December 2009 Electrical Safety Occurrences

There were 11 electrical safety occurrences for December 2009:

- 3 occurrences resulted in shocks
- 4 occurrences involved inadequate lockout/tagout (LOTO) and 1 involved hazardous energy control (removed equipment covers)
- 7 occurrences involved electrical workers and 4 occurrences involved non-electrical workers
- 3 occurrences involved subcontractors
- 4 occurrences resulted from inadequate planning
- 1 occurrence involved the discovery of an energized neutral conductor

The number of electrical safety events remained high as we finished the calendar year on somewhat of an unfavorable trend, with only February and July having fewer than ten events. Inadequate hazardous energy control was the primary cause of electrical events in December, with one LOTO failure resulting in an electrical shock to a worker. The total number of reported electrical shocks for 2009 is consistent with the previous three years. However, improvement in this area is needed, particularly since the majority of shock events involved non-electrical workers. Also, in 2009 the severity of events increased as did the number of electrical burns. In the last few months of the year we saw one extreme and two high electrical severity scores (e.g., November - 5250, October - 2100, and September - 3500). Many of the events in 2009 were a result of inadequate planning or complacency, indicating a need to focus on improving how we plan and safely execute work in 2010.

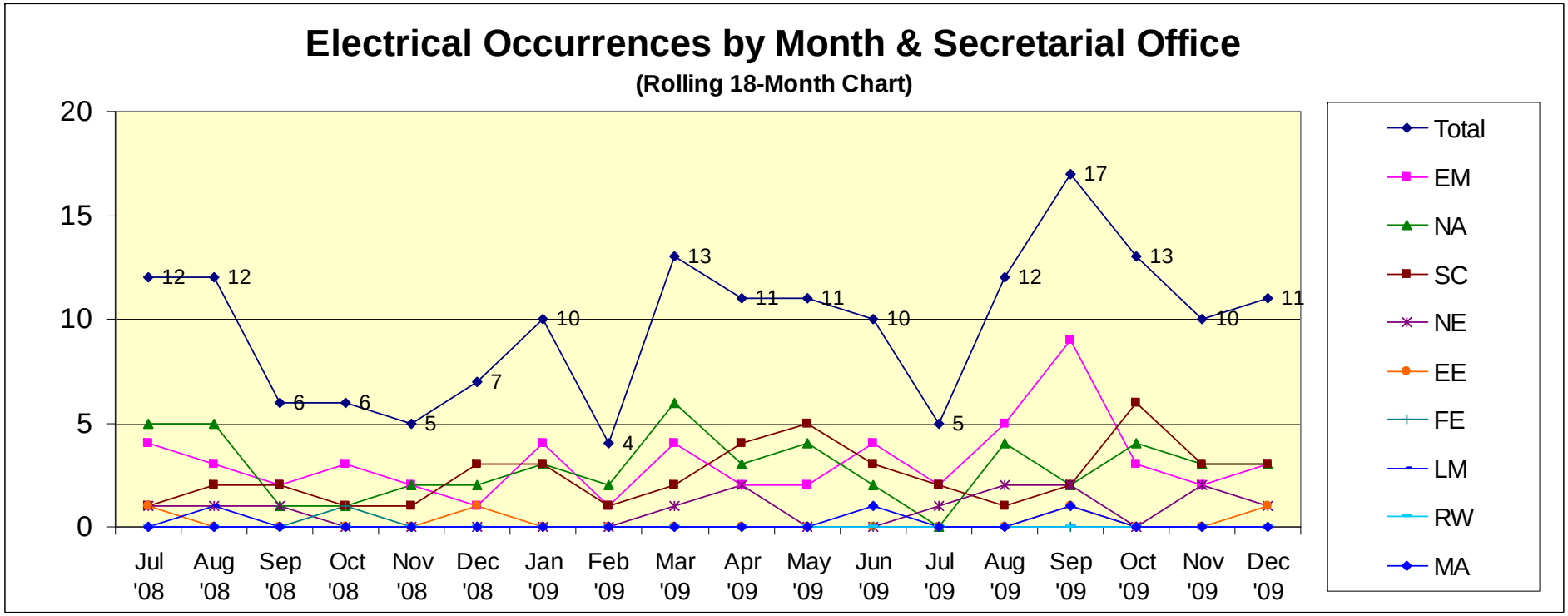
In compiling the monthly totals, the search initially looked for occurrence discovery dates in this month (excluding Significance Category R reports), and for the following ORPS "HQ keywords":
01K – Lockout/Tagout Electrical, 01M - Inadequate Job Planning (Electrical),
08A – Electrical Shock, 08J – Near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

Using the key words above, 11 events were identified. Please continue to report all events and evaluate the events using the Electrical Severity Measurement Tool.

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
June-09	10	3	0	0
July-09	5	1	0	0
August-09	12	3	0	0
September-09	17	2	1	0
October-09	13	4	0	0
November-09	10	2	1	0
December-09	11	3	0	0
2009 total	128 (avg. 10.7/month)	25	3	0
2008 total	113 (avg. 9.4/month)	26	1	0
2007 total	140 (avg. 11.7/month)	25	2	0
2006 total	166 (avg. 13.8/month)	26	3	0
2005 total	165 (avg. 13.8/month)	39	5	0
2004 total	149 (avg. 12.4/month)	25	3	1

The average rate of electrical safety occurrences in 2009 was 10.7 per month, which is above the average rate of 9.4 per month experienced in 2008. The 2009 average rate remains below the 2004 – 2007 average rates, but the trend does not show significant improvement. A renewed effort in 2010 is warranted to ensure performance is improved and electrical safety occurrence rates are reduced from the current plateau.



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

Electrical Safety Occurrences – December 2009

No	Report Number	Event Summary	SHOCK	BURN	ARCF[1]	LOTO[2]	PLAN[3]	EXCAV[4]	CUT/D[5]	VEH[6]	SC[7]	RC[8]	ES[9]
1	EE-GO--NREL-NREL-2009-0010	A worker approached nearer than a safe distance to exposed energized electrical parts.									3	2C(2) 10(3)	20
2	EM--PPPO-PRS-PGDPENVRES-2009-0021	Subcontractor used a faulty extension cord set without Ground Fault Circuit Protection.					X				R	10(2)	0
3	EM-RP--BNRP-RPPWTP-2009-0023	Workers failed to follow LOTO procedure.				X					3	2C(2)	0
4	EM-RP--BNRP-RPPWTP-2009-0025	A worker installed a male cord cap on the supply side of a disconnect, potentially creating an electrical hazard.					X				3	10(2)	0
5	NA--LASO-LANL-BOP-2009-0026	Worker receives electrical shock from defective soldering gun.	X								2	2C(1) 4C(3)	330
6	NA--PS-BWP-PANTEX-2009-0068	Workers failed to follow safe switching procedures.					X				2	10(3)	550
7	NA--SS-SNL-1000-2009-0017	Worker failed to follow LOTO procedure.				X					3	2C(2)	0
8	NE-ID--BEA-HFEF-2009-0003	Worker receives an electrical shock because of a failed LOTO.	X			X	X				2	2C(1)	330
9	SC--ASO-ANLE-ANLEER-2009-0004	Worker receives an electrical shock when operating the power switch for a vacuum pump.	X								2	2C(1)	330
10	SC--BSO-LBL-OPERATIONS-2009-0010	Worker discovers energized neutral conductor.				X					4	10(2)	0
11	SC--PNSO-PNNL-PNNLBOPER-2009-0020	Worker failed to follow hazardous energy control procedure.									3	2C(2)	0
	TOTAL		3	0	0	4	4	0	0	0			

