



August 2010

## Electrical Safety Occurrences

The number of electrical safety events decreased from the previous month to thirteen events, which is just slightly higher than average for the year. However, August was a painful month for electrical workers as we received the first electrical burns of 2010. Significant attention will be required if the trend is to be reversed before the end of the year. Once again, inadequate job planning was a cause in many of the events. A brief pause before attempting a task involving electrical energy could provide the needed focus to prevent an inadvertent error. Several occurrences were characterized as a near miss to a more serious event, including a 277-volt shock that resulted third-degree burns and a hospital stay. It is hard to ignore the signs that unless preemptive actions are taken soon, we are headed for a very serious injury. We cannot continue to rely on luck to protect our workers. Proper hazards recognition and situational awareness by workers can help reduce that need for luck. In only three cases this month did the worker know of, or find, the hazard before the hazard found the worker. Hazards recognition is important to worker safety and is a key element of “doing the job right.” Workers need to remember that they are responsible for understanding the work rules, safe work practices, and the associated hazards of the job. In one event this month, a non-electrical worker received an electrical shock from a piece of equipment that they had assumed was de-energized. The work was performed without a lockout/tagout or zero-energy verification. Control of hazardous energy and verification of an electrically safe work condition can help make you safe rather than lucky. We should challenge ourselves to conduct electrical work for a complete month without a lockout/tagout event. As always, we must continue to consider the safety of non-electrical workers and subcontractors when their lack of awareness places them in situations of exposure.

Number of Events	Involving:
4	Electrical Shocks
2	Electrical Burns
4	Hazardous Energy Control
5	Inadequate Job Planning
1	Inadvertent Drilling/Cutting of Electrical Conductor
1	Excavation of Electrical Conductors
2	Vehicle Intrusion of Electrical Conductors
7	Electrical Near Miss
6	Electrical Workers
7	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

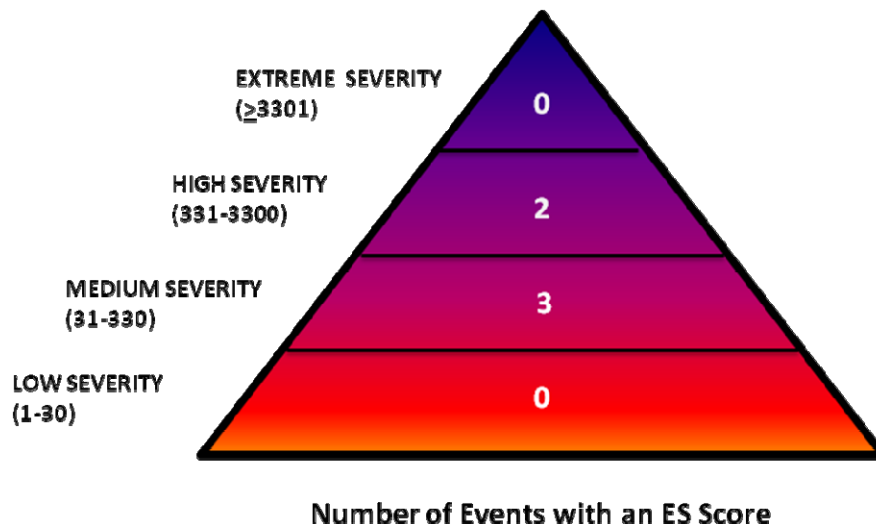
Using the key words above, fourteen events were identified. One event was screened out of the data because the occurrence was a compilation of events previously reported and counted.

Below is the current summary of 2010 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
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	102 (avg. 12.8/month)	22	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

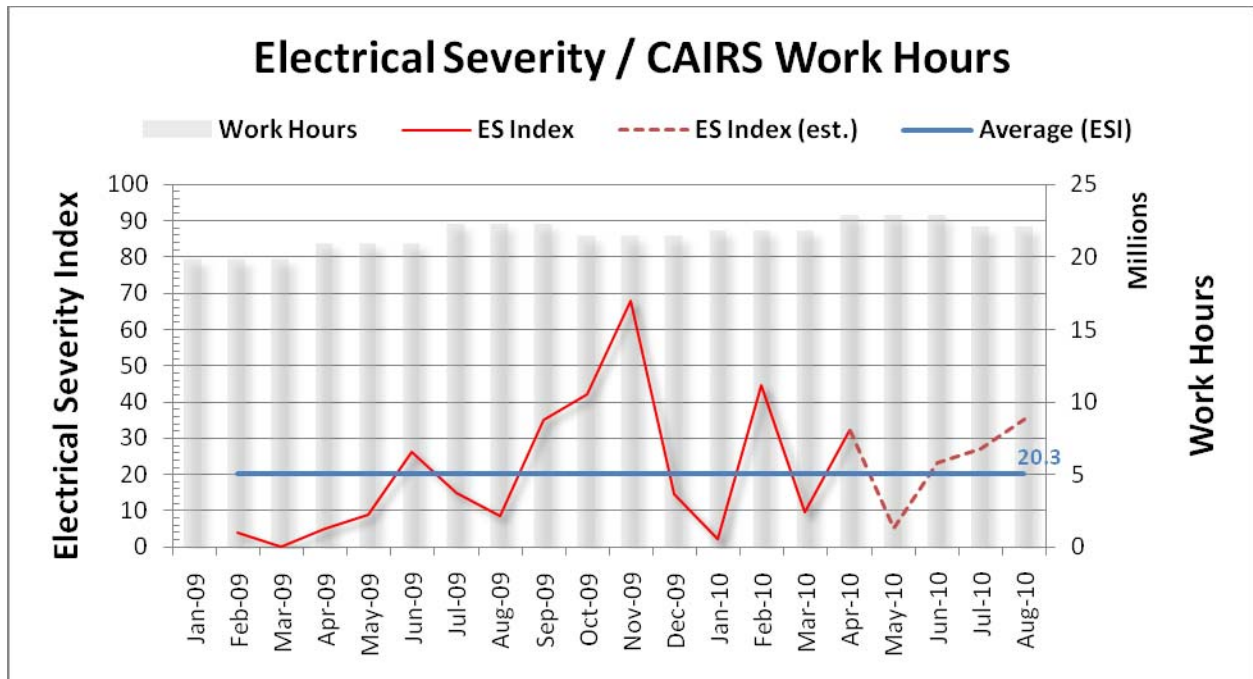
The thirteen events in August 2010, brings the average to 12.8 events with four months left in the year. This represents an increase over the rate of electrical safety occurrences in 2009, which averaged 10.7 per month.

Continue to evaluate electrical events using the Electrical Severity Measurement Tool. Eight of the electrical events were determined to have no Electrical Severity (ES) score. The other five events were distributed as shown below, with the highest ES score being 2400.



## 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	July	August	Δ
<b>Total Occurrences</b>	22	13	-9
<b>Total Electrical Severity</b>	2,990	3,870	+880
<b>Estimated Work Hours</b>	21,737,519	21,958,613	-7,449
<b>ES Index</b>	27.22* (27.51)	35.25	+8.03
<b>Average ESI</b>	19.6	20.3	+0.7

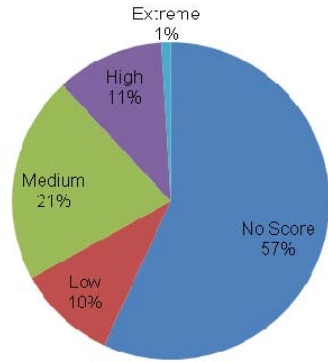
\* These are actual CAIRS work hours for July and ES Index based on the actual hours. The estimated hours and ES Index based on the estimated hours (as reported in July) are shown in parentheses.

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

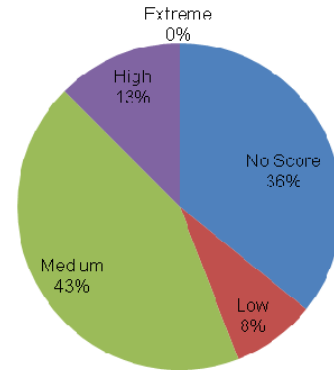
## Electrical Severity and Work Activities

A review of electrical severity categories from January 2009 to August 2010, for events involving electrical work (109) and non-electrical work (120), shows that workers performing non-electrical work have a greater exposure to medium and high severity events. Much of this can be attributed to the higher number of non-electrical workers who come in contact with electrical energy.

