

November 2008 Electrical Safety Occurrences

The number of reported electrical shock events for 2008 are now equal to the total reported in 2007 with at least one shock per month. Of the 25 electrical shocks to date, 73 percent were non-electrical workers and 27 percent were electrical workers. Of the total number of workers involved, 27 percent were subcontractors of which, 71 percent of them were non-electrical workers. Naturally, it is expected that electrical workers would have a lower incidence of electrical shock because of their training, experience and safe work practices; however, the high number of non-electrical worker shocks is still a concern. This could be an indication of a lack of general electrical safety awareness on the part of non-electrical workers or an indication that the workplace still contains unknown electrical hazards waiting to be found.

On the positive side, this is the third time in the past 18 months that the number of electrical safety occurrences has dropped to only five per month. Since May of this year we have seen a general decline in the number of reported occurrences.

There were 5 electrical safety occurrences for November 2008:

- 1 resulted in an electrical shock
- 1 involved damaging an electrical conduit during excavation
- 2 involved lockout/tagout
- 2 involved electrical workers and 3 involved non-electrical workers
- 4 occurrences involved 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

The initial search yielded 6 occurrences. However, one occurrence (NA--LSO-LLNL-LLNL-2008-0057) involved the disturbance of an asbestos ceiling tile while replacing a light ballast. Culling out this occurrence yielded 5 electrical safety occurrences for the month.

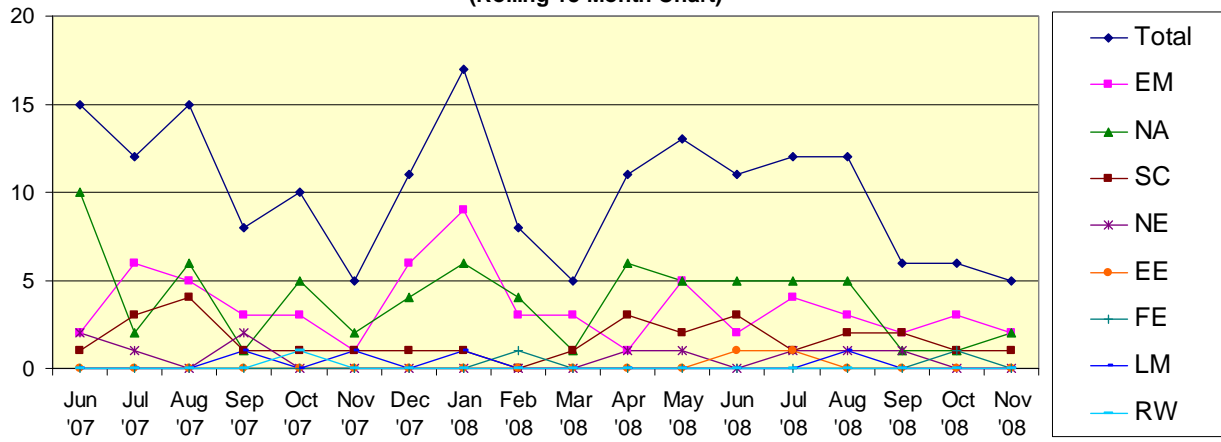
Below is the current summary of 2008 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
Jan-08	17	7	0	0
Feb-08	8	3	0	0
Mar-08	5	1	0	0
Apr-08	11	1	0	0
May-08	13	1	1	0
Jun-08	11	4	0	0
Jul-08	12	1	0	0
Aug-08	12	4	0	0
Sep-08	6	1	0	0
Oct-08	6	1	0	0
Nov-08	5	1	0	0
2008 total	106 (avg. 9.6/month)	25	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 average rate of electrical safety occurrences in 2008 is 9.6 per month, which is less than the average rate of 11.7 per month experienced in 2007.

