

June 2010 Electrical Safety Occurrences

Electrical safety performance in the month of June represented a return to a high number of events (thirteen), following a brief reduction in May. There were four electrical shocks, but most were minor with two of them caused by contact with less than 120 volts. However, in one shock event, the victim contacted a potential 5 kV source. As we have seen in previous months, electrical safety events across the DOE complex overwhelmingly involve non-electrical workers. Many events appear to have been preventable if non-electrical workers or subcontractors had been made aware of potential electrical hazards and the rules pertaining to the control of those hazards. An important area of opportunity for improving electrical safety is job planning. Job planners need to identify and anticipate potential electrical hazards and define effective controls to protect workers on the job. Planning is a key element of Integrated Safety Management and is critical to an effective electrical safety program. Near misses provide us an opportunity to get a second chance without the pain that could have been experienced. It is important to continually report near miss events in order that all sites can learn from them to ensure that similar events are prevented throughout the complex.

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

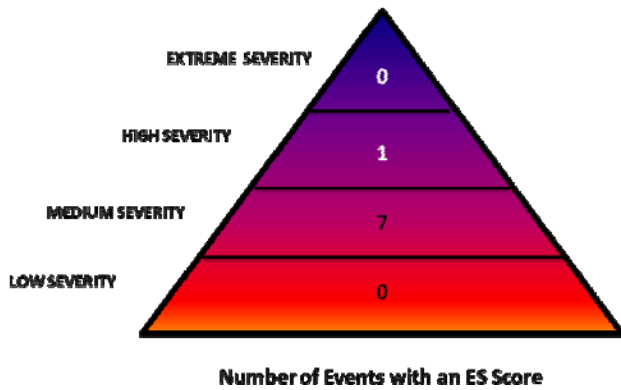
In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month (excluding Significance Category R reports), and for the following ORPS "HQ keywords": 01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical), 08A – Electrical Shock, 08J – Near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

Below is the current summary of 2010 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
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	67 (avg. 11.2/month)	13	0	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

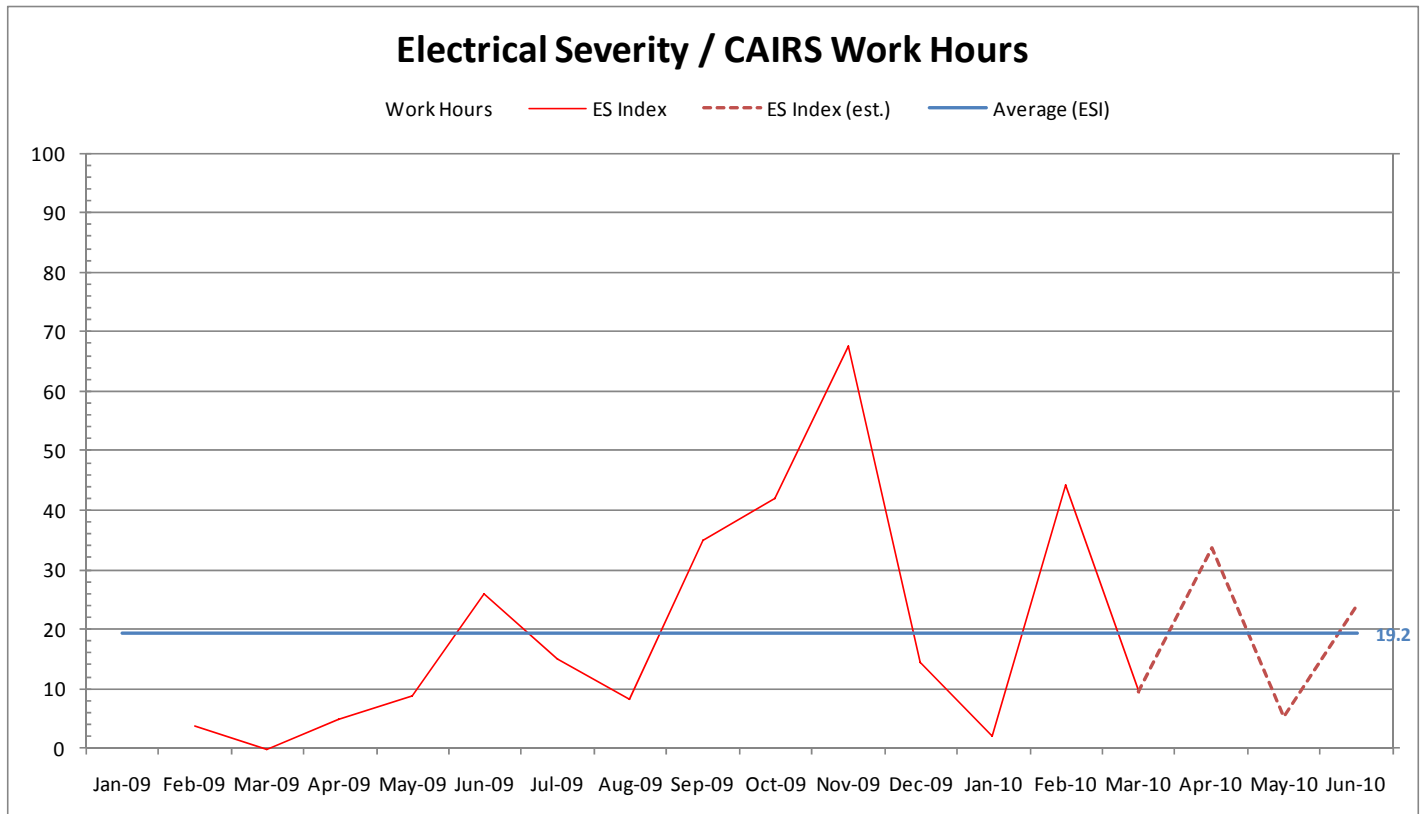
The eleven electrical safety events reported in June 2010, brings the monthly average for the first half of the calendar year to 11.2 events per month. This is an increase over the rate of electrical safety occurrences in 2009 (10.7 per month). Significant improvement must be experienced throughout the remainder of the year if 2010 will show an improvement of previous years.

Please continue to evaluate electrical events using the Electrical Severity Measurement Tool. During the month of June, five of the thirteen electrical events were determined to have no Electrical Severity (ES) score. The other eight events were distributed as shown below, with the highest ES score being 1600.



Electrical Severity	Numerical Score
Low	1 to 30
Medium	31 to 330
High	331 to 3300
Extreme	>3300

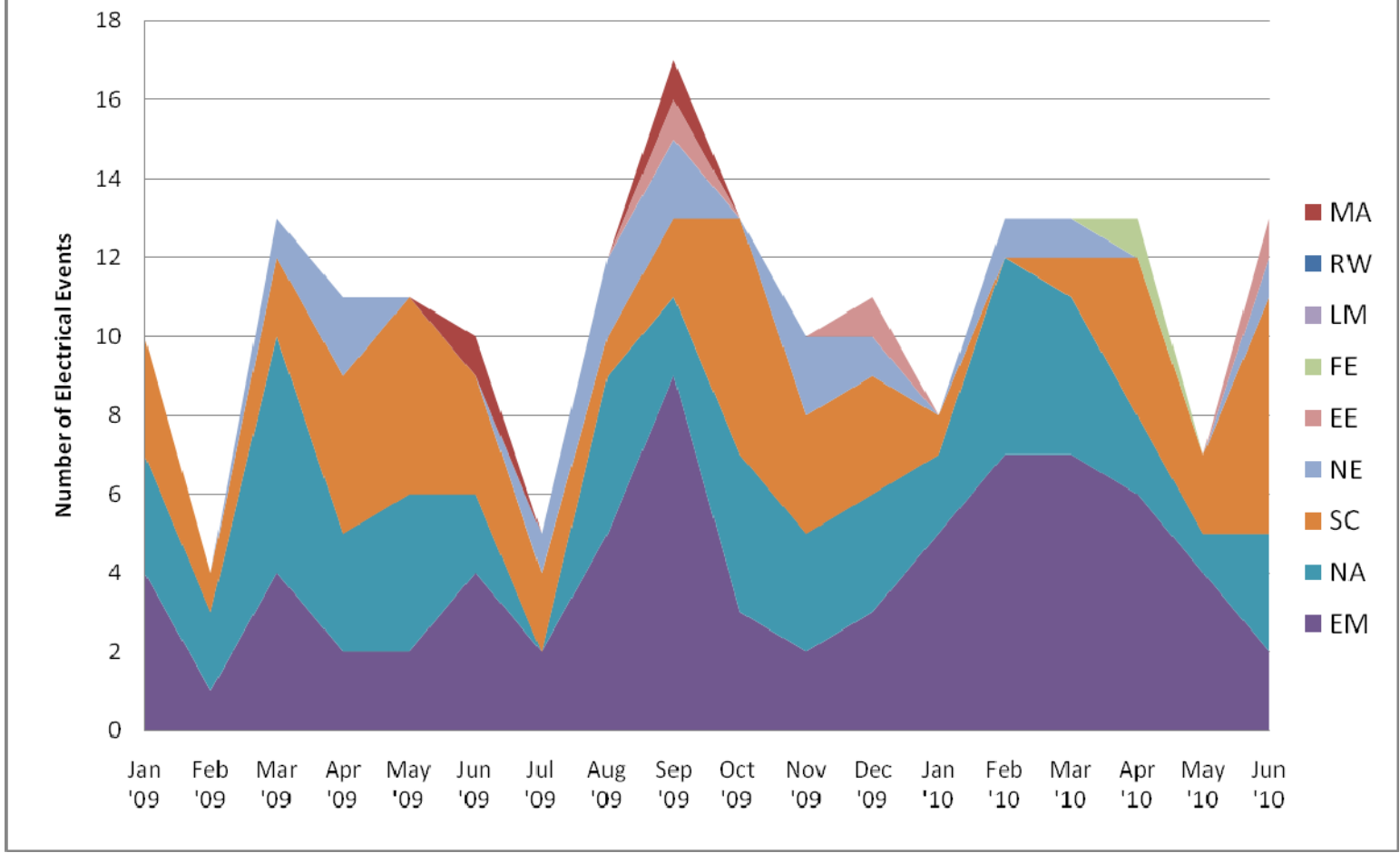
The following chart shows a calculated Electrical Severity Index (ESI) for the DOE complex. Since February 2009, the average ESI has been 19.2. As seen on the chart, the ESI has been moving in a favorable direction since November 2009.



