May 2009 Electrical Safety Occurrences

There were 11 electrical safety occurrences for May 2009:

- 2 resulted in shocks
- 7 involved inadequate lockout/tagout (LOTO)
- 5 involved electrical workers and 6 involved non-electrical workers
- 2 occurrences involved subcontractors
- 1 occurrence involved a vehicle contact with an overhead power line
- 2 occurrences involved damaged conduit containing energized circuits with a jackhammer and an auger

The number of events in May did not change from the previous month but the severity of these events is low. Many are reported as management concerns to allow opportunities to improve before the events result in injury. There were two shock events, but both were the result of faulty legacy equipment and not work practices. As was last month, there are still too many LOTO violations noted, but once again, most did not result in an exposure by the offending worker. The 11 events this month reflect a slight decrease from the 13 events in May 2008. Overall, the May report has some very positive indicators even though the numbers are remained high.

In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month (excluding Significance Category R reports), and for the following ORPS "HQ keywords":
01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical),
08A – Electrical Shock, 08J – Near Miss (Electrical), 12C – Electrical Safety
Using the key words above, 13 events were identified, but 2 events were screened out of this report as not being related to electrical safety. The screened reports were:

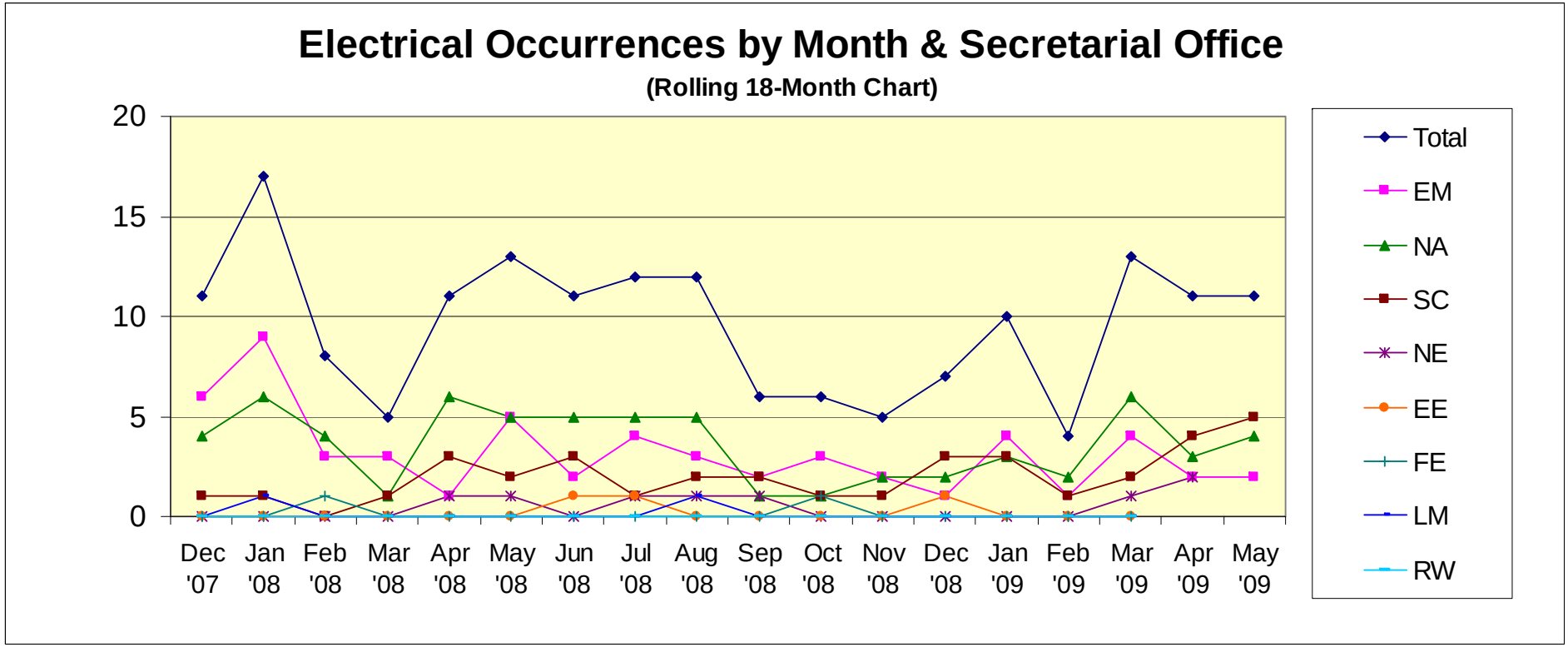
NA--LASO-LANL-BOP-2009-0009 - Management Concern: Air Compressor Control Panel Failure
NE-ID--BEA-SMC-2009-0004 - Power Outage Causes Unexpected Interruption of Ability to Summon Emergency Services

Many ES scores were provided this month to enable a comparison of the severity of the events. Continuing to report all events and screen the events using the Electrical Severity Measurement Tool provide valuable information in our campaign to improve electrical safety in DOE work places.

Below is the current summary of 2009 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
January-09	11	2	0	0
February-09	4	1	0	0
March-09	13	1	1	0
April-09	11	1	0	0
May-09	11	2	0	0
2009 total	50 (avg. 10/month)	7	1	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 average rate of electrical safety occurrences in 2009 is 10 per month, which is slightly above the average rate of 9.4 per month experienced in 2008. The 2009 average rate is below the 2004 – 2007 average rates. It will take continued diligence to continue to reduce the trend.