Electrical Occurrences by Month & Secretarial Office

(Rolling 18-Month Chart)



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

Electrical Safety Occurrences – November 2008

No	Report Number	Subject/Title	EW ⁽¹⁾	N-EW ⁽²⁾	SUB ⁽³⁾	SHOCK	BURN	ARCF ⁽⁴⁾	LOTO ⁽⁵⁾	EXCAV ⁽⁶⁾	CUT/D ⁽⁷⁾	VEH ⁽⁸⁾
1	EM-RL--WCH-REMACT-2008-0005	Excavator Breaks a De-energized Underground Power Line		X	X					X		
2	EM-SR--SRNS-SIPS-2008-0004	Failure to Follow Safe Practices On or Near Electrical Conductors at the 784-7A Steam Plant Facility	X		X							
3	NA--LASO-LANL-BOP-2008-0018	Energized Electrical Feeders Discovered during Demolition Work Activities		X	X				X			
4	NA--LASO-LANL-PHYSTECH-2008-0017	Worker Receives an Electrical Shock During Underground Video Surveying Operations		X		X						
5	SC--SSO-SU-SLAC-2008-0019	Failure to use Lock Out/Tag Out (LOTO)	X		X				X			
	TOTAL		2	3	4	1			2	1		

Key

(1)EW = electrical worker, (2)N-EW = non-electrical worker, (3)SUB = subcontractor, (4)ARCF = significant arc flash, (5)LOTO = lockout/tagout, (6)EXCAV = excavation, (7)CUT/D = cutting or drilling, (8)VEH = vehicle event

ORPS Operating Experience Report

Production GUI - New ORPS

ORPS contains 53979 OR(s) with 57297 occurrences(s) as of 12/2/2008 6:35:51 AM
 Query selected 5 OR(s) with 5 occurrences(s) as of 12/2/2008 2:43:44 PM

Download this report in Microsoft Word format. 

1)Report Number:	EM-RL--WCH-REMACT-2008-0005 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Hanford Site		
Facility Name:	Remedial Action Projects		
Subject/Title:	Excavator Breaks a De-energized Underground Power Line		
Date/Time Discovered:	11/11/2008 13:15 (PTZ)		
Date/Time Categorized:	11/11/2008 17:15 (PTZ)		
Report Type:	Notification		
Report Dates:	Notification	11/13/2008	19:56 (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:	Yes Terranear/Envirocon		
Occurrence Description:	<p>On November 11, 2008, a heavy equipment operator was assisting a Sampler by using an excavator to retrieve soil samples in support of site closure activities of the 618-7 Burial Grounds. The soil sampling locations had been selected randomly by a computer and marked on the ground by small flags according to a map diagram. The area to be sampled was posted as a Contamination Area (CA). The excavator was positioned outside the CA, with the bucket reaching into the CA to retrieve the soil samples.</p> <p>During the process of digging the samples, the excavator bucket hooked a</p>		

	<p>conduit containing a temporary underground power line for a series of light poles. This resulted in the conduit and power line being broken. The power line was de-energized at the time of the event. There were no injuries, shocks or exposures at the time of the event.</p> <p>Following the incident, project management conducted a fact-finding to identify potential causes of the event. The electrical line was determined to feed a series of light poles that were installed by the project in February 2008, in support of trenching and container transfer activities. As-built drawings for the electrical run were available but not reviewed prior to commencing sampling. The sampling location was approximately 7 ft from a light pole and directly in-line with the series of poles. A series of work planning and work control deficiencies were noted in the fact-finding and follow-up investigation into these activities is underway.</p>
Cause Description:	
Operating Conditions:	N/A
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	<p>The excavator was shut down and placed in a safe configuration.</p> <p>The situation was reported to management.</p> <p>A fact finding meeting was scheduled within 2 hours of the event.</p> <p>An electrician confirmed the power line was de-energized.</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: Project Management</p> <p>By When:</p>
Division or Project:	618-7 Field Remediation Site
Plant Area:	600
System/Building/Equipment:	Excavator
Facility Function:	Environmental Restoration Operations
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical)</p> <p>01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other)</p> <p>01R--Inadequate Conduct of Operations - Management issues</p> <p>07D--Electrical Systems - Electrical Wiring</p>