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

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 – June 2010

No	Report Number	Event Summary	SHOCK	BURN	ARCF ⁽¹⁾	LOTO ⁽²⁾	PLAN ⁽³⁾	EXCAV ⁽⁴⁾	CUT/D ⁽⁵⁾	VEH ⁽⁶⁾	SC ⁽⁷⁾	RC ⁽⁸⁾	ES ⁽⁹⁾
1	EE-GO--NREL-NREL-2010-0004	Worker performing diagnostic testing near 277 volts.				X					3	2C(2)	100
2	EM--PPPO-PRS-PGDPENVRES-2010-0011	Worker receives electrical shock when contacting existing conduit.	X			X					3	2C(2) 10(3)	160
3	EM-RL--CPRC-GPP-2010-0008	Workers failed to follow LOTO and work control procedures.					X				3	10(2)	0
4	NA--LASO-LANL-BOP-2010-0006	Worker receives electrical shock from frame of welding machine.	X								2	2C(1)	330
5	NA--SS-SNL-1000-2010-0006	While pulling shielded cable from junction box, shield contacts 120-volt terminal creating arcing.					X				3	10(3)	110
6	NA--SS-SNL-NMFAC-2010-0006	Worker cuts energized 120 volt conductor.				X	X		X		3	10(2)	110
7	NE-ID--BEA-MFC-2010-0003	Worker severs conduit containing de-energized conductors.				X	X		X		4	10(3)	0
8	SC--ASO-ANLE-ANLEAPS-2010-0001	Worker receives 60-volt shock from the housing of test instrument.	X								2	2C(1)	110
9	SC--BSO-LBL-OPERATIONS-2010-0007	Worker cuts energized 120-volt conductor.				X			X		3	2C(2)	110
10	SC--FSO-FNAL-FERMILAB-2010-0003	Worker fails to follow LOTO procedure when performing electrical work.				X	X				3	2C(2)	0
11	SC--PNSO-PNNL-PNNLNUCL-2010-0004	Worker opens the cover of a panel containing energized parts.					X				3	2C(2)	0
12	SC--SSO-SU-SLAC-2010-0009	Worker receives electrical shock from the case of a test instrument.	X								3	10(2)	1600
13	SC--SSO-SU-SLAC-2010-0011	Worker attempts to reset tripped 480-volt circuit breaker without proper PPE.									4	10(2)	0
	TOTAL		4	0	0	6	6	0	3	0			

Key

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

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

Electrical Safety Occurrences – June 2010

No	Report Number	Event Summary	EW ⁽¹⁾	N-EW ⁽²⁾	SUB ⁽³⁾	HFW ⁽⁴⁾	WFH ⁽⁵⁾	PPE ⁽⁶⁾	70E ⁽⁷⁾	VOLT ⁽⁸⁾		C/I ⁽⁹⁾	NEUT ⁽¹⁰⁾	NM ⁽¹¹⁾
										H	L			
1	EE-GO--NREL-NREL-2010-0004	Worker performing diagnostic testing near 277 volts.		X	X		X				X			X
2	EM--PPPO-PRS-PGDPENVRES-2010-0011	Worker receives electrical shock when contacting existing conduit.	X			X					X			X
3	EM-RL--CPRC-GPP-2010-0008	Workers failed to follow LOTO and work control procedures.	X				X				X			
4	NA--LASO-LANL-BOP-2010-0006	Worker receives electrical shock from frame of welding machine.		X		X					X			X
5	NA--SS-SNL-1000-2010-0006	While pulling shielded cable from junction box, shield contacts 120-volt terminal creating arcing.		X	X	X					X			X
6	NA--SS-SNL-NMFAC-2010-0006	Worker cuts energized 120 volt conductor.		X	X	X					X			
7	NE-ID--BEA-MFC-2010-0003	Worker severs conduit containing de-energized conductors.		X	X	X					X			X
8	SC--ASO-ANLE-ANLEAPS-2010-0001	Worker receives 60-volt shock from the housing of test instrument.		X		X					X			
9	SC--BSO-LBL-OPERATIONS-2010-0007	Worker cuts energized 120-volt conductor.	X			X					X			X
10	SC--FSO-FNAL-FERMILAB-2010-0003	Worker fails to follow LOTO procedure when performing electrical work.	X		X		X				X			
11	SC--PNSO-PNNL-PNNLNUCL-2010-0004	Worker opens the cover of a panel containing energized parts.		X			X				X			
12	SC--SSO-SU-SLAC-2010-0009	Worker receives electrical shock from the case of a test instrument.		X		X				X				
13	SC--SSO-SU-SLAC-2010-0011	Worker attempts to reset tripped 480 volt circuit breaker without proper PPE.		X	X		X	X			X			
	TOTAL		4	9	6	8	5	1	0	1	12	0	0	6

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 54723 OR(s) with 58033 occurrences(s) as of 7/13/2010 6:20:57 AM
 Query selected 13 OR(s) with 13 occurrences(s) as of 7/13/2010 12:03:03 PM

Download this report in Microsoft Word format. 

1)Report Number:	EE-GO--NREL-NREL-2010-0004 After 2003 Redesign		
Secretarial Office:	Energy Efficiency and Renewable Energy		
Lab/Site/Org:	National Renewable Energy Laboratory		
Facility Name:	National Renewable Energy Laboratory		
Subject/Title:	Subcontractor Performing Low-voltage Work in Proximity of Exposed Electrical Circuit		
Date/Time Discovered:	06/04/2010 15:16 (MTZ)		
Date/Time Categorized:	06/07/2010 16:16 (MTZ)		
Report Type:	Notification		
Report Dates:	Notification	06/08/2010	17:37 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:			
ISM:			
Subcontractor Involved:	Yes Haselden Construction		
Occurrence Description:	On June 2, 2010, a lower tier subcontractor was observed conducting low-voltage (24 volt) diagnostics while in the proximity of an exposed 277 to 120 volt step down. The subcontractor was using a laptop computer to program controls in a panel that supplies lighting to the South Table Mountain (STM) lower parking lot. The subcontractor was not wearing the appropriate personal protective equipment as specified in the NREL electrical safety procedure. In addition, the subcontractor was approximately 7-feet away from an underground junction box that was not covered thus exposing energized electrical circuits.		