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 – May 2009

No	Report Number	Event Summary	EW[1]	N-EW[2]	SUB[3]	SHOCK	BURN	ARCF[4]	LOTO[5]	EXCAV[6]	CUT/D[7]	VEH[8]	ES[8]
1	EM-RP--BNRP-RPPWPTP-2009-0013	Two ironworkers receive electrical shock.		X		X							330
2	EM-SR--SRNS-SIPS-2009-0003	A forklift contacted an overhead power line. The line was deactivated		X								X	0
3	NA--LASO-LANL-FIRNGHELAB-2009-0008	A capacitor was not placed into an electrically safe work condition before it was transported off site.		X					X				0
4	NA-NVSO--NST-NTS-2009-0007	A construction crew using jackhammer damaged a conduit containing energized conductors.		X							X		240
5	NA-PS-BWP-PANTEX-2009-0031	Pipefitter receives shock from defective luminaire.		X		X			X				330
6	NA--YSO-BWXT-Y12NUCLEAR-2009-00013	Workers misidentified 120-volt conductors as 24 volt, resulting in hazardous energy exposure.	X						X				0
7	SC--ASO-ANLE-ANLEES-2009-0004	Abandon energized conductors discovered.	X										0
8	SC--PNSO-PNNL-PNNLBOPER-2009-0009	Energized electrical conductors found unguarded.	X						X				0
9	SC--PNSO-PNNL-PNNLBOPER-2009-0010	Conduits containing energized conductors were damaged by an auger during excavation.		X	X				X		X		0
10	SC--ORO-ORNL-X10CHRIDGE-2009-0002	The continuity of a neutral was interrupted resulting in failure of a LOTO.	X		X				X				20
11	SC--ORO-ORNL-X10EAST-2009-0001	A worker operated a circuit breaker without using proper electrical PPE.	X						X				0
	TOTAL		5	6	2	2			7		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, (9)ES = electrical severity

ORPS Operating Experience Report

Production GUI - New ORPS

ORPS contains 54178 OR(s) with 57496 occurrences(s) as of 6/9/2009 6:36:49 AM
Query selected 11 OR(s) with 11 occurrences(s) as of 6/9/2009 11:48:33 AM

Download this report in Microsoft Word format.

1)Report Number:	EM-RP--BNRP-RPPWTP-2009-0013 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	RPP Waste Treatment Plant
Subject/Title:	Iron workers receive a mild shock
Date/Time Discovered:	05/28/2009 14:42 (PTZ)
Date/Time Categorized:	05/28/2009 16:20 (PTZ)
Report Type:	Notification/Final
Report Dates:	Notification 05/28/2009 20:46 (ETZ) Initial Update 05/28/2009 20:46 (ETZ) Latest Update 05/28/2009 20:46 (ETZ) Final 05/28/2009 20:46 (ETZ)
Significance Category:	4
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)
Cause Codes:	
ISM:	2) Analyze the Hazards
Subcontractor Involved:	No
Occurrence Description:	On Thursday, May 28, 2009 at approximately 1442 hours, two BNI iron workers were using a high torque tool working out of a knuckle boom lift on the East side 0 foot elevation of the Pre-Treatment building when they received a very minor shock. Upon investigation of the knuckle booms power cord the ground prong was found missing. Further investigation is under way to conclude the source of the shock.
Cause Description:	
Operating Conditions:	Construction
Activity Category:	Construction

Immediate Action(s):	Stopped work. Workers reported to Site Medical. The Job site was instructed to pause all work and perform 120 volt roll back and cord inspection. The Iron workers were released to full duty with no apparent injury. Initiated an investigation. A Fact Finding meeting is scheduled for Monday, June 1, 2009 at 0800 hours to determine the facts leading to the reported incident.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Waste Treatment Plant
Plant Area:	600
System/Building/Equipment:	Pre-Treatment Building (PT)
Facility Function:	Nuclear Waste Operations/Disposal
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	07D--Electrical Systems - Electrical Wiring 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14H--Quality Assurance - Inspection and Acceptance Testing Deficiency
HQ Summary:	On May 28, 2009, while working out of a knuckle boom lift on the east side 0-foot elevation of the Pre-Treatment building, two BNI iron workers were using a high-torque tool when they received a very minor shock. Upon investigation of the knuckle boom’s power cord, the ground prong was found missing. Further investigation is under way to conclude the source of the shock. The work was stopped work and the iron workers reported to site medical. A fact-finding meeting is scheduled.
Similar OR Report Number:	
Facility Manager:	Name: READDY, MICHAEL A Phone: (509) 373-8300 Title: OCCURRENCE REPORT COORDINATOR
Originator:	Name: READDY, MICHAEL A Phone: (509) 373-8300 Title: OCCURRENCE REPORT COORDINATOR

HQ OC Notification:	

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
05/28/2009	14:42 (PTZ)	David Leeth	BNI/Con
05/28/2009	14:42 (PTZ)	Tucker Campbell	BNI/Con
05/28/2009	14:42 (PTZ)	Miles Stauffer	BNI/SA
05/28/2009	14:42 (PTZ)	Paul Hirschman	DOE/FR
05/28/2009	14:42 (PTZ)	Jeff Bruggman	DOE/FR
05/28/2009	16:27 (PTZ)	Ron Smithwick	ONC

Authorized Classifier(AC):

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2)Report Number:	EM-SR--SRNS-SIPS-2009-0003 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Savannah River Site
Facility Name:	Site Infrastructure and Project Systems
Subject/Title:	Forklift Contacts Overhead Deactivated Power Line (U)
Date/Time Discovered:	05/18/2009 09:25 (ETZ)
Date/Time Categorized:	05/18/2009 17:00 (ETZ)
Report Type:	Notification
Report Dates:	

Notification	05/21/2009	15:34 (ETZ)
Initial Update		
Latest Update		
Final		

Significance Category:	3
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	2) Analyze the Hazards
Subcontractor Involved:	No
Occurrence Description:	A construction employee was preparing to relocate a jersey bouncer with a forklift when he contacted a power line with the forklift's mast. Investigation revealed that the power line had been properly air-gapped and de-terminated during previous deactivation activities. The impact to the line resulted in the supporting tension line failing at both power poles. The electrical cabling

	remained suspended. The forklift driver immediately backed the forklift a safe distance from the power line and exited the vehicle. NOTE: This event was reported into ORPS on 05/19/09 via ORPS EM-SR--SRNS-FGEN-2009-0004. After further discussion with management, this ORPS Report was tranferred to the Site Infrastructure and Project Support (SIPS) facility. ORPS EM-SR--SRNS-FGEN-2009-0004 will be canceled.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Construction
Immediate Action(s):	1. A time-out was taken for this activity and the affected area barricaded. 2. Notifications of the event were made to the F Area Shift Manager, Construction Management, Operations Management and DOE. 3. Absence of voltage checks were performed on the impacted cable by I & S. 4. Additional support was provided to the impacted cable by I & S personnel. 5. A Fact Finding was held on 5/18/09. Categorization: This occurrence was discovered at 0925 hrs on 5/18/09, and categorized at 1700 hrs on 5/18/09, which exceeds two (2) hours. The time needed for the facility to establish immediate actions, initiate appropriate response, and evaluate the event required more than 2 hours to begin the categorization process.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: J. Yeager By When:
Division or Project:	SRNS/M&O/Construction
Plant Area:	F
System/Building/Equipment:	F Area Overhead Electrical Line/Fork Lift
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	05E--Mechanical/Structural - Structural Deficiency/Failure 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical)