Distribution of Electrical Severity for Events Involving Electrical Work



Distribution of Electrical Severity for Events Involving Non-Electrical Work

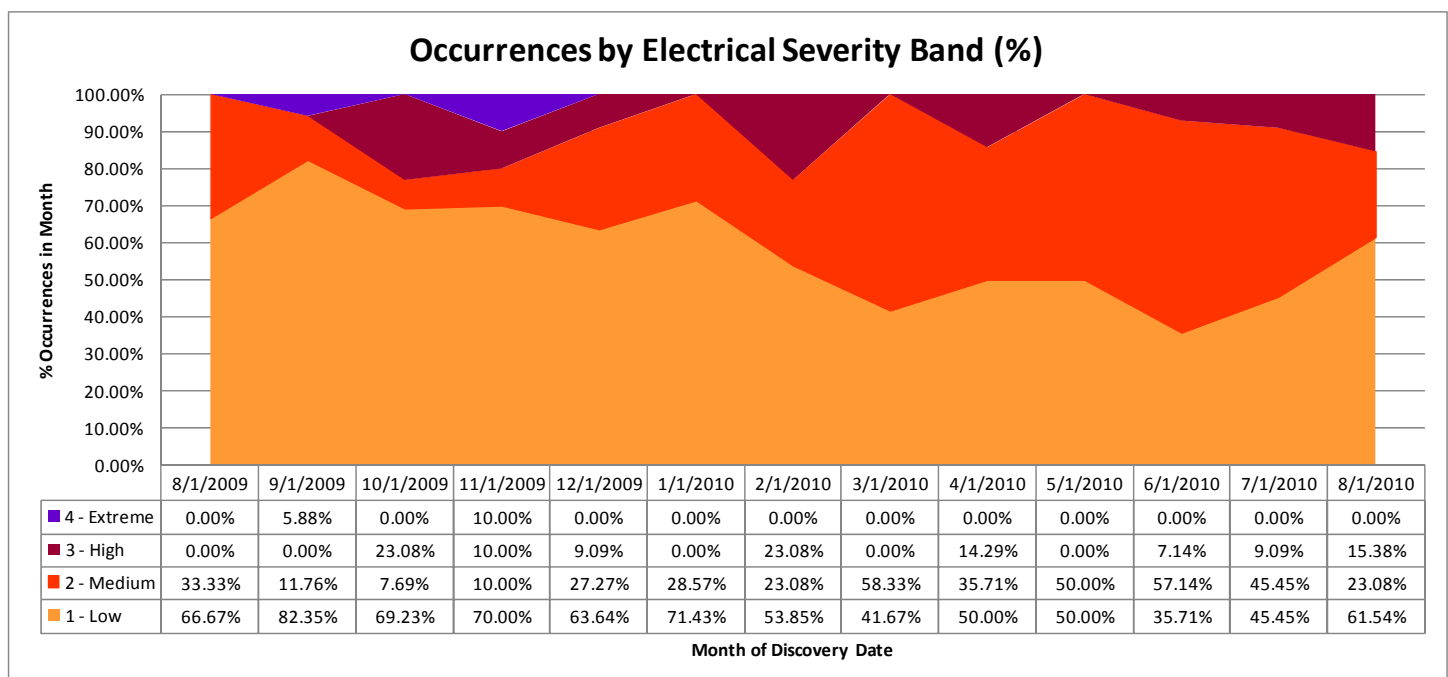


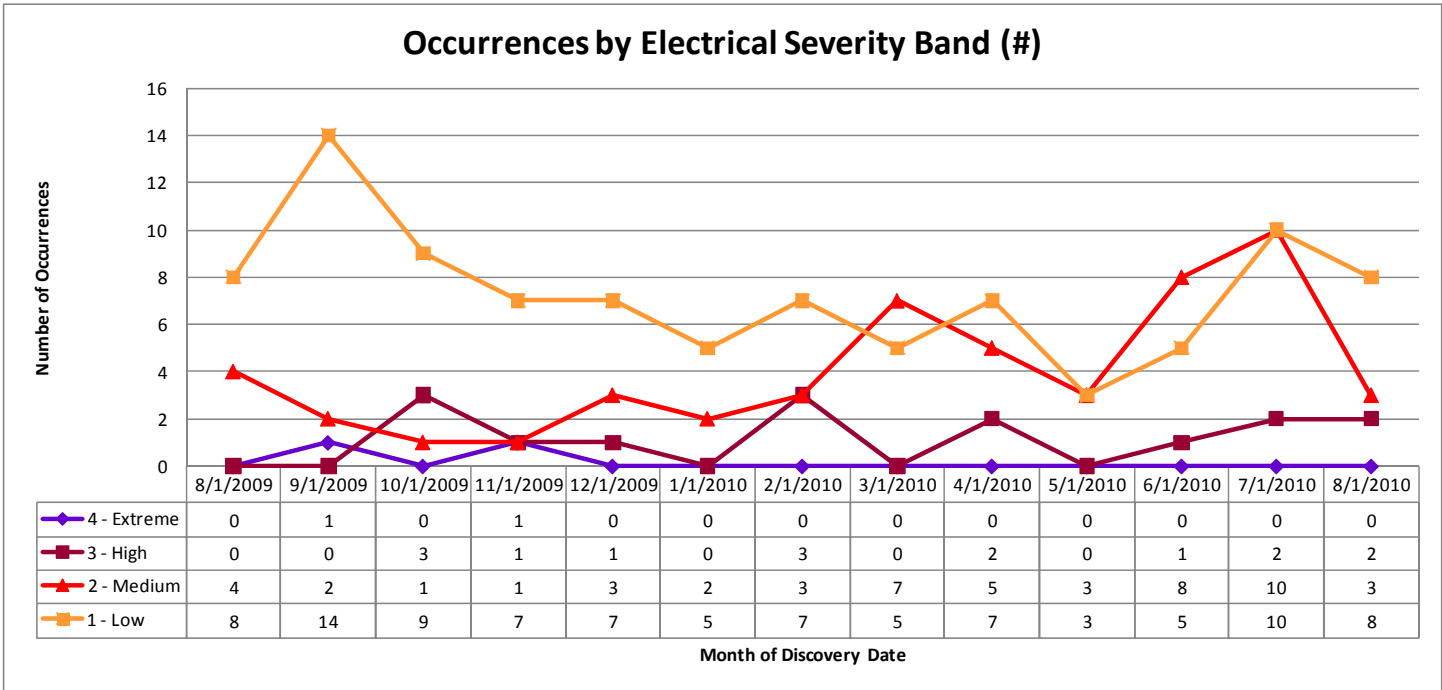
## Summary of Occurrences by Severity Band

For the interval August 2009 through August 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

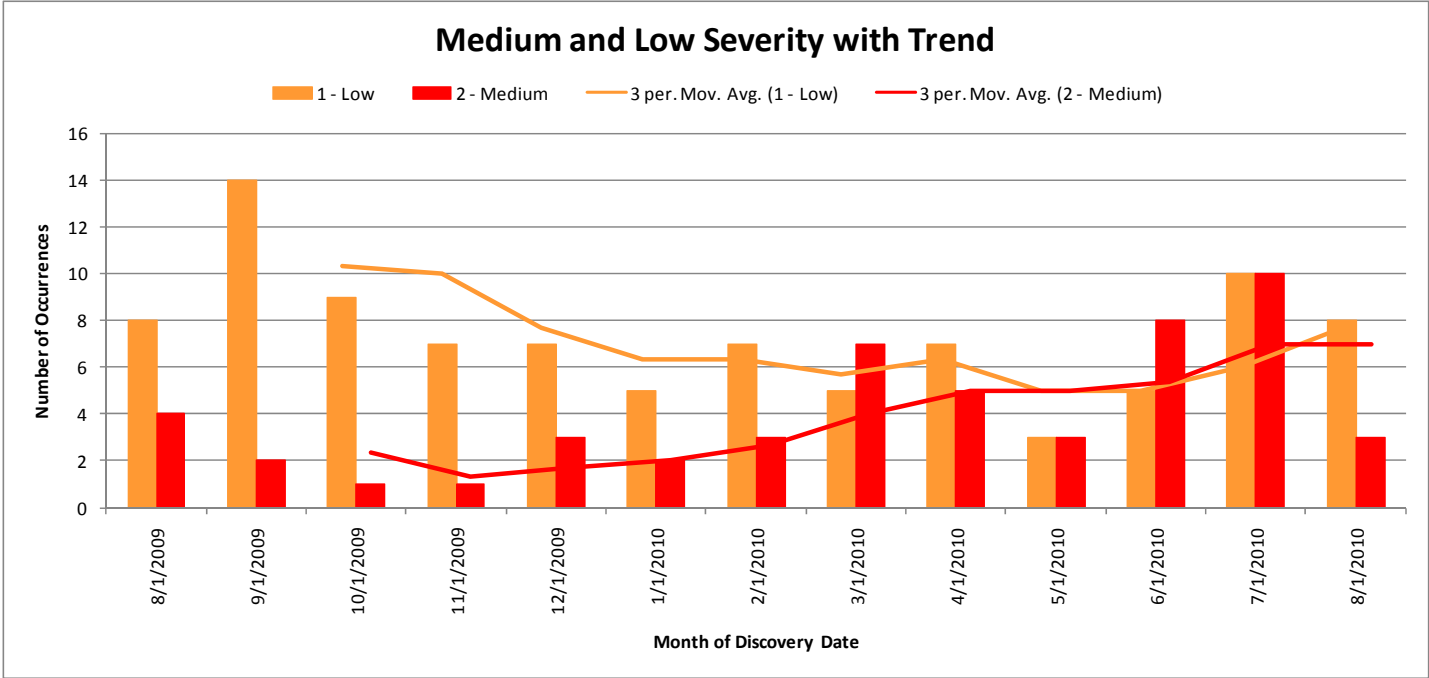
The key observation is that Medium severity occurrences as a group are increasing in CY2010.





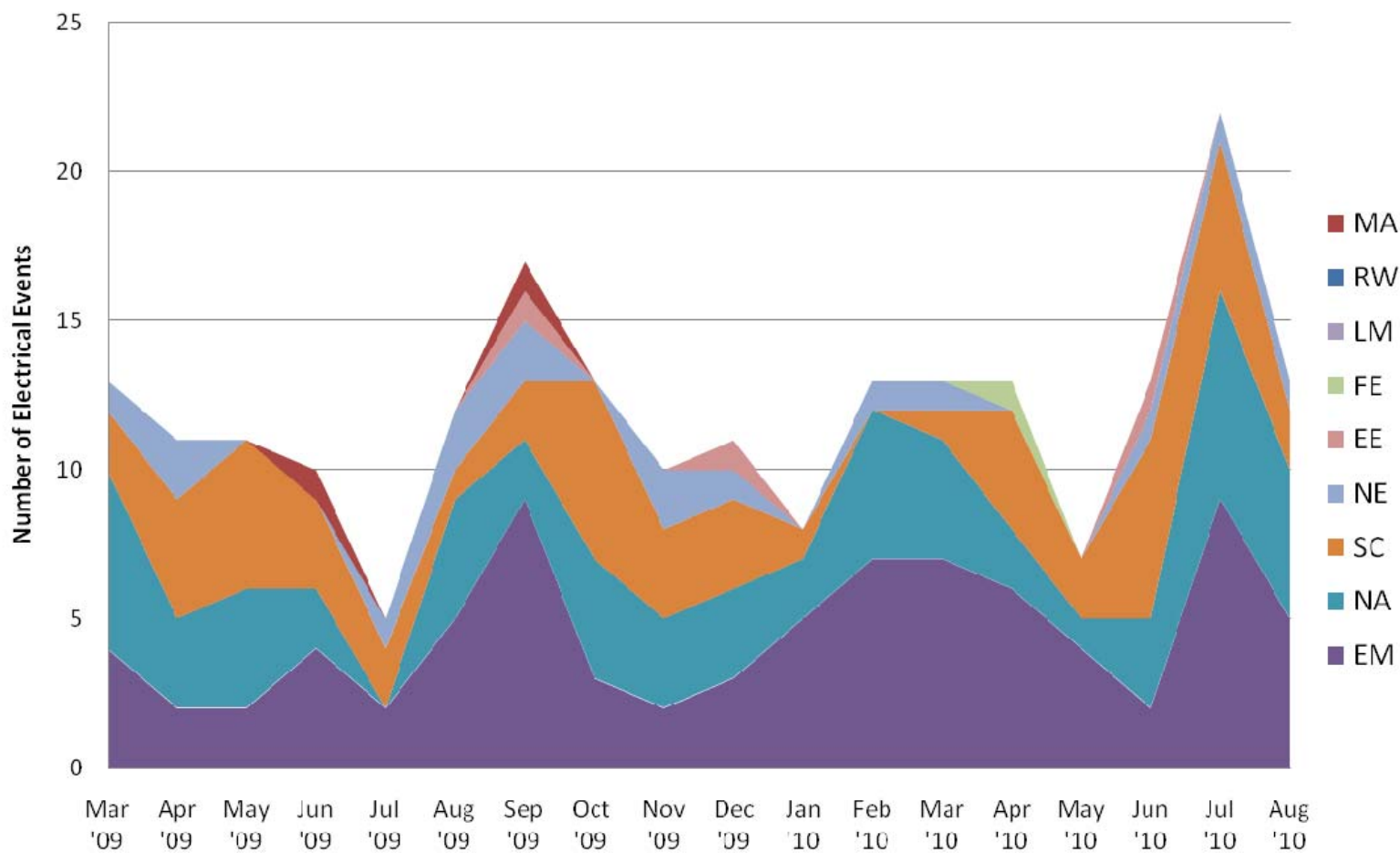
### Medium and Low Severity with Trend

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



# 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, RW - Civilian Radioactive Waste Management, SC - Science

## Electrical Safety Occurrences – August 2010

No	Report Number	Event Summary	SHOCK	BURN	ARCF <sup>(1)</sup>	LOTO <sup>(2)</sup>	PLAN <sup>(3)</sup>	EXCAV <sup>(4)</sup>	CUT/D <sup>(5)</sup>	VEH <sup>(6)</sup>	SC <sup>(7)</sup>	RC <sup>(8)</sup>	ES <sup>(9)</sup>
1	EM--NVSO-NST-NTS-2010-0025	Extension cord severed during excavation activity.					X	X			4	10(3)	0
2	EM-OH-MCP-ARC-MOU1-2010-0002	Dump truck bed contacts overhead electrical line.								X	4	10(3)	0
3	EM-RL--CPRC-CENTPLAT-2010-0007	Excavator contacts overhead communications line.								X	4	10(2)	0
4	EM-SR--SRNS-MOGEN-2010-0006	Worker damages energized 120-V power cord creating ground fault.							X		3	10(2)	110
5	EM-SR--SRNS-SIPS-2010-0015	Workers discovered 120 volts after installing LOTO.					X				3	2C(2)	0
6	NA--LSO-LLNL-LLNL-2010-0036	Worker receives 60-V shock from oven assumed to be de-energized.	X			X					4	10(2)	330
7	NA--PS-BWP-PANTEX-2010-0050	Worker operated a circuit breaker while energized in violation of equipment label.				X					2	10(3)	0
8	NA--SRSO-MOXS-MOX-2010-0002	Worker receives 480-volt electrical shock while working on a temporary power system.	X	X							2	2C(1)	2400
9	NA--SS-SNL-1000-2010-0010	Worker receives electrical burns from contact with 12 volts DC.	X	X							4	10(2)	0
10	NA--SS-SNL-NMFAC-2010-0008	Worker conducts unauthorized energized work on 277-V circuit.				X	X				3	2C(2)	0
11	NE-ID--BEA-ATR-2010-0017	Workers disable circuit breaker operation by disconnecting control power.					X				3	10(2)	0
12	SC--BHSO-BNL-BNL-2010-0025	Worker receives electrical shock from contact with energized conductors in drop ceiling.	X								2	2C(1)	330
13	SC--FSO-FNAL-FERMILAB-2010-0004	Subcontractor creates a ground fault on an energized 277-volt panel.				X	X				3	2C(2)	700
	TOTAL		4	2	0	4	5	1	1	2			

### 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: Extreme is >3301, High is 331-3300, Medium is 31-330, and Low is 1-30