	Upon observance by an NREL construction project manager, the work was suspended and the panel de-energized. An investigation by the prime construction contractor and NREL project management is underway. No injuries or property damage occurred as a result of this event.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Construction
Immediate Action(s):	The NREL construction project manager suspended work. The electrical panel and junction box were de-energized. An incident investigation is underway.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: NREL Management By When:
Division or Project:	Alliance for Sustainable Energy
Plant Area:	STM South Parking
System/Building/Equipment:	Infrastructure Construction Activities
Facility Function:	Solar Activities
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On June 2, 2010, a lower tier subcontractor was observed conducting low-voltage (24-volt) diagnostics while in the proximity of an exposed 277 to 120-volt step down transformer. The subcontractor was using a laptop computer to program controls in a panel that supplies lighting to the South Table Mountain lower parking lot. The subcontractor was not wearing the appropriate personal protective equipment as required in the NREL electrical safety procedure. In addition, the subcontractor was approximately 7 feet away from an underground junction box that was not covered, thus exposing energized electrical circuits. An NREL construction project manager, after observing this activity, suspended the work. The electrical panel and the

	junction box were de-energized. An investigation by the prime construction contractor and NREL project management is underway. There were no injuries or property damage as a result of this event.			
Similar OR Report Number:				
Facility Manager:	Name	JORDAN, MAUREEN Y		
	Phone	(303) 275-3248		
	Title	EHS DIRECTOR		
Originator:	Name	BAYLOSIS, ED A.		
	Phone	(303) 275-3240		
	Title	ISM PROGRAM MANAGER		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	06/04/2010	15:21 (MTZ)	Karen Harness	DOE-GO
Authorized Classifier(AC):				

2)Report Number:	EM--PPPO-PRS-PGDPENVRES-2010-0011 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Paducah Gaseous Diffusion Plant		
Facility Name:	Environmental Restoration		
Subject/Title:	Discovery of Energized Conduit During Preparation for Installation of Additional Electrical Components		
Date/Time Discovered:	06/10/2010 14:15 (ETZ)		
Date/Time Categorized:	06/10/2010 17:23 (ETZ)		
Report Type:	Notification		
Report Dates:	Notification	06/14/2010	17:56 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		

	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls
Subcontractor Involved:	No
Occurrence Description:	<p>While preparing for the installation of electrical receptacles at an office trailer, an electrician was examining the underside of the trailer to determine the location to place additional conduit and assess the amount of materials that would be needed. He was kneeling down near the southeast entrance to the trailer to look underneath. When the electrician inadvertently brushed his hand against some existing conduit for the main power to the trailer he noticed a tingling sensation. The electrician immediately notified the Front Line Supervisor (FLS). When tested with a clamp type volt meter the conduit was found to be energized between 40 and 108 volts.</p> <p>After donning properly rated protective clothing, electricians placed the power supply panel in the open position to disengage power from the south side of the trailer. A Defective Equipment Tag was placed on the power supply panel. The energized conduit condition was not found on the north side of the trailer or on any similarly installed trailers that were tested. The Defective Equipment Tag was replaced with a permitted Lock out/Tag out for the power supply panel to the south side of the trailer. The north side was allowed to remain energized for lighting and cooling within the facility.</p> <p>In accordance with the Electrical Safety Program and as a precautionary measure, the Occupational Medicine Provider was contacted and notified of the incident. After a fact finding meeting, the Acting Manager of Projects categorized the incident as a reportable occurrence under Hazardous Energy Control. Upon further discussion prior to the uploading of this report, the incident was additionally categorized as a Near Miss.</p>
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	<p>Placed the trailer in a safe condition.</p> <p>Notifications were made.</p> <p>Extent of condition was investigated by testing installed conduit in similarly placed office trailers. No other energized conduit was located.</p>

	Circuit that feeds the south side of the trailer was isolated via permitted Lock out/Tag out.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Phil Putman By When: 07/24/2010
Division or Project:	Paducah Environmental Remediation Project
Plant Area:	C-755-T7
System/Building/Equipment:	C-755-T7 Electrical System
Facility Function:	Environmental Restoration Operations
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12C--EH Categories - Electrical Safety 14L--Quality Assurance - No QA Deficiency
HQ Summary:	On June 10, 2010, while preparing for the installation of electrical receptacles at an office trailer, an electrician felt a tingling sensation when he was examining the underside of the trailer to determine the location to place additional conduit and assess the amount of materials that would be needed. The electrician was kneeling down to look underneath the southeast entrance to the trailer when he inadvertently brushed his hand against some existing conduit for the main power to the trailer and felt a tingling sensation. The electrician immediately notified the Front Line Supervisor. The conduit was found to be energized between 40 and 108 V when tested with a clamp type volt meter. After donning properly rated protective clothing, electricians placed the power supply panel in the open position to disengage power from the south side of the trailer. A Defective Equipment Tag was placed on the power supply panel, then replaced with a permitted Lock out/Tag out for the power supply panel to the south side of the trailer. The energized conduit condition was not found on the north side of the trailer or on any similarly installed trailers that were tested. In accordance with the Electrical Safety Program and as a precautionary measure, the Occupational Medicine Provider was contacted and notified of the incident. The trailer was placed in a safe condition and notifications were made.
Similar OR Report Number:	
Facility Manager:	Name Don Ulrich

	Phone	(270) 441-5079		
	Title	Facilities Disposition Manager/Acting MOP		
Originator:	Name	FREELS, JENNIE P		
	Phone	(270) 441-5192		
	Title	QUALITY ASSURANCE SPECIALIST		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	06/10/2010	14:25 (ETZ)	Dennis Prather	PRS
	06/10/2010	14:29 (ETZ)	Don Ulrich	PRS
	06/10/2010	14:46 (ETZ)	Kevin Nell	PRS
	06/10/2010	15:13 (ETZ)	Paul Deltete	PRS
	06/10/2010	15:15 (ETZ)	Greg Bazzell	DOE
	06/10/2010	15:25 (ETZ)	Doug Reinhart	PRS
Authorized Classifier(AC):	H. T. Anderson Date: 06/14/2010			

3)Report Number:	EM-RL--CPRC-GPP-2010-0008 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	Groundwater Protection Project		
Subject/Title:	Work Performed Without Formal Release & Eight Criteria Checklist Not Completed		
Date/Time Discovered:	06/15/2010 13:00 (PTZ)		
Date/Time Categorized:	06/15/2010 13:55 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	06/16/2010	15:39 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3		

	occurrence)
Cause Codes:	
ISM:	4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On 6/15/10 following completion of field maintenance activities, during the operations acceptance review of a work package for installing a thermostat controller at the DR-5 Pump & Treat facility, it was discovered that the eight criteria check list had not been fully completed by the controlling organization administrator. Additionally it was discovered that work was performed without formal work release by the release authority.
Cause Description:	
Operating Conditions:	Normal operations
Activity Category:	Maintenance
Immediate Action(s):	A critique was scheduled for the following morning to evaluate the event and associated details
FM Evaluation:	Following the critique, this event was re-categorized from the initial notification of SC-4 to an SC-3. Notification was made to the Facility Representative at 1010 on Wednesday June 16 of the upgrade.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: P&T Operations By When:
Division or Project:	CHPRC
Plant Area:	100-D
System/Building/Equipment:	DR-5 Pump & Treat Facility
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 01O--Inadequate Conduct of Operations - Inadequate Maintenance 12B--EH Categories - Conduct of Operations 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On June 15, 2010, following completion of field maintenance activities and during the operations acceptance review of a work package for installing a

thermostat controller at the DR-5 Pump & Treat facility, personnel discovered that the eight criteria checklist had not been fully completed by the controlling organization administrator. Additionally it was discovered that work was performed without formal work release by the release authority. A critique was scheduled.

Similar OR Report Number:

Facility Manager:

Name	Bill Barrett
Phone	(509) 373-3985
Title	Pump & Treat Operations & Maintenance Director

Originator:

Name	TURNER, DENNIS M
Phone	(509) 376-3417
Title	TECHNICAL ADVISOR

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
06/15/2010	14:00 (PTZ)	Dyan Foss	VP S&GRP
06/15/2010	14:10 (PTZ)	Brian Biro	DOE-RL

Authorized Classifier(AC):

4)Report Number:

[NA--LASO-LANL-BOP-2010-0006](#) After 2003 Redesign

Secretarial Office:

National Nuclear Security Administration

Lab/Site/Org:

Los Alamos National Laboratory

Facility Name:

"at large" or Balance of Plant

Subject/Title:

Workers Receive Minor Shocks to Hands after Contact with Tri-Pod and Welding Table

Date/Time Discovered:

06/25/2010 14:30 (MTZ)

Date/Time Categorized:

06/25/2010 16:40 (MTZ)

Report Type:

Notification

Report Dates:

Notification	06/29/2010	19:29 (ETZ)
Initial Update		
Latest Update		
Final		

Significance Category:

2

Reporting Criteria:

2C(1) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or disturbance of a previously unknown or mislocated hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas) resulting in a person contacting (burn, shock, etc.)