	12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 18, 2009, a construction worker was preparing to relocate a jersey bouncer with a forklift when the mast of the forklift hit a power line. Investigation revealed that the power line had been properly air gapped and de-terminated during previous deactivation activities. The electrical cabling remained suspended although the tension line failed at two power poles. The construction worker immediately backed the forklift a safe distance from the power line and exited the vehicle. A time-out was taken for this activity and the affected area barricaded. Management notifications were made. A Fact Finding meeting was held.
Similar OR Report Number:	
Facility Manager:	Name: YEAGER, JAMES J Phone: (803) 557-4281 Title: FACILITY MANAGER
Originator:	Name: HUTTO, JR, CONRAD R Phone: (803) 952-9748 Title: WSRC LESSONS LEARNED COORDINATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	05/21/2009 15:00 (ETZ) R. Gentry SI Sr Mg 05/21/2009 15:00 (ETZ) C. Milliner Con. Mgr 05/21/2009 15:00 (ETZ) M. Lott-Holloway SRSOC 05/21/2009 15:00 (ETZ) J.J. Hynes DOE-SR 05/21/2009 15:00 (ETZ) D. Armstrong M&O Proj
Authorized Classifier(AC):	Rod Hutto Date: 05/21/2009

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3)Report Number:	NA--LASO-LANL-FIRNGHELAB-2009-0008 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Los Alamos National Laboratory
Facility Name:	Firing Sites and HE Lab.
Subject/Title:	Oil Spilled Potentially Containing PCB at the County Transfer Station
Date/Time Discovered:	05/20/2009 16:10 (MTZ)
Date/Time Categorized:	05/20/2009 16:10 (MTZ)
Report Type:	Notification

Report Dates:	<table><tr><td>Notification</td><td>05/21/2009</td><td>18:22 (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>
Significance Category:	2
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. 5A(1) - Any release (onsite or offsite) of a hazardous substance, material, waste, or radionuclide from a DOE facility, that is above permitted levels and exceeds the reportable quantities specified in 40 CFR 302 or 40 CFR 355. 5A(4) - Any release (onsite or offsite) of a hazardous substance, material, waste, or radionuclide from a DOE facility that must be reported to outside agencies in a format other than routine periodic reports. (However, oil spills of less than 10 gallons and with negligible environmental impact need not be reported in ORPS.) 8(2) - Any offsite transport of hazardous material, including radioactive material, whose quantity or nature (e.g., physical or chemical composition) is different than intended, such that the receiving organization's operations were impacted/disrupted or the transport resulted in the initiation of corrective actions by the originating organization.
Cause Codes:	
ISM:	
Subcontractor Involved:	Yes RG Construction Services, Inc.
Occurrence Description:	At 1700 hours on 5/19/09 the Los Alamos National Laboratory (LANL) Project Management (PM) Division and the Weapons Facility Operations (WFO) Facility Operation Director (FOD) were notified that an oil filled capacitor which had been transported to the Los Alamos (LA) County Landfill in a roll off bin had leaked oil. These capacitors came from a Project Management (PM) Division electrical upgrade project being conducted at TA-09-21. The oil was discovered as a result of LA County employees conducting segregation activities at the LA County Landfill Transfer Station. The oil spilled outside the roll-off bin onto the concrete floor. The oil is believed to contain Polychlorinated Biphenyls (PCBs). Less than 5 gallons leaked, but more than one pound of PCBs is believed to have

	been released. The Project Manager, the Facility Waste Management Coordinator and the Environmental PCB Subject Matter Expert (SME) have walked the area at TA-9-21 where the roll-off bin was staged and evaluated the parking lot and identified no evidence of oil leakage. At the time of discovery, the electrical state of the capacitors was unknown so LA County was notified and access to the Transfer Station was restricted. On May 20, 2009, LANL personnel responded to the Transfer Station and confirmed the electrical safety hazard. Additionally, Environmental-Resource Conservation and Recovery Act (ENV-RCRA) PCB Coordinator contacted the manufacturer of the capacitors and was told that the leaked oil from the capacitors contained PCBs. The transformers and capacitors have been shipped back to TA-09-21 and placed in a safe configuration. Subsequently the transformers and capacitors were transported back to TA-9-21 and placed in a safe configuration. This event was categorized 5A(1) at this time. This event was additionally categorized as above for the following reasons: 1) ENV-RCRA Division will send a non-routine report to the State of New Mexico; 2) The capacitors removed from the transformers could be charged which could result in a shock hazard; and 3) The transport of the capacitors containing PCBs resulted in hazardous material, that was different than intended, being transported to an offsite facility, in this case, the Los Alamos County Transfer Station.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Transportation Offsite
Immediate Action(s):	1) The PCBs at the Los Alamos Transfer Station are being cleaned up and samples taken at the scene are being analyzed for PCBs. Access to portions of the Los Alamos Transfer Station is still restricted; 2) The capacitors have been rendered safe; 3) Work authorization for the Electrical Upgrades work within Weapons Facilities Operations Organization has been rescinded.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: CAO-PF & FOD By When:

Division or Project:	Weapons Facility Operations
Plant Area:	TA9-21
System/Building/Equipment:	Gear Waste
Facility Function:	Explosive
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 02D--Environmental - Compliance Notification (from or to regulator without a violation) 10A--Transportation - Shipping Regulation Noncompliance 11G--Other - Subcontractor 12D--EH Categories - Environmental Releases/Compliance 13A--Management Concerns - HQ Significant (High-lighted for Management attention) 14E--Quality Assurance - Work Process Deficiency 14H--Quality Assurance - Inspection and Acceptance Testing Deficiency
HQ Summary:	On May 19, 2009, an oil filled capacitor that had been transported to the Los Alamos County Landfill leaked oil containing Polychlorinated Biphenyls (PCBs). Less than 5 gallons of oil leaked, but more than one pound of PCBs is estimated to have been released onto a concrete floor. Access to the spill area was restricted. The capacitors, which had been removed from transformers, may have posed a shock hazard and these capacitors have been rendered safe. The spilled PCB oil is being cleaned up and samples are being analyzed for PCB content. The capacitors came from an electrical upgrade project being conducted at TA-09-21. The electrical upgrade project work approval has been rescinded. A non-routine report will be sent to the State of New Mexico.
Similar OR Report Number:	
Facility Manager:	Name: R. R. Sharp-Geiger Phone: (505) 667-4246 Title: WFO FOD
Originator:	Name: TALLARICO, ANTONIA Phone: (505) 665-6988 Title: OCCURRENCE INVESTIGATOR

HQ OC Notification:

Date	Time	Person Notified	Organization
05/20/2009	16:44 (MTZ)	Notification Line	DOE HQ

Other Notifications:

Date	Time	Person Notified	Organization
05/20/2009	16:10 (MTZ)	Dave Stewart	LASO

Authorized Classifier(AC):	Antonia Tallarico Date: 05/21/2009

4)Report Number:	NA--NVSO-NST-NTS-2009-0007 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Nevada Test Site
Facility Name:	Nevada Test Site
Subject/Title:	Electrical Near-Miss During Remodeling
Date/Time Discovered:	05/28/2009 12:45 (PTZ)
Date/Time Categorized:	05/28/2009 13:50 (PTZ)
Report Type:	Notification
Report Dates:	Notification 05/28/2009 20:56 (ETZ) Initial Update Latest Update Final
Significance Category:	3
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	
Subcontractor Involved:	No
Occurrence Description:	On May 28, 2009, 1245 hrs, a National Security Technologies, LLC (NSTec) construction crew remodeling a bathroom hit a 208-volt energized line using a jack-hammer during a penetration effort. When the line was hit the jackhammer operator observed sparks coming from the area of the penetration and immediately stopped work and threw dirt over the area where the sparks originated. The electrical line did trip the breaker, causing the lights in some portions of the facility to go out, when the incident occurred. There were no injuries or damage. The NSTEc Electrical Authority Having Jurisdiction using the DOE/EFCOG severity evaluation tool evaluated to a severity of 240.
Cause Description:	
Operating Conditions:	Does Not Apply
Activity Category:	Construction
Immediate Action(s):	Work suspended, lockout/tagout put into place for affected circuits.

	Notifications made to NNSA/Nevada Site Office, NSTec line management and Electrical AHJ. Management review held and critique scheduled.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: NSTec Zone 1 By When: 07/09/2009
Division or Project:	Zone 1 Construction
Plant Area:	NTS - Bldg 751
System/Building/Equipment:	Equipment Maintenance Building
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 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 07C--Electrical Systems - Power Outage 07D--Electrical Systems - Electrical Wiring 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 28, 2009, a National Security Technologies, LLC construction crew remodeling a bathroom hit a 208-volt energized line using a jackhammer during a penetration effort. When the line was hit, the jackhammer operator observed sparks coming from the area of the penetration and immediately stopped work and threw dirt over the area where the sparks originated. The faulted electrical line tripped a circuit breaker, causing the lights in some portions of the facility to go out. There were no injuries or damage. Work was suspended and the affected electrical circuits were locked and tagged out. A critique is scheduled.
Similar OR Report Number:	1. EM--NVSO-NST-NLV-2007-0002

	2. EM--NVSO-NST-NTS-2007-0003
Facility Manager:	Name: Gregory Hilbrecht Phone: (702) 295-5749 Title: Facility Manager
Originator:	Name: GILE, ANDREA L Phone: (702) 295-7438 Title: PROJECT OPERATIONS SPEC.
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	05/28/2009 13:55 (PTZ) Duty Manager NSTec 05/28/2009 14:15 (PTZ) Lori Miller NSO/FR 05/28/2009 14:15 (PTZ) James Mumma NSO/FR 05/28/2009 14:15 (PTZ) Brian Barbero NSTec
Authorized Classifier(AC):	Jason Prestridge Date: 05/28/2009

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5)Report Number:	NA--PS-BWP-PANTEX-2009-0031 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Pantex Plant
Facility Name:	Pantex Plant
Subject/Title:	Unexpected Discovery of Hazardous Energy (120 volts)
Date/Time Discovered:	05/15/2009 14:20 (CTZ)
Date/Time Categorized:	05/15/2009 15:30 (CTZ)
Report Type:	Notification
Report Dates:	Notification: 05/18/2009 16:26 (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:	3) Develop and Implement Hazard Controls
Subcontractor Involved:	No
Occurrence Description:	Shortly before 14:00 on May 15, 2009, Pipefitters and Special Mechanic Inspectors (SMIs) were checking for leaks in the fire protection system piping that was located in the ceiling area of a Zone 11 ramp. The Pipefitters had recently completed repairs to the piping system, which was pressurized with air to facilitate detection of leaks. The Pipefitters and SMIs observed a leak in the piping, and a Pipefitter climbed a ladder to determine the exact location of the leak. The leak was from a sprinkler head that was approximately 8 feet above the floor. As the Pipefitter descended the ladder, his shoulder bumped against a 2-bulb fluorescent light fixture and dislodged the chain that suspended one end of the fixture from the ramp ceiling. The chain was light weight and had been affixed to the wooden structure of the ramp ceiling with a small screw driven through an open loop on the chain. The Pipefitter, with the chain in hand, reached through two conduit lines that ran under the roof ceiling and down the ramp, attempting to locate an attachment point. As the Pipefitters forearm came into contact with one or both conduits, he experienced an electric shock that ran from his forearm to his hand. The Pipefitter was wearing short sleeved coveralls and leather gloves. He immediately descended the ladder and the incident was reported to supervision. Initial investigation determined that either before or at the time the light fixture was bumped, an energized conductor (120 volts) became pinched or otherwise exposed and energized the light fixture and chain. The wiring to the junction box was cloth wrapped, 1940s or 1950s vintage, and included two energized conductors and a neutral wire. The system was not grounded. The light fixture had been replaced approximately 2 years earlier by a subcontractor. One end of the ground wire for the fixture was hanging loose within the fixture and the other end was attached to the plate of the junction box using one of the plate screws. There were no injuries to personnel or impact to the environment as a result of this event. The Electrical Severity Index for the event was 330.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Maintenance
Immediate Action(s):	The incident was reported to the craft supervisor, who notified the Operations Center. SMIs remained in the Zone 11 Ramp to preserve the scene. The Pipefitter was evaluated and released at the medical department.