## Electrical Safety Occurrences – August 2010

No	Report Number	Event Summary	EW <sup>(1)</sup>	N-EW <sup>(2)</sup>	SUB <sup>(3)</sup>	HFW <sup>(4)</sup>	WFH <sup>(5)</sup>	PPE <sup>(6)</sup>	70E <sup>(7)</sup>	VOLT <sup>(8)</sup>		C/I <sup>(9)</sup>	NEUT <sup>(10)</sup>	NM <sup>(11)</sup>
										H	L			
1	EM--NVSO-NST-NTS-2010-0025	Extension cord severed during excavation activity.		X		X					X			X
2	EM-OH-MCP-ARC-MOU1-2010-0002	Dump truck bed contacts overhead electrical line.		X	X	X					X			X
3	EM-RL--CPRC-CENTPLAT-2010-0007	Excavator contacts overhead communications line.		X		X					X			X
4	EM-SR--SRNS-MOGEN-2010-0006	Worker damages energized 120-V power cord creating ground fault.		X		X					X			
5	EM-SR--SRNS-SIPS-2010-0015	Workers discovered 120 volts after installing LOTO.	X				X				X			
6	NA--LSO-LLNL-LLNL-2010-0036	Worker receives 60-V shock from oven assumed to be de-energized.		X		X					X			
7	NA--PS-BWP-PANTEX-2010-0050	Worker operated a circuit breaker while energized in violation of equipment label.		X			X				X			X
8	NA--SRSO-MOXS-MOX-2010-0002	Worker receives 480-volt electrical shock while working on a temporary power system.	X		X	X					X			X
9	NA--SS-SNL-1000-2010-0010	Worker receives electrical burns from contact with 12 volts DC.		X		X					X			
10	NA--SS-SNL-NMFAC-2010-0008	Worker conducts unauthorized energized work on 277-V circuit.	X		X		X				X			X
11	NE-ID--BEA-ATR-2010-0017	Workers disable circuit breaker operation by disconnecting control power.	X			X					X			
12	SC--BHSO-BNL-BNL-2010-0025	Worker receives electrical shock from contact with energized conductors in drop ceiling.	X		X	X					X			X
13	SC--FSO-FNAL-FERMILAB-2010-0004	Subcontractor creates aground fault on an energized 277-volt panel.	X		X	X					X			
	TOTAL		6	7	5	10	3	1	0	0	13	0	0	7

### 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 54824 OR(s) with 58134 occurrences(s) as of 9/9/2010 8:26:37 AM

Query selected 13 OR(s) with 13 occurrences(s) as of 9/9/2010 8:27:24 AM

Download this report in Microsoft Word format. 

<b>1)Report Number:</b>	<a href="#">EM--NVSO-NST-NTS-2010-0025</a> <b>After 2003 Redesign</b>		
<b>Secretarial Office:</b>	Environmental Management		
<b>Lab/Site/Org:</b>	Nevada Test Site		
<b>Facility Name:</b>	Nevada Test Site		
<b>Subject/Title:</b>	Cut Extension Cord at UGTA ER-20-4 Well Site		
<b>Date/Time Discovered:</b>	08/28/2010 15:00 (PTZ)		
<b>Date/Time Categorized:</b>	08/28/2010 15:15 (PTZ)		
<b>Report Type:</b>	Notification/Final		
<b>Report Dates:</b>	Notification	08/30/2010	15:18 (ETZ)
	Initial Update	08/30/2010	15:18 (ETZ)
	Latest Update	08/30/2010	15:18 (ETZ)
	Final	08/30/2010	15:18 (ETZ)
<b>Significance Category:</b>	4		
<b>Reporting Criteria:</b>	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)		
<b>Cause Codes:</b>			
<b>ISM:</b>	2) Analyze the Hazards		
<b>Subcontractor Involved:</b>	No		
<b>Occurrence Description:</b>	At approximately 3:00 p.m. on Saturday, August 28th, a Type G 110 volt heavy duty extension cord was partially cut (about half way through) while excavating to place the flow line weights into the ground. National Security Technologies, LLC (NSTec) Laborers were using pneumatic spaders (jackhammers with spade heads) to dig approximately 6-inches into the compacted drill pad. The extension cord ran along the snow fence and was buried to a depth of 2 to 3 inches for 37 feet (a gap that allows access to the discharge end of the flow line) to eliminate a tripping hazard in this high use area. The extension cord was not energized when it was cut and was disconnected at both ends. NOTE: The drill pad is considered a green field (not impacted by site activities); however, the extension cord to the air compressor's Weatherford fuel pump ran through the flow line		

	area.  No injuries or equipment damage resulted from this incident.
<b>Cause Description:</b>	
<b>Operating Conditions:</b>	Does Not Apply
<b>Activity Category:</b>	Normal Operations (other than Activities specifically listed in this Category)
<b>Immediate Action(s):</b>	Activities at the drilling site were paused and the investigation was initiated.  Notifications made to NSTec and NNSA/Nevada Site Office line management.  Management review was held on Sunday, August 29, 2010.
<b>FM Evaluation:</b>	Extension cords in this area where another site contractor collects samples are routinely covered with several inches of soil to eliminate the tripping hazard. Prior to resuming work, all buried extension cords will be placed at the surface and yellow cord protectors will be used in high traffic areas to minimize the tripping hazard. The Job Hazard Analysis and Pre-Task Hazard Review will be revised to include the potential for extension cords and other equipment lines in the shallow subsurface. A site map will be posted and used to document and brief changed surface conditions during operations. Installation of the flow line weights will restart after these activities are completed, and a detailed PTHR is held. Enhanced oversight will be present. There will be additional follow-on actions to complete prior to restart of drilling operations.
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	No
<b>Division or Project:</b>	Underground Test Area Project
<b>Plant Area:</b>	NTS-ER-20-4
<b>System/Building/Equipment:</b>	Drill Rig
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	
<b>HQ Keywords:</b>	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 07D--Electrical Systems - Electrical Wiring

	08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12G--EH Categories - Industrial Operations 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency																			
<b>HQ Summary:</b>	<p>On August 28, 2010, a 110-volt Type G heavy duty extension cord was cut about half way through while excavating to place flow line weights into the ground. Laborers were using pneumatic jackhammers with spade heads to dig approximately 6-inches into the compacted drill pad. The extension cord ran along a snow fence and was buried to a depth of 2 to 3 inches for 37 feet (a gap that allows access to the discharge end of the flow line) to eliminate a tripping hazard in this high use area. The extension cord was not energized when it was cut and was disconnected at both ends. Activities at the drilling site were paused and an investigation was initiated. Before work is allowed to resume, all buried extension cords will be placed at the surface and yellow cord protectors will be used in high traffic areas to minimize the tripping hazard. The Job Hazard Analysis and Pre-Task Hazard Review (PTHR) will be revised to include the potential for extension cords and other equipment lines in the shallow subsurface. A site map will be posted and used to document and brief workers on changed surface conditions during operations. Installation of the flow line weights will restart after these activities are completed, and a detailed PTHR is held. Enhanced oversight will be present. There will be additional follow-on actions completed before drilling operations are restarted.</p>																			
<b>Similar OR Report Number:</b>	1. None																			
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">P. K. Ortego</td> </tr> <tr> <td>Phone</td> <td colspan="3">(702) 295-7438</td> </tr> <tr> <td>Title</td> <td colspan="3">Project Manager</td> </tr> </table>				Name	P. K. Ortego			Phone	(702) 295-7438			Title	Project Manager						
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<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">GILE, ANDREA L</td> </tr> <tr> <td>Phone</td> <td colspan="3">(702) 295-7438</td> </tr> <tr> <td>Title</td> <td colspan="3">PROJECT OPERATIONS SPEC.</td> </tr> </table>				Name	GILE, ANDREA L			Phone	(702) 295-7438			Title	PROJECT OPERATIONS SPEC.						
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<b>HQ OC Notification:</b>	<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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<b>Other Notifications:</b>	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>08/28/2010</td> <td>15:15 (PTZ)</td> <td>James Mumma</td> <td>NSO/FR</td> </tr> <tr> <td>08/28/2010</td> <td>17:00 (PTZ)</td> <td>Brian Barbero</td> <td>NSTec</td> </tr> <tr> <td>08/28/2010</td> <td>20:44 (PTZ)</td> <td>Duty Manager</td> <td>NTS</td> </tr> </tbody> </table>				Date	Time	Person Notified	Organization	08/28/2010	15:15 (PTZ)	James Mumma	NSO/FR	08/28/2010	17:00 (PTZ)	Brian Barbero	NSTec	08/28/2010	20:44 (PTZ)	Duty Manager	NTS
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08/28/2010	20:44 (PTZ)	Duty Manager	NTS																	
<b>Authorized Classifier(AC):</b>																				
<b>2)Report Number:</b>	<a href="#">EM-OH-MCP-ARC-MOU1-2010-0002</a> After 2003 Redesign																			

<b>Secretarial Office:</b>	Environmental Management		
<b>Lab/Site/Org:</b>	Mound Plant		
<b>Facility Name:</b>	Mound Operable Unit 1 Project		
<b>Subject/Title:</b>	Dump Truck Bed Contacting Overhead Electrical Line		
<b>Date/Time Discovered:</b>	08/18/2010 11:05 (ETZ)		
<b>Date/Time Categorized:</b>	08/18/2010 13:00 (ETZ)		
<b>Report Type:</b>	Notification/Final		
<b>Report Dates:</b>	Notification	08/21/2010	11:16 (ETZ)
	Initial Update	08/21/2010	11:16 (ETZ)
	Latest Update	08/21/2010	11:16 (ETZ)
	Final	08/21/2010	11:16 (ETZ)
<b>Significance Category:</b>	4		
<b>Reporting Criteria:</b>	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)		
<b>Cause Codes:</b>			
<b>ISM:</b>	2) Analyze the Hazards 3) Develop and Implement Hazard Controls		
<b>Subcontractor Involved:</b>	Yes Wagner		
<b>Occurrence Description:</b>	A contractor was at Mound OU-1 performing paving operations. A dump truck had completed dumping a load of asphalt into the paver. The dump truck driver then lowered the truck's bed and traveled a short distance forward. After traveling the short distance forward, the driver raised the dump truck bed again to clear asphalt from the tailgate area. After clearing the tailgate area, the driver proceeded to drive the truck forward without lowering the bed. The raised bed struck and pulled down an overhead electric line. Crew members had tried to alert the driver about the overhead line but he was not able to stop the vehicle before contacting the line.		
<b>Cause Description:</b>			
<b>Operating Conditions:</b>	Does not apply		
<b>Activity Category:</b>	Facility Decontamination/Decommissioning		
<b>Immediate Action(s):</b>	Work was stopped. Area was barricaded and notifications were made. Electrical contractor was contacted and performed lockout and tagout of electric line. The line was removed from the truck. Paving operations resumed under the direct observation and supervision of the Mound OU-1 Excavation Manager and the ES&H Manager until the task was completed.		
<b>FM Evaluation:</b>			

<b>DOE Facility Representative Input:</b>							
<b>DOE Program Manager Input:</b>							
<b>Further Evaluation is Required:</b>	No						
<b>Division or Project:</b>	ARC						
<b>Plant Area:</b>	Roadway						
<b>System/Building/Equipment:</b>	Mound OU-1						
<b>Facility Function:</b>	Environmental Restoration Operations						
<b>Corrective Action:</b>							
<b>Lessons(s) Learned:</b>							
<b>HQ Keywords:</b>	07D--Electrical Systems - Electrical Wiring 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency						
<b>HQ Summary:</b>	On August 18, 2010, during contractor paving operations, a raised dump truck bed struck an overhead electric line and pulled the line down. The dump truck driver previously had completed dumping a load of asphalt into the paver. The dump truck driver then lowered the truck's bed and, after traveling a short distance forward, raised the dump truck bed again to clear asphalt from the tailgate area. The driver then proceeded to drive the truck forward without lowering the bed, causing the raised bed to strike and pull down an overhead electric line. Crew members had tried to alert the driver about the overhead line, but he was not able to stop the vehicle before contacting the line. Work was stopped and the area was barricaded. Notifications were made. Lockout/tagout of the electric line was performed and the line was removed from the truck. Paving operations resumed under the direct observation and supervision of the Mound OU-1 Excavation Manager and the ES&H Manager until the task was completed.						
<b>Similar OR Report Number:</b>							
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td>DALGA, DENNIS G</td> </tr> <tr> <td>Phone</td> <td>(513) 508-7383</td> </tr> <tr> <td>Title</td> <td>PROJECT MANAGER</td> </tr> </table>	Name	DALGA, DENNIS G	Phone	(513) 508-7383	Title	PROJECT MANAGER
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Phone	(937) 865-3734						

	Title	PROJECT MANAGER		
<b>HQ OC Notification:</b>	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
<b>Other Notifications:</b>	Date	Time	Person Notified	Organization
	08/18/2010	11:30 (ETZ)	Madan Dev	DOE
<b>Authorized Classifier(AC):</b>				

<b>3)Report Number:</b>	<a href="#">EM-RL--CPRC-CENTPLAT-2010-0007</a> After 2003 Redesign		
<b>Secretarial Office:</b>	Environmental Management		
<b>Lab/Site/Org:</b>	Hanford Site		
<b>Facility Name:</b>	Central Plateau Remediation Project		
<b>Subject/Title:</b>	275E Excavator Boom Made Contact w/Communication Line - ARRA		
<b>Date/Time Discovered:</b>	08/22/2010 08:45 (PTZ)		
<b>Date/Time Categorized:</b>	08/22/2010 09:45 (PTZ)		
<b>Report Type:</b>	Notification/Final		
<b>Report Dates:</b>	Notification	08/24/2010	19:11 (ETZ)
	Initial Update	08/24/2010	19:11 (ETZ)
	Latest Update	08/24/2010	19:11 (ETZ)
	Final	08/24/2010	19:11 (ETZ)
<b>Significance Category:</b>	4		
<b>Reporting Criteria:</b>	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)		
<b>Cause Codes:</b>			
<b>ISM:</b>	4) Perform Work Within Controls		
<b>Subcontractor Involved:</b>	No		
<b>Occurrence Description:</b>	On Sunday August 22, 2010, at 275E demolition site a work crew was working to complete the debris removal from the recent structure demolition. The debris pile contained a couple of concrete blocks that needed to either be size reduced or removed with heavy equipment. The equipment needed to complete the size reduction was out-of-service due to malfunctions the day before, so it was determined the with the use of an excavator inside the work zone and a track hoe outside the work zone, the concrete blocks could be relocated to another area.		

