



Office of Health, Safety and Security

Electrical Safety Report



April 2011

Electrical Safety Occurrences

The number of electrical safety events for April decreased from ten in March to nine, while the electrical severity index increased from 6 to 32 and the average index increased from 20.6 to 21. One of these events involved an electrical shock. In that event, a subcontract worker received a mild shock as he cleaned out a 4-inch hole after core drilling into a concrete floor. The worker had accidentally cut through an embedded PVC conduit containing two energized wires (120-volt to ground and 208-volt phase to phase). When he cleaned the damp sludge from the hole, an energized wire became exposed and touched his finger resulting in a 120-volt shock. The work area had been scanned for interference before starting the job but the conduit did not show up on the scan. The worker was initially wearing rubber electrical and leather gloves while drilling, but switched to lighter gloves when he cleaned out the hole. The damaged circuit was subsequently identified and locked out. This event underscores the importance of understanding the limits of the technology used to perform subsurface investigations (e.g., identifying PVC) and the need to ensure that workers use appropriately-rated personal protective equipment when making blind penetrations.

This month there were four electrical penetration events. In the first event, a carpenter cut an energized 120-volt wire in a lighting circuit with a reciprocating saw while enlarging a door frame. In the second event, a subcontract electrician damaged an energized 120-volt temporary power cable while drilling into drywall. He was aware of the cable but believed it was low enough so that it would not be a problem. In the third event, a construction subcontractor cut into an energized conductor with a pair of diagonal wire cutters, causing a spark and loud pop. The subcontractor was removing portions of a conveyor that was under lockout/tagout (LOTO); however the subcontractor continued the demolition outside of the isolation point. This event illustrates the dangers of exceeding the scope of work, where no protection from hazardous energy existed. The fourth penetration event resulted in an electrical shock and was previously discussed.

There was one reported excavation event this month in which construction workers discovered an unidentified 480-volt electrical cable near a known signal cable conduit while performing an excavation to repair parking lot lighting. The unidentified cable constituted discovery of a component that was not part of the hazardous energy control boundary and therefore was not included in the LOTO. The workers were not exposed to electrical energy.

Also this month, there were two reported LOTO events. In the first event, electrical utility workers conducted power system troubleshooting without proper application of the site's lockout/tagout procedure. In the second event, a subcontractor electrician removed temporary power cables and did not perform a complete zero energy check. Performing a

safe-to-work check to verify zero energy is an important part of the hazardous energy control process. The month of May is National Electrical Safety Month and the focus is on hazardous energy control awareness. This year's slogan is "When in Doubt, Lock it out!" The EFCOG Electrical Safety Task Group has prepared training material, posters, and other important information for this year's campaign, which can be found at http://www.efcog.org/wg/esh_es/electrical_safety_month.htm.

There were four reported electrical near-miss events and the following event is especially noteworthy. An electrician was troubleshooting a transformer and applied a 1,000-volt rated multimeter to a 2,300-volt circuit, causing the multimeter to fail. The electrician had mistakenly identified the system as 480 volts. The electrician's Class 0-5KV rubber gloves, leather over-gloves, fire retardant long sleeve shirt, and safety glasses prevented any injury when the electrical short occurred that damaged the meter. Although the transformer nameplate data correctly indicated the voltage, investigators determined that better, more visible labeling could have helped prevent this event. This near miss resulted in a high electrical severity score. A similar event occurred in February 2007, in which a construction wireman attempted to check an energized 2,400-volt circuit with a digital voltmeter rated for only 1,000 volts. The wireman was not injured but the voltmeter was destroyed. The wireman believed the electrical panel contained only 480 volts and did not check the nameplate data. Improving equipment labeling to increase the visibility of electrical hazards was one of the corrective actions.

The following table shows a breakdown of the electrical safety events for April, 2011.

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

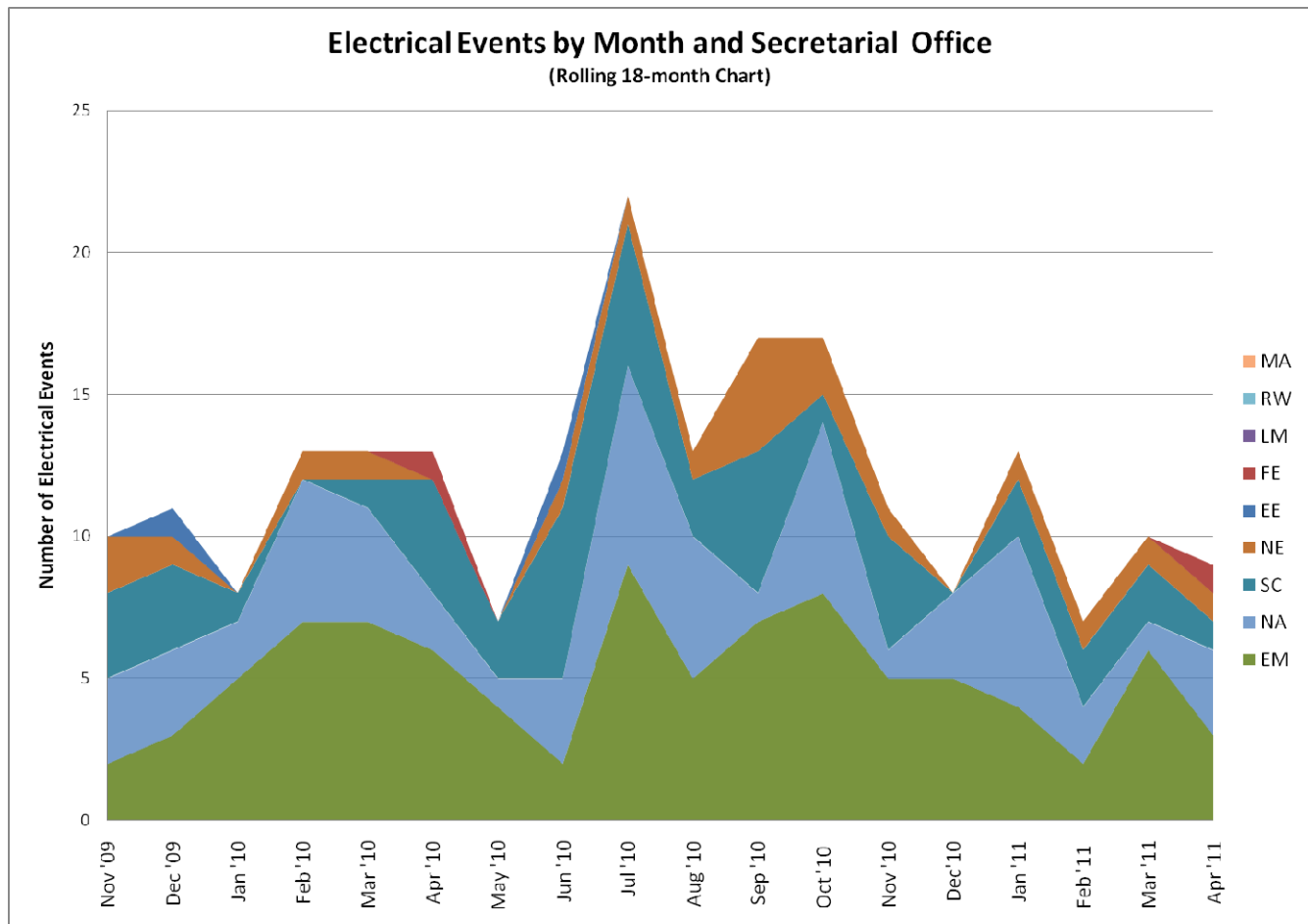
In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month (excluding Significance Category R reports), and for the following ORPS "HQ keywords":

01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical), 08A – Electrical Shock, 08J – Near Miss (Electrical), 12C – Electrical Safety

Below is the current summary of the 2011 electrical safety occurrences:

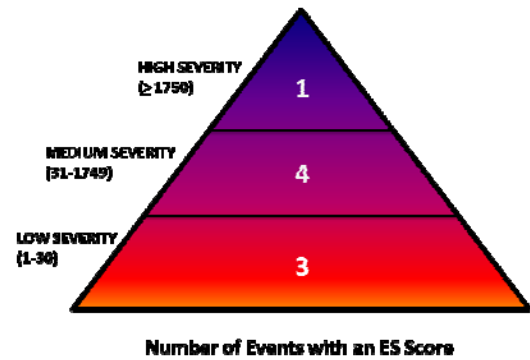
Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
April	9	1	0	0
March	10	1	0	0
February	7	3	0	0
January	13	3	1	0
2011 total	39 (avg. 9.8/month)	8	1	0
2010 total	155 (avg. 12.9/month)	28	2	0
2009 total	128 (avg. 10.7/month)	25	3	0
2008 total	113 (avg. 9.4/month)	26	1	0
2007 total	140 (avg. 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 monthly average for 2011 is lower than the monthly average in calendar years 2009 and 2010.