	08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 11G--Other - Subcontractor 12G--EH Categories - Industrial Operations 14E--Quality Assurance - Work Process Deficiency												
HQ Summary:	On November 11, 2008, an excavator was retrieving soil samples at the 618-7 Burial Grounds, when the excavator bucket hooked a conduit containing a temporary underground power line for a series of light poles. This resulted in the conduit and power line being broken. The power line was de-energized at the time of the event. There were no injuries, shocks or exposures.												
Similar OR Report Number:													
Facility Manager:	<table border="1"> <tr> <td>Name</td> <td>FOSTER, TOM</td> </tr> <tr> <td>Phone</td> <td>(803) 645-3521</td> </tr> <tr> <td>Title</td> <td>DIRECTOR, FIELD REMEDIATION</td> </tr> </table>	Name	FOSTER, TOM	Phone	(803) 645-3521	Title	DIRECTOR, FIELD REMEDIATION						
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Phone	(803) 645-3521												
Title	DIRECTOR, FIELD REMEDIATION												
Originator:	<table border="1"> <tr> <td>Name</td> <td>Teller, Donald S</td> </tr> <tr> <td>Phone</td> <td>(509) 372-9722</td> </tr> <tr> <td>Title</td> <td>OCCURRENCE INVESTIGATOR</td> </tr> </table>	Name	Teller, Donald S	Phone	(509) 372-9722	Title	OCCURRENCE INVESTIGATOR						
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11/11/2008	13:35 (PTZ)	Ed MacAlister	DOE FR										
11/11/2008	17:39 (PTZ)	Sam Baker	DOE ONC										
Authorized Classifier(AC):													

2)Report Number:	EM-SR--SRNS-SIPS-2008-0004 After 2003 Redesign		
Secretarial Office:	Environmental Management		
Lab/Site/Org:	Savannah River Site		
Facility Name:	Site Infrastructure and Project Systems		
Subject/Title:	Failure to Follow Safe Practices On or Near Electrical Conductors at the 784-7A Steam Plant Facility		
Date/Time Discovered:	11/17/2008 14:00 (ETZ)		
Date/Time Categorized:	11/17/2008 14:20 (ETZ)		
Report Type:	Notification		
Report Dates:	Notification	11/19/2008	16:59 (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:	3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	Yes Hurst
Occurrence Description:	<p>On 11/14/08, a DOE-FR observed a vendor retrieve an instrument from the low voltage (24V) area of the B-1 Electrical Panel at the 784-7A Steam Plant. The same vendor was also observed looking into the open door of the DA Electrical Panel. These panels contain 480 Volts and are Arc Flash labeled. Proper Personal Protective Equipment (PPE) was not worn to access the panels in either case. The scope of work was to troubleshoot, with vendor guidance, electrical anomalies between the B-1 and DA Electrical panels. The vendor scope was to perform consultation and not to perform any hands on work. This was verbally communicated to the vendor by the Subcontract Technical Representative prior to his arrival on site. All actual troubleshooting/work was to be performed by Site Infrastructure Utilities & Operations E&I mechanics per an approved work package. The vendor did not receive work authorization or pre-job briefing from 724-7A facility personnel prior to accessing the electrical panels on the morning of 11/14/08.</p> <p>A Fact Finding Meeting was held at 1230 on 11/17/08 to evaluate the significance of the electrical safety concern. Additional investigation revealed that on several occasions the B-1 Electrical Panel doors had been opened by non-qualified electrical workers from within Site Infrastructure Utilities & Operations to observe the status of various starters/components in the low voltage (24V) section of the panel. Proper PPE was not worn while opening the main panel door as required by the arc flash label located near the 480V disconnect.</p> <p>Site Infrastructure Management decided to report these multiple 18Q2 safety violations as a 10(2), Management Concern, Significance 3 with assistance from the SRS Electrical Safety Subject Matter Expert.</p> <p>There were no personnel injuries or facility impacts as a result of these issues.</p>