	<p>The process to get the concrete blocks out of the work zone would be for the excavator equipped with a thumb-and-bucket attachment to push them one at a time outside the work zone then the front loader would pick them up and transport them to another debris location. There is an overhead line hazard (communication line at 17' height) which was documented in the work package.</p> <p>While working less than 4 – feet under the communication line, the 275E work team was attempting to load one of the concrete steps into the front-end-loader bucket. The excavator was being used to brace the concrete step as the front-end-loader bucket scraped/scooped up the step. Spotters were assigned to specifically monitor the electrical and communication lines during this evolution. During this effort, the thumb-and-bucket attachment on the excavator slipped off of the step, recoiled vertically (up) several inches and a flat spot on the excavator boom momentarily contacted the communications line. There were no personnel injuries and no damage to either the excavator or the communications line.</p>
<b>Cause Description:</b>	
<b>Operating Conditions:</b>	Does not apply
<b>Activity Category:</b>	Facility Decontamination/Decommissioning
<b>Immediate Action(s):</b>	<ol style="list-style-type: none"> <li>1: Stop work on this job site</li> <li>2: Placed equipment into a safe configuration</li> <li>3: Made all necessary notifications</li> <li>4: Personal statements and photos were obtained</li> <li>5: Critique was scheduled for next working day</li> </ol>
<b>FM Evaluation:</b>	<p>During the work evolution there was constant communication by spotters and equipment operators. Once the event happened all work was stopped and equipment was placed into a safe configuration. No injuries or equipment damage occurred.</p> <p>Upon completion of the critique the next working day, it was determined that this event did have some impact on safe facility operations the correct classified as a management concern significance category 4.</p>
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	No
<b>Division or Project:</b>	CHPRC/D&D Project/D4/2E
<b>Plant Area:</b>	200 East
<b>System/Building/Equipment:</b>	275E

<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)															
<b>Corrective Action:</b>																
<b>Lessons(s) Learned:</b>																
<b>HQ Keywords:</b>	08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12G--EH Categories - Industrial Operations 13H--Management Concerns - American Recovery and Reinvestment Act (ARRA) 14E--Quality Assurance - Work Process Deficiency															
<b>HQ Summary:</b>	<p>On August 22, 2010, the thumb-and-bucket attachment on an excavator boom momentarily contacted an overhead communications line at the 275E demolition site. A work crew was completing debris removal from a recent structure demolition. The debris pile contained several concrete steps that needed to be size reduced or removed with heavy equipment. The excavator was to be used to push the steps one at a time outside the work zone where a front loader would pick them up and transport them to another debris location. An overhead line hazard (a communications line at a 17 foot height) was present and was documented in the work package. During the work evolution there was constant communication by spotters and equipment operators. While working less than 4 feet under the communication line, the 275E work team was attempting to load one of the concrete steps into the front-end-loader bucket. The excavator was being used to brace the concrete step as the front-end-loader bucket scraped/scooped up the step. During this effort, the thumb-and-bucket attachment on the excavator slipped off of the step, recoiled vertically upward several inches and a flat spot on the excavator boom momentarily contacted the communications line. Work on the job site was stopped. The equipment was placed in a safe configuration. A critique was scheduled. There were no injuries and no damage to either the excavator or the communications line.</p>															
<b>Similar OR Report Number:</b>																
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">R.A. Trevino</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 373-2933</td> </tr> <tr> <td>Title</td> <td colspan="3">D&amp;D Project Area Manager</td> </tr> </table>				Name	R.A. Trevino			Phone	(509) 373-2933			Title	D&D Project Area Manager		
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<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">MORRIS, KAREN R</td> </tr> <tr> <td>Phone</td> <td colspan="3">(509) 373-5152</td> </tr> <tr> <td>Title</td> <td colspan="3">OPERATIONS SPECIALIST</td> </tr> </table>				Name	MORRIS, KAREN R			Phone	(509) 373-5152			Title	OPERATIONS SPECIALIST		
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<b>Other Notifications:</b>	Date	Time	Person Notified	Organization
	08/22/2010	10:05 (PTZ)	RV Johnson	DOE-RL
	08/22/2010	10:10 (PTZ)	JM Swartz	D&D
<b>Authorized Classifier(AC):</b>				
<b>4)Report Number:</b>	<a href="#">EM-SR--SRNS-MOGEN-2010-0006</a> After 2003 Redesign			
<b>Secretarial Office:</b>	Environmental Management			
<b>Lab/Site/Org:</b>	Savannah River Site			
<b>Facility Name:</b>	Management and Operating - General			
<b>Subject/Title:</b>	Spark From Power Cord Of Network Equipment Rack			
<b>Date/Time Discovered:</b>	08/23/2010 11:14 (ETZ)			
<b>Date/Time Categorized:</b>	08/23/2010 14:40 (ETZ)			
<b>Report Type:</b>	Update			
<b>Report Dates:</b>	Notification	08/24/2010	13:15 (ETZ)	
	Initial Update	08/24/2010	13:19 (ETZ)	
	Latest Update	09/01/2010	13:47 (ETZ)	
	Final			
<b>Significance Category:</b>	3			
<b>Reporting Criteria:</b>	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 3 occurrence)			
<b>Cause Codes:</b>				
<b>ISM:</b>	2) Analyze the Hazards			
<b>Subcontractor Involved:</b>	No			
<b>Occurrence Description:</b>	<p>New network equipment has been mounted in a rack in the Central Computing Facility. The equipment is mounted using rail kits which allow it to slide in and out of the rack.</p> <p>On Monday, August 23rd, at approximately 1114, two employees were attempting to record serial numbers from the devices and had pulled one out approximately 2 inches. When the employee pushed the device back in, they heard a pop and saw a spark. At that point they called a time out and notified management. It appears that when the device was pulled out, the power cord caught on the rail kit and when the device was pushed back in, the cord got pinched between two parts of the rail. This caused a short.</p>			

	<p>Neither the power strip the device was plugged into nor the circuit breaker tripped. No one received a shock. The device lost power. It was subsequently observed that the power cords on several of the other devices had also been pinched or nicked.</p> <p>The equipment has not yet been evaluated for any damage. There was no smoke or fire.</p> <p>The manager contacted SRS Electrical Safety and a evaluation was performed and then contacted Site ORPS at 1440 and the event was categorized as 10(2).</p> <p>A Fact Finding meeting is scheduled for 8/25/2010.</p> <p>Corrective Actions identified during Fact Finding meeting will be tracked in STAR (2010-CTS-011344).</p>
<b>Cause Description:</b>	
<b>Operating Conditions:</b>	Normal Conditions
<b>Activity Category:</b>	Normal Operations (other than Activities specifically listed in this Category)
<b>Immediate Action(s):</b>	A timeout was called. The devices and rack were not touched until power to the rack was turned off. The facility team lead and manager were notified; they in turn notified the remainder of the management chain. A QEW was called to turn off the breakers for all 4 power strips in the rack. The facility electrical design authority (who is a SERB member) was contacted. The area Safety Engineer was notified; he notified the SRNL SERB member. The Facility Administrator was notified. The power cords for the equipment in the rack were unplugged after verifying no power to the strips. Jackie McAlhaney, SERB Vice Chair, was also contacted to observe the condition of the equipment.
<b>FM Evaluation:</b>	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 110 (Medium Significance). This event scores as follows: Electrical Hazard: 10 (120v); Environment Factor: 0; Shock Proximity Factor: 10; Arc Flash: 0; Thermal Factor: 0; and Injury Factor: 1. Electrical Severity= $10(1+0+0+10+0)*1=110$ .
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	Yes. Before Further Operation? No By Whom: Fred Stanland By When:

<b>Division or Project:</b>	IT	
<b>Plant Area:</b>	A-Area	
<b>System/Building/Equipment:</b>	703-44A	
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)	
<b>Corrective Action 01:</b>	<b>Target Completion Date:</b> 08/25/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#3
	Verify equipment racks have been inspected and document.	
<b>Corrective Action 02:</b>	<b>Target Completion Date:</b> 08/24/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#4
	Develop briefing to make others aware of issue.	
<b>Corrective Action 03:</b>	<b>Target Completion Date:</b> 09/30/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#5
	Develop internal reference cards/checklists for reporting process and contacts (both DOE-FR and facility manager) for use if an event happens.	
<b>Corrective Action 04:</b>	<b>Target Completion Date:</b> 09/10/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#6
	Issue Lessons Learned to site with a specific reference the rack style/number involved ( IBM X3550-M2 Server Platform).	
<b>Corrective Action 05:</b>	<b>Target Completion Date:</b> 08/26/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#7
	Replace all power cables in subject rack and implement cable rout that avoids interferences, as well as, remove bracket (Z bracket) on the end of slide rails that pinched and penetrated cabling.	
<b>Corrective Action 06:</b>	<b>Target Completion Date:</b> 09/30/2010	<b>Tracking ID:</b> 2010-CTS-011344, CA#8
	Update Manual 12B1, Procedure 2.21 CI Conduct of Operations to: ? Provide guidance for cable management ? Define protocols for racking/un-racking of equipment in Data Centers ? Ensure a 2nd look is made before energizing equipment ? Implement regularly scheduled inspections of cabling in all Data Center equipment racks	
<b>Lessons(s) Learned:</b>	To be issued.	
<b>HQ Keywords:</b>	07D--Electrical Systems - Electrical Wiring	

	12C--EH Categories - Electrical Safety 14L--Quality Assurance - No QA Deficiency																											
<b>HQ Summary:</b>	<p>On August 23, 2010, two employees heard a pop and saw a spark when they pushed a network device back into its rack position. The employees had pulled the device out of the rack approximately 2 inches in order to record serial numbers from new network devices. The new network equipment had been mounted in the rack in the Central Computing Facility. The equipment is mounted using rail kits which allow it to slide in and out of the rack. At the pop and the spark, the two employees called a time out and notified management. It appears that when the device was pulled out, the power cord caught on the rail kit. When the device was pushed back in, the cord got pinched between two parts of the rail. This action caused a short. Neither the power strip that the device was plugged into nor the circuit breaker tripped. The power cords for the equipment in the rack were unplugged after verifying that there was no electrical power to the strips. There were no electrical shocks associated with this event. It was subsequently observed that the power cords on several of the other devices had also been pinched or nicked. The manager contacted SRS Electrical Safety staff and an evaluation was performed. A fact finding meeting was scheduled.</p>																											
<b>Similar OR Report Number:</b>	1. None																											
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">Fred Stanland</td> </tr> <tr> <td>Phone</td> <td colspan="3">(803) 725-3257</td> </tr> <tr> <td>Title</td> <td colspan="3">Manager, Network and Data Center Engineering</td> </tr> </table>				Name	Fred Stanland			Phone	(803) 725-3257			Title	Manager, Network and Data Center Engineering														
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<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">BRADFORD, CARL E</td> </tr> <tr> <td>Phone</td> <td colspan="3">(803) 952-9802</td> </tr> <tr> <td>Title</td> <td colspan="3">ISSUE COORDINATOR</td> </tr> </table>				Name	BRADFORD, CARL E			Phone	(803) 952-9802			Title	ISSUE COORDINATOR														
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<b>Authorized Classifier(AC):</b>	Rod Hutto      Date: 08/24/2010																											
<b>5)Report Number:</b>	<a href="#">EM-SR--SRNS-SIPS-2010-0015</a> After 2003 Redesign																											
<b>Secretarial Office:</b>	Environmental Management																											

