March 2007 Electrical Safety Occurrences

There were 9 electrical safety occurrences for March 2007:

- 1 involved a shock to a worker
- 2 involved lockout/tagout
- 1 involved excavation.
- 6 involved electrical workers and 3 involved non-electrical workers.
- 4 involved subcontractors.

In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month, and for the following ORPS "HQ keywords":

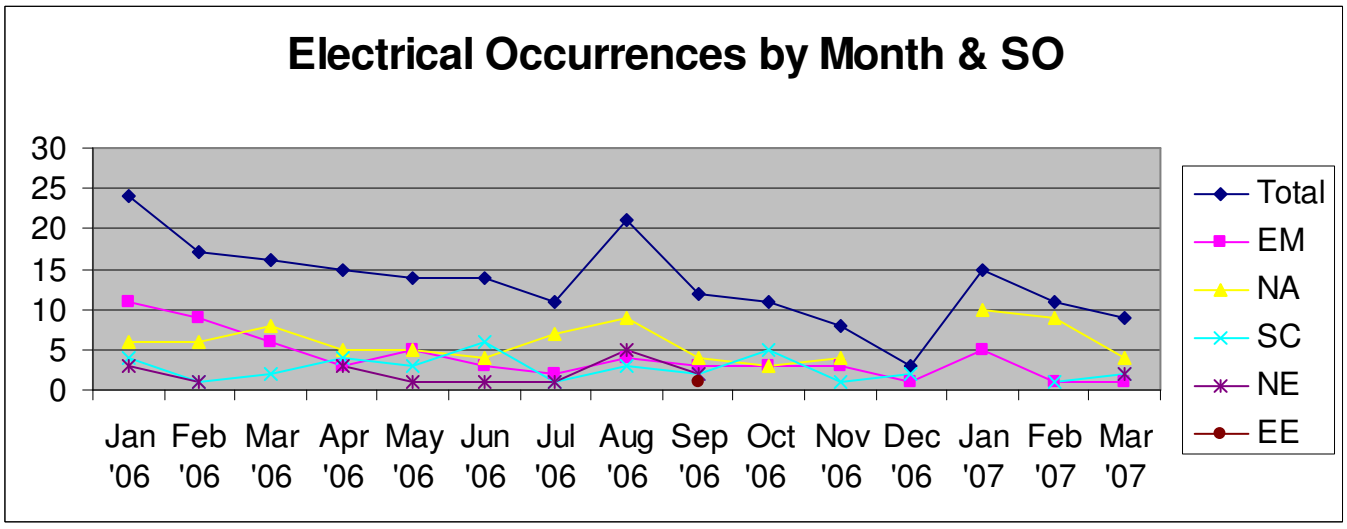
01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical),
08A – Electrical Shock, 08J – Near Miss (Electrical), 12C – Electrical Safety

The initial search yielded 10 occurrences. However, one occurrence (NA--YSO-BWXT-Y12NUCLEAR-2007-0014) involved the surveillance and lock/out tag out of a reduction furnace, and was culled out because this event did not appear to involve an electrical hazard.

The rolling summary of 2007 electrical safety occurrences is now:

period	Elec. Safety Occurrences	Shocks	Burns	Fatalities
1/07	15	1	0	0
2/07	11	3	0	0
3/07	9	1	0	0
2007 total	35	5	0	0
2006 total	166	26	3	0
2005 total	165	39	5	0
2004 total	149	25	3	1

The average rate of occurrences in 2007 is now 12 per month, which is less and the average rate of 14 per month experienced in 2006.



Electrical Safety Occurrences – March 2007

No	Report Number	Subject / Title	ew	n-ew	sub	shock	Burn	arcf	loto	excav	cut/d	veh
1	EM-RP--BNRP-RPPWTP-2007-0003	Previously Damaged Cord Cut to Prevent Use While Plugged In		x	x							
2	NA--LASO-LANL-ACCCOMPLEX-2007-0003	Sector B Power Panel Removal	x		x				x			
3	NA--LSO-LLNL-LLNL-2007-0016	Management Concern - Near Miss Involving A Single Occurrence That Could Have Resulted In A Serious Occupational Injury In Building 332	x									
4	NA--NVSO-LLNV-LLNV-2007-0003	Required Personal Protective Equipment not used during Boiler Preventive Maintenance at Buildings 5100 and 5180	x									
5	NA--PS-BWXP-PANTEX-2007-0026	Zone 12 South MAA Bays NEC Violation	x									
6	NE-ID--BEA-HFEF-2007-0001	Electrical shock from a manipulator		x		x						
7	NE-ID--BEA-RTC-2007-0002	Conduit Encased in Concrete Damaged at RTC		x	x					x		
8	SC--BSO-LBL-OPERATIONS-2007-0002	LOTO violation results in near miss	x		x				x			
9	SC--PSO-PPPL-PPPL-2007-0001	Hazardous Energy Control 3/23/07	x									
	Total		6	3	4	1			2	1		

Key

ew= electrical worker, n-ew = non-electrical worker, sub = subcontractor, arcf = significant arc flash, excav = excavation, cut/d = cutting or drilling, veh = vehicle event

ORPS Operating Experience Report

Production GUI - New ORPS

ORPS contains 53159 OR(s) with 56477 occurrences(s) as of 4/10/2007 11:03:27 AM
Query selected 9 OR(s) with 9 occurrences(s) as of 4/10/2007 11:06:32 AM

Download this report in Microsoft Word format.