	Electricians locked out the lighting circuit involved. Electrical Safety Office personnel obtained photographs of the area and equipment involved. Electricians removed the light fixture for evaluation.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Maintenance
Plant Area:	Zone 11
System/Building/Equipment:	Electrical/Zone 11 Ramp/Light Fixture
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01S--Inadequate Conduct of Operations - Incorrect/Inadequate Installation 07D--Electrical Systems - Electrical Wiring 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08K--OSHA Reportable/Industrial Hygiene - Near Miss (Other) 12C--EH Categories - Electrical Safety 14L--Quality Assurance - No QA Deficiency
HQ Summary:	On May 15, 2009, a pipefitter received an electrical shock while checking for fire protection system piping leaks. The pipefitter’s shoulder bumped against a 2-bulb fluorescent light fixture and dislodged the chain that suspended one end of the fixture from the ceiling. The pipefitter, with the chain in hand, reached through two conduit lines, attempting to locate an attachment point. As the pipefitter’s forearm came into contact with one or both conduits, he experienced an electric shock that ran from his forearm to his hand. He immediately reported the shock to supervision. Investigation noted that a 120-volt conductor became pinched or otherwise exposed and energized the light fixture and chain. The pipefitter received a medical examination and was released. The DOE Electrical Severity Index score for this event was 330. An investigation is underway.
Similar OR Report Number:	
Facility Manager:	Name: Brent Henderson Phone: (806) 477-3213 Title: Department Manager
Originator:	Name: GRAHAM, BRENDA LEE Phone: (806) 477-5103

	Title: ADMINISTRATIVE SPECIALIST III
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 05/15/2009; Time: 15:30 (CTZ); Person Notified: Raul Castenada; Organization: PXSO
Authorized Classifier(AC):	Bob Barr Date: 05/18/2009

6)Report Number:	NA--YSO-BWXT-Y12NUCLEAR-2009-0013 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Y12 National Security Complex
Facility Name:	Y12 Nuclear Operations
Subject/Title:	Blown Fuse Causes False Alarm on Dock 8A
Date/Time Discovered:	05/20/2009 13:43 (ETZ)
Date/Time Categorized:	05/20/2009 15:00 (ETZ)
Report Type:	Notification
Report Dates:	Notification: 05/26/2009 13:11 (ETZ); Initial Update; Latest Update; Final
Significance Category:	3
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
Cause Codes:	
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls
Subcontractor Involved:	No
Occurrence Description:	On May 18, 2009, during an activity to remove a temporary modification in the Oxide Conversion Facility (OCF), two signal wires were removed that were understood to be 24 VDC (low voltage). As the two wires were being removed they touched and blew a 0.2 amp fuse and tripped a Ground Fault Circuit Interrupting (GFCI) breaker. After the system was restored back to the temporary modification status, the system engineer discovered that the two wires were not low voltage but part of a 120 VAC signal circuit. As this

	constituted the discovery of an unidentified electrical energy source, the event was determined to be a reportable occurrence. No personnel made contact with the 120 VAC circuit and the temporary modification was restored before the fuse was replaced and the GFCI breaker reset. Background: On May 13, 2009, a System Engineer and Lockout/Tagout (LO/TO) Issuing Authority performed a walkdown in preparation to remove Low-Level Switch LSL-301A, a temporary modification on the Oxide Conversion Facility (OCF). Work package 50201778 was prepared and work began on May 18, 2009. As directed by the permit, a LO/TO was applied to the 120 VAC panel which provides power to the level switch. While removing wires to switches LSL-301 and LSL-301A, two signal wires, believed to be 24 VDC, touched and blew an in-line 0.2 amp fuse in the K-931 programmable logic controller (PLC) and tripped a GFCI breaker. The resultant loss of power activated a related group of alarms and beacons. Personnel correctly responded to the alarms per the associated response procedure. The on-duty Operations supervisor informed the shift manager of the event who then notified the Plant Shift Superintendent. All parties agreed that the event was not a reportable Occurrence per DOE M 231.1-2 and procedure Y14-192 as the fuse that was blown was associated with a low-voltage work activity. The shift manager gave permission to acknowledge/silence the alarms and allow maintenance personnel to return the level switch to its original configuration. (NOTE: At this point, all personnel associated with the activity were still working under the mistaken assumption that the two lines that touched were 24 VDC signal wiring.) On May 19, 2009, work package 50201778 was modified to replace the blown fuse in the K-931 PLC. A system specific fuse was obtained and the activity was completed without incident. On May 20, 2009, the Design Engineer was investigating why a 24 VDC event would trip the GFCI breaker. A review of the drawing revealed that what was thought to be 24 VDC wiring was actually a 120 VAC signal circuit. The Engineer notified the Production Support Manager of this discovery. After reviewing all available information regarding the LO/TO, work package, and post-event actions, the Production Support Manager categorized the event as a 2C-2 category 3 Occurrence.
Cause Description:	
Operating Conditions:	Maintenance Activity
Activity Category:	Maintenance