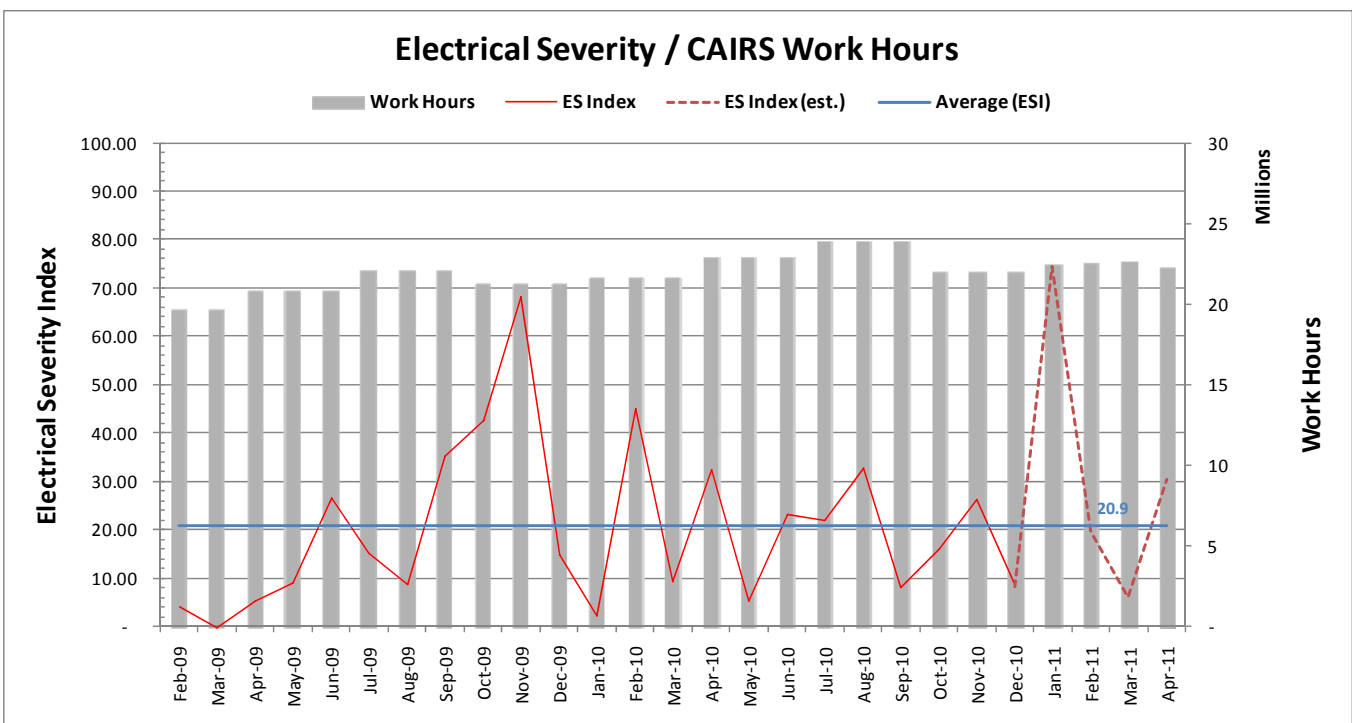
Electrical Severity Scores

The electrical severity scores are calculated using Revision 2 of the Electrical Severity Measurement Tool. One of the electrical events this month did not have an Electrical Severity (ES) score. The other eight events are distributed as shown in the triangle, with the highest ES score being 2,100. The actual score for each event is provided in the event tables.



Electrical Severity Index

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



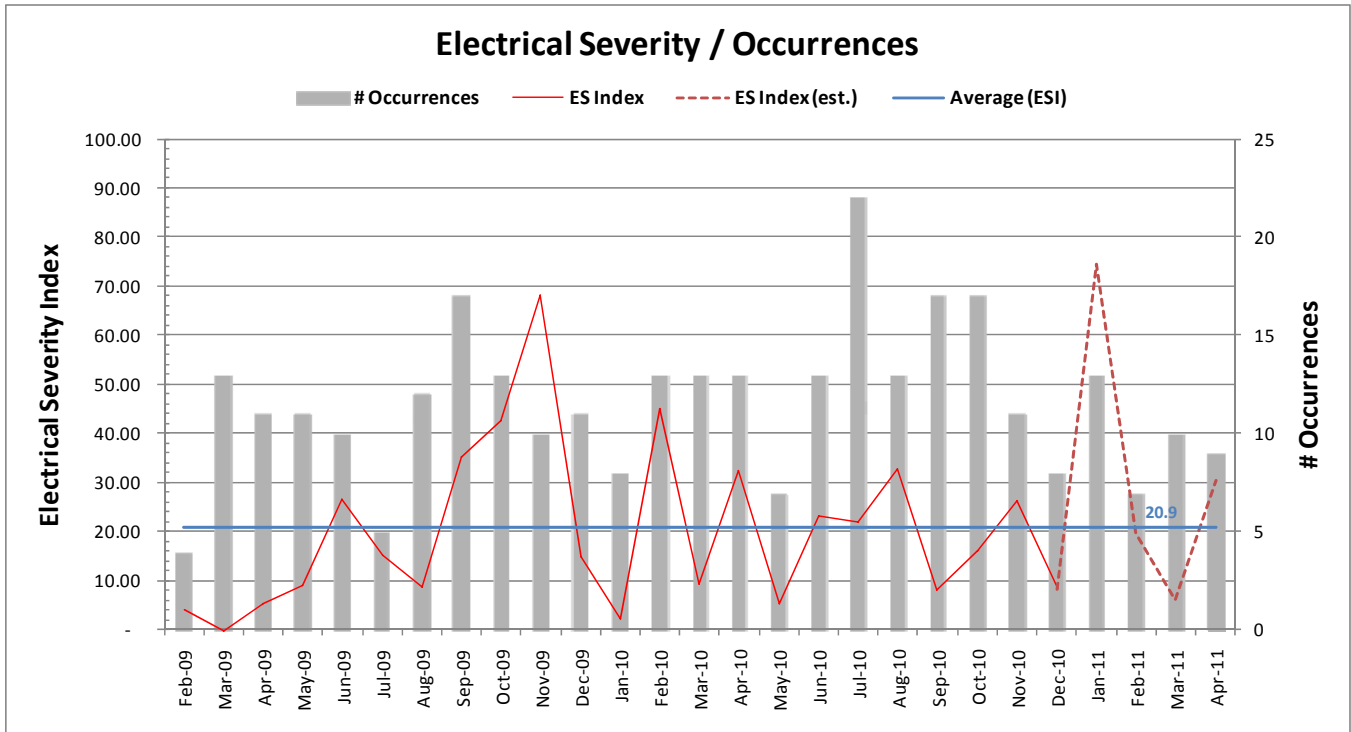
Note: An estimated ESI is calculated until accurate CAIRS man-hours are available. The chart will be updated monthly.

Category	March	April	Δ
Total Occurrences	10	9	-1
Total Electrical Severity	670	3,375	+2,705
Estimated Work Hours	22,615,034* (22,615,034)	22,256,450	-358,585
ES Index	5.93* (5.93)	30.33	+24.4
Average ESI	20.6	20.9	+0.3

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

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

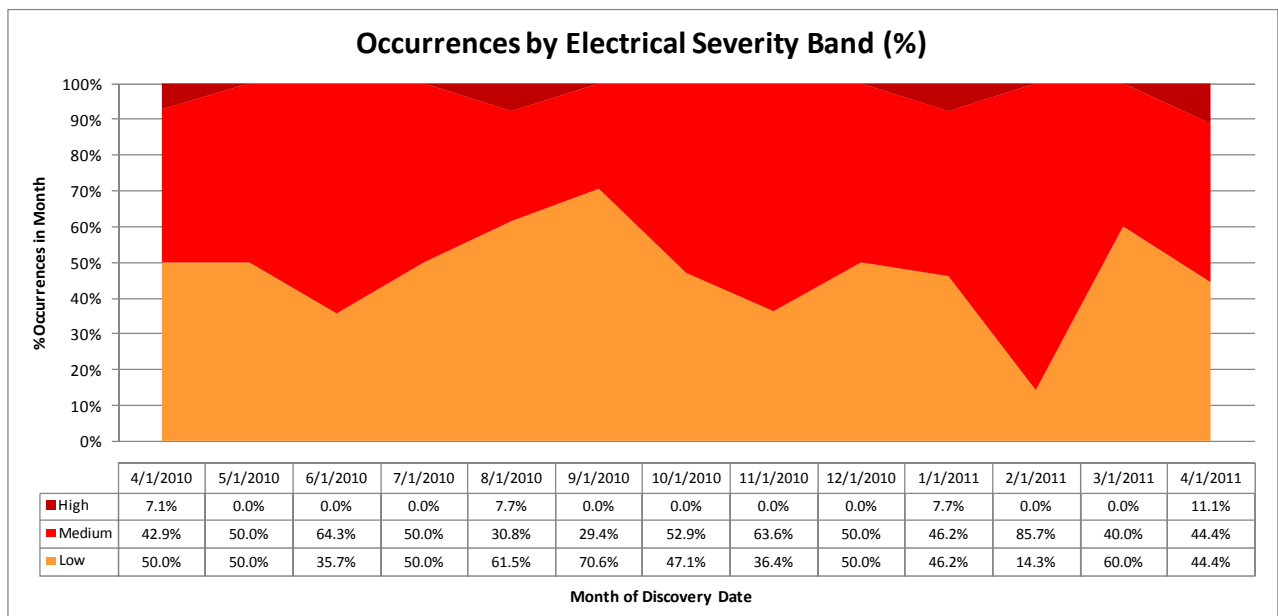
The following chart shows ESI with the number of Occurrences instead of work hours.