1)Report Number:	EM-RP--BNRP-RPPWTP-2007-0003 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	RPP Waste Treatment Plant
Subject/Title:	Previously Damaged Cord Cut to Prevent Use While Plugged In
Date/Time Discovered:	03/27/2007 07:45 (PTZ)
Date/Time Categorized:	03/27/2007 09:21 (PTZ)
Report Type:	Update
Report Dates:	Notification 03/29/2007 19:17 (ETZ) Initial Update 04/04/2007 10:26 (ETZ) Latest Update 04/04/2007 10:26 (ETZ) 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 FD Thomas
Occurrence Description:	At 0745 hrs on March 27, 2007, during a weekly safety walkdown of the Low Activity Waste (LAW) Building +48 ft elevation level, a FD Thomas subcontractor safety representative (hereon referred to as "safety rep") cut the female end of a live 110-volt electrical cord. The safety rep noticed the cord sitting on the ground in an unused state. Upon a closer look of the cord, the safety rep noticed two pieces of green electrical tape wrapped around the cord. The safety rep pulled the green tape and noticed they were covering a number of significant cuts on the cord where wire was exposed, and also noted that the female end of the cord was frayed. The safety rep then visually followed the cord to a nearby spiderbox, where there were a number of other similar cords either plugged into the box, or unplugged and hanging by the legs of the spiderbox. The safety rep thought the cord she was examining led to an unplugged cord hanging from a leg of the box, and therefore assumed that the cord she was holding was unpowered. The safety rep proceeded to cut the female end of the cord off with a box cutter, resulting in sparks issuing from the

	cord. The safety rep immediately stopped cutting and realized the cord was still plugged in. The safety rep reported that she did not feel any jolt or shock from the event. The box cutter showed damage from the arc. The incident resulted in the GFCI and circuit breaker tripping.
Cause Description:	
Operating Conditions:	All conditions normal. The work space contains a number of electrical cords that are available for use by workers during the day.
Activity Category:	Construction
Immediate Action(s):	An electrician reset the GFCI and circuit breaker, and released the spiderbox for use. The electrical cord was pulled for disposal. The FD Thomas safety representative reported to the Construction site medical center for review and was released back to work with no medical issues. The safety rep confirmed that she did not feel any jolt or shock from the event. A site-wide roll back and inspection of unused 120-volt and 240-volt cords is being conducted. Utilized cords are being inspected and marked wtih colored tape as proof of inspection. A team will be established to look at issues of the event and develop a plan to prevent recurrence. The subcontractor held a stand down and training session with their craft to discuss the event and their expectations to prevent recurrence.
FM Evaluation:	Based on further investigation of the incident and discussions with line management (including the DOE Facility Representative), it was deemed most appropriate that the event be re-categorized from a Hazardous Energy Control issue (Group 2, Subgroup C, #2) to a Management Concern issue (Group 10, #2). The significance category level remains unchanged (e.g., SC-3). The decision to re-categorize was made on 2-April, 2007. The logic for this approach is based on the descriptions of the events in the ORPS categories themselves. Cutting electrical cords is not part of our program and is in fact prohibited. In effect, there was no prescribed energy control process to violate, and no unexpected discovery. The current hazardous energy control program will not require revision; instead, reinforcing existing rules are what would be required. While consideration was made to categorize this event a near miss, the analysis determined that the characteristics of the event did not meet the criteria, as a number of barriers and controls were in place to prevent a reportable injury. These barriers and controls included the GFCI, the daily GFCI test, standing on dry pavement, insulating shoes, and dry skin. Given these circumstances, a reportable injury was determined to be unlikely.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Bill Lung By When:
Division or Project:	Waste Vitrification andTreatment Plant

Plant Area:	600
System/Building/Equipment:	LAW / Electrical Cord
Facility Function:	Nuclear Waste Operations/Disposal
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Conduct of Operations - Conduct of Operations (miscellaneous) 01Q--Conduct of Operations - Personnel error 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Compliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process
HQ Summary:	During a safety walkdown at Low Activity Waste Building, a subcontract safety representative cut the female end of an energized 110-volt electrical cord with a box cutter after observing that the cord had some fraying and believing that the cord was de-energized. The representative was not shocked, but the box cutter indicated some damage from the ensuing electrical arc, which also tripped the breaker. The representative went to the site medical facility for evaluation and was released without restriction. A site-wide inspection of unused 120-volt and 240-volt cords was initiated.
Similar OR Report Number:	

Facility Manager:

Name	BOND, SHAWN L
Phone	(509) 372-9252
Title	SAFETY OPERATIONS SPECIALIST

Originator:

Name	BOND, SHAWN L
Phone	(509) 371-2117
Title	SAFETY OPERATIONS SPECIALIST

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
03/27/2007	09:53 (PTZ)	Jeff Bruggeman	DOE FR
03/27/2007	10:27 (PTZ)	Newell Crary	ONC
04/02/2007	13:50 (PTZ)	Jeff Bruggeman	DOE FR
04/03/2007	10:59 (PTZ)	Sam Baker	ONC

Authorized Classifier(AC):	

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2)Report Number:	NA--LASO-LANL-ACCCOMPLEX-2007-0003 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Los Alamos National Laboratory
Facility Name:	Accelerator Complex
Subject/Title:	Sector B Power Panel Removal

Date/Time Discovered:	03/13/2007 10:15 (MTZ)
Date/Time Categorized:	03/13/2007 12:00 (MTZ)
Report Type:	Notification/Final
Report Dates:	Notification 03/15/2007 18:22 (ETZ) Initial Update 03/15/2007 18:22 (ETZ) Latest Update 03/15/2007 18:22 (ETZ) Final 03/15/2007 18:22 (ETZ) Revision 1 03/21/2007 18:29 (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:	Yes B and D Electric
Occurrence Description:	Management Synopsis:On March 13, 2007, the Los Alamos Neutron Science Center (LANSCE) Facility Operations Director (FOD) determined there was a management concern as a result of a communication failure between a LANL sub contractor and LANSCE work groups regarding work being performed simultaneously in Sector B of the LANSCE facility. Subcontract workers performed lockout/tagout (LOTO) on the transformer feeding a power panel and removed the de-energized panel per the construction plan in Sector B. At the same time Los Alamos National Laboratory (LANL) workers were preparing to work on the accelerator equipment that is normally powered by that power panel. The LANL workers subsequently discovered that the panel had been removed along with an orange lock. The installation of the orange lock was part of the procedure to isolate power to the accelerator equipment. The LANL workers could not perform work using the LANSCE procedure that provides detailed LOTO instructions of equipment fed by the panel because the panel had been removed. The orange lock owner had not been notified of the removal of the orange lock. Background: Two planned electrical projects were to occur simultaneously at LANSCE (TA-53, bldg.-3, Linac). The first project performed by a subcontractor was to replace a power panel and second project performed by LANSCE personnel involved work on accelerator equipment. Neither team was aware of the specific work activities being performed by the other team. The subcontract workers were part of a Facility and Infrastructure Recapitalization Program (FIRP) project to remove and replace power panels. A breaker on the power panel being replaced contained an orange lock and tag. The subcontract workers did not understand the meaning of orange locks or tags.

	The workers were trained to ISD 101-3.0 which replaces LIR 402-860-02.1. LIR 402-860-02.1 defines orange locks or in this case a tag as "...commonly be used to lock equipment out of service or in an off or de-energized position. However, orange locks and tags may be used to lock equipment, machinery, or systems in the on, open, and/or energized condition as required to protect personnel and/or environment." This LIR has been superceded by ISD 101-3.0 which does not mention the existence of orange locks. LANSCE is still transitioning between the two procedures. The orange tag contains information that it is part of a group LOTO for the Transition Region; a contact phone number and the group leader Z number; and the information to keep the breaker it is attached to open. The subcontract workers saw the orange LOTO but believed that since it was not a red lock/tag and because they were involved in a Decommissioning and Demolition (D&D) that they could remove the panel with the attached tag. The removal of the panel was performed is a safe manner in accordance to the Integrated Work Document (IWD). The LANSCE workers were preparing to work on the accelerator equipment. As part of the work preparation an orange lock and tag had been placed on the power panel January 29, 2007. On March 13, 2007 LANSCE workers were walking down Sector B, verifying the placement of the orange locks/tags. The LANSCE workers were expecting to see an orange tag on circuit 27 on the power panel and were surprised to discover the entire power panel along with the orange lock and tag was missing. The LANSCE workers contacted the Beam Delivery Team Leader. The Beam Delivery Team Leader directed the transition site fence be closed and locked using orange locks and placards. All of the lockout points on the group LOTO box were locked with orange locks to prevent any additional locks from being placed on the LOTO until the power supply in question could be locked out by alternate means. A qualified electrical safety officer, using the electrical severity tool, ranked this event as a group 1 where the electrical hazard(s) to personnel safety were evaluated to be non-existent. After power panels are removed and replaced and before the system is re-energized, a commissioning agent, not employed by the subcontractor, verifies that system can be re-energized. This ensures that the system can be re-energized safely.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Maintenance
Immediate Action(s):	1)Accelerator workers paused work and immediately notified management of the problem. 2)Accelerator Operations secured access to the work area where equipment was fed by the removed power panel. 3)A magnet power supply fed by the removed power panel was secured with a LOTO as an additional precaution. 4)Work Control and work planning issues will be escalated to the Institutional Management Review Board (IMRB).
FM Evaluation:	
DOE Facility Representative	

Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Los Alamos Neutron Science Center
Plant Area:	TA-53 Bldg. 3
System/Building/Equipment:	LINAC
Facility Function:	Accelerators
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Conduct of Operations - Conduct of Operations (miscellaneous) 01B--Conduct of Operations - Configuration Management/Control 01K--Conduct of Operations - Lockout/Tagout (Electrical) 01M--Conduct of Operations - Inadequate Job Planning (Electrical) 01P--Conduct of Operations - Communication 01R--Conduct of Operations - Management issues 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14D--Quality Assurance - Documents and Records
HQ Summary:	Two planned electrical projects were to occur simultaneously at the Los Alamos Neutron Science Center (LANSCE). The first project performed by a subcontractor was to replace a power panel and second project performed by LANSCE personnel involved work on accelerator equipment. Neither team was aware of the specific work activities being performed by the other team. Subcontract workers performed lockout/tagout on the transformer feeding a power panel and removed the de-energized panel. Subsequently, while preparing to work on the second project, the LANSCE workers discovered that the panel had been removed along with an orange lock that was to isolate power to the accelerator equipment. The orange lock owner had not been notified of the removal of the lock. The work area was secured, notifications were made and an additional lockout/tagout was placed for the accelerator. Work control and work planning issues will be escalated to the Institutional Management Review Board.
Similar OR Report Number:	

Facility Manager:

Name	Dan Seely
Phone	(505) 667-6593
Title	Facility Operations Director-4

Originator:

Name	TALLARICO, ANTONIA
Phone	(505) 665-6988
Title	OCCURRENCE INVESTIGATOR

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
03/13/2007	16:10 (MTZ)	Ed Christie	NNSA

Authorized Classifier(AC):	Antonia Tallarico Date: 03/21/2007

3)Report Number:	NA--LSO-LLNL-LLNL-2007-0016 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Lawrence Livermore National Lab.
Facility Name:	Lawrence Livermore Nat. Lab. (BOP)
Subject/Title:	Management Concern - Near Miss Involving A Single Occurrence That Could Have Resulted In A Serious Occupational Injury In Building 332
Date/Time Discovered:	03/21/2007 13:00 (PTZ)
Date/Time Categorized:	03/21/2007 13:00 (PTZ)
Report Type:	Notification
Report Dates:	Notification 03/21/2007 16:46 (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 March 19, 2007 Building 332 Facility Management was notified of an electrical issue associated with the use of an anti-static pad. The issue resulted from improper grounding to an electrical outlet. No workers were injured; however the pad and the outlet were damaged.
Cause Description:	
Operating Conditions:	NA
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	The electrical outlet was locked out of service until it was replaced.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Roger Rocha By When: 05/04/2007
Division or Project:	DNT
Plant Area:	Site 200, Block 300
System/Building/Equipment:	332

Facility Function:	Plutonium Processing and Handling
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Conduct of Operations - Conduct of Operations (miscellaneous) 01Q--Conduct of Operations - Personnel error 07D--Electrical Systems - Electrical Wiring 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 13E--Management Concerns - Facility Call Sheet 14E--Quality Assurance - Work Process
HQ Summary:	An improper grounding to an electrical outlet in Building 332 caused an electrical hazard that damaged an anti-static pad and the outlet. There were no personnel injured. The electrical outlet was locked out of service until it was replaced.
Similar OR Report Number:	

Facility Manager:

Name	Mark Martinez
Phone	(925) 422-7572
Title	NMTP Program Leader

Originator:

Name	ECCHER, BARBARA A
Phone	(925) 422-9332
Title	OCCURRENCE REPORTING OFFICER

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
03/21/2007	13:30 (PTZ)	Roy Kearns	NNSA/LSO

Authorized Classifier(AC):	

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4)Report Number:	NA--NVSO-LLNV-LLNV-2007-0003 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Lawrence Livermore National Lab.
Facility Name:	Lawrence Livermore Nat. Lab. (BOP)
Subject/Title:	Required Personal Protective Equipment not used during Boiler Preventive Maintenance at Buildings 5100 and 5180
Date/Time Discovered:	03/21/2007 13:00 (PTZ)
Date/Time Categorized:	03/21/2007 14:00 (PTZ)
Report Type:	Notification

Report Dates:

Notification	03/30/2007	19:48 (ETZ)
Initial Update		
Latest Update		
Final		

Significance Category:	3

Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin. 10(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:	4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On March 21, 2007 at approximately 1300 hours, personnel performed boiler maintenance without required personal protective equipment (PPE). The maintenance was on boilers in buildings 5100 and 5180 at the Joint Actinide Shock Physics Experimental Research (JASPER) Facility located in Area 27 of the Nevada Test Site. Maintenance personnel from the National Security Technologies (NSTec), Operations and Infrastructure Directorate, Zone 2, Maintenance, performed this preventive maintenance under two separate work packages. The Pre-Task Hazard Reviews (PTHR) conducted by the maintenance personnel did not identify all of the Personal Protective Equipment (PPE) that was indicated in the associated NSTec job plans as required for performance of work on the high-voltage boiler equipment.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Maintenance
Immediate Action(s):	No immediate actions were taken for this incident. The work activities were completed before LLNL Facility Management was notified of the incident.
FM Evaluation:	Operations at JASPER are not impacted by this occurrence. LLNL JASPER Facility Management reviewed the work packages and the NSTec Job Plan contained the appropriate recognition of proper Personal Protective Equipment (PPE) and Lock Out Tag Out (LO/TO) requirements. NSTec updated PPE requirements for high voltage electrical work in February 2007, with their implementation of 10CFR851 requirements, and effectiveness of training to the new standard requires evaluation. Additionally, NSTec maintenance personnel may not have properly followed their LO/TO requirements for this work; as an energized wire was wiggled without utilizing LO/TO. LLNL Facility Management is requiring further evaluation from NSTec. The occurrence at JASPER is isolated to the NSTec maintenance personnel. The

	NSTec Operations and Infrastructure Directorate Zone 2 Maintenance Superintendent needs to fully evaluate and correct this issue before NSTec Zone 2 Maintenance Personnel will be allowed to perform electrical preventive maintenance activities at the JASPER Facility.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Dudley L. Russell, NSTec By When: 05/14/2007
Division or Project:	DNT
Plant Area:	NTS, Area 27
System/Building/Equipment:	JASPER B5100 and B5180 Boilers
Facility Function:	Plutonium Processing and Handling
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Conduct of Operations - Lockout/Tagout (Electrical) 01O--Conduct of Operations - Maintenance 08H--OSHA Reportable/Industrial Hygiene - Safety Compliance 12E--EH Categories - Equipment Degradation/Failure 14E--Quality Assurance - Work Process
HQ Summary:	Workers performed maintenance on high-voltage boiler equipment in Buildings 5100 and 5180 of the Joint Actinide Shock Physics Experimental Research (JASPER) Facility without wearing the required personal protective equipment (PPE), and may not have followed the LO/TO requirements for this work. The pre-task hazard reviews did not identify all of the PPE that was indicated in the job plans. The Maintenance Superintendent will evaluate and correct these issues before Zone 2 maintenance personnel are allowed to perform further electrical preventive maintenance at the JASPER Facility.
Similar OR Report Number:	
Facility Manager:	Name: FELSKE, DONALD J Phone: (702) 295-6361 Title: NTO Operations Manager
Originator:	Name: MCGUFF, PAUL R Phone: (925) 422-9547 Title: ENVIRONMENTAL SCIENTIST
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 03/30/2007; Time: 12:20 (PTZ); Person Notified: Roy Kearns; Organization: LSO
Authorized Classifier(AC):	Donald Felske Date: 03/30/2007

5)Report Number:	NA--PS-BWXP-PANTEX-2007-0026 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Pantex Plant
Facility Name:	Pantex Plant
Subject/Title:	Zone 12 South MAA Bays NEC Violation
Date/Time Discovered:	03/02/2007 14:00 (CTZ)
Date/Time Categorized:	03/02/2007 15:32 (CTZ)
Report Type:	Update
Report Dates:	Notification 03/06/2007 16:58 (ETZ) Initial Update 04/09/2007 08:59 (ETZ) Latest Update 04/09/2007 08:59 (ETZ) Final
Significance Category:	3
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	
Subcontractor Involved:	No
Occurrence Description:	A third wire ground test (ECOS test) failed in two bays. Investigation found that the transformer that was installed during JCO-04-02 did not have the neutral bonded to facility ground (NEC violation). It was also discovered that the grounding electrode had been installed as required by WO 29339875 & NEC, but the NEC required bond between the panel neutral and grounding terminal blocks was not installed. Additional investigation is required to determine the significance of the event.
Cause Description:	
Operating Conditions:	Operational
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Bays were immediately placed into Maintenance Mode to repair the NEC violation
FM Evaluation:	Extension approved until 5/31/07.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Systems Engineering By When: 05/31/2007

Division or Project:	Engineering Division
Plant Area:	Zone 12 S MAA Bays
System/Building/Equipment:	Zone 12 South MAA Bays
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01E--Conduct of Operations - Operations Procedures 07D--Electrical Systems - Electrical Wiring 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process 14H--Quality Assurance - Inspection and Acceptance Testing
HQ Summary:	A wire ground test and a subsequent investigation found that a grounding electrode had not been installed for a transformer in Pantex's Zone 12 South MAA Bays. The bond between the panel neutral and grounding terminal blocks had not been made as required by the National Electric Code (NEC). The bays were placed into a maintenance mode pending repair of this NEC violation.
Similar OR Report Number:	

Facility Manager:

Name	Steve Young
Phone	(806) 477-4434
Title	Design Engineering Manager

Originator:

Name	LEE, CYNTHIA R
Phone	(806) 477-4000
Title	ADMINSTRATIVE SPEC III

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
03/02/2007	15:32 (CTZ)	Brian Jones	PXSO