Immediate Action(s):	Employees responded to the alarm per procedure. The on-duty supervisor informed the shift manager of the event. Shift manager contacted the PSS of event. Engineering confirmed that the alarms were due to the blown fuse. Shift manager gave permission to acknowledge the alarm and to continue maintenance on restoring levels switch to its original configuration. (At this point, everyone was still working under the mistaken assumption that the lines were carrying 24 VDC.)
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: TBD By When:
Division or Project:	Production Division
Plant Area:	Protected
System/Building/Equipment:	Building 9212
Facility Function:	Uranium Conversion/Processing and Handling
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01R--Inadequate Conduct of Operations - Management issues 07C--Electrical Systems - Power Outage 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 18, 2009, while maintenance personnel were removing Low-Level Switch LSL-301A, two signal wires that were understood to be 24 VDC (low voltage) touched, causing a 0.2-amp fuse to blow and a Ground Fault Circuit Interrupting breaker to trip. The resultant loss of power activated alarms and beacons. The shift manager gave permission to acknowledge/silence the alarms and to allow maintenance personnel to return the level switch to its original configuration. A system engineer later reviewed the drawings and discovered that the two wires were not low voltage but part of a 120-VAC signal circuit. No personnel came in contact with the 120-VAC circuit.

Similar OR Report Number:	1. NA--YSO-BWXT-Y12SITE-2008-0011
	2. NA--YSO-BWXT-Y12NUCLEAR-2008-0030
	3.
Facility Manager:	Name: W. C. Tindal Phone: (865) 241-6555 Title: Manager, Enriched Uranium Processing
Originator:	Name: WILSON, SHIRLEY S Phone: (865) 574-1566 Title: MANAGER, OCCURRENCE REPORTING

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
05/20/2009	13:43 (ETZ)	R. S. York	SHFT MGR
05/20/2009	13:43 (ETZ)	S. D. Abston	Y-12 EU
05/20/2009	15:00 (ETZ)	W. K. Crisp	Y-12 PSS
05/20/2009	15:43 (ETZ)	M. Durham	YSO FR
05/20/2009	15:43 (ETZ)	J. G. Campbell	YSO FR

Authorized Classifier(AC): T. W. Paul Date: 05/26/2009

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7)Report Number:	SC--ASO-ANLE-ANLEES-2009-0004 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Argonne National Laboratory East
Facility Name:	Energy Systems Division
Subject/Title:	Energized Wires Found Coming out of Abandoned Conduit
Date/Time Discovered:	05/15/2009 09:12 (CTZ)
Date/Time Categorized:	05/15/2009 10:05 (CTZ)
Report Type:	Notification/Final

Report Dates:

Notification	05/19/2009	18:40 (ETZ)
Initial Update	05/19/2009	18:40 (ETZ)
Latest Update	05/19/2009	18:40 (ETZ)
Final	05/19/2009	18:40 (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
Subcontractor Involved:	No
Occurrence Description:	On May 15, 2009, the Energy Systems Environment, Safety & Health Coordinator learned that while correcting a separate deficiency noted during a semi-annual inspection in Building 362(service floor-C056), a Lab Custodian identified a piece of conduit coming from the ceiling with wires extending from it. Insulation on the wires was intact and the ends were wrapped in electrical tape. The Lab Custodian, along with a DEEI, used a tick-tester and found the wires to be energized. The Building Manager was notified and a voltmeter was used to verify the wires were live. The wires and conduit are part of a project that has been inactive for nearly 20 years; there was no plan to use the wires as part of any work activity. Although the electrical severity index value is zero, this is being reported as a management concern.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Research
Immediate Action(s):	The Lab Custodian notified the building manager for 362. The energy was confirmed by the use of a volt meter. The wires were fully taped when found. The building manager requested building maintenance to place a junction box over the wires, which was completed. A Lessons Learned was written and sent to the Electrical Safety Committee. A work order was put in to have the wires de-energized and removed.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Energy Systems Division
Plant Area:	Basement of bldg 362
System/Building/Equipment:	362/C056

Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	It should never be assumed that abandoned wires have been de-energized.
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01R--Inadequate Conduct of Operations - Management issues 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 15, 2009, a lab worker performing a semiannual facility inspection identified a piece of conduit coming from the ceiling with wires extending from it. Insulation on the wires was intact and the ends were wrapped in electrical tape. Workers determined that the wires were energized. Management notifications were made. The wires and conduit were part of a project that has been inactive for nearly 20 years; there was no plan to use the wires as part of any work activity. The DOE electrical severity index score is zero for this discovery. A work request was generated to de-energize and remove the wires.
Similar OR Report Number:	
Facility Manager:	Name: VAN WERMESKERKEN, NANCY A Phone: (630) 252-4794 Title: ESE ALD ESH/QA COORDINATOR
Originator:	Name: BRINDLE, SUSAN K Phone: (630) 252-6286 Title: ORPS COORDINATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 05/15/2009; Time: 10:15 (CTZ); Person Notified: Ron Lutha; Organization: DOE-ASO
Authorized Classifier(AC):	

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8)Report Number:	SC--PNSO-PNNL-PNNLBOPER-2009-0009 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Pacific Northwest National Laboratory
Facility Name:	Energy Research Programs (PNNL)
Subject/Title:	Discovery of Uncontrolled Hazardous Energy

Date/Time Discovered:	05/05/2009 10:24 (PTZ)
Date/Time Categorized:	05/05/2009 15:00 (PTZ)
Report Type:	Notification
Report Dates:	Notification 05/07/2009 15:04 (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:	5) Provide Feedback and Continuous Improvement
Subcontractor Involved:	No
Occurrence Description:	On Tuesday, May 5, 2009, at 1024 hours, PNNL staff performing a lab self assessment discovered unguarded energized (115V) electrical conductors in an equipment rack in EMSL, Room 1413. There was no contact with the hazardous energy as a result of this discovery.
Cause Description:	
Operating Conditions:	Indoor. Dry.
Activity Category:	Research
Immediate Action(s):	The equipment was de-energized and placed in a controlled, safe condition. A critique will be scheduled.
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:	Fundamental and Computational Sciences
Plant Area:	RCHN Area
System/Building/Equipment:	EMSL / 1413
Facility Function:	Laboratory - Research & Development

Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 5, 2009, PNNL staff performing a lab self assessment discovered unguarded, energized, 115-volt electrical conductors in an EMSL Building equipment rack. There was no contact with the hazardous energy as a result of this discovery. The equipment was de-energized and placed in a safe condition. A critique will be scheduled.
Similar OR Report Number:	
Facility Manager:	Name: Dupuis, M Phone: (509) 375-2617 Title: Manager, Catalysis Science
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
05/05/2009	15:00 (PTZ)	Carlson, J. L.	PNSO

Authorized Classifier(AC):	Pollari, R. A. Date: 05/07/2009

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9)Report Number:	SC--PNSO-PNNL-PNNLBOPER-2009-0010 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Pacific Northwest National Laboratory
Facility Name:	Energy Research Programs (PNNL)
Subject/Title:	Electrical Conduit Damage by Subcontractor during Excavation
Date/Time Discovered:	05/19/2009 10:00 (PTZ)
Date/Time Categorized:	05/20/2009 17:00 (PTZ)
Report Type:	Notification

Report Dates:

Notification	05/22/2009	16:40 (ETZ)
Initial 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 4) Perform Work Within Controls		
Subcontractor Involved:	Yes FEDCON		
Occurrence Description:	On Tuesday, May 19, 2009, a subcontractor preparing a Radiological Portal Monitor (RPM) site in Algonac, Michigan, unexpectedly encountered three conduits containing 120V conductors, damaging two. Service was interrupted to a nearby city park. There was no personnel or equipment contact with energized electrical conductors.		
Cause Description:			
Operating Conditions:	Mean temp 62 F; dew point 38; avg humidity 48; wind speed 10 mph (SSW); precip 0"		
Activity Category:	Construction		
Immediate Action(s):	All power was immediately verified to be de-energized, and secured by lock and tag as specified by the City of Algonac. Repair work is being planned subject to City of Algonac agreement. A critique will be scheduled.		
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:	National Security Directorate		
Plant Area:	Offsite		
System/Building/Equipment:	RPM Site, Algonac, MI		
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 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 07D--Electrical Systems - Electrical Wiring 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations Issues 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On May 19, 2009, a subcontractor preparing a Radiological Portal Monitor site in Algonac, Michigan, unexpectedly encountered three conduits containing 120-volt conductors, damaging two. Service was interrupted to a nearby city park. There was no contact with energized electrical conductors. All power was immediately verified to be de-energized, and secured by lock and tag as specified by the City of Algonac. Repair work is being planned subject to City of Algonac agreement. A critique will be scheduled.
Similar OR Report Number:	
Facility Manager:	Name: Hevland, M. E. Phone: (509) 372-4471 Title: Deputy Manager, Radiation Portal Monitor Project
Originator:	Name: POLLARI, ROGER A Phone: (509) 371-7700 Title:
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 05/20/2009; Time: 17:30 (PTZ); Person Notified: Carlson, J. L.; Organization: PNSO
Authorized Classifier(AC):	Pollari, R. A. Date: 05/22/2009

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10)Report Number:	SC-ORO--ORNL-X10CHRIDGE-2009-0002 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Oak Ridge National Laboratory
Facility Name:	Chestnut Ridge
Subject/Title:	Energized Shared Neutral Wire Discovered During Light Fixture Removal at Bldg 8700
Date/Time Discovered:	05/05/2009 09:10 (ETZ)
Date/Time Categorized:	05/06/2009 10:30 (ETZ)
Report Type:	Update

Report Dates:	Notification	05/08/2009	09:54 (ETZ)
	Initial Update	06/01/2009	12:39 (ETZ)
	Latest Update	06/01/2009	12:39 (ETZ)
	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 GEM Technologies		
Occurrence Description:	A work plan and Job Hazard Analysis were developed and approved for the isolation of a lighting circuit in Bldg 8700, room TA-B106, in preparation for the removal of light fixtures by a subcontractor. On May 5, 2009, the isolation was conducted under a single source lockout/tagout (LO/TO) performed by an ORNL journeyman electrician, wearing proper personal protective equipment (PPE). The work activity included air gapping the wires for the identified circuit according to the work plan. The ORNL electrician saw a spark when he disconnected the neutral wire. After completing the isolation of the identified circuit and capping the identified circuit neutral wire, the ORNL electrician notified the subcontractor journeyman electrician of a potentially energized shared neutral circuit. The subcontractor electrician, working under a separately approved work plan, performed voltage checks with a proximity tester before removing the first light fixture. The voltage check indicated no presence of voltage. He disconnected the wiring and removed the first light fixture without incident. While removing a second light fixture, the subcontractor electrician noticed a spark to ground when the neutral wire was disconnected. Since the circuit was thought to be isolated, the subcontractor electrician’s PPE was insufficient for performing on or near energized work. There was no shock or injury to the subcontractor electrician, and no damage to the equipment. It was thought at this time that the event was not reportable. The subcontractor electrician immediately suspended work, notified co-workers and the Safety Officer of the incident. Facility management was subsequently notified. The subcontractor electrician then performed a voltage check and identified 273 volts at both the normally energized connection and the neutral wiring going to the light fixture.		

	On May 6, 2009, at approximately 0900 hours, the SNS management team and DOE Facility Representative reconvened, and a critique of the event was conducted. During the critique, a reconsideration of the reportability was discussed and a classification determination was made. At approximately 1030 hours, SNS contacted the ORNL Laboratory Shift Superintendent (LSS), and the event was categorized as 2C(2), failure to follow a hazardous energy control process. Update 6/1/2009: An NTS report was issued for the event. Therefore, the DOE Facility Representative approved extending the Final occurrence Report due date to 7/14/2009 to be consistent with the NTS corrective action plan due date.
Cause Description:	
Operating Conditions:	Normal operating conditions
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	On May 5, 2009, at approximately 0925 hours, the SNS Site Operations Manager directed that all of the subcontractor's work be stopped pending an investigation of the event. At approximately 0930 hours, the SNS Site Operations Manager convened a management team to investigate the incident. An occurrence report was under consideration but dismissed at that time. Investigation of the event continued. At approximately 1030 hours, the Chief Electrical Inspector directed the ORNL electricians to isolate the lighting circuit in room TA-B106 from the other circuits and the shared neutrals. At approximately 1130 hours, the ORNL Construction Field Representative and the Bldg 8700 Manager authorized the subcontractor to resume non-electrical work. On May 6, 2009, at approximately 0900 hours, the SNS management team and DOE Facility Representative reconvened, and a critique of the event was conducted. During the critique, additional information from the investigation was available and an occurrence determination was made. At approximately 1030 hours, SNS contacted the ORNL LSS, and the event was categorized as 2C(2), failure to follow a hazardous energy control process. On May 7, 2009, ORNL management held an awareness meeting with ORNL electricians and research mechanics who perform LO/TO. The purpose of the meeting was to reinforce the initial lessons learned from this event and communicate expectations to suspend work when unanticipated conditions occur. Also discussed were the expectations for informing line