Key

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

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

Electrical Safety Occurrences – December 2009

No	Report Number	Event Summary	EW[1]	N-EW[2]	SUB[3]	HFW[4]	WFH[5]	PPE[6]	70E[7]	VOLT[8] H	VOLT[8] L	C/I[9]	NEUT[10]	NM[11]
1	EE-GO--NREL-NREL-2009-0010	A worker approached nearer than a safe distance to exposed energized electrical parts.		X	X		X		X		X			X
2	EM--PPPO-PRS-PGDPENVRES-2009-0021	Subcontractor used a faulty extension cord set without Ground Fault Circuit Protection.		X	X		X				X			X
3	EM-RP--BNRP-RPPWTP-2009-0023	Workers failed to follow LOTO procedure.	X				X				X			
4	EM-RP--BNRP-RPPWTP-2009-0025	A worker installed a male cord cap on the supply side of a disconnect, potentially creating an electrical hazard.	X				X				X			
5	NA--LASO-LANL-BOP-2009-0026	Worker receives electrical shock from defective soldering gun.		X		X					X			
6	NA--PS-BWP-PANTEX-2009-0068	Workers failed to follow safe switching procedures.	X				X		X		X			X
7	NA--SS-SNL-1000-2009-0017	Worker failed to follow LOTO procedure.	X				X				X			
8	NE-ID--BEA-HFEF-2009-0003	Worker receives an electrical shock because of a failed LOTO.	X			X					X			
9	SC--ASO-ANLE-ANLEER-2009-0004	Worker receives an electrical shock when operating the power switch for a vacuum pump.		X		X					X			
10	SC--BSO-LBL-OPERATIONS-2009-0010	Worker discovers energized neutral conductor.	X		X		X				X		X	
11	SC--PNSO-PNNL-PNNLBOPER-2009-0020	Worker failed to follow hazardous energy control procedure.	X				X				X			
	TOTAL		7	4	3	3	8	0	2	0	11	0	1	3

Key

(1) EW = electrical worker, (2) N-EW = non-electrical worker, (3) SUB = subcontractor, (4) HFW = hazard found the worker, (5) WFH = worker found the hazard, (6) PPE = inadequate or no PPE used, (7) 70E = NFPA 70E issues, (8) VOLT = H (>600) L(≤600), (9) C/I = Capacitance/Inductance, (10) NEUT = neutral circuit, (11) NM = near miss

ORPS Operating Experience Report

Production GUI - New ORPS

ORPS contains 54495 OR(s) with 57813 occurrences(s) as of 1/5/2010 10:32:27 AM
Query selected 11 OR(s) with 11 occurrences(s) as of 1/5/2010 11:55:33 AM

Download this report in Microsoft Word format.

1)Report Number:	EE-GO--NREL-NREL-2009-0010 **After 2003 Redesign**
Secretarial Office:	Energy Efficiency and Renewable Energy
Lab/Site/Org:	National Renewable Energy Laboratory
Facility Name:	National Renewable Energy Laboratory
Subject/Title:	Equipment guarding not properly affixed - potential exposure hazard
Date/Time Discovered:	12/03/2009 10:30 (MTZ)
Date/Time Categorized:	12/03/2009 11:00 (MTZ)
Report Type:	Notification
Report Dates:	Notification: 12/04/2009 17:57 (ETZ) Initial Update: Latest Update: Final:
Significance Category:	3
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin. 10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	
Subcontractor Involved:	Yes St. Andrews Construction
Occurrence Description:	A subcontractor was found to be working in close proximity to unguarded, energized electrical circuits. This condition existed because the guards/covers for the equipment had not been properly reinstalled after a previous maintenance/servicing activity.

	The worker did not come into contact with these circuits and was not harmed.
Cause Description:	
Operating Conditions:	Normal operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Further inspection of the work area revealed other improperly guarded equipment in the area. Immediate actions were taken to re-establish safe conditions, the worker was removed from the hazard area, equipment de-energized and guards were repositioned.
FM Evaluation:	No one was injured, there was no property damage or disruption to operations. A thorough incident investigation will be completed.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: EHS By When:
Division or Project:	Science and Technology
Plant Area:	FTLB 158-03
System/Building/Equipment:	FTLB/Weatherometers
Facility Function:	Solar Activities
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01O--Inadequate Conduct of Operations - Inadequate Maintenance 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 3, 2009, a subcontractor was found to be working near unguarded, energized, electrical circuits at the Field Test Laboratory Building. The unguarded condition existed because the guards/covers for the equipment had not been properly reinstalled after previous maintenance or servicing. The worker did not come into contact with these circuits and was not harmed. Further inspection of the work area revealed

	other improperly guarded equipment. The equipment was de-energized and the guards were repositioned. A thorough incident investigation will be completed.
Similar OR Report Number:	
Facility Manager:	Name: JORDAN, MAUREEN Y Phone: (303) 275-3248 Title: EHS Office Director
Originator:	Name: OKANE, BARBARA V. Phone: (303) 384-7609 Title: ENVIRONMENTAL H & S SENIOR ES&H SPEC
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 12/03/2009; Time: 11:39 (MTZ); Person Notified: Karen Harness; Organization: DOE-GO
Authorized Classifier(AC):	

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2)Report Number:	EM--PPPO-PRS-PGDPENVRES-2009-0021 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Paducah Gaseous Diffusion Plant
Facility Name:	Environmental Restoration
Subject/Title:	Near Miss - Less Than Adequate Vendor Oversight Results in Safety Concerns Including Elevated Work Without Fall Protection
Date/Time Discovered:	12/01/2009 14:45 (ETZ)
Date/Time Categorized:	12/01/2009 17:30 (ETZ)
Report Type:	Notification
Report Dates:	Notification: 12/03/2009 18:35 (ETZ) Initial Update: Latest Update: Final:
Significance Category:	R
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)