Authorized Classifier(AC): Tommy Clem Date: 03/06/2007

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6)Report Number:	NE-ID--BEA-HFEF-2007-0001 **After 2003 Redesign**
Secretarial Office:	Nuclear Energy, Science and Technology
Lab/Site/Org:	Idaho National Laboratory
Facility Name:	Hot Fuel Examination Facility
Subject/Title:	Electrical shock from a manipulator
Date/Time Discovered:	03/21/2007 16:00 (MTZ)
Date/Time Categorized:	03/21/2007 16:31 (MTZ)
Report Type:	Notification

Report Dates:

Notification	03/22/2007	18:34 (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:	An operator received an electrical shock while performing manipulator operations at the 9M window of the HFEF Hot Cell. These operations involved an experiment with a furnance called the Hot Fuel Dissolution Apparattus. The operator was working with experimenter personnel following the guidance of an approved procedure and process work sheet. The furnace anode had been de-energized per the procedure and the operator was disassembling the furnace anode for weighing. (At this point, the furnace is located inside the hot cell and the operator is located outside of the hot cell, disassembling the furnace remotely with the manipulators.) The power cord to the anode via a wire and a clip had been removed and was touching the furnace. The anode had been removed and placed on the in-cell balance. The experimenter directed the operator to lift the wire off the furnace so it was not touching the furnace, and thus have a potential to affect his data collection. When the operator lifted the wire from the furnace with the manipulator hand, he received a shock from the manipulator hand grip. Operations were stopped immediately. The operator was escorted to the site nurse for evaluation. No problems were noted with the operator and he was released to return to duty. The manipulators were de-engergized and tagged out of service. The area was roped off until a critique could be held and a path forward had been developed.		
Cause Description:			
Operating Conditions:	The Facility was in the Operating Mode.		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		
Immediate Action(s):	The operator was escorted to the nurses station for a check out and returned to duty upon being evaluated. The power to the manipulators (110 Volts from a plug in cord) was removed and tagged out of service. A barrier (rope) was placed around the Hot Cell station of 9M to preserve the scene. Facility Management and DOE-ID were notified. The Facility has suspended work with the use of any manipulator until this problem can be identified and repaired.		
FM Evaluation:	Operations have been suspended until energy source has been identified and corrected. This is anticipated to be a short duration, 2-3 days.		
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Facility Maintenance By When: 03/26/2007		

Division or Project:	Hot Fuel Examination Facility (HFEF)
Plant Area:	MFC- HFEF
System/Building/Equipment:	Bldg. 785
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	07D--Electrical Systems - Electrical Wiring 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 12C--EH Categories - Electrical Safety 14L--Quality Assurance - None
HQ Summary:	An operator received an electrical shock while performing manipulator operations at the 9M window of the HFEF Hot Cell on an in-cell furnace. The furnace anode had been de-energized per the procedure and the operator was disassembling the furnace anode for weighing. (At this point, the furnace is located inside the hot cell and the operator is located outside of the hot cell, disassembling the furnace remotely with the manipulators.) The power cord to the anode via a wire and a clip had been removed and was touching the furnace. When the operator lifted the wire from the furnace with the manipulator hand, he received a shock from the manipulator hand grip. Operations were stopped immediately. The operator received a medical evaluation with no problems noted, and he was released for duty. The manipulators were de-energized and tagged out of service and the area was roped off until a critique could be held and a path forward had been developed.
Similar OR Report Number:	
Facility Manager:	Name: CAIN, RICHARD S Phone: (208) 533-7628 Title: TREAT/NRAD REACTOR MANAGER
Originator:	Name: BRANSON, GARY L Phone: (208) 526-6529 Title:

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

Other Notifications:	Date	Time	Person Notified	Organization
	03/21/2007	16:31 (MTZ)	Robert Seal	DOE-ID

Authorized Classifier(AC):	

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7)Report Number:	NE-ID--BEA-RTC-2007-0002 **After 2003 Redesign**
Secretarial Office:	Nuclear Energy, Science and Technology
Lab/Site/Org:	Idaho National Laboratory
Facility Name:	Reactor Technology Complex
Subject/Title:	Conduit Encased in Concrete Damaged at RTC
Date/Time Discovered:	03/14/2007 16:30 (MTZ)
Date/Time Categorized:	03/15/2007 10:00 (MTZ)