	<p>Note: The SRS Electrical Safety subject matter expert calculated the electrical severity of this event using guidance developed by the EFCOG/DOE Electrical Safety Subgroup. The calculated severity for this event is 600 (High Significance). This event scores as follows: Electrical Hazard: 50 (480V); Environment Factor: 0; Shock Proximity Factor: 1; Arc Flash: 10; Thermal Factor: 0; no PPE mitigations, and Injury Factor: 1. Electrical Severity=50(1+0+1+10+0)*1=600. The recommended ORPS Significance Category is 3.</p> <p>All corrective actions and causal analysis associated with this issue will be tracked in Site Tracking, Analysis and Reporting (ref. 2008-CTS-015661).</p>
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Maintenance
Immediate Action(s):	On 11/14/08, the DOE-FR immediately reported the vendor actions to the Site Infrastructure Utilities & Operations Manager. The vendor was instructed to cease all activity in and around the 480V electrical panels. All electrical panel doors were secured and placed in a safe state. A Fact Finding meeting was scheduled for 11/17/08.
FM Evaluation:	The Facility Manager has reviewed and concurred with this report.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Site Infrastructure/Utilities and Operations
Plant Area:	784-7A
System/Building/Equipment:	784-7A
Facility Function:	Balance-of-Plant - Site/outside utilities
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01R--Inadequate Conduct of Operations - Management issues 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14C--Quality Assurance - Quality Improvement Deficiency

14E--Quality Assurance - Work Process Deficiency

HQ Summary: On November 14, 2008, a vendor engaged in troubleshooting electrical anomalies between electrical panels was observed retrieving an instrument from the low voltage area of an electrical panel. The same vendor was also observed looking into the open door of another electrical panel. These panels contain 480 Volts and are Arc Flash labeled. Proper Personal Protective Equipment (PPE) was not worn to access the panels in either case. The vendor scope was to perform consultation and not to perform any hands on work. Also, the vendor did not receive a work authorization or pre-job prior to accessing the electrical panels. A fact finding meeting revealed that on several occasions the electrical panel doors had been opened by non-qualified electrical workers to observe the status of various starters/components in the low voltage (24V) section of the panel. Proper PPE was not worn while opening the main panel door as required by the arc flash label located near the 480-volt disconnect.

Similar OR Report Number:

Facility Manager:

Name	Dane Anderson
Phone	(803) 725-8086
Title	Mgr, Site Infrastructure Utilities and Operations

Originator:

Name	Lewis, Jr., John C
Phone	(803) 557-4378
Title	PROGRAM COMPLIANCE LEAD

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
11/17/2008	14:25 (ETZ)	D. Anderson	SRS-SI
11/17/2008	14:25 (ETZ)	T. Tomac	DOE-FR
11/17/2008	14:25 (ETZ)	L. Jones	SRS-SI
11/17/2008	14:25 (ETZ)	C. Campbell	SRS-SI
11/17/2008	14:25 (ETZ)	JJ Hynes	DOE-FR
11/17/2008	16:15 (ETZ)	M. Kinard	SRSOC

Authorized Classifier(AC): Robert White Date: 11/17/2008

3)Report Number: [NA--LASO-LANL-BOP-2008-0018](#) **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: Energized Electrical Feeders Discovered during Demolition Work Activities