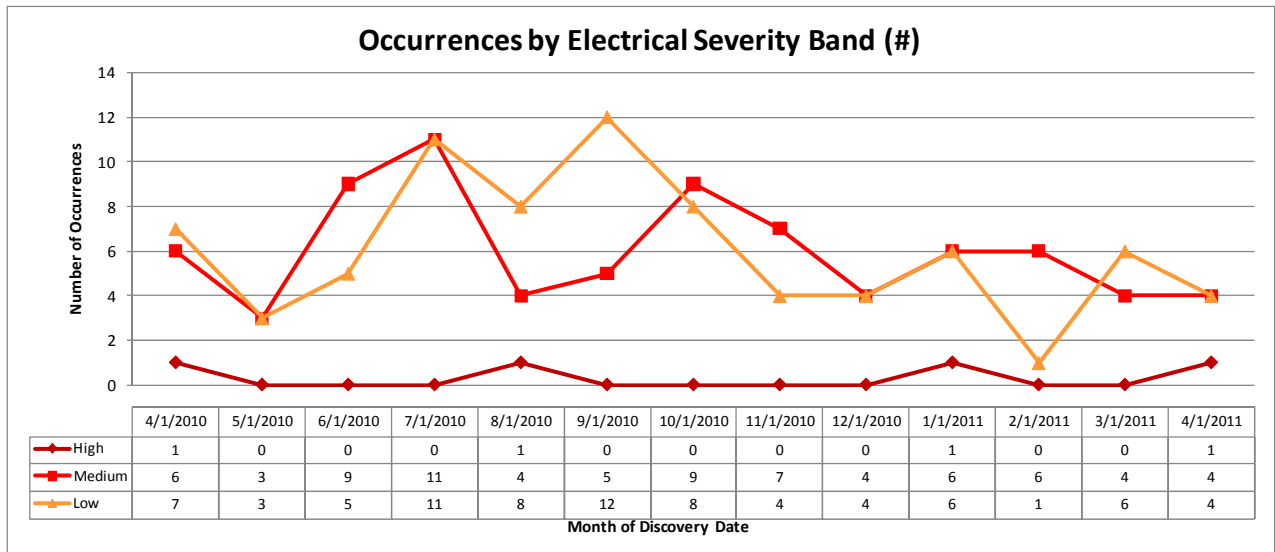


Summary of Occurrences by Severity Band

For the interval April 2010 through April 2011 (current month and the past 12), the next two charts summarize occurrences by severity band and month of discovery date:

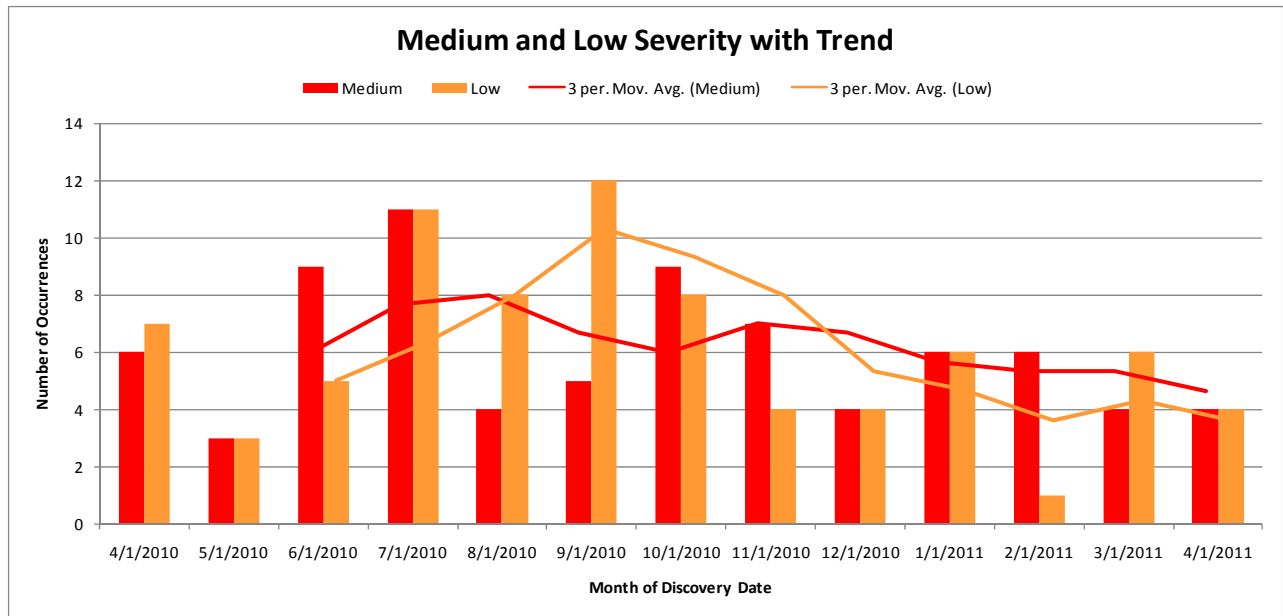
- By percentage of total occurrences in month
- By number of occurrences in month





Medium and Low Severity with Trend

The following chart focuses on the Medium and Low severity data series for April 2010 through April 2011. Trend lines are included for each, using a 3-month moving average.



Electrical Safety Occurrences – April 2011

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--MSC-GENERAL-2011-0004	Electrical work was conducted without proper application of the lockout/tagout procedure.				X	X				3	2C(2)	10
2	EM-RP--WRPS-TANKFARM-2011-0009	A carpenter cut a 120V energized wire with a reciprocating saw while enlarging a door frame.							X		3	2C(2)	110
3	EM-SR--SRR-WSALT-2011-0001	Construction workers discovered an unidentified energized 480V line during excavation.						X			3	2C(2)	5
4	FE--NETL-GOPE-NETLMGN-2011-0002	An electrician applied a 1000V-rated multimeter to a 2300V circuit damaging the meter.									4	10(3)	2100
5	NA--LASO-LANL-ADOADMIN-2011-0004	An electrician drilled into an energized 120V temporary power cable.					X		X		3	2C(2)	10
6	NA--LSO-LLNL-LLNL-2011-0020	A worker drilled into a 120/208V line and received a minor shock.	X						X		2	2C(1)	480
7	NA--YSO-BWXT-Y12SITE-2011-0009	A worker exceeded the work scope and cut into an energized conductor causing a spark.							X		3	2C(2)	110
8	NE-ID--BEA-ATR-2011-0007	An instrument tech removed a 120V jumper, from inside a 480V panel, w/o flash protection PPE.					X				3	10(3)	550
9	SC--SSO-SU-SLAC-2011-0006	Electrician failed to verify a safe-to-work condition.				X					3	2C(2)	0
	TOTAL		1	0	0	2	3	1	4	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 – April 2011

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--MSC-GENERAL-2011-0004	Electrical work was conducted without proper application of the lockout/tagout procedure.	X		X		X				X			
2	EM-RP--WRPS-TANKFARM-2011-0009	A carpenter cut a 120V energized wire with a reciprocating saw while enlarging a door frame.		X	X	X					X			X
3	EM-SR--SRR-WSALT-2011-0001	Construction workers discovered an unidentified energized 480V line during excavation.		X			X				X			X
4	FE--NETL-GOPE-NETLMGN-2011-0002	An electrician applied a 1000V-rated multimeter to a 2300V circuit damaging the meter.	X			X				X				X
5	NA--LASO-LANL-ADOADMIN-2011-0004	An electrician drilled into an energized 120V temporary power cable.	X		X	X					X			
6	NA--LSO-LLNL-LLNL-2011-0020	A worker drilled into a 120/208V line and received a minor shock.		X	X	X		X			X			
7	NA--YSO-BWXT-Y12SITE-2011-0009	A worker exceeded the work scope and cut into an energized conductor causing a spark.		X	X	X					X			
8	NE-ID--BEA-ATR-2011-0007	An instrument tech removed a 120V jumper, from inside a 480V panel, w/o flash protection PPE.	X				X	X	X		X			X
9	SC--SSO-SU-SLAC-2011-0006	Electrician failed to verify a safe-to-work condition.	X		X		X				X			
	TOTAL		5	4	6	5	4	2	1	1	8	0	0	4

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

Production GUI - New ORPS

ORPS contains 55195 OR(s) with 58505 occurrences(s) as of 5/17/2011 6:41:08 AM
 Query selected 9 OR(s) with 9 occurrences(s) as of 5/17/2011 10:14:01 AM

Download this report in Microsoft Word format. 

1)Report Number:	EM-RL--MSC-GENERAL-2011-0004 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	General		
Subject/Title:	Failure to utilize Hazardous Energy Control Process during Construction of HAMMER Operations Building		
Date/Time Discovered:	04/13/2011 10:22 (PTZ)		
Date/Time Categorized:	04/13/2011 12:00 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	04/18/2011	18:20 (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:	Yes Fowler Construction and Power City Electric		
Occurrence Description:	On 4/12/2011 at approximately 1500 hours, Construction was performing startup of Heat Pumps for the HVAC system at the HAMMER Operations building. During startup, problems were noted indicating incorrect power supply to the heat pumps. The construction sub-contractor electrician performed checks of wiring from the building disconnect through the building electrical panel to the heat pumps and confirmed proper installation. An Authorized Worker lockout/tagout was used as a hazardous energy control during the initial troubleshooting at the building. Since proper Personal Protective Equipment (PPE) was not available for a		

standby electrician to assist in performing additional checks from the building disconnect to the City of Richland service, no further work was performed that day. On 4/13/11, during the morning pre-job, lockout/tagout was referenced for start-up of the heat pumps. Following the morning pre-job, the sub-contractor electrician and standby electrician wearing appropriate PPE performed voltage checks at the building disconnect and determined the source of the problem was within the City of Richland transformer or Current Transformer (CT) cabinet. The City of Richland Electrical Utilities (EU) was called at 0906. The MSA Construction Manager left the HAMMER construction site shortly after the call and drove to 200 East to attend to other business believing it would be several hours prior to the city EU responding to the call for assistance. The City EU personnel arrived at HAMMER at 0951 and were met by the sub-contractor superintendent, sub-contractor electricians, and a MSA construction safety professional at the transformer (transformer and CT cabinet located within HAMMER complex approximately 100 feet from Operations Building. A sub-contractor electrician explained the problem to the City EU personnel. City EU personnel verified correct power feed to the transformer and proceeded to disconnect power to the transformer and maintain control per their protocols. Following the disconnect, they performed a zero energy from the transformer to the CT cabinet using voltage meters. The zero energy check was witnessed by the sub-contractor electrician from a safe distance. City EU personnel removed the tamper indicating device on the CT cabinet and opened the cabinet allowing the EU personnel and electrician to inspect power connections within the CT cabinet. The subcontractor performed another zero energy check. During inspection, the subcontractor electrician discovered a crossed phase connection on the load side, corrected the problem, and closed the CT cabinet. After correction, the city EU personnel closed the cabinet, reinstalled tamper devices, and restored power at the transformer. Following power restoration, the subcontractor electrician and standby electrician donned appropriate PPE and a voltage check was performed at the main disconnect confirming proper voltage. The City EU personnel were informed the problem was corrected and no further assistance was required. The time of work completion was 1022 hours. Immediately following the work, the facility design authority was notified of the fix by the subcontractor superintendent. He questioned how the work was performed since they were in troubleshooting mode. When informed how the work was performed, the design authority and MSA construction safety professional went to the Facility Managers (FM) office to discuss the work evolution and potential non-compliance of the Hazardous Energy Control program. The FM gathered additional information, consulted with the HAMMER lockout/tagout administrator and the MSA interpretive authority for lockout/tagout and confirmed the work had been conducted without proper application of the Hanford Site Lockout/Tagout procedure at 11:30. The FM immediately suspended