	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:	1) Define the Scope of Work 2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	Yes Carolina
Occurrence Description:	On Tuesday, December 1, 2009, a vendor delivered a temporary open sided structure to the site. At approximately 1345 hours local time one of the vendor workers was observed working on top of the structure over 16 feet above grade without fall protection. The condition was noted by a DOE support subcontractor and reported to the DOE Facility Representative who then contacted site safety and health personnel and site management. Upon further examination, vendor personnel were found to be using a portable generator without ground fault circuit interrupter (GFCI) and using unsafe electrical cords. In addition, vendor personnel were not wearing the appropriate basic personal protection equipment (PPE) for on-site work. Vendor personnel were advised to discontinue installing the structure and an aerial lift obtained to safely remove the vendor worker from the partially constructed roof of the structure. Notifications were made and the structure was anchored in place and left in a safe condition. At approximately 1010 hours, on the morning of the incident vendor personnel delivering a temporary open sided structure (carport) were met by a bargaining unit employee and followed the employee to the location for off loading the material. The vendors were met at the off loading location by a Front Line Manager (FLM) and provided a briefing to the general work activity hazard analysis (AHA). This AHA covered basic work hazards for the location and included excavation penetration requirements; however, the AHA did not cover the activities of assembling the carport. The FLM verified with site security that there were no security related escorting requirements for the area since it was outside the limited area. While vendor personnel off loaded the material at the designated location the bargaining unit employee and the FLM left the area. Vendor personnel were not under supervision or oversight by project or safety and health personnel until the discovery of the elevated work condition later in the day.

	The project lead and site management dispatched another FLM that was overseeing a separate work activity in the general vicinity after receiving calls expressing concern over the work being performed to install the carport. The FLM arrived at the carport installation and observed work being performed in a manner contrary to site safety requirements and halted the activity. The immediate concern was that vendor workers had used 12 foot A-frame ladders to access the roof of the structure which was over 16 feet above grade at its highest point. The FLM called for an aerial lift to safely remove one of the vendor workers from the carport roof. Shortly after being notified of the working conditions, site management and site safety and health personnel arrived at the area and halted the work. During the conversation with vendor personnel regarding conducting elevated work without fall protection, a walk down of the area revealed other safety concerns with the performance of work. A portable generator was in use with out GFCI capability, electrical cords were in use that were badly worn or cut with exposed conductors, some cords were missing ground plugs, and power tools with repaired plugs and cords were being used. Vendor personnel were not wearing gloves, safety shoes, safety glasses, or hard hats and the area around the carport had pieces of trimmed metal lying on the ground. A critique was convened on December 2, 2009, at 0800 hours to ascertain the timeline and actions of site personnel relative to the carport installation activity. Discussion of the incident revealed that procurement personnel placed the requisition for the carport as described on the requisition as an equipment purchase and did not understand there was vendor involvement in the installation of the structure. A follow up review of the purchase order indicated that the quoted price of the carport included installation on-site and shipping. Project management had anticipated the procurement of the carport to be a turn key operation that included the structural material, shipping, and installation. This information was not relayed to procurement. The project manager categorized the incident as a management concern on the evening of December 1, 2009. Following the critique, the consensus was to categorize the incident under the recurring significance category based on previous vendor oversight incidents that were not deemed to meet reporting requirements at the time they occurred. The incident was also categorized as a near miss based on the critique discussion.
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Vendor personnel were advised to cease installation of the temporary

	structure. Project personnel arranged for an aerial lift to be brought to the location for the vendor employee to descend from the structure. The structure was anchored in place by site personnel and left in a safe condition. Vendor personnel off loaded remaining materials, collected the tools that had been used, and demobilized from the site. A critique was scheduled for the morning of December 2, 2009.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Chris Marshall By When: 01/15/2010
Division or Project:	Paducah Environmental Remediation Project
Plant Area:	C-762 Laydown Area
System/Building/Equipment:	Temporary Structure at C-762
Facility Function:	Environmental Restoration Operations
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other) 01P--Inadequate Conduct of Operations - Inadequate Oral Communication 01R--Inadequate Conduct of Operations - Management issues 07D--Electrical Systems - Electrical Wiring 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 08K--OSHA Reportable/Industrial Hygiene - Near Miss (Other) 11G--Other - Subcontractor 11L--Other - Supplier 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 13A--Management Concerns - HQ Significant (High-lighted for Management attention)

	14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On December 1, 2009, a vendor employee was observed working on top of an open-sided portable structure (carport) over 16 feet above grade without fall protection. The condition was noted by a DOE support subcontractor and reported to the DOE Facility Representative who then contacted site safety and health personnel and site management. Upon further examination, vendor personnel were found to be using a portable generator without ground fault circuit interrupter and using unsafe electrical cords. In addition, vendor personnel were not wearing the appropriate basic personal protection equipment for on-site work. Notifications were made. The structure was anchored in place and left in a safe condition. Following a critique, the consensus was to categorize the incident under the recurring significance category based on previous vendor oversight incidents that were not deemed to meet reporting requirements at the time they occurred. The incident was also categorized as a near miss based on the critique discussion.
Similar OR Report Number:	
Facility Manager:	Name: Paul Deltete Phone: (270) 441-5017 Title: Operations Manager/Deputy Project Manager
Originator:	Name: FREELS, JENNIE P Phone: (270) 441-5192 Title: QUALITY ASSURANCE SPECIALIST
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	12/01/2009 14:45 (ETZ) Greg Bazzell DOE 12/01/2009 14:45 (ETZ) Mike Evans PRS 12/01/2009 15:00 (ETZ) Chris Marshall PRS 12/01/2009 15:15 (ETZ) Kelly Ausbrooks PRS
Authorized Classifier(AC):	Montgomery R. Breneman Date: 12/03/2009

3)Report Number:	EM-RP--BNRP-RPPWTP-2009-0023 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	RPP Waste Treatment Plant
Subject/Title:	Failure to follow prescribed hazardous energy control process