Report Type:	Notification
Report Dates:	Notification 03/19/2007 19:52 (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 Phenix Construction Company
Occurrence Description:	On March 14, 2007 at 1630 hours a BEA construction subcontractor was excavating to install a new fire water line as part of a GPP project at the Reactor Technology Complex (RTC). Using a Caterpillar 330 excavator, the operator felt some resistance while filling his bucket and removed the bucket from the hole. A Concrete-encased, 1-inch-diameter PVC conduit sagged, breaking the plastic conduit. Electrical wiring running through the conduit was undamaged. Work ceased immediately, the site was secured, and Construction and Facility Management were notified. Using plant drawings, nearby 480-volt pedestrian lighting and associated 120-volt receptacles on the light poles were locked out and tagged out (LOTO). The three breakers supplying the affected circuits "did not" trip during this incident. Subsurface investigations had been completed Monday, March 12, 2007 using 3 subsurface investigation techniques (ground penetrating, electro-magnetic resonance, and radio-frequency). Drawings were provided by the project and utilized by the subsurface investigation teams to identify underground anomalies. All identified underground anomalies were marked with paint. Independent additional observations were also completed Monday, March 12th by the Facility Manager, Construction Manager, Construction Supervisor and Safety Engineer. The subsurface investigations "had" identified an underground anomaly in this area. Vacuum and hand excavating exposed a lawn sprinkler control wire. The lawn sprinkler system control wire was located approximately 6 inches deep directly above the 18-inch-deep concrete-encased conduit, which was shadowed during the subsurface investigation by the overlying sprinkler control wire and conduit. During the Project planning phase facility drawings were identified and provided to the project. No drawings were identified or provided that showed the concrete encased 480V conductors and conduit. After the event a drawing was located which is titled TRA Landscape Improvements, the drawing showed both sets of wires, but the sprinkler control wires are installed on the oposite side of the sidewalk than depicted in the drawings. Additionally the drawing

	identifies a electrical warning locator ribbon was to be installed above the concrete encased conduit and 6 inches below the ground level level to indicate the presence of a buried cable. There was no electrical warning locator ribbon found at the excavation location. Although the event occurred on March 14 at 1630, it was not initially categorized until after the critique on March 15, where it was determined that the event did meet ORPS reporting criteria. Further investigation is continuing.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Construction
Immediate Action(s):	Stopped work. Area was secured. Notified construction management, project management, INL Senior Management and DOE. Performed lockout/tag out of electrical circuits supplying power to the affected wires.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Gary Braun By When:
Division or Project:	Construction Subcontract for Utility Corridor
Plant Area:	RTC
System/Building/Equipment:	RTC Grounds lighting at Pedestrian Sidewalk
Facility Function:	Balance-of-Plant - Site/outside utilities
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01B--Conduct of Operations - Configuration Management/Control 05D--Mechanical/Structural - Mechanical Equipment 08F--OSHA Reportable/Industrial Hygiene - Industrial Operations 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records 14E--Quality Assurance - Work Process
HQ Summary:	While digging at the INL Reactor Technology Complex, an excavator’s bucket snagged a concrete-encased PVC conduit containing 480V conductors. The conduit was damaged but the electrical wiring inside was not. Work ceased immediately and the site was secured. Previous subsurface investigations techniques (ground penetrating radar, electro-magnetic resonance, and radio-frequency) and review of drawings had failed to locate the conduit. A subsequent review found a drawing of the conduit in a different location, and

	showing a electrical warning locator ribbon that apparently had not been installed. Further investigation is continuing.
Similar OR Report Number:	
Facility Manager:	Name: BRAUN, GARY W Phone: (208) 533-4439 Title: FACILITY COMPLEX MANAGER
Originator:	Name: ALLEN, JEFFREY K Phone: (208) 526-5320 Title: OPERATIONS ASSISTANT
HQ OC Notification:	Date: NA, Time: NA, Person Notified: NA, Organization: NA
Other Notifications:	03/15/2007 10:00 (MTZ) Dwayne Coburn F&SS 03/15/2007 10:00 (MTZ) Mike Gorriup DOE-ID
Authorized Classifier(AC):	

8)Report Number:	SC--BSO-LBL-OPERATIONS-2007-0002 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Lawrence Berkeley Laboratory
Facility Name:	Operations Division
Subject/Title:	LOTO violation results in near miss
Date/Time Discovered:	03/19/2007 09:00 (PTZ)
Date/Time Categorized:	03/22/2007 15:00 (PTZ)
Report Type:	Notification
Report Dates:	Notification: 03/23/2007 20:52 (ETZ) Initial Update Latest Update Final
Significance Category:	3
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	4) Perform Work Within Controls
Subcontractor Involved:	Yes PDE Electric
Occurrence Description:	On 3/15/07, an electrician employed by PDE Electric installed two conduits in an existing energize panel (12B) located in SW wall of B-25A room 119. This was a violation of LOTO, Hot Work procedures, and the subcontractor's safety