	construction electrical work pending further investigation of the event and made appropriate notifications.
Cause Description:	
Operating Conditions:	Under Construction
Activity Category:	Construction
Immediate Action(s):	Verified the facility was in a safe configuration. Suspended all electrical work at the construction site. Held a critique.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: By When:
Division or Project:	Emergency Services and Training
Plant Area:	600
System/Building/Equipment:	City of Richland Electrical Service
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 11G--Other - Subcontractor 11M--Other - Outside Agency or Organization/ Site Visitor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On April 13, 2011, electrical work was performed without proper lockout/tagout use during the startup of heat pumps for the HVAC system at the HAMMER Operations building. On April 12, initial problems were noted indicating an incorrect power supply to the heat pumps. Voltage checks were performed at the building disconnect and it was determined that the source of the problem was within the City of Richland transformer or Current Transformer (CT) cabinet. The City of Richland Electrical Utilities (EU) personnel were called, arrived and verified the correct power feed to the transformer. They disconnected power to the transformer and maintained control per EU protocols. EU performed a zero energy check

from the transformer to the CT cabinet using voltage meters. City EU personnel opened the cabinet, allowing the EU personnel and the subcontractor electrician to inspect power connections within the CT cabinet. During inspection, the electrician discovered a crossed phase connection on the load side, corrected the problem, and closed the CT cabinet. Immediately following the work, the Facility Design Authority was notified of the repair. He questioned how the work was performed since the activity was in a troubleshooting mode. It was confirmed that the work had been conducted without proper application of the Hanford Site Lockout/Tagout procedure. Construction electrical work was immediately suspended pending further investigation. Management notifications were made.

Similar OR Report Number:

Facility Manager:

Name	P. J. Vandervert
Phone	(509) 376-5792
Title	Operations Manager

Originator:

Name	SMITHWICK, RONALD L
Phone	(509) 376-3030
Title	

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
04/13/2011	11:55 (PTZ)	KA McGinnis	MSA
04/13/2011	12:05 (PTZ)	SC Hafner	MSA-EST
04/13/2011	12:07 (PTZ)	DG Ruscitto	MSA
04/13/2011	12:10 (PTZ)	LD Earley	DOE-RL
04/13/2011	12:15 (PTZ)	RG Hastings	DOE-RL

Authorized Classifier(AC):

2)Report Number:

[EM-RP--WRPS-TANKFARM-2011-0009](#) After 2003 Redesign

Secretarial Office:

Environmental Management

Lab/Site/Org:

Hanford Site

Facility Name:

Tank Farms

Subject/Title:

A Construction Carpenter Contacts Energized Wire Enlarging AN-Farm Change Trailer Door Opening

Date/Time Discovered:

04/05/2011 09:45 (PTZ)

Date/Time Categorized:

04/05/2011 10:15 (PTZ)

Report Type:

Notification

Report Dates:	Notification	04/06/2011	18:10 (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		
Subcontractor Involved:	Yes Total Site Services, LLC		
Occurrence Description:	<p>On April 05, 2011, a construction carpenter made contact with a 120 volt energized wire while using a reciprocating saw to enlarge the AN-Farm change trailer (MO497) door frame in preparation of installing a larger door. Power to change trailer's lighting circuit was lost immediately after the damage occurred. The scope of work for Work Order TFC-WO-11-1941 was to enlarge the change trailer's door opening to accommodate installation of the wider upgraded personal contamination monitor.</p> <p>An electrician was dispatched and ensured the affected circuit's breaker was open. No other circuits were affected. There were no injuries.</p>		
Cause Description:			
Operating Conditions:	Does not apply.		
Activity Category:	Construction		
Immediate Action(s):	<p>Work was stopped. The area was cordoned off. Power to MO-478 was isolated. Carpenter was taken to AMH for a precautionary evaluation. An event investigation was initiated.</p>		
FM Evaluation:			
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	Yes. Before Further Operation? No		

	By Whom: Martinen, Edgar W By When:															
Division or Project:	Washington River Protection Solutions, LLC (WRPS)															
Plant Area:	200 East															
System/Building/Equipment:	Change Trailer/MO497/Door Frame															
Facility Function:	Nuclear Waste Operations/Disposal															
Corrective Action:																
Lessons(s) Learned:																
HQ Keywords:	01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 07C--Electrical Systems - Power Outage 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 April 5, 2011, a subcontractor construction carpenter made contact with a 120-volt energized wire while using a reciprocating saw to enlarge the AN-Farm change trailer door frame in order to install a larger door. The power to the change trailer's lighting circuit was lost immediately. The scope of the work was to enlarge the change trailer's door opening to accommodate installation of a wider upgraded personal contamination monitor. An electrician verified that the affected circuit breaker was open. No other circuits were impacted. There were no injuries. Work was stopped and the area was cordoned off. The carpenter was taken to AdvanceMed Hanford for a medical evaluation. An event investigation was initiated.															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">Martinen, Edgar W</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 376-5874</td> </tr> <tr> <td>Title</td> <td colspan="3">Manager, TFP Project Construction</td> </tr> </table>				Name	Martinen, Edgar W			Phone	(509) 376-5874			Title	Manager, TFP Project Construction		
Name	Martinen, Edgar W															
Phone	(509) 376-5874															
Title	Manager, TFP Project Construction															
Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">WATERS, SHAUN F</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 373-3457</td> </tr> <tr> <td>Title</td> <td colspan="3">OPERATIONS SPECIALIST</td> </tr> </table>				Name	WATERS, SHAUN F			Phone	(509) 373-3457			Title	OPERATIONS SPECIALIST		
Name	WATERS, SHAUN F															
Phone	(509) 373-3457															
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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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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>04/05/2011</td> <td>10:40 (PTZ)</td> <td>Domnoske-Rauch, L. A.</td> <td>DOE-ORP</td> </tr> <tr> <td>04/05/2011</td> <td>10:45 (PTZ)</td> <td>Wilkinson, R. E.</td> <td>WRPS</td> </tr> </tbody> </table>				Date	Time	Person Notified	Organization	04/05/2011	10:40 (PTZ)	Domnoske-Rauch, L. A.	DOE-ORP	04/05/2011	10:45 (PTZ)	Wilkinson, R. E.	WRPS
Date	Time	Person Notified	Organization													
04/05/2011	10:40 (PTZ)	Domnoske-Rauch, L. A.	DOE-ORP													
04/05/2011	10:45 (PTZ)	Wilkinson, R. E.	WRPS													

	04/05/2011	11:17 (PTZ)	Smithwick, R. L.	MSA-ONC
Authorized Classifier(AC):				
3)Report Number:	EM-SR--SRR-WSALT-2011-0001 After 2003 Redesign			
Secretarial Office:	Environmental Management			
Lab/Site/Org:	Savannah River Site			
Facility Name:	Saltstone Facility			
Subject/Title:	Discovery of Energized Cable during Excavation for Saltstone South Parking Lot Lighting Repair			
Date/Time Discovered:	04/04/2011 14:00 (ETZ)			
Date/Time Categorized:	04/07/2011 11:00 (ETZ)			
Report Type:	Final			
Report Dates:	Notification	04/07/2011	16:00 (ETZ)	
	Initial Update	05/10/2011	11:43 (ETZ)	
	Latest Update	05/10/2011	11:43 (ETZ)	
	Final	05/10/2011	11:43 (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:	A1B3C02 - Design/Engineering Problem; Design / documentation LTA; Design/documentation not up-to-date A3B1C01 - Human Performance Less Than Adequate (LTA); Skill Based Errors; Check of work was LTA -->couplet - A4B3C11 - Management Problem; Work Organization & Planning LTA; Inadequate work package preparation			
ISM:	2) Analyze the Hazards			
Subcontractor Involved:	No			
Occurrence Description:	<p>On Monday, April 4, 2011 construction workers discovered an unidentified electrical cable near a known signal cable conduit while performing an excavation in the South Parking Lot of 704-Z in accordance with WO #9961205-01, Z-Area South Parking Lot Cable Repair.</p> <p>A timeout was called and the work was placed in a safe configuration.</p> <p>A Fact Finding Meeting was held 4/5/2011 to identify issues and to determine appropriate path-forward/actions relative to the event.</p>			

	<p>Subsequent investigation determined the unidentified electrical cable was an energized 480V line. This constitutes discovery of a component that is not part of the hazardous energy control boundary as it was missing from the lockout/tagout. There was no exposure to electrical energy.</p> <p>The time from ORPS Discovery to Categorization exceeded the normal two hour period. The ORPS reportability criteria was determined to be met on 4/7/2011 after facility management's review/evaluation of the additional information learned during the fact finding held on 4/5/2011, the determination that the cable was energized, and subsequent review of the reporting criteria.</p>
Cause Description:	<p>The apparent cause for the event was the Site Map, and thus the Field Map, covering the excavation area did not show the unknown electrical line, although the unknown electrical line was listed as a reference on the Site Map. A complete review of the Site Map by the work planner and work package approvers with an investigation of all references, notes, etc. would have revealed the existence of the unknown cable.</p>
Operating Conditions:	<p>Normal Operations</p>
Activity Category:	<p>Normal Operations (other than Activities specifically listed in this Category)</p>
Immediate Action(s):	<p>A Timeout was initiated by the Construction Assistant Superintendent and the work placed in a safe configuration.</p> <p>Construction Assistant Superintendent notified the Shift Operations Manager and Construction Superintendent of the incident.</p>
FM Evaluation:	<p>There were no injuries or impact to facility operations.</p> <p>Since configuration control of underground Systems/Commodities/Utilities is incomplete, there is a risk of unknown/unidentified interferences. There are provisions in Manual 8Q, Procedure 34, Excavations and Trenches that address the potential for unknown/unidentified interferences.</p> <p>The SRS Electrical Safety subject matter expert has calculated the electrical severity of this event using guidance developed by the EFCOG/DOE Electrical Safety Subgroup. The calculated severity for this event is 5 (Low Significance). This event scores as follows: Electrical Hazard: 1 (low voltage circuit); Environment Factor: 5 (damp); Shock Proximity Factor: 0; Arc Flash: 0; Thermal Factor: 0; and Injury Factor: 1 (none). $Electrical\ Severity = 1 * (1 + 5 + 0 + 0 + 0) * 1 = 6$.</p> <p>$Electrical\ Severity\ (ES) = (Electrical\ Hazard\ Factor) * (1 + Environment\ Factor + Shock\ Proximity\ Factor + Arc\ Flash\ Proximity\ Factor + Thermal$</p>