<b>Lab/Site/Org:</b>	Savannah River Site		
<b>Facility Name:</b>	Site Infrastructure and Project Systems		
<b>Subject/Title:</b>	Hazardous Energy Incident		
<b>Date/Time Discovered:</b>	08/04/2010 16:20 (ETZ)		
<b>Date/Time Categorized:</b>	08/04/2010 16:20 (ETZ)		
<b>Report Type:</b>	Notification		
<b>Report Dates:</b>	Notification	08/04/2010	16:55 (ETZ)
	Initial Update		
	Latest Update		
	Final		
<b>Significance Category:</b>	3		
<b>Reporting Criteria:</b>	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.		
<b>Cause Codes:</b>			
<b>ISM:</b>			
<b>Subcontractor Involved:</b>	No		
<b>Occurrence Description:</b>	On 8/2/2010, Construction personnel were preparing to rework the fire alarm panels in Z area. The fire panels are part of a low voltage system. An approved lock out was installed and construction workers removed pull box covers to evaluate the work. When the covers were removed a wire that was not part of the work scope or installed per the available drawings was found. The wire was checked for absence of voltage per standard work practice and found to be energized with 110 volts. Construction called time out and notified Site Infrastructure. Construction initiated an investigation and Infrastructure called a Fact Finding. This report is being issued to document SRNS managements concern as a 2C(2).		
<b>Cause Description:</b>			
<b>Operating Conditions:</b>	Norma/		
<b>Activity Category:</b>	Construction		
<b>Immediate Action(s):</b>	Called time out. Initiated Fact Finding.		
<b>FM Evaluation:</b>			
<b>DOE Facility Representative Input:</b>			
<b>DOE Program Manager Input:</b>			
<b>Further Evaluation is</b>	Yes.		

<b>Required:</b>	Before Further Operation? No By Whom: James Yeager By When:																			
<b>Division or Project:</b>	Project Management & Construction																			
<b>Plant Area:</b>	Z area																			
<b>System/Building/Equipment:</b>	Z area																			
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)																			
<b>Corrective Action:</b>																				
<b>Lessons(s) Learned:</b>																				
<b>HQ Keywords:</b>	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency																			
<b>HQ Summary:</b>	On August 2, 2010, construction personnel were preparing to rework the fire alarm panels in Z area. The fire panels are part of a low-voltage system. An approved lockout was installed and construction workers removed pull box covers to evaluate the work. A wire that was not part of the work scope or installed per the available drawings was discovered. The wire was checked for absence of voltage and found to be energized with 110 volts. Construction personnel called time out and notified Site Infrastructure. An investigation and fact finding was initiated.																			
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<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td colspan="3">YEAGER, JAMES J</td> </tr> <tr> <td>Phone</td> <td colspan="3">(803) 557-4281</td> </tr> <tr> <td>Title</td> <td colspan="3">FACILITY MANAGER</td> </tr> </table>				Name	YEAGER, JAMES J			Phone	(803) 557-4281			Title	FACILITY MANAGER						
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<b>Authorized Classifier(AC):</b>													
<b>6)Report Number:</b>	<a href="#">NA--LSO-LLNL-LLNL-2010-0036</a> After 2003 Redesign												
<b>Secretarial Office:</b>	National Nuclear Security Administration												
<b>Lab/Site/Org:</b>	Lawrence Livermore National Lab.												
<b>Facility Name:</b>	Lawrence Livermore Nat. Lab. (BOP)												
<b>Subject/Title:</b>	Building 190 Tube Furnace Minor Electrical Shock												
<b>Date/Time Discovered:</b>	08/09/2010 09:30 (PTZ)												
<b>Date/Time Categorized:</b>	08/09/2010 15:30 (PTZ)												
<b>Report Type:</b>	Notification/Final												
<b>Report Dates:</b>	<table border="1"> <tr> <td>Notification</td> <td>08/11/2010</td> <td>19:28 (ETZ)</td> </tr> <tr> <td>Initial Update</td> <td>08/11/2010</td> <td>19:28 (ETZ)</td> </tr> <tr> <td>Latest Update</td> <td>08/11/2010</td> <td>19:28 (ETZ)</td> </tr> <tr> <td>Final</td> <td>08/11/2010</td> <td>19:28 (ETZ)</td> </tr> </table>	Notification	08/11/2010	19:28 (ETZ)	Initial Update	08/11/2010	19:28 (ETZ)	Latest Update	08/11/2010	19:28 (ETZ)	Final	08/11/2010	19:28 (ETZ)
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<b>Cause Codes:</b>													
<b>ISM:</b>	<ol style="list-style-type: none"> <li>1) Define the Scope of Work</li> <li>2) Analyze the Hazards</li> <li>3) Develop and Implement Hazard Controls</li> <li>4) Perform Work Within Controls</li> </ol>												
<b>Subcontractor Involved:</b>	No												
<b>Occurrence Description:</b>	On August 9, 2010, at approximately 9:30 AM, an employee working in Building 190 received a minor electrical shock while threading a wire through a tube furnace. Prior to threading the wire through the furnace, which can only be done with the furnace cover removed, the employee checked the cover in an attempt to confirm that the furnace was off. Since there was no heat detected, the employee mistakenly believed it was de-energized while it was, in fact, still plugged in. The oven operates at 60-volts. According to LLNL procedures (Document 16.1 of the Environmental, Safety and Health Manual), work on any equipment over 50-volts requires either Lock Out/Tag Out or an Energized Electrical Work Permit. The wire being threaded through the oven slipped between two ceramic "beads" which were installed internal to the unit to prevent finger contact with live electrical wires, but which are not effective in blocking												

	<p>something with a smaller diameter (i.e, the wire). Upon receiving the shock, the employee notified his supervisor and went to LLNL's Health Services as a precaution. The employee was evaluated and released with no restrictions. The Ground Fault Circuit Interrupter (GFCI) also immediately tripped, minimizing the extent of the shock. The DOE Electricity Severity Measurement Tool was used and the score was determined to be 330 (Medium). Because this score does not fall under the definition of "hazardous energy," the Physical and Life Sciences Directorate determined, approximately 3:30 PM, that this event would be classified as a Management Concern, Group 10(2), Significance Category 4.</p>
<b>Cause Description:</b>	
<b>Operating Conditions:</b>	Does not apply
<b>Activity Category:</b>	Normal Operations (other than Activities specifically listed in this Category)
<b>Immediate Action(s):</b>	Immediately upon receiving the electrical shock (which was described as "tingling"), the employee reported the event to his supervisor and went to LLNL's Health Services for an evaluation. A work pause was put in effect for the work with the tube furnace.
<b>FM Evaluation:</b>	The minor shock resulted in a work pause for the operation of the tube furnace. A review of operations and the adequacy of controls and procedures will be undertaken.
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	No
<b>Division or Project:</b>	PLS
<b>Plant Area:</b>	Site 200
<b>System/Building/Equipment:</b>	Building 190 Tube Furnace
<b>Facility Function:</b>	Laboratory - Research & Development
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	
<b>HQ Keywords:</b>	<p>01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical)  08A--OSHA Reportable/Industrial Hygiene - Electrical Shock  12I--EH Categories - Lockout/Tagout (Electrical or Mechanical)  14E--Quality Assurance - Work Process Deficiency</p>
<b>HQ Summary:</b>	On August 9, 2010, an employee working in Building 190 received a minor electrical shock while threading a wire through a tube furnace. Prior to threading the wire through the furnace, which can only be done with the furnace cover removed, the employee checked the cover in an attempt to



confirm that the furnace was off. Since there was no heat detected, the employee mistakenly believed it was de-energized while it was, in fact, still energized. The oven operates at 60-volts. According to LLNL procedures, work on any equipment over 50-volts requires either Lock Out/Tag Out or an Energized Electrical Work Permit. The wire being threaded through the oven slipped between two ceramic "beads" which were installed internal to the unit to prevent finger contact with live electrical wires, but which are not effective in blocking something with a smaller diameter. Upon receiving the shock, the employee notified his supervisor and went to LLNL's Health Services as a precaution. The employee was evaluated and released with no restrictions. The Ground Fault Circuit Interrupter also immediately tripped, minimizing the extent of the shock. The DOE Electricity Severity Measurement Tool score was 330 (Medium). The minor shock resulted in a work pause for the operation of the tube furnace. A review of operations and the adequacy of controls and procedures will be performed.

**Similar OR Report Number:**

**Facility Manager:**

Name	William H. Goldstein
Phone	(925) 422-2515
Title	PLS Associate Director

**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
08/09/2010	16:05 (PTZ)	Tracey Simpson	ESH TL
08/09/2010	16:08 (PTZ)	David Aron	NNSA/LSO
08/09/2010	16:12 (PTZ)	Scott McAllister	LEDO

**Authorized Classifier(AC):**

Warren Rued     Date: 08/10/2010

**7)Report Number:**

[NA--PS-BWP-PANTEX-2010-0050](#) After 2003 Redesign

**Secretarial Office:**

National Nuclear Security Administration

**Lab/Site/Org:**

Pantex Plant

**Facility Name:**

Pantex Plant

**Subject/Title:**

Hazard Controls for Circuit Breaker Operation Not Fully Implemented

**Date/Time Discovered:**

08/12/2010 13:00 (CTZ)

**Date/Time Categorized:**

08/12/2010 14:55 (CTZ)

**Report Type:**

Update

<b>Report Dates:</b>	Notification	08/13/2010	15:32 (ETZ)
	Initial Update	08/18/2010	14:21 (ETZ)
	Latest Update	08/18/2010	14:21 (ETZ)
	Final		
<b>Significance Category:</b>	2		
<b>Reporting Criteria:</b>	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 2 occurrence)		
<b>Cause Codes:</b>			
<b>ISM:</b>	4) Perform Work Within Controls		
<b>Subcontractor Involved:</b>	No		
<b>Occurrence Description:</b>	<p>On 08/12/10, an Electrical Code Inspector (ECI) noticed a breaker on a panel in Zone 11 facility that had been operated with the breaker energized, contrary to the warning labeling. Due to the potential for the release of high energy in the event the circuit breaker failed catastrophically, the labeling required the breaker to be placed in an electrically safe work condition (de-energized) prior to operating. The breaker had been placed in an open condition with the circuit energized. The breaker was operated as designed, but not as-posted.</p> <p>There were no injuries to personnel, nor danger to equipment or the environment as a result of this event.</p>		
<b>Cause Description:</b>			
<b>Operating Conditions:</b>	Normal		
<b>Activity Category:</b>	Construction		
<b>Immediate Action(s):</b>	<p>Manager, Plant Maintenance Department, initiated an investigation.</p> <p>Manager, Plant Maintenance Department, initiated stand-down training.</p> <p>Manager, Plant Maintenance Department, suspended qualifications for involved personnel.</p> <p>On 08/12/10, the event was categorized as 10(3) S/C 2, A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence.</p>		
<b>FM Evaluation:</b>	Description of Occurrence was revised for clarification. 08/18/2010		
<b>DOE Facility Representative Input:</b>			
<b>DOE Program Manager Input:</b>			

