut through the edge of the concrete. Upon this discovery, a subcontractor LOTO request was submitted to determine the location of the cut electrical conductor so that it could be repaired. A critique was scheduled.															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">Marlin Conner</td> </tr> <tr> <td>Phone</td> <td colspan="3">(806) 477-7199</td> </tr> <tr> <td>Title</td> <td colspan="3">Projects Management Department Manager</td> </tr> </table>				Name	Marlin Conner			Phone	(806) 477-7199			Title	Projects Management Department Manager		
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Phone	(806) 477-7199															
Title	Projects Management Department Manager															
Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">MCNABB, RON O</td> </tr> <tr> <td>Phone</td> <td colspan="3">(806) 477-6855</td> </tr> <tr> <td>Title</td> <td colspan="3">SUPPORT REPRESENTATIVE</td> </tr> </table>				Name	MCNABB, RON O			Phone	(806) 477-6855			Title	SUPPORT REPRESENTATIVE		
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HQ OC Notification:	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> </tbody> </table>				Date	Time	Person Notified	Organization	NA	NA	NA	NA				
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12/14/2010	09:19 (CTZ)	John Thurston	PXSO													
Authorized Classifier(AC):	Don Gerber Date: 12/16/2010															
8)Report Number:	NA--SS-SNL-NMSITE-2010-0003 After 2003 Redesign															
Secretarial Office:	National Nuclear Security Administration															
Lab/Site/Org:	Sandia National Laboratories - SS															
Facility Name:	SNL New Mexico Site															
Subject/Title:	Prospective Electrical Firm Representative Breaks Limited Approach Boundary at Electrical Panel (Submitted by SNL for DOE/SSO)															
Date/Time Discovered:	12/22/2010 12:02 (MTZ)															
Date/Time Categorized:	12/22/2010 12:02 (MTZ)															
Report Type:	Update															
Report Dates:	<table border="1"> <tr> <td>Notification</td> <td>12/23/2010</td> <td>13:11 (ETZ)</td> </tr> <tr> <td>Initial Update</td> <td>01/06/2011</td> <td>15:49 (ETZ)</td> </tr> <tr> <td>Latest Update</td> <td>01/06/2011</td> <td>15:49 (ETZ)</td> </tr> </table>				Notification	12/23/2010	13:11 (ETZ)	Initial Update	01/06/2011	15:49 (ETZ)	Latest Update	01/06/2011	15:49 (ETZ)			
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	Final		
Significance Category:	3		
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)		
Cause Codes:			
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls		
Subcontractor Involved:	Yes Akima Management Services, LLC		
Occurrence Description:	<p>On December 21, 2010 the Department of Energy/Sandia Site Office received notification at approximately 1:02 p.m. that an electrical contractor broke the limited approach boundary of an energized electrical panel at a staging area near H Ave and 20th St.</p> <p>A prime contractor was in the process of mobilizing a site trailer (construction trailer) to a construction lay-down yard, and asked two electrical firms to come on-site to provide a quote for the hook-up of electrical power to site trailer.</p> <p>The placement of the construction trailer occurred at the same time that representatives from the two electrical firms arrived at the site (contractor lay down yard). The prime contractor site superintendent was trying to work with the truck driver with respect to placement of the site trailer and was not providing close supervision of the representatives from two electrical firms.</p> <p>At some point during the delivery of the site trailer; the prime contractor site superintendent went to a vehicle to call a site inspector to come out to the work site to ensure proper placement of the trailer. During this timeframe one of the electrical firm representatives (without donning appropriate PPE) broke the limited approach barrier of the electrical panel by removing the screws from the dead front (panel AA 300). When the site inspector arrived at the lay down yard they witnessed one of the representatives kneeling on the ground in front of the panel.</p> <p>The site inspector immediately asked the representative to stop the work activity that was being performed. The inspector then proceeded to ask questions (i.e., did they have knowledge of NFPA 70E, were they aware of the contract policy for working energized etc.). The representatives response to the inspectors questions were</p>		