Date/Time Discovered:	12/10/2009 15:00 (PTZ)
Date/Time Categorized:	12/10/2009 16:00 (PTZ)
Report Type:	Notification
Report Dates:	Notification 12/12/2009 17:51 (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:	1) Define the Scope of Work 2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	Electricians were replacing a 480 volt Primary Distribution Panel (PDP) East of the High Level Waste (HLW) facility with a 120/240/480 volt power supply (General Distribution Rack (GDR) The cable feed from the substation was transferred from the PDP to the GDR. This work was performed per the lockout/tagout (LOTO) procedure, which included a boundary lock and single point locks applied by the workers at the substation feeding the equipment. When the cable feed transfer to the GDR was completed, the single point locks were removed. One week later, during an inspection of the GDR, the electricians removed two covers on the GDR for the electrical inspection without installing single point locks, which is a violation of the LOTO procedure. The boundary lock was still in place at the substation, therefore the GDR was not energized. However, work cannot be performed under a boundary lock per procedure.
Cause Description:	
Operating Conditions:	Construction
Activity Category:	Construction
Immediate Action(s):	The work was stopped; workers made notifications to Management. Management convened a fact finding meeting to ascertain the circumstances of the event.
FM Evaluation:	Personnel who possess a high degree of knowledge and experience in a given area or are extremely familiar with specific plant equipment can be

	lured into making improper or biased decisions because of their comfort level with the given situation. This may be especially true for individuals who are typically motivated to accomplish additionally, close management attention is necessary to ensure work practices remain within the bounds of project procedures and policies. This is especially true in the area of safety related procedures where the requirements tend to become increasingly restrictive over time
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Michael A Readdy Sr By When:
Division or Project:	WTP Waste Treatment Plant
Plant Area:	600
System/Building/Equipment:	North East side of High Level Waste Building (HLW)
Facility Function:	Nuclear Waste Operations/Disposal
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 10, 2009, electricians removed two General Distribution Rack covers without installing single point locks, a LO/TO procedure violation. The single point locks had been removed one week earlier during a 480 V Primary Distribution Panel replacement. This earlier work was performed per the LOTO procedure that included a boundary lock and single point locks applied by the workers at the substation feeding the equipment. When the cable feed transfer was completed, the single point locks were removed. Upon discovery of the LO/TO procedure violation, work was stopped and management notifications were made. A fact finding meeting was held.
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
HQ OC Notification:	

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
12/10/2009	15:00 (PTZ)	Max Hammond	BNI/Con
12/10/2009	15:00 (PTZ)	Dave Leeth	BNI/Con
12/10/2009	15:05 (PTZ)	Miles Stauffer	BNI/SA
12/10/2009	16:15 (PTZ)	Jeff Bruggeman	DOE/FR
12/10/2009	16:37 (PTZ)	Noell	ONC

Authorized Classifier(AC):	

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4)Report Number:	EM-RP--BNRP-RPPWTP-2009-0025 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	RPP Waste Treatment Plant
Subject/Title:	Incorrect Cord Cap end installed
Date/Time Discovered:	12/21/2009 13:50 (PTZ)
Date/Time Categorized:	12/21/2009 15:30 (PTZ)
Report Type:	Notification
Report Dates:	

Notification	12/22/2009	15:46 (ETZ)
Initial Update		
Latest Update		
Final		

Significance Category:	3
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	A4B3C11 - Management Problem; Work Organization & Planning LTA; Inadequate work package preparation A4B4C03 - Management Problem; Supervisory Methods LTA; Appropriate level of in-task supervision not determined prior to task A5B1C04 - Communications Less Than Adequate (LTA); Written

	Communication Method of Presentation LTA; Deficiencies in user aids (charts, etc.)
ISM:	1) Define the Scope of Work 2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	It was discovered on 12-21-2009 an employee placed a single point lock/out on a disconnect for the Pre Treat Facility Tower Crane elevator to install a cord cap. This work was performed per the lockout/tagout (LOTO) procedure. The employee was installing the cord cap for an up coming outage in order to provide an alternate power source to the crane elevator during the outage. The employee inadvertently installed the cord caps backwards, the male cord cap on the disconnect and the female cord cap on the cable going to the crane elevator. There were no injures or property damage.
Cause Description:	
Operating Conditions:	Construction
Activity Category:	Construction
Immediate Action(s):	The work was stopped; workers made notifications to Management. Management initiated an investigation to ascertain the circumstances of the event.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Michael A Readdy Sr By When:
Division or Project:	WTP Waste Treatment Plant
Plant Area:	600
System/Building/Equipment:	Pre Treatment Facility
Facility Function:	Nuclear Waste Operations/Disposal
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01Q--Inadequate Conduct of Operations - Personnel error

	01S--Inadequate Conduct of Operations - Incorrect/Inadequate Installation 12B--EH Categories - Conduct of Operations 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 21, 2009, while installing a cord cap for an up coming outage in order to provide an alternate power source to the Pre Treat Facility Tower Crane elevator, an employee inadvertently installed the cord cap backwards, such that the male cord cap was on the disconnect and the female cord cap was on the cable going to the elevator. There were no injures or property damage. The work was stopped and management initiated an investigation.
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
12/21/2009	13:50 (PTZ)	Ken Wade	DOE

Other Notifications:

Date	Time	Person Notified	Organization
12/21/2009	13:50 (PTZ)	Miles Stauffer	BNI/SA
12/21/2009	13:50 (PTZ)	Dave Leeth	BNI/Con
12/21/2009	13:50 (PTZ)	Tucker Campbell	BNI/Con

Authorized Classifier(AC):

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5)Report Number:	NA--LASO-LANL-BOP-2009-0026 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Los Alamos National Laboratory
Facility Name:	"at large" or Balance of Plant
Subject/Title:	Worker Receives Electrical Shock from a Portable Solder Gun
Date/Time Discovered:	12/03/2009 14:00 (MTZ)
Date/Time Categorized:	12/03/2009 16:45 (MTZ)
Report Type:	Notification

Report Dates:

Notification	12/04/2009	15:50 (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. 4C(3) - Discovery of any defective item or material, other than a suspect/counterfeit item or material, in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety. A defective item or material is any item or material that does not meet the commercial standard or procurement requirements as defined by catalogues, proposals, procurement specifications, design specifications, testing requirements, contracts, or the like. It does not include parts or services that fail or are otherwise found to be inadequate because of random failures or errors within the accepted reliability level.		
Cause Codes:			
ISM:			
Subcontractor Involved:	No		
Occurrence Description:	MANAGEMENT SYNOPSIS: On December 3, 2009, at Technical Area 3, Building 4200, at approximately 1400, while using a portable Weller Industrial Solder Gun, Model D650, a Materials Physics and Applications Superconductivity Technology Center (MPA-STC) worker (W1) received an electrical shock to his right hand from contacting an energized screw on the pistol handle. Subsequent inspection of the solder gun found a screw located on the pistol handle was energized at 120 volts and in direct contact with the hot plug on the cord. The solder gun was labeled as Underwriter's Laboratory (UL) listed. The MPA-STC Group Electrical Safety Officer (GESO) determined this configuration was a manufacturer's defect caused during the assembly of the unit. W1 experienced a burning sensation to his right middle finger with no discoloration and immediately dropped the soldering gun. W1 was using the solder gun for soldering operations for an experiment. W1 notified the MPA-STC GESO who in turn notified the MPA-STC responsible line manager (RLM) and the Institutional Facilities and Central Services (IFCS) Facility Operations Director (FOD). W1 and the GESO indicated the solder gun and five other similar units were recently purchased and this was the first time this particular unit was used. The GESO tagged out the solder gun and removed it from service pending further inspection. The GESO removed the other five units from service for inspection and verification as properly configured. Due a personal emergency, W1 was not transported to the		