	hazardous energy.
Cause Codes:	
ISM:	
Subcontractor Involved:	No
Occurrence Description:	<p>MANAGEMENT SYNOPSIS: On June 25, 2010, at Technical Area 3, Building SM-38, Room 122 (ironworker shop), at 1430, as a Maintenance and Site Services (MSS) welding inspector (WI) touched a tri-pod connected to a Miller Syncrowave 300 welding machine with his left hand and a welding table with his right, he received a minor shock to the palm of his left hand. WI immediately called an electrician (E1) to conduct voltage measurements. In the mean time, a Utilities welder's helper (WH) started to clean up the material on the welding table. He touched the tri-pod with his left hand and the welding table with his right hand and also received a minor shock to the finger tips on his left hand. A Utilities welder and WH had been pre-fabricating some stainless steel material for the TA-3-22 Power Plant using the Miller welding machine and the gas tungsten welding process with a tig torch. WI had been called to inspect the weld when he received the minor shock. The initial voltage measurement of the welding machine was 215 volts alternating current (AC) with the machine energized and a residual of 90 volts AC with the machine de-energized which dissipated to 0 volts after a few minutes. E1 tagged out and removed the welding machine from service. WI and WH were taken to the LANL occupational medicine facility for evaluation. Both workers were released to work with no restrictions after their evaluations.</p> <p>At 1640 following notification, the Institutional Facilities and Central Services (IFCS) Facility Operations Director (FOD) Designee categorized the event as a near miss. On June 28, 2010, at 1300, a critique was convened. Information collected at the critique could not determine if the workers received an electrical shock or a shock similar to a "carpet" shock. The initial measurements could not be verified as AC or DC voltage since E1 was on leave that day and the welding machine was subsequently found in the DC mode; therefore, the IFCS FOD requested for additional voltage measurements and testing of the welding machine and associated equipment. The event categorization did not change; however, it would be re-assessed after the voltage measurements and testing of the equipment were completed and reviewed. An integrated work document was generated for electricians to perform additional voltage measurements and testing of the equipment. On June 29, 2010, the electricians conducted the voltage measurements and testing. An issue with the outlet that the welding machine was plugged into and/or the breaker was identified after a voltage reading of 480 volts AC was measured from phase-to-ground which should have measured at 277 volts AC. The electricians posted the outlet as "do not use." At 0930, based on the results of the voltage measurements and testing, the IFCS FOD re-categorized the event as a personnel shock event under the Hazardous</p>

	Energy criteria.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	<p>1. E1 tagged out and removed the welding machine from service.</p> <p>2. WI and WH were taken to the LANL occupational medicine facility for evaluation. Both workers were released to work with no restrictions after their evaluations.</p> <p>3. On June 29, 2010, electricians conducted additional voltage measurements and testing. An issue with the outlet that the welding machine was plugged into and/or the breaker was identified. The electricians posted the outlet as "do not use."</p> <p>4. A work ticket will be issued for electricians to perform diagnostics and testing of the 480 VAC circuit back to its feeder breaker.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes.</p> <p>Before Further Operation? No</p> <p>By Whom: IFCS-DO & CAO-PF</p> <p>By When: 08/09/2010</p>
Division or Project:	Maintenance and Site Services Division
Plant Area:	TA-3-38-122
System/Building/Equipment:	Miller Syncrowave 300 Welding Machine
Facility Function:	Balance-of-Plant - Machine shops
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>07E--Electrical Systems - Electrical Equipment Failure</p> <p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock</p> <p>08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance</p> <p>08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical)</p> <p>12C--EH Categories - Electrical Safety</p> <p>14E--Quality Assurance - Work Process Deficiency</p>
HQ Summary:	<p>On June 25, 2010, at the ironworker shop, a Maintenance and Site Services (MSS) welding inspector touched a tri-pod connected to a Miller Syncrowave 300 welding machine with his left hand and a welding table with his right and received a minor electrical shock to the palm of his left hand. The inspector immediately called an electrician to conduct voltage</p>

measurements. In the meantime, a Utilities welder's helper started to clean up the material on the welding table and, when he touched the tri-pod with his left hand and the welding table with his right hand, also received a minor shock to the finger tips on his left hand. A Utilities welder and the helper had been using the welding machine to pre-fabricate some stainless steel material. The initial voltage measurement of the welding machine was 215 volts AC with the machine energized and a residual of 90 volts AC with the machine de-energized, which dissipated to 0 volts after a few minutes. The electrician tagged out and removed the welding machine from service. The inspector and helper were taken to the LANL occupational medicine facility for evaluation and were released to work with no restrictions. On June 29, electricians conducted voltage measurements and found a problem with the outlet that the welding machine was plugged into and/or the breaker when 480 volts AC was measured from phase-to-ground, which should have measured at 277 volts AC. The electricians posted the outlet as "do not use."

Similar OR Report Number:

Facility Manager:

Name	Judith Huchton
Phone	(505) 665-2272
Title	IFCS Facility Operations Director

Originator:

Name	YAZZIE, ALVA M
Phone	(505) 664-0666
Title	OCCURRENCE INVESTIGATOR

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
06/28/2010	08:49 (MTZ)	Notification Line	NNSA
06/28/2010	14:45 (MTZ)	Ed Christie	NNSA
06/29/2010	09:55 (MTZ)	Ed Christie	NNSA

Authorized Classifier(AC): Mark Hunsinger Date: 06/29/2010

5)Report Number: [NA--SS-SNL-1000-2010-0006](#) After 2003 Redesign

Secretarial Office: National Nuclear Security Administration

Lab/Site/Org: Sandia National Laboratories - SS

Facility Name: SNL Division 1000

Subject/Title: Unexpected Discovery of Exposed Electrical Circuit Resulting in Electrical Arc in Bldg. 884

Date/Time Discovered: 06/03/2010 14:00 (MTZ)

Date/Time Categorized: 06/03/2010 16:00 (MTZ)

Report Type: Update

Report Dates:	Notification	06/07/2010	12:31 (ETZ)
	Initial Update	07/12/2010	11:30 (ETZ)
	Latest Update	07/12/2010	11:30 (ETZ)
	Final		
Significance Category:	3		
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)		
Cause Codes:			
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls		
Subcontractor Involved:	No		
Occurrence Description:	<p>On 06/03/2010 at about 14:00, during preparations for moving an accelerator from Sandia to a university, a student opened a wall-mounted junction box containing bundles of signal cables in order to remove the cables from conduit which ran from the control panel to the accelerator vault room. The signal cables had previously been disconnected from equipment located in the accelerator vault room and were not energized. During the course of pulling one of the bundles out of the conduit, a metal shielded cable touched an energized 110 volt terminal on a relay located inside the junction box. There was an electrical arc. The person was not shocked or injured. After the arc was noted, the person notified Sandia personnel. The junction box was examined by an electrician who verified the relay was connected to building power. The electrician disconnected the power source to the relay, and removed the relay and associated wiring. After inspection of the system by electrical safety personnel who verified the equipment was de-energized, Sandia personnel were allowed to finish removing the signal cable bundles.</p> <p>Prior to work on the accelerator, all known electrical sources had been unplugged or de-energized, locked and tagged out, and disconnected from building power panels. Sandia personnel did not remember there was a relay inside the junction box, and believed the total system had been placed in a de-energized state. However, the relay was still connected to building power.</p>		
Cause Description:	Critique/Fact Finding Performed: 6/3/10		
Operating Conditions:	Normal		
Activity Category:	Facility Decontamination/Decommissioning		
Immediate Action(s):	Personnel ceased work on the electrical junction box and an electrician shut off power to the relay and subsequently removed the relay and associated wiring from the box. The junction box was then determined to not have any		

	other energized electrical components.
FM Evaluation:	EOC # 16372 UPDATE 11/17/09 Request for a Final extension was granted by DOE/SSO/FR, Veronica Martinez. The reason for this request is due to the fact that the Center 1100 Director is on vacation until next week. I need to obtain his concurrence on the corrective actions. Extension is granted to Friday, July 30, 2010. END OF UPDATE
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Causal Analysis Team By When: 07/16/2010
Division or Project:	1000/Ion Beam Laboratory Relocation
Plant Area:	Tech Area I
System/Building/Equipment:	2.5 MeV Accelerator/Bldg. 884, Rm. 10
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11I--Other - Visiting Scientist/Researcher or Student Employee 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
HQ Summary:	On June 3, 2010, during preparations for moving an accelerator from Sandia to a university, a student opened a wall-mounted junction box and began pulling signal cables, causing an electrical arc. The junction box contained bundles of signal cables. The signal cables had previously been disconnected from equipment located in the accelerator vault room and were not energized. During the course of pulling one of the cable bundles out of the conduit, a metal shielded cable touched an energized 110-volt terminal on a relay located inside the junction box and the electrical arc was noticed. The student was not shocked or injured. After the arc, Sandia personnel were notified. An electrician disconnected the power source to the relay, and

removed the relay and associated wiring. After inspection of the system, Sandia personnel were allowed to finish removing the signal cable bundles. Prior to work on the accelerator, all known electrical sources had been unplugged or de-energized, locked and tagged out, and disconnected from building power panels. Sandia personnel did not remember there was a relay inside the junction box, and believed the total system had been placed in a de-energized state. However, the relay was still connected to building power. A critique was held.