	Proximity Factor) * (Injury Factor)							
DOE Facility Representative Input:								
DOE Program Manager Input:								
Further Evaluation is Required:	No							
Division or Project:	Saltstone Facility							
Plant Area:	704-Z							
System/Building/Equipment:	Saltstone South Parking Lot Lighting							
Facility Function:	Nuclear Waste Operations/Disposal							
Corrective Action 01:	Target Completion Date: 06/01/2011	Tracking ID: 2011-CTS-004338 CA#6						
	A Team review will be performed for work packages that contain excavations to disposition known/potential interferences in addition to approved planned work scope							
Lessons(s) Learned:	See STAR Record 2011-CTS-004338							
HQ Keywords:	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency							
HQ Summary:	On April 4, 2011, construction workers discovered an unidentified electrical cable near a known signal cable conduit while performing an excavation in the South Parking Lot of 704-Z. A timeout was called and the work was placed in a safe configuration. A fact finding meeting was held to identify issues and to determine an appropriate path forward. Subsequent investigation determined that the unidentified electrical cable was an energized 480-volt line. This constitutes discovery of a component that is not part of the hazardous energy control boundary as it was not included in the lockout/tagout. There was no personnel exposure to electrical energy.							
Similar OR Report Number:	1. None							
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>SONNENBERG, LESLIE K</td> </tr> <tr> <td>Phone</td> <td>(803) 208-6022</td> </tr> <tr> <td>Title</td> <td>FACILTY MANAGER</td> </tr> </table>		Name	SONNENBERG, LESLIE K	Phone	(803) 208-6022	Title	FACILTY MANAGER
Name	SONNENBERG, LESLIE K							
Phone	(803) 208-6022							
Title	FACILTY MANAGER							
Originator:	<table border="1"> <tr> <td>Name</td> <td>GREEN, MICHAEL J.</td> </tr> </table>		Name	GREEN, MICHAEL J.				
Name	GREEN, MICHAEL J.							

	Phone	(803) 208-3171		
	Title	PROGRAM MANAGER C		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	04/06/2011	15:42 (ETZ)	A. Osteen	OM Mgr
	04/06/2011	15:42 (ETZ)	L. Sonnenberg	FM Mgr
	04/06/2011	15:50 (ETZ)	J. Occhipinti	Eng Mgr
	04/06/2011	16:30 (ETZ)	D. Olson	SRR Pres
	04/06/2011	16:30 (ETZ)	K. Sandroni	DOE FR
	04/06/2011	16:30 (ETZ)	M. Sautman	DNFSB
	04/06/2011	16:30 (ETZ)	D. Burnfield	DNFSB
	04/06/2011	17:00 (ETZ)	M Hubbard	Safety
	04/07/2011	12:55 (ETZ)	K. Sandroni	DOE FR
Authorized Classifier(AC):				
4)Report Number:	FE--NETL-GOPE-NETLMGN-2011-0002 After 2003 Redesign			
Secretarial Office:	Fossil Energy			
Lab/Site/Org:	National Energy Technology Laboratory			
Facility Name:	NETL - Morgantown			
Subject/Title:	Electrical Voltage Applied Exceeding Limits of Multimeter			
Date/Time Discovered:	04/10/2011 17:38 (ETZ)			
Date/Time Categorized:	04/10/2011 19:00 (ETZ)			
Report Type:	Notification/Final			
Report Dates:	Notification	04/12/2011	17:06 (ETZ)	
	Initial Update	04/12/2011	17:06 (ETZ)	
	Latest Update	04/12/2011	17:06 (ETZ)	
	Final	04/12/2011	17:06 (ETZ)	
Significance Category:	4			
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 4 occurrence)			
Cause Codes:	A3B1C03 - Human Performance Less Than Adequate (LTA); Skill Based Errors; Incorrect performance due to mental lapse			

	-->couplet - NA
ISM:	2) Analyze the Hazards
Subcontractor Involved:	No
Occurrence Description:	A site electrician while performing electrical troubleshooting activities associated with a Building 5 (B-5) boiler facility transformer applied a 1000 volt rated multimeter to a 2300 volt circuit exceeding the voltage limits of the meter. The electrician had mistakenly identified the system as 480 volts rather than the actual 2300 volts. The incident resulted in the failure of the multimeter. The electrician's personal protective equipment (Class 0-5KV rubber gloves, leather over-gloves, fire retardant long sleeve shirt, and safety glasses) prevented any personal injury from occurring as a result of the electrical short that occurred.
Cause Description:	
Operating Conditions:	.Unscheduled electrical outage troubleshooting was occurring in B-5.
Activity Category:	Maintenance
Immediate Action(s):	The electrician was transported to a local hospital for evaluation but was discharged later with no injuries reported. Two additional electricians were dispatched to the site to make repairs to the transformer and restoring electrical service to the facility three hours later.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Office of Institutional Operations
Plant Area:	Transformer Station
System/Building/Equipment:	B-5 Boiler Facility
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01Q--Inadequate Conduct of Operations - Personnel error 07C--Electrical Systems - Power Outage 07E--Electrical Systems - Electrical Equipment Failure 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On April 10, 2011, a site electrician performing electrical troubleshooting

activities, associated with a Building 5 boiler facility transformer, applied a 1,000-volt rated multimeter to a 2,300-volt circuit, exceeding the voltage limits of the meter. The electrician had mistakenly identified the system as 480 volts rather than the actual 2,300 volts. The incident resulted in the failure of the multimeter. The electrician's personal protective equipment (Class 0-5KV rubber gloves, leather over-gloves, fire retardant long sleeve shirt, and safety glasses) prevented any personal injury from the resulting electrical short. The electrician was transported to a local hospital for evaluation but was discharged later with no injuries reported. Two additional electricians were dispatched to the site to repair the transformer and restore electrical service to the facility.

Similar OR Report Number:

Facility Manager:	Name	BUTERBAUGH, JEFFERY L.
	Phone	(304) 285-4214
	Title	EMERGENCY RESPONSE COORDINATOR

Originator:	Name	BUTERBAUGH, JEFFERY L.
	Phone	(304) 285-4214
	Title	EMERGENCY RESPONSE COORDINATOR

HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA

Other Notifications:	Date	Time	Person Notified	Organization
	04/10/2011	17:40 (ETZ)	Allen Wells	NETL
	04/10/2011	18:06 (ETZ)	Cindy Mullens	NETL
	04/10/2011	18:20 (ETZ)	Dan McCollum	NETL
	04/10/2011	18:40 (ETZ)	Mike Monahan	NETL
	04/10/2011	18:50 (ETZ)	Bill Lowry	NETL

Authorized Classifier(AC):

5)Report Number: [NA--LASO-LANL-ADOADMIN-2011-0004](#) After 2003 Redesign

Secretarial Office: National Nuclear Security Administration

Lab/Site/Org: Los Alamos National Laboratory

Facility Name: ADO Administration

Subject/Title: Electrician Drills Into Energized Temporary Lighting Cable

Date/Time Discovered: 04/05/2011 15:00 (MTZ)

Date/Time Categorized: 04/06/2011 08:30 (MTZ)

Report Type: Final

Report Dates:	Notification	04/08/2011	10:51 (ETZ)
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	Initial Update	04/28/2011	15:39 (ETZ)
	Latest Update	04/28/2011	15:39 (ETZ)
	Final	04/28/2011	15:39 (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:	A3B2C05 - Human Performance Less Than Adequate (LTA); Rule Based Error; Situation incorrectly identified or represented results in wrong rule used -->couplet - A1B5C01 - Design/Engineering Problem; Operability of Design / Environment LTA; Ergonomics LTA		
ISM:	2) Analyze the Hazards		
Subcontractor Involved:	Yes Pueblo Electric		
Occurrence Description:	<p>UPDATE, 4/28/2011: This report is being submitted as final.</p> <p>MANAGEMENT SYNOPSIS: On Tuesday, April 5, 2011, at approximately 1500, a Pueblo Electric electrician (W1) drilled through a gypsum wall that sits on top of the OSC (structural support systems) in TE#3 Lab and hit a temp power 120 volt Metal-Clad (MC) cable. The temp power MC Cable was going though the wall parallel to the new hole that was being drilled and about a 1 -1/2" below. W1 drilled through the first layer of drywall. W1 used his flashlight to look through the new hole to make sure there was nothing in the wall. W1 was aware of the MC Cable but thought it was low enough that it would not be in the way. Due to other commodities on both side of the wall he was not able to drill parallel to the OSC. W1 drilling from the same side of the wall with the hole saw through the backside of the wall and this is when he drilled into the MC Cable. The temporary lights went out in the lab. W1 used an electrical proximity tester to confirm the power on the MC Cable de-energized. W1 contacted the LANL Material and Site Services (MSS) Electrical Foreman (W2). W2 investigated the issue and identified the circuit that tripped. W2 contacted the Operations Electrical Safety Officer (ESO) (W3) and the LANL Lockout/Tagout (LOTO) (W4) authorities. Locks were issued by W4 and installed at approximately 1600.</p> <p>The Chemistry and Metallurgy Research Replacement (CMRR) superintendent was notified of the event at 0700 on April 6, 2011. He contacted W2 for additional information and then notified the CMRR</p>		

Construction Manager at approximately 0708. The CMRR Construction Manager notified the Radiological Laboratory/Utility/Office Building (RLUOB) Project Manager and the LANL Construction Manager at 0710.