	LANL occupational medicine facility for evaluation until December 4, 2009. W1 was released back to work with no restrictions. No impact to the experiment, operations, or the facility resulted from this event. At 1645, the IFCS FOD Designee was notified of the event and categorized the event as reportable.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	1. The GESO tagged out the solder gun and removed it from service pending further inspection. 2. On December 4, 2009, the acting MPA-STC RLM took W1 to the OMF for evaluation. W1 was released back to work with no restrictions. 3. The acting MPA-STC RLM has removed the other five solder guns from service for inspection and verification as properly configured. 4. An electrical safety officer will evaluate the event using the electrical severity tool.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: MPA-STC, IFCS-DO & CAO-PF By When: 01/15/2010
Division or Project:	Materials Physics and Applications Division
Plant Area:	TA-3-4200-T115
System/Building/Equipment:	Weller Industrial Solder Gun, Model D650
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 11H--Other - Procurement Deficiency/Defective Items 11L--Other - Supplier 12R--EH Categories - Suspect/Counterfeit Items - Defective Items 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On December 3, 2009, while using a portable Weller Model D650 Industrial Solder Gun at Building 4200, a Materials Physics and

	Applications Superconductivity Technology Center worker received an electrical shock to his right hand from touching an energized screw on the pistol handle. He experienced a burning sensation to his right middle finger with no discoloration and immediately dropped the soldering gun. Inspection of the solder gun found that a screw on the pistol handle was energized at 120 volts and in direct contact with the hot plug on the cord. The solder gun was labeled as Underwriters Laboratories (UL) listed. The Electrical Safety Officer determined this configuration was a manufacturer's defect caused during the assembly of the unit. The solder gun and five other similar units were recently purchased and this was the first time this particular unit was used. The solder gun was tagged out and removed from service pending further inspection. The other five units were removed from service for inspection and verification as properly configured.
Similar OR Report Number:	
Facility Manager:	Name: Judith Huchton Phone: (505) 665-2272 Title: IFCS Facility Operations Director
Originator:	Name: YAZZIE, ALVA M Phone: (505) 664-0666 Title: OCCURRENCE INVESTIGATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 12/03/2009; Time: 17:07 (MTZ); Person Notified: Notification Line; Organization: NNSA
Authorized Classifier(AC):	Linda Collier Date: 12/04/2009

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6)Report Number:	NA--PS-BWP-PANTEX-2009-0068 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Pantex Plant
Facility Name:	Pantex Plant
Subject/Title:	Potential NFPA 70E Non-Adherence
Date/Time Discovered:	12/09/2009 13:00 (CTZ)
Date/Time Categorized:	12/09/2009 14:50 (CTZ)
Report Type:	Update
Report Dates:	Notification: 12/10/2009 17:52 (ETZ) Initial Update: 12/11/2009 08:22 (ETZ)

	Latest Update	12/11/2009	08:22 (ETZ)
	Final		

Significance Category:	2
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 2 occurrence)
Cause Codes:	
ISM:	4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On 12/09/09 at 00:57 hours, Utilities Department Main Control Room Operator (MCRO) received alarms indicating equipment failure in Buildings (Bldgs.) 12-64, 12-109, and 12-53. Utilities Operators responded and determined Electricians were required to make repairs. The Pantex Operations Center (OC) contacted the Crafts Material Access Area (MAA) on-call manager, who coordinated the call-out of Electricians to support troubleshooting and repairs. Following completion of breath alcohol testing (BAT), the Electricians gathered equipment, tools, and personal protective equipment (PPE) and proceeded to the Bldg. 12-64 Court Yard. After investigating the equipment and electrical panels associated with the circuit that had tripped, the Electricians turned all breakers on the motor control center (MCC) to the "OFF" position, which would not allow any load to be picked up when energizing the main breaker and the main distribution panel (MDP), reset the tripped breaker at the MDP. The Electrician who reset the breaker (480 Volt) at the MDP was wearing two layers of level 2 coveralls, a 44 Calorie coat, an arc flash face shield, and gloves. The Electricians then turned on the MCC breakers one at a time. The MCC was re-energized with no issues. Prior to re-setting the chillers and dehumidifiers, Utilities personnel initiated inspection of the chillers as a possible cause for the initial power outage. During inspection of the chillers, and without them being turned on, the MDP breaker tripped again killing power to the same facilities. The Electrical Supervisor notified the Electrical Section Manager and System Engineer to evaluate possible incorrect trip settings on the breaker. The System Engineer looked at the settings and determined that the settings were initially wrong. The Electrical Code Inspector then noticed a "DANGER" sticker on the door of the MDP and communicated to all involved that they were not to reset the breaker without de-energizing power at the sub-station that feeds it. The Electrical Supervisor stopped

	work and removed all personnel from the area and contacted the Electrical Distribution System Owner to create a switching order to de-energize power at the automatic transfer switch (ATS) (12,470 Volts). Electricians had inappropriately reset the breaker in the MDP without assuring that the system was in an electrically safe condition. In this case, that required de-energizing the MDP at the ATS. There were no injuries nor damage to equipment or the environment as a result of this event.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Electrical Supervisor stopped work and evaluated the requirements for manipulating the MDP breaker. The Electrical Distribution System Owner created a switching order to de-energize power at the ATS. Electricians executed the switching order, reset the breaker settings, reset the breaker, and restored power. The Electrical Code Inspector calculated the electrical severity (550) using the EFCOG/DOE Electrical Severity Measurement Tool, and determined the event met the criteria to be categorized as a S/C 3. A critique was conducted at 14:00 hours on 12/09/09 and the event was categorized as 10(3) S/C 3, A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. At 15:50 hours on 12/09/09 B&W recategorized the event as 10(3) S/C 2, at the request of the Pantex Site Office.
FM Evaluation:	Corrective actions will be tracked in the Issues Management System on PER-2009-1431. 12/11/09 Title changed to more accurately describe event.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Maintenance Division