Date/Time Discovered:	11/22/2008 12:30 (MTZ)		
Date/Time Categorized:	11/25/2008 11:03 (MTZ)		
Report Type:	Notification		
Report Dates:	Notification	12/01/2008	17:36 (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 Clauss Construction		
Occurrence Description:	<p>MANAGEMENT SYNOPSIS: On November 22, 2008, at 1230, at Technical Area 21, Building 14, while pulling a junction box (J-box) from an exterior wall using an excavator, a Clauss Construction operator observed an electrical arc flash from the abandoned J-box. The operator had been performing structural demolition of the north exterior wall as part of the TA-21-14 Federalized Decommissioning and Demolition (D&D) Project. The LANL safety representative, who was on site at the time, immediately stopped the work and notified the LANL and DOE project managers. All workers left the work area and access to the area controlled to prevent injury. No personnel injuries resulted from the event. At 1300, the LANL project manager arrived on scene and assessed the condition. The LANL line manager made notifications to the Emergency Response Group, the Institutional Facilities and Central Services (IFCS) Facility Operations Director, and the TA21 Operations Manager. At 1500, the KSL Services linemen arrived on scene and found two energized circuits (one circuit of 120/208 volts and a second circuit of 480/277 volts) which were fed from Substation 307. The linemen turned off the associated breakers. A competent person from the LANL project team applied lock out and tag out (LOTO) devices to both breakers. After the situation was evaluated and a determination made that the electrical hazards were properly controlled, the LANL project manager resumed demolition work activities.</p> <p>BACKGROUND: The TA-21-14 D&D Project is a demolition contract federalized to the local NNSA Office through the Albuquerque Service</p>		

Center. The DOE subcontracted the demolition work activities to Clauss Construction and tasked the LANL Site Projects Division (SP-DO) with oversight responsibilities for the Project.

According to the LANL project manager, prior to 1986, the main electrical feeds to TA21-14 came from a single 120/208 volt and a single 480/277 volt circuit from Substation 307. In 1985, the two circuits were abandoned and a new main electrical feed was installed from an overhead power pole on the southwest corner of TA21-14. The old electrical feeders from the two panel boxes attached to TA21-14 were apparently disconnected and wiring which fed into the building was removed. However, the feeders from the exterior J-boxes back to the substation were left in place and dead-ended with electrical tape inside the old J-boxes outside the building. It is not known when the old feed circuits were re-energized by placing the substation breakers in the "on" position. This configuration had not been captured on any as-builts. The TA21 Closure Project recently had the KSL linemen disconnect the main power feed from the overhead power pole.

During the mobilization phase of the Project, the DOE subcontractor hired a certified electrician to perform the utility disconnect verification at TA21-14. The verification confirmed a zero energy state for the TA21-14 structure. However, the verification apparently did not include opening the exterior J-boxes with blank top covers for circuits abandoned in place and to conduct a zero energy verification check.

Cause Description:

Operating Conditions:

Demolition Work Activities

Activity Category:

Facility Decontamination/Decommissioning

Immediate Action(s):

1. The KSL linemen turned off the breakers associated with the energized circuits. A competent person from the LANL project team applied LOTO devices to the breakers.
2. The LANL safety representative worked with the Project team and developed an in-field procedure to ensure the area around the legacy electrical feeds was controlled and all the hazards associated with the feeders were properly mitigated.
3. After a determination was made that the electrical hazards were properly mitigated and a pre-job briefing held, the LANL project manager resumed the demolition work activities.
4. The LANL project manager will issue a work ticket to have the IFCS electricians pull out the conductors on the two circuits. The substation will be characterized, circuits re-labeled as warranted, and the substation placed into a safe configuration.

	<p>5. The LANL project management will develop and issue a standing order to address the secondary utilities configuration management issue until an institutional process is developed.</p> <p>6. A LANL Electrical Safety Committee representative will evaluate the event using the electrical severity tool.</p> <p>7. Notifications were made to the Emergency Response Group, LANL and DOE line managers, the Associate Director for Project Management and Site Services, the Institutional Facilities and Central Services Facility Operations Director, the TA21 Operations Manager, and the DOE Event Notification Line.</p>
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	<p>Yes. Before Further Operation? No By Whom: SP-DO, IFCS-DO & ESH-IO By When: 01/09/2009</p>
Division or Project:	TA21-14 Federalized D&D Project
Plant Area:	TA21-14
System/Building/Equipment:	120/208V and 480/277V Energized Circuits
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control</p> <p>01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical)</p> <p>01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical)</p> <p>08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues</p> <p>08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance</p> <p>08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical)</p> <p>11G--Other - Subcontractor</p> <p>12I--EH Categories - Lockout/Tagout (Electrical or Mechanical)</p> <p>14D--Quality Assurance - Documents and Records Deficiency</p> <p>14E--Quality Assurance - Work Process Deficiency</p>
HQ Summary:	On November 22, 2008, while pulling a junction box (J-box) from an exterior wall using an excavator at Technical Area 21, Building 14, a Clauss Construction operator observed an electrical arc flash from the abandoned J-