There were no injuries to the worker.

A fact finding meeting was held at 0725 on April 6, 2011 at the location of the event.

A critique was held on Wednesday, April 6, 2011 and the RLUOB Facility Operations Director (FOD) Designee categorized this event against ORPS criterion 2C(2) Significance Category 3 (SC 3).

4/26/2011 9:19 AM

The Chemistry and Metallurgy Research Replacement (CMRR) superintendent was notified of the event at 0700 on April 6, 2011. He contacted W2 for additional information and then notified the CMRR Construction Manager at approximately 0708. The CMRR Construction Manager notified the Radiological Laboratory/Utility/Office Building (RLUOB) Project Manager and the LANL Construction Manager at 0710.

There were no injuries to the worker.

A fact finding meeting was held at 0725 on April 6, 2011 at the location of the event.

A critique was held on Wednesday, April 6, 2011 and the RLUOB Facility Operations Director (FOD) Designee categorized this event against ORPS criterion 2C(2) Significance Category 3 (SC 3).

Cause Description:

Background: The Radiological Laboratory Utility Office Building (RLUOB) is under the final stages of construction.

ISM Summary: This event is most likely a result of Step 2, Analyze the Hazards.

Apparent Cause Analysis and the Causal Analysis Tree, as described in the DOE Occurrence Reporting Causal Analysis Guide (DOE G 231.1-2), were used to identify the causes for this event. Apparent causes are identified as the most probable causes of an event or condition that management has the control to fix and for which effective recommendations for corrective actions can be generated.

Electrical Severity Score:

The LANL Chief Electrical Safety Officer (ESO) determined the Electrical Severity score for the event was 10. The electrical severity score was determined using the LANL electrical severity tool. The electrical severity tool rates the electrical severity on a scale of 0 to greater than 310,000. This range provides an exponentially rising severity that, when based on a logarithmic scale, breaks down into four categories of significance, Extreme, High, Medium, and Low. The Electrical Severity score of 10 falls into the Low range.

The worker involved in this event was a qualified electrical worker with Pueblo Electric Inc (W1). W1 was also the Person In Charge (PIC) for the work being accomplished that day. W1 was wearing the proper Personal Protective Equipment (PPE) for the work being accomplished and was working in accordance with the Integrated Work Document (IWD) for the work.

During an interview W1 he stated that he believed the main cause of the penetration of the temp power 120 volt MC cable was the angle he was drilling from. W1 stated that there was a four square Junction Box (J-Box) very near where W1 was penetrating the drywall. W1 was aware of the MC cable but believed it was low enough so that the point he was penetrating from would not be an issue. Because of the location of the J-box and the point where W1 was drilling W1 had to penetrate the wall by drilling at an angle. If the J-box had not been there, W1 stated he would not have penetrated the temporary MC cable.

The most likely cause codes for this event are A3B2C05, Situation incorrectly identified or represented. The location of the J-box was in close proximity to the penetration point, which required E1 to drill at an angle, resulting in the penetration of the temporary MC cable. Corrective Action 1 addresses this cause code.

Communications:

While not a contributing factor to the event, notification processes and communication of the event to management in a timely matter was less than adequate. Corrective action 2 addresses this issue.

Operating Conditions:	Startup Operations
Activity Category:	Construction
Immediate Action(s):	<ul style="list-style-type: none"> - LO/TO applied - Work Pause conduct with MSS electricians to review notification process. - Work Pause with Pueblo Electric to review IWD and new Pre-job Brief.

	- RLOUB construction management will have ensure that there is increased construction oversight of penetration construction activities.		
FM Evaluation:	There were no personnel injuries associated with this event.		
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:	CMRR RLUOB		
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)		
Corrective Action 01:	<table border="1"> <tr> <td>Target Completion Date:04/22/2011</td> <td>Actual Completion Date:</td> </tr> </table>	Target Completion Date: 04/22/2011	Actual Completion Date:
Target Completion Date: 04/22/2011	Actual Completion Date:		
	<p>Title: Modify IWD to better clarify the requirements in Exhibit F for blind penetrations.</p> <p>Responsible Organization: CMRR Construction Manager.</p> <p>Deliverable: A copy of the modified IWD</p>		
Corrective Action 02:	<table border="1"> <tr> <td>Target Completion Date:04/06/2011</td> <td>Actual Completion Date:04/06/2011</td> </tr> </table>	Target Completion Date: 04/06/2011	Actual Completion Date: 04/06/2011
Target Completion Date: 04/06/2011	Actual Completion Date: 04/06/2011		
	<p>Description: Conduct work pause with all CMRR construction to discuss event, including notification process for abnormal events.</p> <p>Responsible Organization: CMRR Construction Manager.</p> <p>Deliverable: Copy of sign in roster and notes from 4/6/2011 meeting.</p>		
Lessons(s) Learned:	Management is in the process of issuing a lessons learned to discuss the blind penetrations and assuring that all workers understand the proper process for notification of events.		
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01P--Inadequate Conduct of Operations - Inadequate Oral Communication 07D--Electrical Systems - Electrical Wiring 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency		

	14G--Quality Assurance - Procurement Deficiency															
HQ Summary:	<p>On April 5, 2011, a subcontractor electrician drilled through a gypsum wall that sits on top of an OSC (structural support systems) in the TE #3 Lab and hit a 120-volt, metal-clad, temporary power cable. The cable passed through the wall parallel to the new hole that he was drilling and about 1½ inches below. He drilled through the first layer of drywall and then used his flashlight to look through the new hole to make sure there was nothing in the wall. The electrician was aware of the cable, but thought it was low enough that it would not be in the way. Because of other obstructions on both sides of the wall, he was not able to drill parallel to the OSC. When the electrician drilled from the same side of the wall through to the backside of the wall, his hole saw drilled into the cable causing the temporary lights in the lab to go out. The electrician used an electrical proximity tester to confirm that the cable was de-energized. He contacted the LANL Material and Site Services Electrical Foreman, who investigated and identified the circuit that tripped. The foreman then contacted the Operations Electrical Safety Officer and the LANL Lockout/Tagout authorities. Locks were issued and installed. A fact finding meeting and a critique were held. The electrician was not injured.</p>															
Similar OR Report Number:	1. NA--LASO-LANL-FIRNGHELAB-2009-0015															
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">Richard Holmes</td> </tr> <tr> <td>Phone</td> <td colspan="3">(505) 606-2394</td> </tr> <tr> <td>Title</td> <td colspan="3">Facility Operations Director</td> </tr> </table>				Name	Richard Holmes			Phone	(505) 606-2394			Title	Facility Operations Director		
Name	Richard Holmes															
Phone	(505) 606-2394															
Title	Facility Operations Director															
Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">WATERS, MARTHA D.</td> </tr> <tr> <td>Phone</td> <td colspan="3">(505) 606-0277</td> </tr> <tr> <td>Title</td> <td colspan="3">OCCURRENCE INVESTIGATOR</td> </tr> </table>				Name	WATERS, MARTHA D.			Phone	(505) 606-0277			Title	OCCURRENCE INVESTIGATOR		
Name	WATERS, MARTHA D.															
Phone	(505) 606-0277															
Title	OCCURRENCE INVESTIGATOR															
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				
Date	Time	Person Notified	Organization													
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>04/06/2011</td> <td>08:15 (MTZ)</td> <td>Herman LeDeux</td> <td>DOE/LASO</td> </tr> </tbody> </table>				Date	Time	Person Notified	Organization	04/06/2011	08:15 (MTZ)	Herman LeDeux	DOE/LASO				
Date	Time	Person Notified	Organization													
04/06/2011	08:15 (MTZ)	Herman LeDeux	DOE/LASO													
Authorized Classifier(AC):	Martha D. Waters Date: 04/27/2011															
6)Report Number:	NA--LSO-LLNL-LLNL-2011-0020 After 2003 Redesign															
Secretarial Office:	National Nuclear Security Administration															
Lab/Site/Org:	Lawrence Livermore National Lab.															
Facility Name:	Lawrence Livermore Nat. Lab. (BOP)															
Subject/Title:	Worker Receives Minor Electrical Shock in Building 391															
Date/Time Discovered:	04/08/2011 11:45 (PTZ)															
Date/Time Categorized:	04/08/2011 13:45 (PTZ)															

Report Type:	Update		
Report Dates:	Notification	04/11/2011	18:28 (ETZ)
	Initial Update	04/12/2011	13:17 (ETZ)
	Latest Update	04/12/2011	13:17 (ETZ)
	Final		
Significance Category:	2		
Reporting Criteria:	2C(1) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or disturbance of a previously unknown or mislocated hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas) resulting in a person contacting (burn, shock, etc.) hazardous energy.		
Cause Codes:			
ISM:			
Subcontractor Involved:	Yes GSE, Inc.		
Occurrence Description:	<p>On April 8, 2011, at approximately 11:45 AM, a subcontract worker received a minor electrical shock while cleaning out a hole he drilled in the concrete floor of B-391 room 1302. The area was scanned for utilities using proper procedures and equipment prior to start of work. The worker was wearing proper PPE when he core-drilled a 4-inch hole through a concrete floor in B-391. All work controls and permits were in place. After drilling the hole, the worker removed his rubber electrical gloves and leather outer gloves. He donned lighter gloves, looked in the hole and noted only a smooth surface. Using a rag, he began cleaning out the concrete sludge in the hole in the concrete floor. He received a tingle in one of the middle fingers of his right hand. He stopped work and reported the incident. He was taken to the subcontractor company health care provider, was determined to be uninjured, and was released. It was discovered that the process of drilling the hole in the concrete floor cut through an unidentified 0.5" PVC conduit containing energized wires.</p> <p>The 0.5" PVC conduit is fed by Panel 858A34, circuits 27 and 29. These two circuits are for wall receptacles. There are two hot wires in the conduit, 120V phase-to-ground, and 208V phase-to-phase. While cleaning the damp sludge from the hole the energized wire became exposed and contacted his finger. It is likely the worker received a 120V shock.</p> <p>The F&I Directorate initiated a review of the incident on April 8, 2011.</p>		
Cause Description:			
Operating Conditions:	Does not apply		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		