Plant Area:	Zone 12 South MAA
System/Building/Equipment:	Multiple Buildings in Zone 12 South MAA
Facility Function:	Balance-of-Plant - Site/outside utilities
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 07C--Electrical Systems - Power Outage 07E--Electrical Systems - Electrical Equipment Failure 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 December 9, 2009, Utilities Operators responded to equipment failures in Buildings 12-64, 12-109, and 12-53 and they determined that electricians would be required to make repairs. After investigating the equipment and electrical panels associated with the circuit breaker that had tripped, the electricians turned all circuit breakers on the motor control center to the "OFF" position and reset the tripped circuit breaker on the main distribution panel (MDP). The electrician who reset the breaker was wearing proper personal protective equipment. While inspecting chillers as a possible cause for the initial power outage, the MDP breaker tripped again. A System Engineer determined that the trip settings for the breaker were initially wrong and an Electrical Code Inspector then noticed a "DANGER" sticker on the door of the MDP. The inspector told everyone involved not to reset the breaker without de-energizing power at the substation that feeds it. The Electrical Supervisor stopped work, removed all personnel from the area, and requested a switching order to de-energize power at the automatic transfer switch (12,470 volts). It was determined that the electricians had inappropriately reset the breaker in the MDP without assuring that the system was in an electrically safe condition by de-energizing the MDP at the automatic transfer switch.
Similar OR Report Number:	
Facility Manager:	Name: Brent Henderson Phone: (806) 477-3213 Title: Plant Maintenance Department Manager
Originator:	Name: HALL, BEVERLY J Phone: (806) 477-3222 Title:
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA

Other Notifications:	

Date	Time	Person Notified	Organization
12/09/2009	13:06 (CTZ)	Jessica Cortez	PXSO

Authorized Classifier(AC):	Robert Barr Date: 12/11/2009

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7)Report Number:	NA--SS-SNL-1000-2009-0017 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Sandia National Laboratories - SS
Facility Name:	SNL Division 1000
Subject/Title:	Technologist Failed to Perform Lockout/Tagout During a Vacuum Pump Change Out in Chase Area of 858EL
Date/Time Discovered:	12/02/2009 12:00 (MTZ)
Date/Time Categorized:	12/02/2009 13:30 (MTZ)
Report Type:	Notification
Report Dates:	

Notification	12/03/2009	17:55 (ETZ)
Initial Update		
Latest Update		
Final		

Significance Category:	3
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
Cause Codes:	
ISM:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls 4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On December 2, 2009, at about 11:15 a.m., during the process of changing out a hard-wired 208V, 3-phase vacuum pump located in the chase area outside 858EL/L1264, a technologist did not apply Lockout/Tagout (LOTO) to the pump switch located inside the lab, or the disconnect switch located near the pump. Both switches were turned off and were within sight and control of the technologist. The technologist performed a zero energy test to the electrical leads on the pump with a multimeter prior to removing the wiring to the defective pump. The zero energy test verified that the electrical source was off.

	During the time the wires were disconnected, electrical tape was wrapped over the ends of the wires. The pump was changed out to a new one, the wiring reconnected, inspected for proper connection, electrical box cover reinstalled, the two switches turned back on, and the system restarted. The technologist was not current in LOTO training, and believed that LOTO was not required since both switches were turned off. A technologist working near the area, but not involved in the pump change, observed the work and reported the situation to the Center ES&H Coordinator.
Cause Description:	Critique/Fact Finding Performed 12/3/09
Operating Conditions:	Normal
Activity Category:	Research
Immediate Action(s):	By the time the Center ES&H Coordinator arrived at the lab, the vacuum pump change out had been completed. The ES&H Coordinator discussed the lack of LOTO with the technologist, and told the person to not perform any further work that would require LOTO until the person completed LOTO training and was approved by the manager to perform that type of work.
FM Evaluation:	Activities requiring LOTO will not be performed until personnel in the departments are trained and qualified to perform LOTO.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Causal Analysis Team By When: 01/15/2010
Division or Project:	1000/Reseach and Development
Plant Area:	Tech Area I
System/Building/Equipment:	Bldg. 858EL, Rm. L1264
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01F--Inadequate Conduct of Operations - Training Deficiency 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14B--Quality Assurance - Training and Qualification Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 2, 2009, during the process of changing out a hard-wired 208-volt, 3-phase vacuum pump located in the chase area outside 858EL/L1264, a technologist did not apply a Lockout/Tagout (LOTO) to the pump switch located inside the lab or the disconnect switch located

	near the pump. Both switches were turned off and were within sight and control of the technologist. The technologist verified a zero energy condition with a multimeter before removing the wiring and replacing the defective pump. The technologist was not current in LOTO training, and believed that LOTO was not required since both switches were turned off. The ES&H Coordinator discussed the lack of LOTO with the technologist, and told the worker not to perform any further work that would require a LOTO until completing LOTO training and being approved by the manager to perform that type of work.
Similar OR Report Number:	
Facility Manager:	Name: M. Wayne Davis Phone: (505) 844-6734 Title: Center 1100 ES&H Coordinator
Originator:	Name: LUCERO, JEWELEE A Phone: (505) 845-4727 Title: REPORTING ADMINISTRATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	12/02/2009 12:15 (MTZ) Jerry Simmons 1120 12/02/2009 12:15 (MTZ) EOC 4136 12/02/2009 12:20 (MTZ) Julia Phillips 1100 12/02/2009 12:30 (MTZ) Heather Trumble, FR DOE/SSO 12/02/2009 12:10 (MTZ) Dan Barton 1123 12/02/2009 12:15 (MTZ) Diane Peebles 1112
Authorized Classifier(AC):	Gregory Hebner Date: 12/03/2009