<b>Further Evaluation is Required:</b>	No						
<b>Division or Project:</b>	Maintenance Division						
<b>Plant Area:</b>	Zone 11						
<b>System/Building/Equipment:</b>	Zone 11 Facility						
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)						
<b>Corrective Action:</b>							
<b>Lessons(s) Learned:</b>							
<b>HQ Keywords:</b>	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency						
<b>HQ Summary:</b>	On August 12, 2010, an electrical code inspector was contacted by ES&H and Projects Division representatives to walk down a lockout/tagout from August 10, and discuss the required personnel protective equipment and training for subcontractors to verify absence of energy. During the walk down, the inspector noticed a circuit breaker on a panel in Building 11-50 that had been operated, possibly without the breaker de-energized at the time, as required by the safety postings/labeling (the breaker was labeled with a warning to not operate it energized because of the potential of high fault energy exposure in the event of a breaker failure). The inspector discussed the matter with the supervisor and confirmed that the breaker had indeed been opened two days earlier with the circuit energized, resulting in the event being classified as a Near Miss. The Plant Maintenance Department manager initiated stand-down training and an investigation. Qualifications for the involved personnel were suspended. There were no injuries or danger to equipment.						
<b>Similar OR Report Number:</b>	1. NA--PS-BWP-PANTEX-2009-0068						
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td>Brent Henderson</td> </tr> <tr> <td>Phone</td> <td>(806) 477-3213</td> </tr> <tr> <td>Title</td> <td>Manage, Plant Maintenance Department</td> </tr> </table>	Name	Brent Henderson	Phone	(806) 477-3213	Title	Manage, Plant Maintenance Department
Name	Brent Henderson						
Phone	(806) 477-3213						
Title	Manage, Plant Maintenance Department						
<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td>HALL, BEVERLY J</td> </tr> <tr> <td>Phone</td> <td>(806) 477-3222</td> </tr> </table>	Name	HALL, BEVERLY J	Phone	(806) 477-3222		
Name	HALL, BEVERLY J						
Phone	(806) 477-3222						

	Title			
<b>HQ OC Notification:</b>	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
<b>Other Notifications:</b>	Date	Time	Person Notified	Organization
	08/12/2010	15:20 (CTZ)	Tyfani Lanier	B&W
	08/12/2010	15:20 (CTZ)	Jessica Cortez	PXSO
<b>Authorized Classifier(AC):</b>	Stan Stambaugh		Date: 08/18/2010	

<b>8)Report Number:</b>	<a href="#">NA--SRSO-MOXS-MOX-2010-0002</a> After 2003 Redesign		
<b>Secretarial Office:</b>	National Nuclear Security Administration		
<b>Lab/Site/Org:</b>	Savannah River Site		
<b>Facility Name:</b>	MOX Fuel Fabrication Facility		
<b>Subject/Title:</b>	Electrical shock while working on a 480V temporary power system.		
<b>Date/Time Discovered:</b>	08/07/2010 00:15 (ETZ)		
<b>Date/Time Categorized:</b>	08/07/2010 06:05 (ETZ)		
<b>Report Type:</b>	Notification		
<b>Report Dates:</b>	Notification	08/07/2010	16:47 (ETZ)
	Initial Update		
	Latest Update		
	Final		
<b>Significance Category:</b>	2		
<b>Reporting Criteria:</b>	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.		
<b>Cause Codes:</b>			
<b>ISM:</b>	4) Perform Work Within Controls		
<b>Subcontractor Involved:</b>	Yes Egizii Electric		
<b>Occurrence Description:</b>	An Egizii electrician received an electrical shock while working on a 480V temporary power system. The electrician was taken to the hospital, but was awake and communicating clearly. Indications are that he has a 3rd degree burn to an index finger where the current entered and another burn area behind his neck where the current exited. A co-worker was there with him and pulled the live cable from his hand. Indications from the medical staff at the hospital are that the employee has no effects from the shock except the burns. He is still under observation, but may be released today.		

<b>Cause Description:</b>	Still under investigation
<b>Operating Conditions:</b>	Does not apply
<b>Activity Category:</b>	Construction
<b>Immediate Action(s):</b>	<p>The area was secured and it was ensured that the wiring involved was de-energized. Statements have been obtained from the workers directly involved and from those in the general area. All appropriated notifications have been made.</p> <p>An investigation commenced immediately following the incident. Egizii Electric will stand down from all work pending the results of the investigation.</p>
<b>FM Evaluation:</b>	Further evaluation required
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	<p>Yes.          Before Further Operation? Yes          By Whom: Kelly Trice &amp; Dan Leonard          By When: 08/09/2010</p>
<b>Division or Project:</b>	MOX/Areva Services, LLC
<b>Plant Area:</b>	F Area
<b>System/Building/Equipment:</b>	480 volt temporary power with splitter
<b>Facility Function:</b>	Balance-of-Plant - Site/outside utilities
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	To be determined
<b>HQ Keywords:</b>	<p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock          08D--OSHA Reportable/Industrial Hygiene - Injury          08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance          08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical)          11G--Other - Subcontractor          12H--EH Categories - Injuries Requiring Medical Treatment Other Than First Aid          13A--Management Concerns - HQ Significant (High-lighted for Management attention)          14E--Quality Assurance - Work Process Deficiency          14G--Quality Assurance - Procurement Deficiency</p>
<b>HQ Summary:</b>	<p>On August 7, 2010, a subcontractor (Egizii Electrical) electrician received an electrical shock while working on a 480-volt temporary power system. The electrician was taken to a local hospital, where he was awake and communicating clearly. It appeared that the electrician sustained a 3rd degree burn to an index finger where the current entered his body and to another area behind his neck where the current exited. An electrical circuit</p>

breaker tripped at the source and released the electrician's grip on the cable. Hospital medical staff indicated that the electrician has no physical effects from the shock except for the burns. The electrician was still under observation on August 7. The area was secured and the involved system wiring was de-energized. Statements have been obtained from the workers directly involved and from those in the general area. Appropriate notifications were made. An investigation commenced immediately following the event. Egizii Electric stood down all work pending the investigation results.

**Similar OR Report Number:** 1. To be determined

**Facility Manager:**

Name	LEONARD, DANIEL T.
Phone	(803) 819-8994
Title	ES&H PROGRAM SPECIALIST

**Originator:**

Name	LEONARD, DANIEL T.
Phone	(803) 819-8994
Title	ES&H PROGRAM SPECIALIST

**HQ OC Notification:**

Date	Time	Person Notified	Organization
08/07/2010	01:30 (ETZ)	Kevin Buchanan	NNSA

**Other Notifications:**

Date	Time	Person Notified	Organization
08/07/2010	03:00 (ETZ)	Patrick McDonald	MOX Serv
08/07/2010	05:30 (ETZ)	Dan Leonard	MOX Serv
08/07/2010	05:30 (ETZ)	Howard Lawrence	MOX Serv
08/07/2010	05:30 (ETZ)	Kelly Trice	MOX Serv
08/07/2010	05:30 (ETZ)	Mike Zustra	MOX Serv

**Authorized Classifier(AC):** Richard Stuhler      Date: 08/07/2010

**9)Report Number:** [NA--SS-SNL-1000-2010-0010](#) **After 2003 Redesign**

**Secretarial Office:** National Nuclear Security Administration

**Lab/Site/Org:** Sandia National Laboratories - SS

**Facility Name:** SNL Division 1000

**Subject/Title:** Employee Sustains Minor Electrical Shock While Working on Scanning Probe Microscope

**Date/Time Discovered:** 08/31/2010 13:00 (MTZ)

**Date/Time Categorized:** 09/01/2010 16:00 (MTZ)

**Report Type:** Notification/Final

**Report Dates:**

Notification	09/02/2010	15:55 (ETZ)
Initial Update	09/02/2010	15:55 (ETZ)

	Latest Update	09/02/2010	15:55 (ETZ)
	Final	09/02/2010	15:55 (ETZ)
<b>Significance Category:</b>	4		
<b>Reporting Criteria:</b>	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)		
<b>Cause Codes:</b>			
<b>ISM:</b>	5) Provide Feedback and Continuous Improvement		
<b>Subcontractor Involved:</b>	No		
<b>Occurrence Description:</b>	<p>About 15:50 on 8/18/10, a technologist received a minor electrical shock (approximately 12V DC) to the hand while installing a gender-changer onto a ribbon cable with a D-shell connector. The shock resulted in four small burns (1/16 inch diameter each) on the right hand at the base of the index finger. The technologist reported the incident to management and the ES&amp;H coordinator, and was escorted to Medical for evaluation. The technologist was subsequently released back to work the same day without restriction.</p> <p>The cable was connected to a Scanning Probe Microscope (SPM) controller with a potentiostat for electrochemical measurements. The cable was supposed to connect to a bulkhead fitting on a glovebox, allowing the SPM to be installed into the glovebox while the controller remained outside. However, the connector pins were not making good contact through the bulkhead fitting as a result of spatial limitations. Another technologist working on the SPM sought the help of this technologist to troubleshoot the issue. The installation of the gender-changer was an attempt to resolve the shell interference of the connector allowing better pin connections.</p> <p>The controller was on at the time the shock occurred. The cable was intended to provide plus or minus 15V DC and plus or minus 5V DC power to the SPM, so the work was not considered to be energized electrical work (which is above 50 volts). Both of the technologists were trained and authorized for the work. The equipment was taken out of service pending evaluation by the manufacturer for defects.</p> <p>Based on data from the investigation, this event scored as zero using the electrical severity tool based on an R&amp;D DC voltage less than 15 volts and power less than 100 watts per the Sandia Electrical Safety subject matter</p>		

	expert.
<b>Cause Description:</b>	Critique/Fact Finding Performed 8/18/10
<b>Operating Conditions:</b>	Normal Operation
<b>Activity Category:</b>	Research
<b>Immediate Action(s):</b>	The technologist was escorted to the Medical facility for evaluation. The SPM was placed out of service pending testing by the manufacturer.
<b>FM Evaluation:</b>	EOC # 17485  This event happened on 8/18/2010, but we did not categorize this occurrence until 9/1/2010 since we needed to have the manufacturer of the equipment perform testing to determine if there was a malfunction of the equipment. No malfunction was found by the manufacturer. The reason we needed this information was because of the small burns that the technologist sustained. The specified low voltages and current of the equipment would not be at a level that we would anticipate a person receiving a perceptible shock or injury. The suspected reason for the shock to occur was due to moisture on the person's hand, and the fact that the pointed pins of the connector being pushed against the hand may have resulted in lower resistance of the skin which allowed for current to flow. The DOE Facility Representative was kept informed of the progress of the investigation during this time.
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	No
<b>Division or Project:</b>	1000
<b>Plant Area:</b>	Tech Area I
<b>System/Building/Equipment:</b>	Scanning Probe Microscope/Bldg. 897, Rm. 2444
<b>Facility Function:</b>	Laboratory - Research & Development
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	
<b>HQ Keywords:</b>	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08D--OSHA Reportable/Industrial Hygiene - Injury 12J--EH Categories - OS/IH 14L--Quality Assurance - No QA Deficiency
<b>HQ Summary:</b>	On August 18, 2010, a technologist received a minor electrical shock (approximately 12-v DC) to the hand while installing a gender-changer onto a ribbon cable with a D-shell connector. The shock resulted in four small burns (1/16 inch diameter each) on the right hand at the base of the index finger. The technologist reported the incident to management and the ES&H coordinator, and was escorted to Medical for evaluation. The



technologist was subsequently released back to work the same day without restriction. The cable was connected to a Scanning Probe Microscope (SPM) controller with a potentiostat for electrochemical measurements. The cable was supposed to connect to a bulkhead fitting on a glovebox, allowing the SPM to be installed into the glovebox while the controller remained outside. However, the connector pins were not making good contact through the bulkhead fitting as a result of spatial limitations. The cable was intended to provide plus or minus 15-v DC and plus or minus 5-v DC power to the SPM, so the work was not considered to be energized electrical work (which is above 50 volts). The equipment was taken out of service pending evaluation by the manufacturer for defects. This event scored as zero using the DOE electrical severity tool based on an R&D DC voltage less than 15 volts and power less than 100 watts.