Similar OR Report Number:

Facility Manager:

Name	M. Wayne Davis
Phone	(505) 844-6734
Title	Center 1100 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
06/03/2010	14:15 (MTZ)	Barney Doyle	1111
06/03/2010	14:15 (MTZ)	Charles Barbour	1100
06/03/2010	14:15 (MTZ)	David Sandison	1110
06/03/2010	14:15 (MTZ)	M. Wayne Davis	1100
06/03/2010	15:00 (MTZ)	Steve Rottler	1000
06/03/2010	15:00 (MTZ)	EOC	4136
06/03/2010	16:13 (MTZ)	David Barber, FR	DOE/SSO

Authorized Classifier(AC):

Charles Barbour Date: 06/04/2010

6)Report Number:

[NA--SS-SNL-NMFAC-2010-0006](#) 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:

Energized Conductor Cut by Worker Results in Electrical Short at Building 6577

Date/Time Discovered:

06/01/2010 13:05 (MTZ)

Date/Time Categorized:

06/01/2010 13:10 (MTZ)

Report Type:

Notification

Report Dates:

Notification	06/03/2010	14:18 (ETZ)
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	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)		
Cause Codes:			
ISM:	1) Define the Scope of Work 2) Analyze the Hazards		
Subcontractor Involved:	Yes Engineering Contractors Inc. (ECI)		
Occurrence Description:	<p>At approximately 7:45am on May 28, 2010, a general contract worker cut an energized 120volt electrical conductor which caused a short at building 6577. The contractor was tasked with the removal of a communication panel from the wall and cut the conductors inside of the communication panel using insulated diagonal cutting pliers when the electrical short occurred. The worker was wearing standard construction PPE which included safety glasses, safety shoes, hard hat, and gloves during the operation. The contractor believed that the panel was de-energized and in a safe electrical condition. There were no injuries or impact to the facilities due to this event.</p> <p>Due to the new configuration in this work area, the panel was not required for operations and was out of service.</p> <p>The electrical subcontractor was called after the event and traced the circuit and locked and tagged out CKT. 22, on PANEL E2, and performed a zero energy verification on the entire communication panel PLC-C2, which put the panel in an electrical safe condition.</p>		
Cause Description:	Critique/Fact Finding Performed: 6/1/10		
Operating Conditions:	Normal		
Activity Category:	Construction		
Immediate Action(s):	<p>Electrical circuit was placed in a safe condition.</p> <p>Work was suspended on the project.</p> <p>Investigation was initiated.</p>		

	4800 Early Notifications were conducted.				
FM Evaluation:	EOC # 16329				
DOE Facility Representative Input:					
DOE Program Manager Input:					
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Causal Analysis Team By When: 07/16/2010				
Division or Project:	4000/Modify space for storage and personnel				
Plant Area:	Tech Area V				
System/Building/Equipment:	Security Panel/Bldg. 6577, Rm. 2A				
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)				
Corrective Action:					
Lessons(s) Learned:					
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency				
HQ Summary:	On May 28, 2010, a general contract worker cut an energized 120-volt electrical conductor, causing an electrical short at Building 6577. The contractor was removing a communication panel from a wall and cut the conductors inside of the panel using insulated diagonal cutting pliers. The worker was wearing standard construction PPE that included safety glasses, safety shoes, a hard hat, and gloves. The worker believed that the panel was de-energized and in an electrically safe condition. An electrical subcontractor was called after the event to trace the circuit and lock and tag it out. The electrical subcontractor also performed zero energy verification on the entire communication panel to ensure the panel is in an electrically safe condition. There were no injuries or impact to the facilities. An investigation was initiated.				
Similar OR Report Number:					
Facility Manager:	<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		
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
	06/01/2010	13:10 (MTZ)	Joyce Arviso-Benally, FR	DOE/SSO
	06/01/2010	13:15 (MTZ)	William Lucy	4021
	06/01/2010	13:15 (MTZ)	Arthur Ratzel	4800
	06/01/2010	13:15 (MTZ)	Michael Quinlan	4840
	06/01/2010	13:15 (MTZ)	EOC	4136
Authorized Classifier(AC):	John Norwalk Date: 06/03/2010			
7)Report Number:	NE-ID--BEA-MFC-2010-0003 After 2003 Redesign			
Secretarial Office:	Nuclear Energy, Science and Technology			
Lab/Site/Org:	Idaho National Laboratory			
Facility Name:	Materials and Fuels Complex			
Subject/Title:	Subcontractor cut a conduit and de-energized wire while removing Air Handling Unit			
Date/Time Discovered:	06/02/2010 08:25 (MTZ)			
Date/Time Categorized:	06/02/2010 09:00 (MTZ)			
Report Type:	Notification/Final			
Report Dates:	Notification	06/07/2010	15:48 (ETZ)	
	Initial Update	06/07/2010	15:48 (ETZ)	
	Latest Update	06/07/2010	15:48 (ETZ)	
	Final	06/07/2010	15:48 (ETZ)	
Significance Category:	4			
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)			
Cause Codes:				
ISM:	2) Analyze the Hazards			
Subcontractor Involved:	Yes			

	NORESCO, LLC
Occurrence Description:	On 6/2/2010 a subcontractor conducting demolition on an out-of-service air handling unit - unintentionally cut through a hidden conduit containing electrical conductors. The hidden line was obstructed by the duct plenum they were working on. Piping and ducting were in front of the conduit. The supply breaker for the conductors was open and the conductors were not energized at the time of the cut, however the circuit was not protected by Lockout Tagout (LOTO). No one was injured, or exposed to live energy and there was no arc flash. The electrical severity index has been analyzed to be zero. The Sawzall tool used to perform the cut was double insulated.
Cause Description:	
Operating Conditions:	Does not apply
Activity Category:	Construction
Immediate Action(s):	Work was immediately stopped and the area was barricaded. A Battelle Energy Alliance (BEA) electrician (with appropriate PPE) performed zero energy and the circuit was locked and tagged. A critique was convened on 06/02/2010 at 12:30 P.M. A formal "Stop Work" was given to the subcontractor with "Release to Work" criteria being addressed in Required Reading.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Facility Support & Services
Plant Area:	MFC-752 basement
System/Building/Equipment:	MFC-752, Air Handling Unit I-1
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 07D--Electrical Systems - Electrical Wiring 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 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

HQ Summary: On June 2, 2010, a subcontractor, who was conducting demolition on an out-of-service air handling unit, unintentionally cut through a hidden conduit containing electrical conductors. The hidden line was obstructed by the duct plenum that they were working on. The supply breaker for the conductors was open and the conductors were not energized at the time of the cut; however, the circuit was not protected by a lockout/tagout. No one was injured or exposed to electrical energy and there was no arc flash. The electrical severity index score has been calculated to be zero. The Sawzall tool used to perform the cut was double insulated. Work was stopped and the area was barricaded. A critique was held.

Similar OR Report Number:

Facility Manager:	Name	David B. Lively
	Phone	(208) 533-7438
	Title	Facility Complex Manager

Originator:	Name	Crofts, Bryan P
	Phone	(208) 533-4081
	Title	FACILITY PROJECT MANAGER

HQ OC Notification:	Date	Time	Person Notified	Organization
	06/02/2010	08:30 (MTZ)	John C. Martin	DOEID

Other Notifications:	Date	Time	Person Notified	Organization
	06/02/2010	08:30 (MTZ)	Scott McBride	BEA
	06/02/2010	08:30 (MTZ)	David Lively	BEA

Authorized Classifier(AC): K C Gerard Date: 06/07/2010

8)Report Number: [SC--ASO-ANLE-ANLEAPS-2010-0001](#) After 2003 Redesign

Secretarial Office: Science

Lab/Site/Org: Argonne National Laboratory East

Facility Name: Advanced Photon Source

Subject/Title: Worker Receives Mild Shock To Hand While Using An Analyzer Test Cart

Date/Time Discovered: 06/29/2010 11:00 (CTZ)

Date/Time Categorized: 06/29/2010 15:10 (CTZ)