Immediate Action(s):	<p>1) The employee reported the incident to his supervisor.</p> <p>2) The employee was taken to the subcontractor company's health care provider, was determined to be uninjured, and was released.</p> <p>3) Line and program management were notified.</p> <p>4) Work was stopped and a safety pause was conducted.</p> <p>5) The unidentified electrical circuit was subsequently identified and locked out (LOTO).</p> <p>6) A review of the incident was initiated April 8, 2011 by the F&I Directorate.</p>
FM Evaluation:	<p>The final report is due to the ORO by 5/17/2011.</p> <p>The final report is due for entry into ORPS by 5/20/2011.</p>
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes.</p> <p>Before Further Operation? No</p> <p>By Whom: Jon Sjoberg</p> <p>By When: 05/17/2011</p>
Division or Project:	O&B
Plant Area:	Site 200
System/Building/Equipment:	Building 391 Electrical Conduit
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control</p> <p>07D--Electrical Systems - Electrical Wiring</p> <p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock</p> <p>11G--Other - Subcontractor</p> <p>12C--EH Categories - Electrical Safety</p> <p>14D--Quality Assurance - Documents and Records Deficiency</p>
HQ Summary:	<p>On April 8, 2011, a subcontract worker received a minor electrical shock while cleaning out a hole that he drilled in the concrete floor of Building 391. The area was scanned for utilities using proper procedures and equipment prior to start of work. All work controls and permits were in place. The worker was wearing proper PPE when he core-drilled a 4-inch hole through a concrete floor. After drilling the hole, the worker removed his rubber electrical and leather gloves. After donning lighter gloves, he looked in the hole and noted only a smooth surface. Using a rag, the worker began cleaning out the concrete sludge from the hole in the concrete floor when he received a tingle in a finger of his right hand. The</p>

worker stopped work and reported the event. He was taken to the subcontractor company health care provider, was determined to be uninjured, and was released. In the process of drilling the hole, he had cut through an unidentified 1/2" PVC conduit containing energized wires. There are two hot wires in the conduit, 120-volt phase-to-ground, and 208-volt phase-to-phase. While cleaning the damp sludge from the hole, the energized wire became exposed and contacted the worker's finger. It appears that the worker received a 120-volt shock. Work was stopped and a safety pause was conducted. The unidentified electrical circuit was subsequently identified and locked and tagged out. A review of the event was initiated.

Similar OR Report Number:

Facility Manager:

Name	Harold T. Conner
Phone	(925) 422-5786
Title	AD Facility and Infrastructure Directorate

Originator:

Name	FREEMAN, JEFFREY W
Phone	(925) 424-6787
Title	OCCURRENCE REPORTING

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
04/08/2011	15:00 (PTZ)	Roger Rocha	LEDO
04/08/2011	15:15 (PTZ)	Tracey Simpson	ESH TL

Authorized Classifier(AC):

Jon Sjoberg Date: 04/11/2011

7)Report Number:

[NA--YSO-BWXT-Y12SITE-2011-0009](#) After 2003 Redesign

Secretarial Office:

National Nuclear Security Administration

Lab/Site/Org:

Y12 National Security Complex

Facility Name:

Y-12 Site

Subject/Title:

Work Scope Exceeded during Demolition resulting in Worker Contacting Energized Electrical Conductor

Date/Time Discovered:

04/11/2011 11:50 (ETZ)

Date/Time Categorized:

04/11/2011 13:36 (ETZ)

Report Type:

Notification

Report Dates:

Notification	04/13/2011	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:	4) Perform Work Within Controls		
Subcontractor Involved:	Yes Safety and Ecology Inc. (SEC)		
Occurrence Description:	A Construction Subcontractor mobilized on April 11, 2011 to remove a portion of the Stock Out Conveyor located in the coal yard South west of building 9401-3. The scope of the work task was the removal of that portion of the Stock out Conveyor from the first pedestal to the end of the conveyor. All hazardous energy sources were air gapped at the pedestal, no hazardous energy sources were present in the section of the conveyor that was to be removed. The Subcontractor started with the removal of the Universal Waste (Waste that cannot be taken to the landfill i.e. circuit boards, lights, ballast etc.) at the top and worked down the conveyor. An employee of the subcontractor failed to stop the removal task at the isolation point near the pedestal and continued with the demolition beyond the isolation point. While removing electrical waste components the subcontract employee cut into an energized conductor with pair of six inch diagonal wire cutters which resulted in a spark flash and loud "POP". The subcontract employee was not injured. Work was stopped pending the investigation into this incident.		
Cause Description:			
Operating Conditions:	Normal		
Activity Category:	Construction		
Immediate Action(s):	Work was stopped, Personnel involved was checked for injury, Notifications were made.		
FM Evaluation:	was stopped pending the investigation into this incident.		
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Floyd Smith		

	By When: 04/18/2011						
Division or Project:	T & P Construction						
Plant Area:	Protected Area						
System/Building/Equipment:	9401-3 Conveyor						
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) 01Q--Inadequate Conduct of Operations - Personnel error 07D--Electrical Systems - Electrical Wiring 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency						
HQ Summary:	On April 11, 2011, a construction subcontractor was tasked to remove a portion of the Stock Out Conveyor located in a coal yard southwest of Building 9401-3, during which an energized conductor was cut, resulting in a spark flash. The scope of the work task was the removal of that portion of the Stock Out Conveyor from the first pedestal to the end of the conveyor. All hazardous energy sources were air gapped at the pedestal, and no hazardous energy sources were present in the section of the conveyor that was to be removed. The subcontractor started with the removal of the universal waste (waste that cannot be taken to the landfill (i.e. circuit boards, lights, ballast etc.) at the top and worked down to the conveyor. A subcontractor worker failed to stop the removal task at the isolation point near the pedestal and continued with the demolition beyond the isolation point. While removing electrical waste components, the subcontractor worker cut into an energized conductor with a pair of 6-inch diagonal wire cutters which resulted in a spark flash and a loud "pop" sound. The subcontractor worker was not injured. Work was stopped pending the investigation into this event. Appropriate notifications were made.						
Similar OR Report Number:							
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>Floyd Smith</td> </tr> <tr> <td>Phone</td> <td>(865) 576-9040</td> </tr> <tr> <td>Title</td> <td>Construction Subcontract Manager</td> </tr> </table>	Name	Floyd Smith	Phone	(865) 576-9040	Title	Construction Subcontract Manager
Name	Floyd Smith						
Phone	(865) 576-9040						
Title	Construction Subcontract Manager						
Originator:	<table border="1"> <tr> <td>Name</td> <td>CHARLES, TONY M</td> </tr> <tr> <td>Phone</td> <td>(865) 574-1566</td> </tr> <tr> <td>Title</td> <td>OCCURRENCE REPORTING PROGRAM MANAGER</td> </tr> </table>	Name	CHARLES, TONY M	Phone	(865) 574-1566	Title	OCCURRENCE REPORTING PROGRAM MANAGER
Name	CHARLES, TONY M						
Phone	(865) 574-1566						
Title	OCCURRENCE REPORTING PROGRAM MANAGER						

HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	04/11/2011	12:13 (ETZ)	Frank Keelty	Proj Mgr
	04/11/2011	12:45 (ETZ)	Floyd Smith	Sub Mgr
	04/11/2011	12:50 (ETZ)	Tom Morris	Proj Mgr
	04/11/2011	13:20 (ETZ)	George McClain	Ops Mgr
	04/11/2011	13:36 (ETZ)	Duty FR	NNSA
	04/11/2011	13:36 (ETZ)	Larry Brown	PSS
Authorized Classifier(AC):	E. B. Kimbro Date: 04/13/2011			
8)Report Number:	NE-ID--BEA-ATR-2011-0007 After 2003 Redesign			
Secretarial Office:	Nuclear Energy, Science and Technology			
Lab/Site/Org:	Idaho National Laboratory			
Facility Name:	Advanced Test Reactor			
Subject/Title:	480V Jumper Removed at the ATR Without Proper Personal Protective Equipment (PPE)			
Date/Time Discovered:	04/04/2011 07:30 (MTZ)			
Date/Time Categorized:	04/06/2011 16:30 (MTZ)			
Report Type:	Notification			
Report Dates:	Notification	04/07/2011	18:53 (ETZ)	
	Initial Update			
	Latest Update			
	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:	4) Perform Work Within Controls			
Subcontractor Involved:	No			
Occurrence Description:	On April 2, 2011, during the conduct of detailed operating procedure (DOP)-7.7.8, Radiation Monitoring System Integrity Check, a craft instrument technician removed a 120V jumper from inside a 480 VAC switchgear without the appropriate personal protective equipment (PPE)			