**Similar OR Report Number:**

**Facility Manager:**

Name	M. Wayne Davis
Phone	(505) 844-6734
Title	ES&H Coordinator

**Originator:**

Name	LUCERO, JEWELLEE 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
08/31/2010	13:00 (MTZ)	Charles Barbour	1100
08/31/2010	13:45 (MTZ)	Veronica Martinez	DOE/SSO
08/31/2010	15:00 (MTZ)	Frederick McCormick	1110

**Authorized Classifier(AC):**

Gregory Hebner      Date: 09/01/2010

**10)Report Number:**

[NA--SS-SNL-NMFAC-2010-0008](#) After 2003 Redesign

**Secretarial Office:**

National Nuclear Security Administration

**Lab/Site/Org:**

Sandia National Laboratories - SS

**Facility Name:**

SNL NM Site-wide F & M

**Subject/Title:**

Subcontract Worker Conducts Unauthorized Energized Electrical Work at Bldg. 961

**Date/Time Discovered:**

08/18/2010 10:00 (MTZ)

**Date/Time Categorized:**

08/19/2010 11:10 (MTZ)

**Report Type:**

Update

**Report Dates:**

Notification	08/23/2010	12:37 (ETZ)
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	Initial Update	08/25/2010	10:27 (ETZ)
	Latest Update	08/25/2010	10:27 (ETZ)
	Final		
<b>Significance Category:</b>	3		
<b>Reporting Criteria:</b>	<p>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.</p> <p>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)</p>		
<b>Cause Codes:</b>			
<b>ISM:</b>	<p>3) Develop and Implement Hazard Controls</p> <p>4) Perform Work Within Controls</p>		
<b>Subcontractor Involved:</b>	<p>Yes</p> <p>Enterprise Electric</p>		
<b>Occurrence Description:</b>	<p>At approximately 10:00 a.m., on August 18, 2010, at Building 961, a subcontract journeyman electrician conducted unauthorized energized electrical work on a 277 volt, 20 amp circuit. The prime contractor on the renovation project was unaware of the event. The electrical subcontractor was removing a #12 conductor from a j-box in the ceiling for the purpose of disconnecting an emergency lighting fixture. The worker was on an insulated ladder at the time of the event and did not physically contact the exposed energized conductor. There was no injury and the event did not affect any programmatic equipment. The electrician was wearing a hard hat, safety glasses, safety shoes, and cotton clothing at the time of the event.</p> <p>The subcontract electrician was a 40 year journeyman who had only worked one month at Sandia. The worker was trained to the contractor's and Sandia's electrical safety requirements, which do not allow non-permitted energized electrical work.</p> <p>Discovery of the event consisted of initial interviews on August 18, 2010, followed by interviews with the prime and sub-contract electrical companies on August 19, 2010.</p>		
<b>Cause Description:</b>	Critique/Fact Finding Performed: 8/19/10		

<b>Operating Conditions:</b>	Normal
<b>Activity Category:</b>	Construction
<b>Immediate Action(s):</b>	<p>A stop work order was issued for the electrical contractor</p> <p>Work was suspended on the project</p> <p>Investigation was initiated</p> <p>4800 Early Notifications were conducted</p>
<b>FM Evaluation:</b>	<p>EOC #17481</p> <p>UPDATE 8/24/10: Approved by DOE/SSO FRs.</p> <p>The Discovery Date and Time was Corrected.</p> <p>This OR was originally an SC2 Near Miss. It was changed to a SC3 Near Miss and added 2C(2) Hazardous Energy Control for the following reasons:</p> <ol style="list-style-type: none"> <li>1) Within the last 6 months (the only period reviewed) there were no non-contact events across the complex that were evaluated higher than an SC3</li> <li>2) SC3 is consistent with the proposed Severity Index Tool, which is nearing adoption by DOE HQ (we are tasked to provide a score under the tool for each event, but we are still following the current ORPS guide for classification)</li> <li>3) The occurrence report is listed under two classifications - Group 10 (which allows discretion for the significant category) and Group 2 (2C(2)) which does not - under the ORPS criteria, failure to follow with no injury is an SC3 event.</li> <li>4) Under the Group 10 criteria, the only mandated SC2 is "any event resulting in the initiation of a Type A or B accident investigation" which this clearly is not.</li> <li>5) Finally, this event falls clearly into the SC3 definition: Significance Category 3: Occurrences in this category are those that are not Operational Emergencies and that have a minor impact on safe facility operations, worker or public safety and health, regulatory compliance, or public/business interests. (Examples: unexpected discovery of energy source, broken wrist, electrical conduit cut and violation of work procedures)</li> <li>6) The Electrical Severity significance Number was 700.</li> </ol>

<b>DOE Facility Representative Input:</b>					
<b>DOE Program Manager Input:</b>					
<b>Further Evaluation is Required:</b>	Yes. Before Further Operation? Yes By Whom: Causal Analysis Team By When: 10/01/2010				
<b>Division or Project:</b>	4827/Bldg. 961 Renovation				
<b>Plant Area:</b>	Tech Area IV				
<b>System/Building/Equipment:</b>	277 volt, 20 amp, electrical system/Bldg. 961				
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)				
<b>Corrective Action:</b>					
<b>Lessons(s) Learned:</b>					
<b>HQ Keywords:</b>	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency				
<b>HQ Summary:</b>	On August 18, 2010, a subcontract journeyman electrician at Building 961 conducted unauthorized energized electrical work on a 277-volt, 20-amp circuit. The prime contractor on the renovation project was unaware of the event. The electrician was removing a #12 conductor from a junction box in the ceiling for the purpose of disconnecting an emergency lighting fixture. The worker was on an insulated ladder at the time of the event and did not physically touch the exposed energized conductor. The electrician was wearing a hard hat, safety glasses, safety shoes, and cotton clothing at the time of the event. There was no injury and the event did not affect any programmatic equipment. The subcontract electrician, who had only worked one month at Sandia, had been trained to the contractor's and Sandia's electrical safety requirements, which do not allow non-permitted energized electrical work. A stop work order was issued for the electrical contractor and an investigation was initiated.				
<b>Similar OR Report Number:</b>					
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td>Greg C. Kirsch</td> </tr> <tr> <td>Phone</td> <td>(505) 845-9497</td> </tr> </table>	Name	Greg C. Kirsch	Phone	(505) 845-9497
Name	Greg C. Kirsch				
Phone	(505) 845-9497				

	Title	FMOC FESH Lead		
<b>Originator:</b>	Name	LUCERO, JEWELLEE A		
	Phone	(505) 845-4727		
	Title	REPORTING ADMINISTRATOR		
<b>HQ OC Notification:</b>	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
<b>Other Notifications:</b>	Date	Time	Person Notified	Organization
	08/19/2010	11:10 (MTZ)	Debra Garcia-Sanchez, FR	DOE/SSO
	08/19/2010	11:10 (MTZ)	Arthur Ratzel	4800
	08/19/2010	11:10 (MTZ)	Michael Quinlan	4840
	08/19/2010	11:10 (MTZ)	Bill Lucy	4021
	08/19/2010	11:10 (MTZ)	Gerry Lipka	4842
	08/19/2010	11:12 (MTZ)	EOC	4136
<b>Authorized Classifier(AC):</b>	John Norwalk      Date: 08/20/2010			
<b>11)Report Number:</b>	<a href="#">NE-ID--BEA-ATR-2010-0017</a> After 2003 Redesign			
<b>Secretarial Office:</b>	Nuclear Energy, Science and Technology			
<b>Lab/Site/Org:</b>	Idaho National Laboratory			
<b>Facility Name:</b>	Advanced Test Reactor			
<b>Subject/Title:</b>	Loss of Advanced Test Reactor (ATR) Air Compressors During Scheduled Maintenance			
<b>Date/Time Discovered:</b>	08/18/2010 09:10 (MTZ)			
<b>Date/Time Categorized:</b>	08/23/2010 14:00 (MTZ)			
<b>Report Type:</b>	Notification			
<b>Report Dates:</b>	Notification	08/26/2010	14:28 (ETZ)	
	Initial Update			
	Latest Update			
	Final			
<b>Significance Category:</b>	3			
<b>Reporting Criteria:</b>	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 3 occurrence)			

<b>Cause Codes:</b>	
<b>ISM:</b>	
<b>Subcontractor Involved:</b>	No
<b>Occurrence Description:</b>	<p>Maintenance to perform annual cleaning and inspection of direct current (DC) distribution panel 609-DP-39 using work order (WO) 143975, "609-DP-39, Annual Cleaning and Inspection" was scheduled on the Plan of the Day for August 2010. The authorized work included steps to remove control power required for normal operation of the 2400 volt breakers for the equipment powered from the switchgear in the ATR Complex building TRA-609. The work order also noted affected breakers could be opened manually if necessary.</p> <p>At 0915 on August 18, 2010, a cooling water high temperature alarm occurred on the operating air compressor (609-M-6) supplying ATR Instrument air, after electricians disconnected the TRA-609 battery bank leads to secure DC control power, but before any cleaning or inspection began. Utility area operators sent to investigate the alarm condition observed the compressor outlet air temperature reading 70°F higher than normal and light smoke from the compressor. One of the operators attempted to shut down the compressor by opening the breaker for the M-6 compressor. The breaker failed to open because control power had been secured. No attempt was made to manually open the breaker or to secure power to the electrical bus feeding the switchgear and the air compressor.</p> <p>Breaker control power was restored by electricians at the request of the Utility Area Supervisor (UAS) and the breaker opened securing power to the 609-M-6 air compressor. Instrument air pressure at ATR began slowly lowering with no air compressors running.</p> <p>The Shift Supervisor entered Abnormal Operating Procedure (AOP)-6.1, Loss of Instrument Air. The UAS requested electricians stop work and restore control power in order to secure the 609-M-6 air compressor and start the 609-M-8 air compressor to provide instrument air. The electricians restored control power and the M-6 breaker opened securing power to 609-M-6. Utility area operators started the 609-M-8 compressor to restore instrument air to ATR.</p> <p>The ATR Plant Foreman responding to the scene requested INL Fire Department response upon discovery of smoke in the building. The INL Fire Department responded to TRA-609 and determined no fire was present. The source of the smoke is suspected to be overheated compressor fluid and/or paint on the compressor.</p> <p>A critique of this event was scheduled for August 19, 2010.</p>

<b>Cause Description:</b>	
<b>Operating Conditions:</b>	The Advanced Tet Reactor was shut down for the Cycle 148A-1 outage.
<b>Activity Category:</b>	Maintenance
<b>Immediate Action(s):</b>	<p>Appropriate levels of BEA management and DOE-ID were notified of this event.</p> <p>A critique was conducted on August 19, 2010. At the critique the system engineer stated the cause of the high temperature condition was most likely loss of cooling water flow to the compressor. The cause for this loss has not been determined and is under investigation. The critique further revealed that the UAS and at least one operator did not understand the WO note that stated breakers could be opened manually during performance of the WO. The normal breaker operating switch is rendered inoperable with DC control power secured and manually tripping the breaker requires the breaker door to be opened and a mechanical trip mechanism actuated. This manual operation requires PPE and training that exceeds operations level and must be performed by electricians. The brief performed did not include operations personnel and did not discuss how affected equipment would be operated in the event of an abnormal event.</p>
<b>FM Evaluation:</b>	<p>This event was originally determined to be not reportable; however, after consideration of possible lessons learned, etc., it was deemed reportable as a management concern.</p> <p>This report is being submitted late due to the ORPS system being down on Monday, August 23, 2010, preventing data entry and internal reviews/approvals. Following the ORPS system becoming operational again, the ATR was still not able to submit reports due to two function errors that effected submittal capabilities (Secretarial Office field and ATR's Authority File) until today, August 26, 2010.</p>
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	No
<b>Division or Project:</b>	ATR Programs
<b>Plant Area:</b>	Air Compressors
<b>System/Building/Equipment:</b>	Advanced Test Reactor Air Compressors
<b>Facility Function:</b>	Category "A" Reactors
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	
<b>HQ Keywords:</b>	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)

	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01O--Inadequate Conduct of Operations - Inadequate Maintenance 01P--Inadequate Conduct of Operations - Inadequate Oral Communication 01R--Inadequate Conduct of Operations - Management issues 05D--Mechanical/Structural - Mechanical Equipment Failure/Damage 12B--EH Categories - Conduct of Operations 14E--Quality Assurance - Work Process Deficiency															
<b>HQ Summary:</b>	<p>On August 18, 2010, a cooling water high temperature alarm was activated on the operating air compressor supplying ATR instrument air, after electricians disconnected the TRA-609 battery bank leads to secure DC control power, but before any cleaning or inspection began. Utility area operators were sent to investigate the alarm condition. They observed the compressor outlet air temperature reading 70° Fahrenheit higher than normal and light smoke from the compressor. One of the operators attempted to shut down the compressor by opening the circuit breaker for the M-6 compressor. The breaker failed to open because control power had been previously secured for maintenance on a distribution panel. Electricians restored the control power and the breaker was opened to remove power to the 609-M-6 air compressor. Instrument air pressure at ATR began slowly lowering with no air compressors running. Utility area operators started the 609-M-8 compressor to restore instrument air to the ATR. The INL Fire Department responded to TRA-609 and determined that no fire was present. The source of the smoke is suspected to be overheated compressor fluid and/or paint on the compressor. At the critique, the system engineer stated the cause of the high temperature condition was most likely loss of cooling water flow to the compressor. The cause for this loss has not been determined and is under investigation.</p>															
<b>Similar OR Report Number:</b>																
<b>Facility Manager:</b>	<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															
<b>Originator:</b>	<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		
Name	OWENS, MARJORIE A															
Phone	(208) 533-4563															
Title	ATR OPERATIONS FACILITY ADMINISTRATI															
<b>HQ OC Notification:</b>	<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													
<b>Other Notifications:</b>	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>08/23/2010</td> <td>15:00 (MTZ)</td> <td>R. Denning</td> <td>DOE-ID</td> </tr> </tbody> </table>				Date	Time	Person Notified	Organization	08/23/2010	15:00 (MTZ)	R. Denning	DOE-ID				
Date	Time	Person Notified	Organization													
08/23/2010	15:00 (MTZ)	R. Denning	DOE-ID													
<b>Authorized Classifier(AC):</b>	E. B. Criswell      Date: 08/25/2010															