	plan. The conduits he installed were home runs from sub panels that had been recently installed by PDE. The new panels were not energized nor did they have any electrical conductors installed. This work was noticed the next afternoon (3/16/07) by an LBNL electrician, who was conducting a review of the A1 permit issued for the shutdown of panel 12B scheduled for the following day (Saturday 3/17/07). The electrician reported his concerns to his supervisor. The supervisor determined that there was no imminent danger, the shutdown could proceed as planned, and that further discussion would be held with the superintendent on Monday morning (3/19/07) to determine if a LOTO violation had been committed. Early Monday morning (3/19/07), the superintendent and electric shop supervisor confirmed with EH&S that there had been a LOTO violation and decided to stand down the electrical work on this project. The PDE employee who performed the unauthorized installation was asked to leave the site and complied. PDE asked the individual to resign and he complied. A mandatory stand down safety meeting to discuss electrical safety at LBNL was held the morning of 3/20/07 for all PDE's employees working at LBNL. PDE is in the process of responding to the Lab's concerns and a follow up meeting will be conducted prior to resumption of electrical work on the project. Line management continued its evaluation of the event. On 3/22/07, in consultation with the EH&S subject matter expert, Facilities categorized the incident as an ORPS-reportable near miss.
Cause Description:	
Operating Conditions:	Indoors, well-lit, dry
Activity Category:	Construction
Immediate Action(s):	Early Monday morning (3/19/07), the superintendent and electric shop supervisor confirmed with EH&S that there had been a LOTO violation and decided to stand down the electrical work on this project. The PDE employee who performed the unauthorized installation was asked to leave the LBNL site and complied. PDE asked the individual to resign and he complied.
FM Evaluation:	Facilities line management reviewed the incident with the EHS electrical safety engineer and determined that an ORPS Management Concern (near miss) was appropriate.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Facilities Division By When: 03/27/2007
Division or Project:	Facilities
Plant Area:	25A
System/Building/Equipment:	Building 25A
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)

Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Conduct of Operations - Lockout/Tagout (Electrical) 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process
HQ Summary:	An LBNL electrician discovered that a subcontractor electrician had installed two conduits in an energized panel in LBNL Building 25A, in violation of LOTO, hot work procedures, and the PDE's safety plan. A mandatory stand-down electrical safety meeting was held for all of the subcontractor's employees. The subcontractor is in the process of responding to LBNL's concerns, and a follow-up meeting will be conducted prior to the resumption of work.
Similar OR Report Number:	

Facility Manager:

Name	Jerry OHearn
Phone	(510) 495-2606
Title	Facilities Division Deputy Director

Originator:

Name	CHERNOWSKI, JOHN G
Phone	(510) 486-7457
Title	OFFICE OF CONTRACT ASSURANCE (OCA)

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
03/22/2007	15:00 (PTZ)	Mary Gross	DOE-BSO

Authorized Classifier(AC):	

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9)Report Number:	SC--PSO-PPPL-PPPL-2007-0001 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Princeton Plasma Physics Laboratory
Facility Name:	Princeton Plasma Physics Lab. (BOP)
Subject/Title:	Hazardous Energy Control 3/23/07
Date/Time Discovered:	03/23/2007 11:43 (ETZ)
Date/Time Categorized:	03/23/2007 12:10 (ETZ)
Report Type:	Notification

Report Dates:

Notification	03/26/2007	15:46 (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:	No
Occurrence Description:	On 3/23/07 at approximately 10:30 a.m., a technician from the Computer Division was working on a task to aid in the removal of two obsolete computer drives and a power supply from a computer rack located in room C221E (formerly known as the D.A.S.). The task included removing several data cables connected between the drives and the power supply. The employee had removed approximately five data cable connections and was preparing to remove them from the power supply. However, several of the cables were bundled together and tangled with the power cable. This hindered the employee from removing the cables, so the employee decided that since the equipment was obsolete he could cut the data cables. He obtained a wire cutter and attempted to cut the data cables that were next to the power supply cable. While cutting one of the data cables the employee was also pulling on the power cable and exposed the power supply wiring, this caused him to not only cut the data cable but cut the hot and ground wire of the power supply cable. The employee cut across the 125V energized power cable and nicked the ground wire. This caused a flash at the blade of the cutter. The breaker did not trip.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	When he was leaving the room, the technician discussed the situation with the Facility Manager. The technician said he believed that the system was de-energized because the system was old and had not been used for several years. The FM determined that the technician did not appear to be injured and then initiated a Stop Work Order. The area was secured and the employee's supervisor along with the ES&H Division electrical safety engineer was contacted and summoned to the scene. An electrician was also summoned to the area to evaluate the power supply. After determining that the piece of equipment was energized, he de-energized it, by pulling the plug from an outlet under the floor. The area was then secured and the supervisor was notified by the FM that the job was terminated until the investigation into the incident was completed.
FM Evaluation:	Investigation on going. A stop work oder is in effect.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: J. Levine By When: 04/15/2007
Division or Project:	Computer Division

Plant Area:	Room C221E
System/Building/Equipment:	Computer Power Supply
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Conduct of Operations - Inadequate Job Planning (Electrical) 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Compliance 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
HQ Summary:	As a computer technician was removing data cables in PPPL Room C221E, he cut into an energized 125V power cable and caused a flash. The facility manager determined that the technician was not injured and initiated a Stop Work Order. The area was secured and the job was terminated until there is an investigation of the incident.
Similar OR Report Number:	
Facility Manager:	Name: BAVLISH, JOHN T Phone: (609) 243-2899 Title: Facility Manager
Originator:	Name: BAVLISH, JOHN T Phone: (609) 243-2899 Title:
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 03/23/2007; Time: 12:15 (ETZ); Person Notified: L. Dietrich; Organization: PSO
Authorized Classifier(AC):	