box. The LANL safety representative immediately stopped the work and notified the LANL and DOE project managers. No personnel injuries resulted from the event. KSL Services linemen found an energized 120/208-volt and a 480/277-volt circuit. The circuits were abandoned in 1985, and the current configuration did not appear on any as-built drawings. The linemen turned off the associated circuit breakers. The circuit breakers were locked and tagged out.

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
11/22/2008	12:35 (MTZ)	Ron McMahan	NNSA
11/22/2008	15:31 (MTZ)	Notification Line	NNSA
11/25/2008	11:03 (MTZ)	Jeff Williams	NNSA
11/25/2008	11:03 (MTZ)	Ron Fontana	NNSA

Authorized Classifier(AC): Mark Hunsinger Date: 12/01/2008

4)Report Number: [NA--LASO-LANL-PHYSTECH-2008-0017](#) After 2003 Redesign

Secretarial Office: National Nuclear Security Administration

Lab/Site/Org: Los Alamos National Laboratory

Facility Name: Physical and Technical Supt.

Subject/Title: Worker Receives an Electrical Shock During Underground Video Surveying Operations

Date/Time Discovered: 11/17/2008 22:00 (MTZ)

Date/Time Categorized: 11/19/2008 07:55 (MTZ)

Report Type: Notification

Report Dates:

Notification	11/20/2008	19:25 (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 November 17, 2008 at 2200, while performing underground video surveying operations at Technical Area 54, Regional Well R-38, a LANL Water Stewardship Project worker (W1) sustained an electrical shock to his hands. W1 had observed the light bulb on a Laval Underground Survey Camera flickering and attempted to secure the bulb when he received the shock. W1 and another LWSP worker (W2) stated they stood in standing water during the underground surveying operations. W1 immediately removed the camera from service, replaced it with another camera, and resumed surveying operations. The next day W1 reported his shock to LWSP management. W1 was taken to the LANL occupational medicine facility for evaluation and released back to work with no restrictions. On November 19, 2008, LWSP management suspended all underground video surveying operations pending an electrical assessment of the equipment and the trailer used for underground surveying operations.</p> <p>Following notification, the LANL Chief Electrical Safety Officer (ESO) conducted a preliminary electrical assessment of the event. He indicated W1 may have received an electrical shock which exceeded 100 volts Direct Current (DC) in a wet environment. The Chief ESO will complete his evaluation using the electrical severity tool following further evaluation.</p> <p>BACKGROUND: According to LWSP personnel, the camera is plugged into the trailer which is powered by a 120-volt generator. The camera is attached to a winch and lowered into the drill hole using cable. LWSP management indicated the camera has been in use since 1995 when it was procured. The camera is repaired when a user reports a problem with it. Subsequent review found 1) the camera and the trailer have not been inspected by an ESO to ensure it meets LANL electrical safety requirements for use and 2) the existing integrated work document (IWD) had not adequately covered the electrical hazards.</p>
Cause Description:	
Operating Conditions:	Underground Video Operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	1. W1 was taken to the LANL occupational medicine facility for evaluation