<b>12)Report Number:</b>	<a href="#">SC--BHSO-BNL-BNL-2010-0025</a> After 2003 Redesign		
<b>Secretarial Office:</b>	Science		
<b>Lab/Site/Org:</b>	Brookhaven National Laboratory		
<b>Facility Name:</b>	Brookhaven National Laboratory (BOP)		
<b>Subject/Title:</b>	Contractor Receives 120V AC Electric Shock		
<b>Date/Time Discovered:</b>	08/31/2010 11:15 (ETZ)		
<b>Date/Time Categorized:</b>	08/31/2010 12:50 (ETZ)		
<b>Report Type:</b>	Notification		
<b>Report Dates:</b>	Notification	09/01/2010	14:13 (ETZ)
	Initial Update		
	Latest Update		
	Final		
<b>Significance Category:</b>	2		
<b>Reporting Criteria:</b>	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.		
<b>Cause Codes:</b>			
<b>ISM:</b>			
<b>Subcontractor Involved:</b>	Yes Ropplet		
<b>Occurrence Description:</b>	At Brookhaven National Laboratory (BNL) on August 31, 2010, at 1115 hours, an electrical contractor was working above the drop ceiling in the hallway of building 535A to install new fire alarm cables. As he moved some wires out of the way he received a minor electrical shock. There were white and black wires lying on the top of the ceiling panel. The black wire was energized to 120V AC. The worker said he felt fine, but was asked to report to the on-site Occupational Medical Clinic (OMC) for evaluation. The OMC released the worker, and he returned to work with no injury. Investigation is ongoing as to the source of the energy.		
<b>Cause Description:</b>			
<b>Operating Conditions:</b>	Normal Operations		
<b>Activity Category:</b>	Normal Operations (other than Activities specifically listed in this Category)		
<b>Immediate Action(s):</b>	The worker was sent to the BNL OMC for evaluation and was released to return to work. The wire was de-energized, the area was secured, and an investigation was initiated.		
<b>FM Evaluation:</b>			
<b>DOE Facility Representative</b>			

<b>Input:</b>													
<b>DOE Program Manager Input:</b>													
<b>Further Evaluation is Required:</b>	Yes. Before Further Operation? No By Whom: By When:												
<b>Division or Project:</b>	Modernization Project Office												
<b>Plant Area:</b>	535A												
<b>System/Building/Equipment:</b>	535A												
<b>Facility Function:</b>	Balance-of-Plant - Offices												
<b>Corrective Action:</b>													
<b>Lessons(s) Learned:</b>													
<b>HQ Keywords:</b>	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14L--Quality Assurance - No QA Deficiency												
<b>HQ Summary:</b>	On August 31, 2010, an electrical contractor received a minor electrical shock while installing new fire alarm cables above a drop ceiling in the hallway of Building 535A. The shock occurred as he was moving some white and black wires that were lying on the top of the ceiling panel. The black wire was energized to 120-volts AC. The electrical contractor said that he felt fine, but was asked to report to the on-site Occupational Medical Clinic for evaluation. Following the evaluation, he was released to return to work. The wire was de-energized and the area was secured. An investigation was initiated to determine the source of the electrical power.												
<b>Similar OR Report Number:</b>													
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td>COSTA, RAYMOND</td> </tr> <tr> <td>Phone</td> <td>(631) 344-8227</td> </tr> <tr> <td>Title</td> <td>F&amp;O ESHTQ Manager</td> </tr> </table>	Name	COSTA, RAYMOND	Phone	(631) 344-8227	Title	F&O ESHTQ Manager						
Name	COSTA, RAYMOND												
Phone	(631) 344-8227												
Title	F&O ESHTQ Manager												
<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td>SIERRA, EDWARD A</td> </tr> <tr> <td>Phone</td> <td>(631) 344-4080</td> </tr> <tr> <td>Title</td> <td>LLL/ORPS COORDINATOR</td> </tr> </table>	Name	SIERRA, EDWARD A	Phone	(631) 344-4080	Title	LLL/ORPS COORDINATOR						
Name	SIERRA, EDWARD A												
Phone	(631) 344-4080												
Title	LLL/ORPS COORDINATOR												
<b>HQ OC Notification:</b>	<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										
<b>Other Notifications:</b>	<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Person Notified</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>08/31/2010</td> <td>11:30 (ETZ)</td> <td>R. Costa</td> <td>BNL</td> </tr> <tr> <td>08/31/2010</td> <td>13:30 (ETZ)</td> <td>P. Kelly</td> <td>BHSO/DOE</td> </tr> </tbody> </table>	Date	Time	Person Notified	Organization	08/31/2010	11:30 (ETZ)	R. Costa	BNL	08/31/2010	13:30 (ETZ)	P. Kelly	BHSO/DOE
Date	Time	Person Notified	Organization										
08/31/2010	11:30 (ETZ)	R. Costa	BNL										
08/31/2010	13:30 (ETZ)	P. Kelly	BHSO/DOE										

	08/31/2010	13:35 (ETZ)	R. Desmarais	BHSO/DOE
<b>Authorized Classifier(AC):</b>				
<b>13)Report Number:</b>	<a href="#">SC--FSO-FNAL-FERMILAB-2010-0004</a> After 2003 Redesign			
<b>Secretarial Office:</b>	Science			
<b>Lab/Site/Org:</b>	FERMI National Accelerator Laboratory			
<b>Facility Name:</b>	FERMI National Accelerator Lab.(BOP)			
<b>Subject/Title:</b>	Subcontractor failure to follow required electrical safety procedures			
<b>Date/Time Discovered:</b>	08/25/2010 10:16 (CTZ)			
<b>Date/Time Categorized:</b>	08/25/2010 11:00 (CTZ)			
<b>Report Type:</b>	Update			
<b>Report Dates:</b>	Notification	08/27/2010	17:11 (ETZ)	
	Initial Update	08/30/2010	12:26 (ETZ)	
	Latest Update	08/30/2010	12:26 (ETZ)	
	Final			
<b>Significance Category:</b>	3			
<b>Reporting Criteria:</b>	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.			
<b>Cause Codes:</b>				
<b>ISM:</b>	3) Develop and Implement Hazard Controls 4) Perform Work Within Controls			
<b>Subcontractor Involved:</b>	Yes			
<b>Occurrence Description:</b>	At approximately 10:30am a subcontractor electrician was installing a lighting panel at Industrial Building 3 (IB-3). The panel was to be tied into the existing 277V lighting panel located on the west wall of the building. The electrician attached a junction box on the left side of the live 277V panel via sheet metal screws. The junction box was required because the conductors from the lighting panel were too short and a splice was necessary. The sheet metal screw used to install the junction box had compromised the insulation of a conductor inside of the panel. While still live, the electrician removed the cover of the 277V panel to pull / install the new lighting control panel wiring. When the electrician moved the conductor to install the wiring, the screw completely penetrated the insulation and caused an arc flash. This arc flash caused a ground fault which led to a loss of power in IB-3 and IB-4. The electrician reported to the Fermilab medical department for evaluation, but did not sustain any			

	injuries from the event.
<b>Cause Description:</b>	The subcontractor electrician did not follow required electrical safety procedures. The electrician was not wearing the appropriate Personal Protective Equipment required by 70E and had not signed the electrical hazard analysis/work permit created for this specific job. He later acknowledged that he had received both 70E training and Fermilab training for Subcontractor Safety and acknowledged that he was aware of the Fermilab requirement that no work be performed on an energized panel.
<b>Operating Conditions:</b>	Normal
<b>Activity Category:</b>	Normal Operations (other than Activities specifically listed in this Category)
<b>Immediate Action(s):</b>	The Fermilab Fire Department was dispatched to the scene. Individual was sent to medical to be examined but did not sustain any injuries from the event. Work on job site was stopped. Investigation by DOE FSO and FNAL started.
<b>FM Evaluation:</b>	The Fermilab electrical safety requirements are communicated clearly in Subcontractor Safety Training. Job Hazard Assessments are developed for a specific purpose and are to be read and signed by personnel before starting work on the job. Procedures are meant to be followed and to be enforced by employees, supervisors and managers. Nothing else is acceptable.
<b>DOE Facility Representative Input:</b>	
<b>DOE Program Manager Input:</b>	
<b>Further Evaluation is Required:</b>	Yes. Before Further Operation? No By Whom: By When:
<b>Division or Project:</b>	Fermi Site Office
<b>Plant Area:</b>	Industrial Bldg 4
<b>System/Building/Equipment:</b>	
<b>Facility Function:</b>	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
<b>Corrective Action:</b>	
<b>Lessons(s) Learned:</b>	
<b>HQ Keywords:</b>	01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01T--Inadequate Conduct of Operations - Willful Violation

	07C--Electrical Systems - Power Outage 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency								
<b>HQ Summary:</b>	On August 25, 2010, a subcontractor electrician was installing a lighting panel at Industrial Building 3 (IB-3), which was to be tied into an existing 277-volt lighting panel, when an arc flash occurred. The electrician attached a junction box on the left side of the energized 277-volt panel using sheet metal screws. One of the screws had compromised the insulation of a conductor inside the panel. The electrician then removed the cover of the energized 277-volt panel to install the new lighting control panel wiring. When the electrician moved the conductor to install the wiring, the screw completely penetrated the insulation and caused an arc flash. This arc flash resulted in a ground fault that caused a loss of power in IB-3 and IB-4. The electrician reported to the Fermilab medical department for evaluation, but did not sustain any injuries from the event. The subcontractor electrician did not follow required electrical safety procedures. The electrician was not wearing the appropriate personal protective equipment required by NFPA 70E and had not signed the electrical hazard analysis/work permit created for this specific job. He later acknowledged that he had received both 70E training and Fermilab training for Subcontractor Safety and acknowledged that he was aware of the Fermilab requirement that no work be performed on an energized panel. Work was stopped and an investigation was initiated.								
<b>Similar OR Report Number:</b>	1. SC--FSO-FNAL-FERMILAB-2010-0003 2.								
<b>Facility Manager:</b>	<table border="1"> <tr> <td>Name</td> <td>Bruce Chrisman</td> </tr> <tr> <td>Phone</td> <td>(630) 840-2359</td> </tr> <tr> <td>Title</td> <td>Chief Operating Officer</td> </tr> </table>	Name	Bruce Chrisman	Phone	(630) 840-2359	Title	Chief Operating Officer		
Name	Bruce Chrisman								
Phone	(630) 840-2359								
Title	Chief Operating Officer								
<b>Originator:</b>	<table border="1"> <tr> <td>Name</td> <td>JAMES, WILLIAM R</td> </tr> <tr> <td>Phone</td> <td>(630) 840-8901</td> </tr> <tr> <td>Title</td> <td>ES&amp;H EMERGENCY PLANNER</td> </tr> </table>	Name	JAMES, WILLIAM R	Phone	(630) 840-8901	Title	ES&H EMERGENCY PLANNER		
Name	JAMES, WILLIAM R								
Phone	(630) 840-8901								
Title	ES&H EMERGENCY PLANNER								
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Date	Time	Person Notified	Organization						
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	08/25/2010	11:20 (CTZ)	M Bollinger	DOE-FSO	
	08/25/2010	11:20 (CTZ)	B Chrisman	COO	
<b>Authorized Classifier(AC):</b>					

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at (800) 473-4375. Hours: 7:30 a.m. - 5:00 p.m., Mon - Fri (ETZ).  
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