	<p>for flash protection. This jumper had been installed previously by a craft electrician.</p> <p>At approximately 0830 on April 2, 2011, a Senior Reactor Operator (SRO) asked a craft instrument technician to remove a jumper from a 480 VAC switchgear using DOP-7.7.8. The instrument technician was qualified as a Higher Than Normal Risk Electrical Worker as defined in Laboratory Requirements Document (LRD)-14113, Electrical Safety. The technician believed he would only be working with 120 volts and was not aware that the switchgear was a 480 VAC; therefore, did not have on the appropriate Personal Protective Equipment (PPE) for flash protection. The SRO briefed the instrument technician on the 120V work but failed to brief him on the 480V switchgear arc flash hazard. Additionally, the procedure (DOP-7.7.8) had not been signed in authorizing the work to be performed. The installation and removal process is controlled by DOP-7.7.8 and is normally performed by a craft electrician.</p> <p>At approximately 0900 an operator opened the breaker for the SRO and the craft instrument technician. This equipment is old, Nelson switchgear. When the panel door is opened to access where the 120V jumper was installed, the 480 VAC switchgear is a short distance away, making an arc flash hazard present.</p> <p>In the DOP, Section 2, Risk and Controls, arc flash hazards are not listed as a risk under "Working near energized equipment." The only hazard listed there is electrical shock. "Electrical Flash" is only listed for operating breakers greater than 240 V.</p> <p>Based on initial information available, this event was originally determined to not be reportable; however, in light of information gathered during a critique, reportability was determined to be significance category 3.</p>
Cause Description:	
Operating Conditions:	The ATR was shut down for the Cycle 149A-1 outage.
Activity Category:	Maintenance
Immediate Action(s):	<p>Appropriate levels of BEA management and DOE-ID were notified of this event.</p> <p>A critique of this event was scheduled for 1400 on April 6, 2011. work.</p>
FM Evaluation:	
DOE Facility Representative Input:	The ORPS report has a few errors that can impact understanding of the event. The title says 480 VAC Jumper Removal. The jumper was actually 120 VAC within electrical switchgear that also had energized 480 VAC lugs that were not guarded to prevent inadvertent contact by the worker. The report states that the worker was briefed on the 120 VAC work but not

	<p>on the 480 VAC arc flash hazard. At the critique, the worker stated that he was not briefed on any hazards for the work but merely instructed to remove the 120 VAC jumper. The 480 VAC hazard was not limited to arc flash but also included shock due to inadvertent contact with the unguarded energized 480 VAC lugs of which the worker was not aware. The report states that the 480 VAC switchgear is a short distance away, making an arch flash hazard present. The 480 VAC lugs are actually within the same switchgear that was open for removal of the 120 VAC jumper.</p> <p>Entered by: Denning, Richard W 04/20/2011</p>
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	ATR Programs
Plant Area:	ATR
System/Building/Equipment:	Advanced Test Reactor
Facility Function:	Category "A" Reactors
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical)</p> <p>01P--Inadequate Conduct of Operations - Inadequate Oral Communication</p> <p>08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance</p> <p>08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical)</p> <p>12C--EH Categories - Electrical Safety</p> <p>14E--Quality Assurance - Work Process Deficiency</p>
HQ Summary:	<p>On April 2, 2011, during the conduct of detailed operating procedure (DOP)-7.7.8, Radiation Monitoring System Integrity Check, a craft instrument technician removed a 120-volt jumper, from inside a 480-volt switchgear, without the appropriate personal protective equipment (PPE) for flash protection. This jumper had been previously installed by a craft electrician. A craft instrument technician was requested to remove the jumper from the 480-volt switchgear using DOP-7.7.8. The instrument technician was qualified as a Higher than Normal Risk Electrical Worker as defined in Laboratory Requirements Document 14113, Electrical Safety. The technician believed that he would only be working with 120-volts and was not aware that the switchgear was 480-volt, and he did not have on the appropriate PPE for flash protection. The Senior Reactor Operator briefed the instrument technician on the 120-volt work but failed to brief him on the 480-volt switchgear arc flash hazard. Additionally,</p>

	DOP-7.7.8 had not been signed to authorize the work to be performed and did not list the 480-volt hazard. When the panel door is opened to access where the 120-volt jumper was installed, the 480-volt switchgear is a short distance away, creating an arc flash hazard. A critique was held.															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">SCHUEBERT, EDMOND J</td> </tr> <tr> <td>Phone</td> <td colspan="3">(208) 533-4246</td> </tr> <tr> <td>Title</td> <td colspan="3">ATR OPERATIONS FACILITY MANAGER</td> </tr> </table>				Name	SCHUEBERT, EDMOND J			Phone	(208) 533-4246			Title	ATR OPERATIONS FACILITY MANAGER		
Name	SCHUEBERT, EDMOND J															
Phone	(208) 533-4246															
Title	ATR OPERATIONS FACILITY MANAGER															
Originator:	<table border="1"> <tr> <td>Name</td> <td colspan="3">OWENS, MARJORIE A</td> </tr> <tr> <td>Phone</td> <td colspan="3">(208) 533-4563</td> </tr> <tr> <td>Title</td> <td colspan="3">ATR OPERATIONS FACILITY ADMINISTRATI</td> </tr> </table>				Name	OWENS, MARJORIE A			Phone	(208) 533-4563			Title	ATR OPERATIONS FACILITY ADMINISTRATI		
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HQ OC Notification:	<table border="1"> <tr> <td>Date</td> <td>Time</td> <td>Person Notified</td> <td>Organization</td> </tr> <tr> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> </table>				Date	Time	Person Notified	Organization	NA	NA	NA	NA				
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NA	NA	NA	NA													
Other Notifications:	<table border="1"> <tr> <td>Date</td> <td>Time</td> <td>Person Notified</td> <td>Organization</td> </tr> <tr> <td>04/06/2011</td> <td>16:30 (MTZ)</td> <td>R. Denning</td> <td>DOE-ID</td> </tr> </table>				Date	Time	Person Notified	Organization	04/06/2011	16:30 (MTZ)	R. Denning	DOE-ID				
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04/06/2011	16:30 (MTZ)	R. Denning	DOE-ID													
Authorized Classifier(AC):	E. BRUCE CRISWELL Date: 04/07/2011															
9)Report Number:	SC--SSO-SU-SLAC-2011-0006 After 2003 Redesign															
Secretarial Office:	Science															
Lab/Site/Org:	Stanford Linear Accelerator Center															
Facility Name:	Stanford Linear Accelerator Center															
Subject/Title:	Improper Lockout Due to Switch Malfunction and Failure to Follow Procedure															
Date/Time Discovered:	04/15/2011 11:00 (PTZ)															
Date/Time Categorized:	04/18/2011 11:45 (PTZ)															
Report Type:	Notification															
Report Dates:	<table border="1"> <tr> <td>Notification</td> <td>04/19/2011</td> <td>20:26 (ETZ)</td> </tr> <tr> <td>Initial Update</td> <td></td> <td></td> </tr> <tr> <td>Latest Update</td> <td></td> <td></td> </tr> <tr> <td>Final</td> <td></td> <td></td> </tr> </table>				Notification	04/19/2011	20:26 (ETZ)	Initial Update			Latest Update			Final		
Notification	04/19/2011	20:26 (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:	Yes Cupertino Electric, Inc.
Occurrence Description:	<p>On Friday 4/15/2011, at approximately 11:00 am, a subcontractor electrician was removing temporary power cables from Bldg 26. This required accessing elevated areas using a scissor lift; these areas were in the path of travel of Bridge Crane 001 and also near the three insulated 480 volt rails that power the crane. The electrician operated the crane disconnect handle from the ON to OFF position and placed a lock and tag on the handle. Unbeknownst to the electrician, the switch was hung up at an intermediate position and the internal contacts did not separate as expected. The electrician did not perform the required zero energy check of having a crane operator attempt to move the crane and verify that the crane did not move. Soon thereafter the electrician moved the scissor lift to the elevated position and proceeded to remove the temporary cables. A knowledgeable building occupant in crane operations observed the work in progress. A coworker showed him the lockout but he tapped the crane pendant button anyway just to be sure. The crane moved showing it was still energized. The worker called out to the electrician that the crane was not properly locked out. The electrician stopped work and lowered the scissor lift. The electrician notified his supervisor and the Field Construction Manager (FCM).</p> <p>The electrician, supervisor, and FCM investigated and determined that the crane disconnect switch handle did not fully travel to the OFF position. When moving from the ON to OFF position the electrician encountered resistance at an intermediate position which made him believe the handle had fully traveled to the OFF position.</p> <p>An investigation pending.</p>
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Electrician Stopped work, notified his supervisor and Field Construction Manager (FCM)
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No

	By Whom: SLAC Investigation Team By When:						
Division or Project:	Operations Directorate						
Plant Area:	Building 026						
System/Building/Equipment:	Building 026						
Facility Function:	Accelerators						
Corrective Action:							
Lessons(s) Learned:							
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01L--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Other) 07E--Electrical Systems - Electrical Equipment Failure 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency						
HQ Summary:	On April 15, 2011, a subcontractor electrician was removing temporary power cables from Building 26 and did not perform a complete zero energy check on a bridge crane. This work required accessing elevated areas using a scissor lift. These areas were in the path of travel of Bridge Crane 001 and also near the three insulated 480-volt rails that power the crane. The electrician had operated the crane disconnect handle from the ON to OFF position and placed a lock and tag on the handle. Unknown to the electrician, the switch was hung up at an intermediate position and the internal contacts did not separate as expected. The electrician did not perform the required zero energy check of having a crane operator attempt to move the crane and verify that the crane did not move. A building occupant, who was experienced in crane operations, observed the work in progress. A coworker showed him the lockout, but he tapped the crane pendant button anyway just to be sure. The crane moved, showing it was still energized. The worker called out to the electrician that the crane was not properly locked out. The electrician stopped work and lowered the scissor lift. The electrician notified his supervisor and the Field Construction Manager. The initial investigation determined that the crane disconnect switch handle did not fully travel to the OFF position. An investigation is ongoing.						
Similar OR Report Number:							
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>Robinson, Liam M</td> </tr> <tr> <td>Phone</td> <td>(650) 926-2980</td> </tr> <tr> <td>Title</td> <td>FACILITY ENGINEER/COORDINATOR</td> </tr> </table>	Name	Robinson, Liam M	Phone	(650) 926-2980	Title	FACILITY ENGINEER/COORDINATOR
Name	Robinson, Liam M						
Phone	(650) 926-2980						
Title	FACILITY ENGINEER/COORDINATOR						

Originator:	Name	JOHNSON, HOPE E		
	Phone	(650) 926-4322		
	Title	FACILITY MANAGER ADMIN.		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	04/15/2011	11:15 (PTZ)	Liam Robinson	SLAC
	04/15/2011	11:15 (PTZ)	Brian Sherin	SLAC
	04/15/2011	12:00 (PTZ)	Tom Rizzi	SSO DOE
Authorized Classifier(AC):				

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