Report Type: Notification

Report Dates:	Notification	06/30/2010	18:20 (ETZ)
	Initial Update		

	Latest Update		
	Final		
Significance Category:	2		
Reporting Criteria:	2C(1) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or disturbance of a previously unknown or mislocated hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas) resulting in a person contacting (burn, shock, etc.) hazardous energy.		
Cause Codes:			
ISM:			
Subcontractor Involved:	No		
Occurrence Description:	<p>At approximately 1030 CDT on June 29, 2010, an Advanced Photon Source (APS) technician measuring the cavity resonance of a klystron received a mild shock when he leaned on the klystron grounded housing and placed his hand on a small unpainted (scratched) portion of an HP model 8753 Network Analyzer test cart. The worker initially thought he had come in contact with a rough surface on the analyzer and then realized it may have been a slight electric shock. An engineer from the RF Group participating in the measurements noticed the technician jump slightly and asked him what happened. Upon being informed by the technician that the technician may have received a mild shock, the engineer used a Fluke meter to see if a voltage potential existed between the test cart and the klystron grounded housing. The engineer measured a 60 VAC electrical potential between the unpainted (scratched) surface of the 8753 Network Analyzer test cart and the grounded klystron housing.</p> <p>The employee felt no discomfort or effects of what he described as a very minor shock and did not report to the Argonne medical office until directed to do so later in the day. The worker was released to work with no restrictions following a medical evaluation.</p> <p>The test cart was locked out by placing a locking device on its electrical plug and was removed from service. Other HP model 87532 Network Analyzer test carts within the RF Group also were locked out and removed from service pending inspection by a designated electrical equipment inspector (DEEI).</p>		
Cause Description:			
Operating Conditions:	Normal operations		
Activity Category:	Facility/System/Equipment Testing		
Immediate Action(s):	1. The test cart was disconnected from the extension cord attaching it to a 120 VAC outlet.		

	<p>2. The RF Group engineer used a Fluke meter to determine whether or not a voltage potential existed between the ground contact of the extension cord and the klystron housing. No voltage potential existed (i.e., 0 VAC).</p> <p>3. The test cart was electrically locked out by placing a lock out device on its main power plug, "Danger" tape was placed on the test cart, and the test cart was removed from service.</p> <p>4. A designated electrical equipment inspector (DEEI) examined the test cart later in the day.</p> <p>5. The DEEI issued an initial inspection report on the morning of June 30, 2010.</p> <p>6. Other HP model 8753 Network Analyzer test carts being used by the RF Group were locked out and removed from service pending inspection by a DEEI.</p> <p>7. A fact finding meeting was convened at 1300 CDT on June 30, 2010, to obtain additional information regarding the event and the DEEI's inspection results.</p> <p>8. The initial DEEI inspection of the test cart involved with the event revealed inadequate grounding practices within the test cart. For example, no paint was removed at ground connection points or where individual test cart panels connected to the test cart frame.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes.</p> <p>Before Further Operation? No</p> <p>By Whom: Facility Manager Designee</p> <p>By When:</p>
Division or Project:	Accelerator Systems Division
Plant Area:	RF Building 420
System/Building/Equipment:	radiofrequency (RF)/420/analyzer test cart
Facility Function:	Accelerators
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>07D--Electrical Systems - Electrical Wiring</p> <p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock</p>

12C--EH Categories - Electrical Safety
 14L--Quality Assurance - No QA Deficiency

HQ Summary: On June 29, 2010, an Advanced Photon Source technician received a mild shock while measuring the cavity resonance of a klystron when he leaned on the klystron grounded housing and placed his hand on a small unpainted (scratched) portion of an HP model 8753 Network Analyzer test cart. The worker initially thought he had come in contact with a rough surface on the analyzer and then realized that it may have been a slight electric shock. An engineer from the RF Group participating in the measurements noticed the technician jump slightly and asked him what happened. Upon being informed by the technician that he may have received a mild shock, the engineer used a Fluke meter to see if a voltage potential existed between the test cart and the klystron grounded housing. The engineer measured a 60 VAC electrical potential between the unpainted (scratched) surface of the 8753 Network Analyzer test cart and the grounded klystron housing. The technician felt no discomfort or effects of what he described as a very minor shock and did not report to the Argonne medical office until directed to do so later in the day. The worker was released to work with no restrictions. The test cart was electrically locked out, "Danger" tape was placed on the cart, and the cart was removed from service. Other HP model 8753 Network Analyzer test carts were also locked out and removed from service pending inspection. A fact finding meeting was convened.

Similar OR Report Number:

Facility Manager:	Name	BARKALOW, THOMAS W
	Phone	(630) 252-9243
	Title	SUF ESH/QA COORDINATOR

Originator:	Name	BRINDLE, SUSAN K
	Phone	(630) 252-6286
	Title	ORPS COORDINATOR

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

Other Notifications:	Date	Time	Person Notified	Organization
	06/29/2010	15:30 (CTZ)	E. Turnquest	DOE-ASO
	06/29/2010	15:30 (CTZ)	P. Washburn	DOE-ASO

Authorized Classifier(AC):

9)Report Number:	SC--BSO-LBL-OPERATIONS-2010-0007 After 2003 Redesign
Secretarial Office:	Science
Lab/Site/Org:	Lawrence Berkeley Laboratory
Facility Name:	Operations Division

Subject/Title:	110V Live Wire Cut in B76 - No Injuries		
Date/Time Discovered:	06/30/2010 08:03 (PTZ)		
Date/Time Categorized:	06/30/2010 08:24 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	07/02/2010	14:22 (ETZ)
	Initial Update		
	Latest Update		
	Final		
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:			
ISM:	4) Perform Work Within Controls		
Subcontractor Involved:	No		
Occurrence Description:	At around 1440 hours on 06/29/2010, an LBNL Facilities electrician cut into energized 110 V electrical wires. The electrician was attempting to perform electrical circuit demolition and failed to conduct zero voltage verification as required. There was no personnel contact with electricity and the incident did not result in any injuries.		
Cause Description:			
Operating Conditions:	Indoors, dry, lighted		
Activity Category:	Construction		
Immediate Action(s):	<p>- The electrical portion of the construction project was immediately shut down and made safe.</p> <p>- Facilities personnel immediately contacted and reported the incident to Environment, Health, and Safety (EH&S) electrical safety staff.</p>		
FM Evaluation:	<p>- An investigation team headed by the Facilities Maintenance Manager has started collecting documents, taking photographs and statements.</p> <p>- Facilities Division held an All Crafts Safety Stand-Down on 06/30/2010 to discuss electrical safety, specifically Chapters 8 and 18 of the LBNL Safety Manual PUB-3000.</p>		
DOE Facility Representative Input:			
DOE Program Manager			

Input:									
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Facilities By When:								
Division or Project:	Facilities Division								
Plant Area:	B.76-123								
System/Building/Equipment:	B.76 Room 123 Electrical Circuit								
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)								
Corrective Action:									
Lessons(s) Learned:									
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency								
HQ Summary:	On June 29, 2010, an LBNL Facilities electrician cut into energized 110-volt electrical wires. The electrician was attempting to perform electrical circuit demolition and failed to conduct the required zero voltage verification. The electrical portion of the construction project was immediately shut down and placed in a safe condition. Facilities personnel immediately reported the event to Environment, Health, and Safety electrical safety staff. An investigation team headed by the Facilities Maintenance Manager has started collecting documents, taking photographs, and compiling worker statements. The Facilities Division held an All Crafts Safety Stand-Down on June 30 to discuss electrical safety. There was no personnel contact with electricity and the event did not result in any injuries.								
Similar OR Report Number:									
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>Jennifer Ridgeway</td> </tr> <tr> <td>Phone</td> <td>(510) 486-6339</td> </tr> <tr> <td>Title</td> <td>Division Director</td> </tr> </table>	Name	Jennifer Ridgeway	Phone	(510) 486-6339	Title	Division Director		
Name	Jennifer Ridgeway								
Phone	(510) 486-6339								
Title	Division Director								
Originator:	<table border="1"> <tr> <td>Name</td> <td>MOU, FLORENCE P.</td> </tr> <tr> <td>Phone</td> <td>(510) 486-7872</td> </tr> <tr> <td>Title</td> <td>SENIOR ADMINISTRATOR</td> </tr> </table>	Name	MOU, FLORENCE P.	Phone	(510) 486-7872	Title	SENIOR ADMINISTRATOR		
Name	MOU, FLORENCE P.								
Phone	(510) 486-7872								
Title	SENIOR ADMINISTRATOR								
HQ OC Notification:	<table border="1"> <tr> <td>Date</td> <td>Time</td> <td>Person Notified</td> <td>Organization</td> </tr> <tr> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> </table>	Date	Time	Person Notified	Organization	NA	NA	NA	NA
Date	Time	Person Notified	Organization						
NA	NA	NA	NA						

Other Notifications:	Date	Time	Person Notified	Organization
	06/30/2010	08:30 (PTZ)	Kevin Hartnett	BSO

Authorized Classifier(AC):