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8)Report Number:	NE-ID--BEA-HFEF-2009-0003 **After 2003 Redesign**
Secretarial Office:	Nuclear Energy, Science and Technology
Lab/Site/Org:	Idaho National Laboratory
Facility Name:	Hot Fuel Examination Facility
Subject/Title:	110 Volt Electrical Shock Received while Modifying Overhead Handling Control System
Date/Time Discovered:	12/21/2009 09:10 (MTZ)
Date/Time Categorized:	12/21/2009 10:45 (MTZ)
Report Type:	Notification
Report Dates:	Notification 12/22/2009 15:33 (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:	A1B2C06 - Design/Engineering Problem; Design output LTA; Drawing, specification or data error
ISM:	1) Define the Scope of Work 2) Analyze the Hazards 3) Develop and Implement Hazard Controls 5) Provide Feedback and Continuous Improvement
Subcontractor Involved:	No
Occurrence Description:	The HFEF Crane and Electromechanical Manipulator (EMM) control systems were undergoing modifications. These modifications were being performed in accordance with planned work package 00136241. Several walkdowns in the facility were performed by the planner, maintenance crafts and engineering support staff. One of the walkdowns actually involved opening the cover to the Hatch Open Rotating Light Junction Box. This walkdown was performed to determine the available spare terminals on the relay block within the junction box. The original drawing showed terminal 10 in use for the K4 relay. The planner reported that the terminal in use was actually 7 and that terminals 6 and 8 were spares. These walkdowns did not catch the significance of a piece of dymo tape on the junction box cover stating "Fed from Panel 5D-1 CRT 11" nor additional conductors terminated on the relay block. The engineer changed the original drawing to show the K4 relay wired across terminals 2 and 7. A pre-job brief was held on 12/7/2009, where the facility electrical engineer and facility technician discussed the Lock-out/Tagout (LOTO). The work package was approved and activities started on 12/8/2009. Step 16 in Section 5 of the work order required, " Terminate the wires in the Hatch Open Rotating Light JB that go to the PLC cabinet. Reference Drawing 762521. Daily pre-job briefs were held to discuss the scope of that day's work. On 12/18/2009, an I&C technician noted some discrepancies between the wiring in the box and the drawing. He stopped work until he could contact engineering support on the next working day. On 12/21/2009, the worker contacted an engineer and a planner to resolve the discrepancy on the drawing. The engineer felt that the ambiguities on the drawing were typos and directed completion of the work by completing "as-builts" to the drawing. As the worker reached into the

	junction box to attach the wire to the terminal on the relay box, he received a mild shock.
Cause Description:	The drawing used to develop the Lock-out/Tagout did not specify a source for two of the conductors shown entering a junction box. A zero energy check performed was ineffective at identifying the energized contact.
Operating Conditions:	Facility Operational, Modifications underway on overhead handling control system
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Work was stopped. Barriers erected to keep personnel away from the area. Worker was transported to medical facilities. Medical evaluation determined that the worker could return with no restrictions. A critique was held at 1430 on 12/21/2009. After the critique, management decided to suspend facility modification and planned corrective maintenance involving lock-out/tagouts until further evaluations of the scope of the lock-out/tagout were completed.
FM Evaluation:	The need to perform a formal cause analysis will require further evaluation of this event. Further corrective actions shall be evaluated to release other activities requiring lock-out/tagout.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Patrick W. Kern By When: 02/26/2010
Division or Project:	Battelle Energy Alliance
Plant Area:	MFC
System/Building/Equipment:	Crane and Electromechanical Manipulator Control System
Facility Function:	Uranium Conversion/Processing and Handling
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01A--Inadequate Conduct of Operations - Inadequate Conduct of Operations (miscellaneous) 01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01P--Inadequate Conduct of Operations - Inadequate Oral Communication 01R--Inadequate Conduct of Operations - Management issues

	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 12C--EH Categories - Electrical Safety 14D--Quality Assurance - Documents and Records Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 21, 2009, while modifying the HFEF Crane and Electromechanical Manipulator control systems, a worker reached into a junction box to attach a wire to a terminal on a relay box and received a mild electrical shock. The work was stopped and barriers were erected to keep personnel away from the area. The worker was transported to medical facilities where he was evaluated and returned to work with no restrictions. Discrepancies regarding equipment wiring and power feeds were identified. A critique was held.
Similar OR Report Number:	
Facility Manager:	Name: CAIN, RICHARD S Phone: (208) 533-7628 Title: TREAT/NRAD REACTOR MANAGER
Originator:	Name: CAIN, RICHARD S Phone: (208) 533-7628 Title: TREAT/NRAD REACTOR MANAGER
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 12/21/2009; Time: 10:45 (MTZ); Person Notified: Ferrara, Scott E; Organization: DOE-ID
Authorized Classifier(AC):	Jeff Garner Date: 12/22/2009

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9)Report Number:	SC--ASO-ANLE-ANLEER-2009-0004 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Argonne National Laboratory East
Facility Name:	Engineering Research
Subject/Title:	Employee Received Electrical Shock When Energizing Vacuum Pump
Date/Time Discovered:	12/04/2009 16:02 (CTZ)
Date/Time Categorized:	12/04/2009 16:30 (CTZ)
Report Type:	Notification
Report Dates:	Notification: 12/07/2009 18:36 (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:	On December 4, 2009, at approximately 1602 an employee received an electrical shock to his right 4th finger, which he describes as a continuous impulse with tingling in his finger immediately afterwards, when attempting to depress the power switch to a glovebox vacuum pump. The power cord to the vacuum pump had just been modified from a 120V to a 208V receptacle by a second employee, a Qualified Electrical Worker, in support of a change to the source of power for the vacuum pump. He instructed the second employee to stay away from the machine, that he had been shocked. The second employee working with the affected employee at the time of the incident initiated a 911 call. The employee was transported to medical, evaluated and released by medical department with no restrictions the same day. The area of the affected equipment was controlled, the power to the vacuum pump was isolated, de-energized, and locking devices applied to prevent re-use and the equipment becoming re-energized. An investigation team has been chartered to investigate this incident.
Cause Description:	
Operating Conditions:	Normal Operations
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	A 911 was initiated, with paramedics responding and transportation of the affected employee to medical for evaluation and treatment, if necessary. The area of the affected equipment was controlled, the power to the vacuum pump was isolated, de-energized, and locking devices applied to prevent re-use and becoming re-energized.
FM Evaluation:	The system that the pump belonged to will be evaluated by a designated electrical equipment inspector prior to bringing the system back on line. The pump will also be inspected. The other pump that is configured identical to the one that caused the shock was inspected and found to be wired appropriately.
DOE Facility Representative	

Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Investigation Team By When: 12/11/2009
Division or Project:	Energy Systems and Engineering
Plant Area:	200 Area
System/Building/Equipment:	Building 205 Glovebox Vacuum Pump
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 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On December 4, 2009, while attempting to depress the power switch to a glovebox vacuum pump, an employee received an electrical shock to his right 4th finger, which he described as a continuous impulse with tingling in his finger immediately afterwards. The employee was transported to medical, evaluated and released by medical department with no restrictions on the same day. The power cord to the vacuum pump had just been modified from a 120-volt to a 208-volt receptacle by a Qualified Electrical Worker in support of a change to the source of power for the vacuum pump. The power to the vacuum pump was de-energized and locking devices were applied to prevent the equipment from becoming re-energized and used. An investigation team has been chartered to investigate this incident. Another pump that is configured identical to the one that caused the shock was inspected and found to be wired correctly.
Similar OR Report Number:	
Facility Manager:	Name: VAN WERMESKERKEN, NANCY A Phone: (630) 252-4794 Title: ACTING ESE ALD ESH/QA COORDINATOR
Originator:	Name: COLGLAZIER, ROBIN ALAN Phone: (630) 252-8747 Title: SR REGULATORY COMPLIANCE SPECIALIST
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA

Other Notifications:	

Date	Time	Person Notified	Organization
12/04/2009	16:03 (CTZ)	Sue Brindle	ANL-COA
12/04/2009	16:19 (CTZ)	Al Sattelberger	ANL-ESE
12/04/2009	16:30 (CTZ)	John Houck	DOE-ASO

Authorized Classifier(AC):	

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10)Report Number:	SC--BSO-LBL-OPERATIONS-2009-0010 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Lawrence Berkeley Laboratory
Facility Name:	Operations Division
Subject/Title:	B70A Energy Control Management Concern
Date/Time Discovered:	12/17/2009 10:54 (PTZ)
Date/Time Categorized:	12/17/2009 11:09 (PTZ)
Report Type:	Notification/Final
Report Dates:	

Notification	12/21/2009	18:27 (ETZ)
Initial Update	12/21/2009	18:27 (ETZ)
Latest Update	12/21/2009	18:27 (ETZ)
Final	12/21/2009	18:27 (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:	4) Perform Work Within Controls
Subcontractor Involved:	Yes Crouse/Cal Neva
Occurrence Description:	On 10/19/2009, in Building70A Room 4435, a sub-contractor electrician discovered an unexpected energized neutral wire while verifying a LOTO on a circuit that had a Facilities Administrative Lock. He immediately stopped work and reported the discovery to his general contractor supervisor. There were no exposure or injuries as a result of the incident. That same day, an EH&S Division (EHSD) construction safety contract employee noticed that a subcontractor placed a lock on a panel without proper LOTO permit which was required of subcontractors per LBNL

	PUB3000. He called the EHSD Electrical Safety Subject Matter Experts (SMEs), and they visited the site the next day. The SMEs re-discovered the energized neutral wire and brought it to the attention of the sub-contractor and the general contractor.
Cause Description:	
Operating Conditions:	Indoors, dry, lighted
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	When the energized neutral wire was discovered, the subcontractor immediately stopped work and notified his supervisor. The area was cordoned off. The Project Manager was also notified (the Construction Manager was away). The Project Manager notified the Laboratory's project lead electrician who diagnosed a live neutral circuit. The panel was closed (but not locked). The sub-contractor, contractor, and project manager were informed by the lead electrician that all work on this electrical panel should be stopped until the deficiency could be corrected. The EHSD staff taped the panel shut and placed a sign indicating that it should not be opened.
FM Evaluation:	In its initial evaluation, LBNL determined that the electrical incident in 70A did not rise to the level requiring reporting in the ORPS system. However, there were issues that appeared to need further evaluation. An independent incident review commissioned by the Facilities and Operations management verified that the incident did not rise to reportable status. The review however cited issues that the Facilities Division has decided will need to be addressed as a Management Concern under ORPS.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Facilities Division
Plant Area:	B70AR4435
System/Building/Equipment:	Building 70A Room 4435
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 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 October 19, 2009, in Building70A Room 4435, a sub-contractor electrician discovered an unexpected energized neutral wire while verifying a LOTO on a circuit that had a Facilities Administrative Lock. The subcontractor immediately stopped work and notified his supervisor. The area was cordoned off and the project manager was notified. The project manager notified the Laboratory's project lead electrician who diagnosed an energized neutral circuit. The panel was closed (but not locked). The Environment, Health and Safety Division (EHSD) staff taped the panel shut and placed a sign indicating that it should not be opened. That same day, an EHSD safety employee noticed a subcontractor placing a lock on a panel without a proper LOTO permit. In its initial evaluation, LBNL determined that the electrical incident in 70A did not rise to the level requiring reporting in the ORPS system; however, an independent incident review cited issues that the Facilities Division decided will need to be addressed as a Management Concern under ORPS.
Similar OR Report Number:	
Facility Manager:	Name: Jennifer Ridgeway Phone: (510) 486-6339 Title: Division Director
Originator:	Name: MOU, FLORENCE P. Phone: (510) 486-7872 Title: SENIOR ADMINISTRATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 12/17/2009; Time: 11:18 (PTZ); Person Notified: Mary Gross; Organization: BSO Date: 12/17/2009; Time: 11:18 (PTZ); Person Notified: Kevin Hartnett; Organization: BSO
Authorized Classifier(AC):	

11)Report Number:	SC--PNSO-PNNL-PNNLBOPER-2009-0020 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Pacific Northwest National Laboratory
Facility Name:	Energy Research Programs (PNNL)
Subject/Title:	Equipment Covers Removed Without Appropriate Hazardous Energy Control
Date/Time Discovered:	12/01/2009 14:20 (PTZ)
Date/Time Categorized:	12/02/2009 12:14 (PTZ)

Report Type:	Notification
Report Dates:	Notification 12/04/2009 18:56 (ETZ) Initial Update Latest Update Final
Significance Category:	3
Reporting Criteria:	2C(2) - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or a site condition that results in the unexpected discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, steam line, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
Cause Codes:	
ISM:	4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	At 1100 hours on December 2, 2009, a piece of research equipment located in Building 329, Room 15A, was discovered with the outer covers removed exposing electronic components. The equipment was determined to be de-energized at the breaker located on the outside of the equipment, but had not been unplugged. PNNL Electrical Subject Matter Experts reviewed the equipment configuration and determined that it was not in accordance with the PNNL hazardous energy control program requirements.
Cause Description:	
Operating Conditions:	N/A
Activity Category:	Research
Immediate Action(s):	The equipment was unplugged and the covers were replaced. A critique of the event is scheduled for December 8, 2009.
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:	Environmental Sustainability S&T/Energy & Environ
Plant Area:	300 Area
System/Building/Equipment:	329 Building / Room 15A

Facility Function:	Laboratory - Research & Development
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 December 2, 2009, a piece of research equipment located in Building 329, Room 15A, was discovered with the outer covers removed exposing electronic components. The equipment was determined to be de-energized at the circuit breaker located on the outside of the equipment, but the equipment had not been unplugged. PNNL Electrical Subject Matter Experts reviewed the equipment configuration and determined that it was not in accordance with the PNNL hazardous energy control program requirements. The equipment was unplugged and the covers were replaced. A critique of the event was scheduled.
Similar OR Report Number:	
Facility Manager:	Name: Gilmore, T. J. Phone: (509) 371-7171 Title: Manager, Field Hydrology and Chemistry
Originator:	Name: SMITH, KARLA J Phone: (509) 373-6481 Title: TECH. OPS AND ASSURANCE OFFICE, SPEC

HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
12/02/2009	12:06 (PTZ)	Christ, J.	PNSO

Authorized Classifier(AC):	Sutherland, M. R. Date: 12/04/2009