	<p>no that they was not familiar with NFPA 70E or with the contract policies.</p> <p>The electrical representative was asked to close and secure the dead front panel, which placed it in an electrically safe condition.</p> <p>The Rebuild 12th Street Project is a Federalized DOE/SSO project.</p> <p>Based on the above information the ESI was evaluated as: ESI = 120 (Moderate Hazard) as follows: Electrical hazard factor = 10 (moderate hazard - 120/208 V, < 125 KVA transformer); Environment Factor = 0 (Dry); Shock Proximity Factor = 1 (inside the limited approach boundary); Arc Flash Proximity Factor = 10 (Inside the flash protection boundary); Thermal Proximity Factor = 0 (not applicable for this type of equipment); No PPE Mitigations; Injury factor = 1 (no injury).</p>
Cause Description:	Critique/Fact Finding Performed: 12/22/10
Operating Conditions:	Normal
Activity Category:	Construction
Immediate Action(s):	<p>Electrical contractor was asked to close and secure the dead front panel, which placed it in an electrically safe condition.</p> <p>Notifications were conducted.</p> <p>Investigation was initiated.</p>
FM Evaluation:	<p>EOC - 12/21/10 - Time: 1426</p> <p>EOC # 18932</p> <p>UPDATE 1/6/11 Information was added to the Description of Occurrence. The Title was changed.</p> <p>Request for a Final extension was granted by DOE/SSO/FR, Debbie Garcia-Sanchez. The extension is needed due to the Holiday shutdown and travel schedules for critical members of the team. Extension is granted to Friday, February 18, 2011. END OF UPDATE</p>
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes.</p> <p>Before Further Operation? Yes</p> <p>By Whom: Causal Analysis Team</p>

	By When: 02/18/2011						
Division or Project:	DOE/SSO Project Rebuild 12th Street						
Plant Area:	Tech Area I						
System/Building/Equipment:	Electrical Panel/Near H Ave. and 20th Street						
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)						
Corrective Action:							
Lessons(s) Learned:							
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01F--Inadequate Conduct of Operations - Training Deficiency 01R--Inadequate Conduct of Operations - Management issues 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14B--Quality Assurance - Training and Qualification Deficiency 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency						
HQ Summary:	On December 21, 2010, the Department of Energy/Sandia Site Office was notified that an electrical contractor had broken the limited approach boundary of an energized electrical panel. A prime contractor was moving a site construction trailer to a construction lay-down yard, and had asked two electrical firms to come on site to provide a quote to connect electrical power to the trailer. The representatives from the electrical firms arrived at the lay-down yard while the prime contractor site superintendent was working with the truck driver to place the trailer. When the superintendent went to call for a site inspector to come out and ensure proper placement of the trailer, one of the electrical firm representatives (without donning appropriate PPE) broke the limited approach barrier of the electrical panel by removing the screws from the panel dead front. The site inspector arrived and saw the representative kneeling on the ground in front of the panel. The inspector immediately told the representative to stop and then asked both representatives if they knew of NFPA 70E and if they were aware of the contract policy for energized work. They indicated that they were not aware of these requirements. The electrical representative closed and secured the dead front panel, placing it in an electrically safe condition. An investigation was initiated.						
Similar OR Report Number:							
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>Tanja Fitzgerald</td> </tr> <tr> <td>Phone</td> <td>(505) 845-3058</td> </tr> <tr> <td>Title</td> <td>Center 4800 ES&H Coordinator</td> </tr> </table>	Name	Tanja Fitzgerald	Phone	(505) 845-3058	Title	Center 4800 ES&H Coordinator
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Title	Center 4800 ES&H Coordinator						

Originator:	Name	LUCERO, JEWEELE A		
	Phone	(505) 845-4727		
	Title	REPORTING ADMINISTRATOR		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	12/22/2010	13:29 (MTZ)	Debbie Garcia-Sanchez, FR	DOE/SSO
	12/22/2010	13:29 (MTZ)	Bill Lucy	4021
	12/22/2010	13:29 (MTZ)	Gerry Lipka	4842
	12/22/2010	13:29 (MTZ)	Mike Quinlan	4840
	12/22/2010	13:29 (MTZ)	Lynnwood Dukes	4820
Authorized Classifier(AC):	John Norwalk		Date: 12/22/2010	

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