10)Report Number:	SC--FSO-FNAL-FERMILAB-2010-0003 After 2003 Redesign		
Secretarial Office:	Science		
Lab/Site/Org:	FERMI National Accelerator Laboratory		
Facility Name:	FERMI National Accelerator Lab.(BOP)		
Subject/Title:	Failure to follow lockout tagout procedures prior to beginning electrical work		
Date/Time Discovered:	06/01/2010 10:00 (CTZ)		
Date/Time Categorized:	06/02/2010 12:15 (CTZ)		
Report Type:	Final		
Report Dates:	Notification	06/04/2010	16:32 (ETZ)
	Initial Update	06/30/2010	08:06 (ETZ)
	Latest Update	06/30/2010	08:06 (ETZ)
	Final	06/30/2010	08:06 (ETZ)
Significance Category:	3		
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.		
Cause Codes:	A4B2C07 - Management Problem; Resource Management LTA; Means not provided for assuring adequate availability of appropriate materials / tools A4B3C09 - Management Problem; Work Organization & Planning LTA; Work planning not coordinated with all departments involved in task A4B3C01 - Management Problem; Work Organization & Planning LTA; Insufficient time for worker to prepare task		
ISM:	4) Perform Work Within Controls 5) Provide Feedback and Continuous Improvement		
Subcontractor Involved:	Yes Cary Electric		
Occurrence Description:	A subcontractor electrician working on a Fermilab building expansion project (Industrial Building 3, IB-3 expansion) failed to perform LOTO on an electrical breaker prior to starting work. On June 1, 2010, the general contractor superintendent for the building expansion, recognizing that the electrical subcontractor was available this		

	<p>day, notified the electrical subcontractor to remove 4 exterior lights from the east exterior side of the existing IB-3 building. The superintendent failed to notify the Fermilab Construction Coordinator (CC) of his plan to have the subcontractor remove the lights that day, although the CC was aware the lights needed to be removed.</p> <p>The electrical subcontractor arrived on site at approximately 10:30 a.m., and the superintendent directed him to remove the exterior lights. The electrician had prior knowledge that the lights were controlled by a timer, and he used a volt meter to verify that there was no power at the fixtures prior to removal. He removed the lights without incident.</p> <p>The electrician failed to perform LOTO on the governing breaker prior to starting work. He did not have with him the LOTO locks and tags required by Fermilab policy, with which he was familiar, and the Job Hazard Analysis, which he had read and signed.</p> <p>Another electrical subcontractor employee arrived with LOTO locks and tags at about 2:30 p.m. This employee approached IB-3 building management for help identifying the panel/breaker governing the lights. He subsequently performed LOTO on the affected breaker to eliminate potential danger posed by the exposed light fixture wires once the timer switched on the power.</p>
Cause Description:	<p>The subcontractor electrical was familiar with Fermilab polices, had read and signed the Hazard Analysis, did not have LOTO locks and tags as required and contrary to Hazard Analysis and failed to perform LOTO on the breakers prior to starting work.</p> <p>The general contractor did not keep the Fermilab construction coordinator informed of significant changes in work activites on the job site in a timely manner.</p>
Operating Conditions:	Normal
Activity Category:	Construction
Immediate Action(s):	Building manager learning of this event notified Technical Division management, in addition to the notification of Facility Engineering Services Section management (FESS). FESS began investigating this incident with the general contractor. In addition to this investigation, the subcontractor mangement is looking into this incident. DOE-FSO also took part in investigating this incident.
FM Evaluation:	Established procedures are to be followed by people working at Fermilab. Job Hazard Analysis plays a significant role in worker safety; workers must read, understand and comply with the HA at all times.

DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	No		
Division or Project:	Facilities Engineering Service Section		
Plant Area:	IB-3 New Addition		
System/Building/Equipment:	Industrial Building 3 New Addition		
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)		
Corrective Action 01:	<table border="1"> <tr> <td>Target Completion Date:06/04/2010</td> <td>Actual Completion Date:06/04/2010</td> </tr> </table>	Target Completion Date: 06/04/2010	Actual Completion Date: 06/04/2010
Target Completion Date: 06/04/2010	Actual Completion Date: 06/04/2010		
	Weekly scheduling meeting are held with contractors, subcontractors, contract coordinator, ES&H and procurement. This event was discussed and procedures / policies were reinforced. Meeting is held weekly.		
Lessons(s) Learned:			
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical)</p> <p>01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical)</p> <p>01P--Inadequate Conduct of Operations - Inadequate Oral Communication</p> <p>01R--Inadequate Conduct of Operations - Management issues</p> <p>11G--Other - Subcontractor</p> <p>12I--EH Categories - Lockout/Tagout (Electrical or Mechanical)</p> <p>14E--Quality Assurance - Work Process Deficiency</p> <p>14G--Quality Assurance - Procurement Deficiency</p>		
HQ Summary:	<p>On June 1, 2010, a subcontractor electrician working on a Fermilab building expansion project failed to perform Lockout/Tagout (LO/TO) on an electrical circuit breaker before starting work. The construction superintendent failed to notify the Fermilab Construction Coordinator (CC) of his plan to have the subcontractor remove the lights that day, although the CC was aware the lights needed to be removed. The subcontractor electrician arrived on site and the superintendent directed him to remove the exterior lights. He removed the lights without incident; however, he failed to perform the LOTO. The electrician did not have with him the locks and tags required by Fermilab policy, with which he was familiar, and the Job Hazard Analysis, which he had read and signed. Another electrical subcontractor employee arrived later with locks and tags and performed the LOTO on the affected breaker to eliminate the potential danger posed by the exposed light fixture wires. The Building Manager learned of this event and notified</p>		

	Technical Division management, in addition to notifying Facility Engineering Services Section management (FESS). FESS began investigating this incident with the general contractor and subcontractor management.												
Similar OR Report Number:	1. None												
Facility Manager:	<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												
Originator:	<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&H EMERGENCY PLANNER</td> </tr> </table>	Name	JAMES, WILLIAM R	Phone	(630) 840-8901	Title	ES&H EMERGENCY PLANNER						
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Phone	(630) 840-8901												
Title	ES&H EMERGENCY PLANNER												
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06/02/2010	12:20 (CTZ)	J. Scott	DOE-FSO										
Authorized Classifier(AC):													

11)Report Number:	SC--PNSO-PNNL-PNNLNUCL-2010-0004 After 2003 Redesign												
Secretarial Office:	Science												
Lab/Site/Org:	Pacific Northwest National Laboratory												
Facility Name:	PNNL Nuclear Facilities												
Subject/Title:	Failure to Follow Hazardous Energy Control Process												
Date/Time Discovered:	06/09/2010 09:30 (PTZ)												
Date/Time Categorized:	06/09/2010 10:45 (PTZ)												
Report Type:	Notification												
Report Dates:	<table border="1"> <tr> <td>Notification</td> <td>06/11/2010</td> <td>13:32 (ETZ)</td> </tr> <tr> <td>Initial Update</td> <td></td> <td></td> </tr> <tr> <td>Latest Update</td> <td></td> <td></td> </tr> <tr> <td>Final</td> <td></td> <td></td> </tr> </table>	Notification	06/11/2010	13:32 (ETZ)	Initial Update			Latest Update			Final		
Notification	06/11/2010	13:32 (ETZ)											
Initial Update													
Latest Update													
Final													
Significance Category:	3												
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary												

	investigations made before work is authorized to begin.
Cause Codes:	
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On Wednesday, June 09, 2010, at approximately 0930 hours, during a management walk through, one of the team members opened the back panel of an instrument rack which was later confirmed to contain exposed 120 V power. Opening the panel containing hazardous energy was not in compliance with the PNNL Hazardous Energy Control Program.
Cause Description:	
Operating Conditions:	Indoors. Dry.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	The instrument rack panel was closed and labeled. A critique was held Thursday, June 10, 2010.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: By When:
Division or Project:	Facilities & Operations / Operational Systems
Plant Area:	300 Area
System/Building/Equipment:	RPL Facility (325)
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On June 9, 2010, during a management walk through, one of the team members opened the back panel of an instrument rack which was later confirmed to contain exposed 120 V power. Opening the panel containing hazardous energy was not in compliance with the PNNL Hazardous Energy Control Program. The instrument rack panel was closed and labeled. A critique was held on June 10, 2010.