	management of unanticipated conditions upon discovery. Until the investigation is complete, interim protective measures have been put in place at the SNS for the Chief Electrical Inspector to approve any work on shared neutral circuits.
FM Evaluation:	Update 6/1/2009: An NTS report was issued for the event. Therefore, the DOE Facility Representative approved extending the Final occurrence Report due date to 7/14/2009 to be consistent with the NTS corrective action plan due date.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Spallation Neutron Source By When: 07/14/2009
Division or Project:	Spallation Neutron Source (SNS)
Plant Area:	Bldg 8700
System/Building/Equipment:	Bldg 8700, room TA-B106
Facility Function:	Laboratory - Research & Development
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) 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 5, 2009, while removing a light fixture, a subcontractor electrician noticed a spark to ground when the neutral wire was disconnected. Since the circuit was thought to be isolated, the subcontractor electrician's PPE was insufficient for performing energized work. There was no shock or injury to the subcontractor electrician, and no damage to the equipment. A single source lockout/tagout had been performed by an ORNL journeyman electrician for removal of light fixtures in the building. An investigation of the incident was conducted.
Similar OR Report Number:	
Facility Manager:	Name: Sam McKenzie

	Phone (865) 241-8054
Originator:	Name STORMER, R WAYNE Phone (865) 574-6999 Title EVENT REPORTING GROUP
HQ OC Notification:	Date: NA, Time: NA, Person Notified: NA, Organization: NA
Other Notifications:	05/06/2009 10:30 (ETZ) Lab Shift Superintendent ORNL LSS 05/06/2009 11:52 (ETZ) Michele Branton DOE ORNL 05/06/2009 11:52 (ETZ) Johnny Moore DOE ORNL
Authorized Classifier(AC):	

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11)Report Number:	SC-ORO--ORNL-X10EAST-2009-0001 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Oak Ridge National Laboratory
Facility Name:	ORNL East Complex
Subject/Title:	Work Processes Not Followed When Operating Electrical Circuit Breaker in Bldg 5300
Date/Time Discovered:	05/19/2009 14:04 (ETZ)
Date/Time Categorized:	05/19/2009 15:20 (ETZ)
Report Type:	Update
Report Dates:	Notification 05/21/2009 18:42 (ETZ) Initial Update 05/27/2009 13:51 (ETZ) Latest Update 05/27/2009 13:51 (ETZ) Final
Significance Category:	3
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
Cause Codes:	
ISM:	

Subcontractor Involved:	No
Occurrence Description:	On May 19, 2009, at 0930 hours, a Complex Facility Manager (CFM) opened, and subsequently closed, an 800 ampere electrical circuit breaker in Building 5300. However, the CFM performed the activity in violation of electrical safety procedures by not utilizing personal protective equipment. The CFM was qualified, in accordance with Laboratory procedures, to perform this activity. There were no injuries to personnel or impacts to equipment as a result of this activity. Update 5/27/2009: Utilities Division Management determined that the compensatory measures cited in Immediate Actions (r.e., operation of electrical circuit breakers) needed to be more specific to location, breaker voltage, and personnel qualified to perform the work. The proposed occurrence update was discussed with DOE, the F&O Operations Manager, applicable SSD program management, and the UT Battelle Electrical Authority Having Jurisdiction.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Immediately upon notification of the violation (~1400 hours), ORNL management initiated an investigation of the event. The CFM was interviewed at approximately 1500 hours to address the basis for the actions and, at approximately 1525 hours, the CFM provided a written timeline regarding the breaker work activity to the Utilities Division Director. The CFM's lockout/tagout (LO/TO) issuing authority was suspended, and the CFM was placed on administrative leave pending further investigation of the event. Pending further review, Utilities Division Management has determined that the operation of electrical circuit breakers (480 volts or greater) in the Central Energy Plants will only be performed by qualified electrical workers.
FM Evaluation:	Update 5/27/2009: Utilities Division Management determined that the compensatory measures cited in Immediate Actions (r.e., operation of electrical circuit breakers) needed to be more specific to location, breaker voltage, and personnel qualified to perform the work. The proposed occurrence update was discussed with DOE, the F&O Operations Manager, applicable SSD program management, and the UT Battelle Electrical Authority Having Jurisdiction.
DOE Facility Representative Input:	
DOE Program Manager	

Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Utilities Division By When: 07/01/2009
Division or Project:	Utilities Division
Plant Area:	Bldg 5300
System/Building/Equipment:	Bldg 5300, 800 ampere electrical breaker
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On May 19, 2009, a worker opened, and subsequently closed, an 800 ampere electrical circuit breaker in Building 5300. However, the worker performed the activity in violation of electrical safety procedures by not utilizing personal protective equipment. The worker was qualified, in accordance with Laboratory procedures, to perform this activity. There were no injuries to personnel or impacts to equipment as a result of this activity. The worker's lockout/tagout issuing authority was suspended and the worker placed on administrative leave pending further investigation of the event.
Similar OR Report Number:	
Facility Manager:	Name: Joe Whedbee Phone: (865) 574-4295 Title: Utilities Division Director
Originator:	Name: STORMER, R WAYNE Phone: (865) 574-6999 Title: EVENT REPORTING GROUP

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
05/19/2009	15:20 (ETZ)	Lab Shift Superintendent	ORNL LSS
05/19/2009	16:46 (ETZ)	Johnny Moore	DOE ORNL
05/19/2009	16:46 (ETZ)	Michele Branton	DOE ORNL

Authorized Classifier(AC):	