	<p>and released back to work with no restrictions.</p> <p>2. LWSP personnel removed the surveying camera from service.</p> <p>3. An ESO will inspect the equipment and trailer to ensure they meet the LANL electrical safety requirements for use.</p> <p>4. The LWSP management suspended all underground surveying operations pending the completion of the electrical assessment.</p> <p>5. The LWSP management will share the event lessons learned with the other LANL drilling site personnel.</p> <p>6. The Chief ESO will complete his evaluation using the electrical severity tool following further evaluation.</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: LWSP, UI-DO & ESH-IO</p> <p>By When: 01/02/2009</p>
Division or Project:	LANL Water Stewardship Project
Plant Area:	TA54 Well R-38
System/Building/Equipment:	Laval Underground Survey Camera
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	<p>01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous)</p> <p>01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other)</p> <p>01P--Inadequate Conduct of Operations - Inadequate Oral Communication</p> <p>07D--Electrical Systems - Electrical Wiring</p> <p>08A--OSHA Reportable/Industrial Hygiene - Electrical Shock</p> <p>12C--EH Categories - Electrical Safety</p> <p>14E--Quality Assurance - Work Process Deficiency</p> <p>14H--Quality Assurance - Inspection and Acceptance Testing Deficiency</p>
HQ Summary:	<p>On November 17, 2008, a worker sustained an electrical shock to his hands while performing underground video surveying operations at Technical Area 54, Regional Well R-38. He was attempting to secure a flickering light bulb when he received the shock. He and another worker reported that they stood</p>

in standing water during the underground surveying operations. He immediately removed the camera from service, replaced it with another camera, and resumed surveying operations, and reported the shock the following day. He was taken to the occupational medicine facility for evaluation and released back to work with no restrictions. All underground video surveying operations have been suspended pending an electrical assessment of the equipment and the trailer used for underground surveying operations.

Similar OR Report Number:

Facility Manager:	Name	Andrew Erickson
	Phone	(505) 667-4222
	Title	U&I 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
	11/19/2008	08:00 (MTZ)	Notification Line	NNSA

Authorized Classifier(AC): Mark Hunsinger Date: 11/20/2008

5)Report Number: [SC--SSO-SU-SLAC-2008-0019](#) After 2003 Redesign

Secretarial Office: Science

Lab/Site/Org: Stanford Linear Accelerator Center

Facility Name: Stanford Linear Accelerator Center

Subject/Title: Failure to use Lock Out/Tag Out (LOTO)

Date/Time Discovered: 11/24/2008 08:00 (PTZ)

Date/Time Categorized: 11/24/2008 13:00 (PTZ)

Report Type: Notification

Report Dates:	Notification	12/01/2008	14:30 (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 Air Systems Inc, Sub to AIM
Occurrence Description:	An HVAC Controls Subcontractor was working on a new chiller panel as part of a larger HVAC installation in building 15. The panel contained a compartment for 480 volt circuit in addition to the 48 volt relay being installed by the subcontractor. None of the circuits in the panel were energized. The subcontractor had turned off 2 upstream isolating switches for the 480 volt circuit but did not lock out either switch. The condition was noted by the SLAC Facilities Safety Coordinator on a routine inspection shortly after the subcontractor had started work. This new system was de-energized but had been capable of being energized as of Friday November 21, 2008.
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Stop Activity order was issued by the Safety Coordinator.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: SLAC Accident Committee By When:
Division or Project:	Operation Division
Plant Area:	Outside Building 15
System/Building/Equipment:	Building 15
Facility Function:	Accelerators
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical)

	14E--Quality Assurance - Work Process Deficiency			
HQ Summary:	During a routine inspection, the SLAC Facilities Safety Coordinator discovered that an HVAC Controls Subcontractor had started work on a new chiller panel without installing a lockout/tagout on a compartment containing a 480-volt circuit and a 48-volt relay being installed by the subcontractor. None of the circuits in the panel were energized at the time of discovery. The Safety Coordinator issued a Stop Activity order.			
Similar OR Report Number:				
Facility Manager:	Name	KERWIN, RALPH R		
	Phone	(650) 926-2095		
	Title	FIRE MARSHAL		
Originator:	Name	JOHNSON, HOPE E		
	Phone	(650) 926-4322		
	Title	FACILITY MANAGER ADMIN.		
HQ OC Notification:	Date	Time	Person Notified	Organization
	NA	NA	NA	NA
Other Notifications:	Date	Time	Person Notified	Organization
	11/24/2008	12:50 (PTZ)	Ralph Kerwin	SLAC
	11/24/2008	13:50 (PTZ)	Tom Rizzi	SSO DOE
Authorized Classifier(AC):				

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