Similar OR Report Number:				
Facility Manager:	Name	Kooiker, C. A.		
	Phone	(509) 376-5746		
	Title	Bldg Manager, Radiochemical Processing Laboratory		
Originator:	Name	POLLARI, ROGER A		
	Phone	(509) 371-7700		
	Title			
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	06/09/2010	11:10 (PTZ)	Davies, T. H.	PNSO
Authorized Classifier(AC):	Pollari, R. A. Date: 06/11/2010			
12)Report Number:	SC--SSO-SU-SLAC-2010-0009 After 2003 Redesign			
Secretarial Office:	Science			
Lab/Site/Org:	Stanford Linear Accelerator Center			
Facility Name:	Stanford Linear Accelerator Center			
Subject/Title:	Electric Shock when connecting 5 KV Power Supply Calibrator to Ion Pump Power Supply.			
Date/Time Discovered:	06/04/2010 13:45 (PTZ)			
Date/Time Categorized:	06/04/2010 14:45 (PTZ)			
Report Type:	Notification			
Report Dates:	Notification	06/07/2010	18:43 (ETZ)	
	Initial Update			
	Latest Update			
	Final			
Significance Category:	3			
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)			
Cause Codes:				
ISM:				

Subcontractor Involved:	No
Occurrence Description:	<p>At approximately 12:30 a Klystron test Technician received an electric shock while performing an ion pump and power supply calibration test. The Technician removed the ion pump 5KV high voltage cable and was plugging the pump high voltage cable into a SLAC-made calibration device when he felt a shock in both hands. He called for help, and co-workers immediately responded and took him to the SLAC Medical Department. Medical services examined and released the worker back to work without restriction.</p> <p>A full investigation is under way; however a preliminary investigation has been conducted by SLAC's Electrical Safety Officer, which included interviews with the employee and his 1st and 2nd line managers and an initial evaluation of the equipment that was involved.</p> <p>The hand held calibration device (calibrator) is internally manufactured equipment, constructed decades ago, that was never inspected in accordance with the SLAC Electrical Equipment Inspection Program (EEIP). Preliminary evaluation indicates that grounding is inadequate, and the case acts as a chassis ground. An internal problem in the calibrator could impress high voltage on the case. If the case is not grounded but floating, the case could become energized at 5 KV. The Technician reported that he held the calibrator in one hand and with the high voltage cable in the other hand. When he jiggled the cable to properly seat it on the calibrator he felt a shock.</p> <p>This unit and another comparable piece of equipment have been taken out of service. An extent of condition evaluation is underway to determine if there are other SLAC-manufactured testing devices that have not gone through the EEIP.</p>
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Worker taken over to SLAC Medical Service. The scene was secured.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes.</p> <p>Before Further Operation? No</p> <p>By Whom: SLAC Accident Committee</p> <p>By When:</p>
Division or Project:	Accelerator Directorate
Plant Area:	Bldg. 44 - Room 174

System/Building/Equipment:	Klystron Engineer & Testing Lab															
Facility Function:	Accelerators															
Corrective Action:																
Lessons(s) Learned:																
HQ Keywords:	07D--Electrical Systems - Electrical Wiring 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 11H--Other - Procurement Deficiency/Defective Items 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14H--Quality Assurance - Inspection and Acceptance Testing Deficiency															
HQ Summary:	<p>On June 4, 2010, a KlystronTest Technician received an electric shock while performing an ion pump and power supply calibration test. The technician removed the ion pump 5KV high voltage cable and was plugging the pump high voltage cable into a SLAC-made calibration device when he felt an electrical shock in both hands. He was taken to the SLAC Medical Department, examined, and released back to work without restriction. A full investigation is underway. The hand held calibration device (calibrator) is internally manufactured equipment, constructed decades ago, that was never inspected in accordance with the SLAC Electrical Equipment Inspection Program (EEIP). Preliminary evaluation indicates that grounding is inadequate, and the case acts as a chassis ground. An internal problem in the calibrator could result in high voltage on the case. If the case is not grounded but floating, the case could become energized at 5 KV. The technician reported that he held the calibrator in one hand and the high voltage cable in the other hand. When he jiggled the cable to properly seat it on the calibrator, he felt a shock. This unit and another comparable piece of equipment have been taken out of service. An extent of condition evaluation is underway to determine if there are other SLAC-manufactured testing devices that have not gone through the EEIP.</p>															
Similar OR Report Number:																
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td colspan="3">LOUGEE, LAWRENCE</td> </tr> <tr> <td>Phone</td> <td colspan="3">(650) 926-2997</td> </tr> <tr> <td>Title</td> <td colspan="3">FACILITY MANAGER DESIGNEE</td> </tr> </table>				Name	LOUGEE, LAWRENCE			Phone	(650) 926-2997			Title	FACILITY MANAGER DESIGNEE		
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06/04/2010	13:45 (PTZ)	Lance Lougee	SLAC													

	06/04/2010	14:00 (PTZ)	Marie Heard	SSO DOE
	06/04/2010	14:00 (PTZ)	Paul Golan	SSO DOE
	06/04/2010	14:00 (PTZ)	Donald Wilhelm	SSO DOE

Authorized Classifier(AC):

13)Report Number:	SC--SSO-SU-SLAC-2010-0011 After 2003 Redesign		
Secretarial Office:	Science		
Lab/Site/Org:	Stanford Linear Accelerator Center		
Facility Name:	Stanford Linear Accelerator Center		
Subject/Title:	Unauthorized Resetting of Electrical Circuitry Breaker		
Date/Time Discovered:	06/29/2010 10:25 (PTZ)		
Date/Time Categorized:	07/01/2010 12:00 (PTZ)		
Report Type:	Notification/Final		
Report Dates:	Notification	07/01/2010	20:09 (ETZ)
	Initial Update	07/01/2010	20:09 (ETZ)
	Latest Update	07/01/2010	20:09 (ETZ)
	Final	07/01/2010	20:09 (ETZ)
Significance Category:	4		
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)		
Cause Codes:			
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls 5) Provide Feedback and Continuous Improvement		
Subcontractor Involved:	Yes Epicurean Feast Inc.		
Occurrence Description:	<p>On 6/29/2010 a cafeteria employee attempted to reset and reclose a tripped 480V 3 pole breaker that feeds the booster water heater for the cafeteria dishwasher. When the employee attempted to close the breaker it tripped free.</p> <p>A facilities Heating Ventlation Air Condition (HVAC) technician responded to a service request for the out-of-service booster heater. The Facilities HVAC technician summoned a Facilities High Voltage (HV) electrician.</p>		

	<p>The HV electrician found the breaker in the open position and placed an administrative lock and tag on the breaker.</p> <p>The arc flash label on the 480V panel indicates a Flash Hazard Category of 4 based on an incident energy of 34cal/cm². The arc flash Personal Protective Equipment (PPE) required to operate breakers on this panel are 40 cal (minimum) arc-rated clothing, hard hat, safety glasses or goggles, 40 cal flash suit hood, 40 cal leather gloves, and leather shoes.</p> <p>At SLAC only qualified electrical workers are authorized to operate breakers. Qualified electrical workers are trained to recognize the hazards associated with breaker operation and to select appropriate PPE and work practices for the task.</p> <p>Environment, Safety and Health (ES&H) Chapter 8 Electrical Safety, Section 10.7 Resetting Circuit Breakers states that tripped breakers may not be reset until the problem has been identified and corrected or isolated. Reclosing a tripped breaker into a fault can result in significant hazards to personnel and equipment. This includes hazards to the person operating the breaker. In this case the potential arc flash energy at the breaker panel is relatively high, and the possible injuries due to an arc flash are severe. There were two (2) Keep 36" clearance signs above and below the arc flash 'Danger' label.</p>
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	HV electrician applied an administrative lock on the circuit breaker
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Operations
Plant Area:	Building 42
System/Building/Equipment:	Linear Cafe
Facility Function:	Accelerators
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 11G--Other - Subcontractor

	12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency															
HQ Summary:	<p>On June 29, 2010, a cafeteria employee attempted to reset and reclose a tripped 480-volt 3-pole circuit breaker that feeds the booster water heater for the cafeteria dishwasher. When the employee attempted to close the breaker, it tripped free. A facilities HVAC technician responded to a service request for the out-of-service booster heater and summoned a Facilities High Voltage electrician. The electrician found the circuit breaker in the open position and placed an administrative lock and tag on the breaker. The arc flash label on the 480-volt panel indicates a Flash Hazard Category of 4 based on an incident energy of 34 cal/cm². The arc flash Personal Protective Equipment required to operate breakers on this panel are 40 cal (minimum) arc-rated clothing, hard hat, safety glasses or goggles, 40 cal flash suit hood, 40 cal leather gloves, and leather shoes. Only qualified electrical workers are authorized to operate circuit breakers. Tripped circuit breakers may not be reset until the problem has been identified and corrected or isolated because reclosing a breaker into a fault can result in significant hazards to personnel and equipment. This includes hazards to the person operating the breaker. In this case the potential arc flash energy at the breaker panel is relatively high, and the possible injuries from an arc flash are severe. There were two Keep 36" clearance signs above and below the arc flash "Danger" label.</p>															
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