Office of Health, Safety and Security

Electrical Safety Report

November 2010

Electrical Safety Occurrences

The number of electrical safety events for November decreased from seventeen in October to eleven. There were two electrical shocks this month and both involved non-electrical workers. The first event occurred when a worker touched the energized prongs of a power cord plug that was connected to a power switching strip. The power strip was designed to receive electrical power from two sources. The second event occurred when a worker touched defective heat tracing while installing insulation underneath a trailer. This event is similar to an event last month in which a worker felt a shock after brushing up against heat tracing while loading material into a tank. It is important that workers are aware of any heat tracing that might be present in their work area. Because heat tracing is typically external to the components that it heats, it can be susceptible to damage, resulting in a potential electrical safety hazard. Unlike last month's increase in excavation-related events, November saw a decrease in all areas involving electrical intrusions.

Another positive sign for this month is that the number of events involving lockout/tagout (LOTO) and job planning has continued to remain lower than in previous months. Many LOTO events occur because the paperwork is not signed or properly executed before the work is authorized. Procedure compliance needs to be emphasized. It is also important that job planners recognize when a LOTO is required in order to work safely and incorporated into the work control documents.

The following table shows a breakdown of the electrical safety events for November.

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

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

Using the key words above, eleven events were identified.

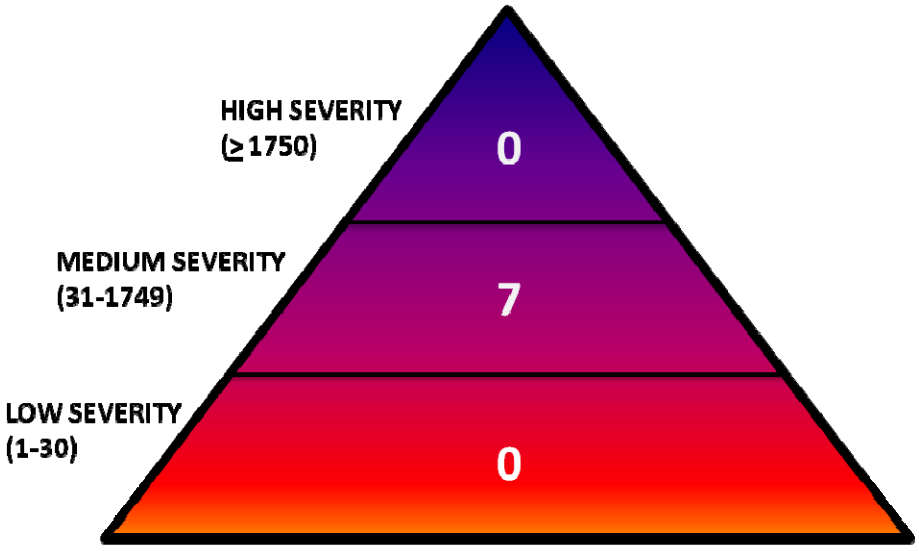
Below is the current summary of 2010 electrical safety occurrences:

Period	Electrical Safety Occurrences	Shocks	Burns	Fatalities
November	11	2	0	0
October	17	2	0	0
September	17	1	0	0
August	13	4	2	0
July	22	5	0	0
June	13	4	0	0
May	7	1	0	0
April	13	2	0	0
March	13	2	0	0
February	13	4	0	0
January	8	0	0	0
2010 total	147 (avg. 13.4/month)	27	2	0
2009 total	128 (avg. 10.7/month)	25	3	0
2008 total	113 (avg. 9.4/month)	26	1	0
2007 total	140 (avg. 11.7/month)	25	2	0
2006 total	166 (avg. 13.8/month)	26	3	0
2005 total	165 (avg. 13.8/month)	39	5	0
2004 total	149 (avg. 12.4/month)	25	3	1

The eleven events in November 2010, brings the monthly average for the year to 13.4 events, which is about 3 more events per month over the rate of electrical safety occurrences in 2009.

Continue to evaluate electrical events using the Electrical Severity Measurement Tool. The electrical severity scores are calculated using Revision 2 of the Electrical Severity Measurement Tool, which was released October 20, 2010.

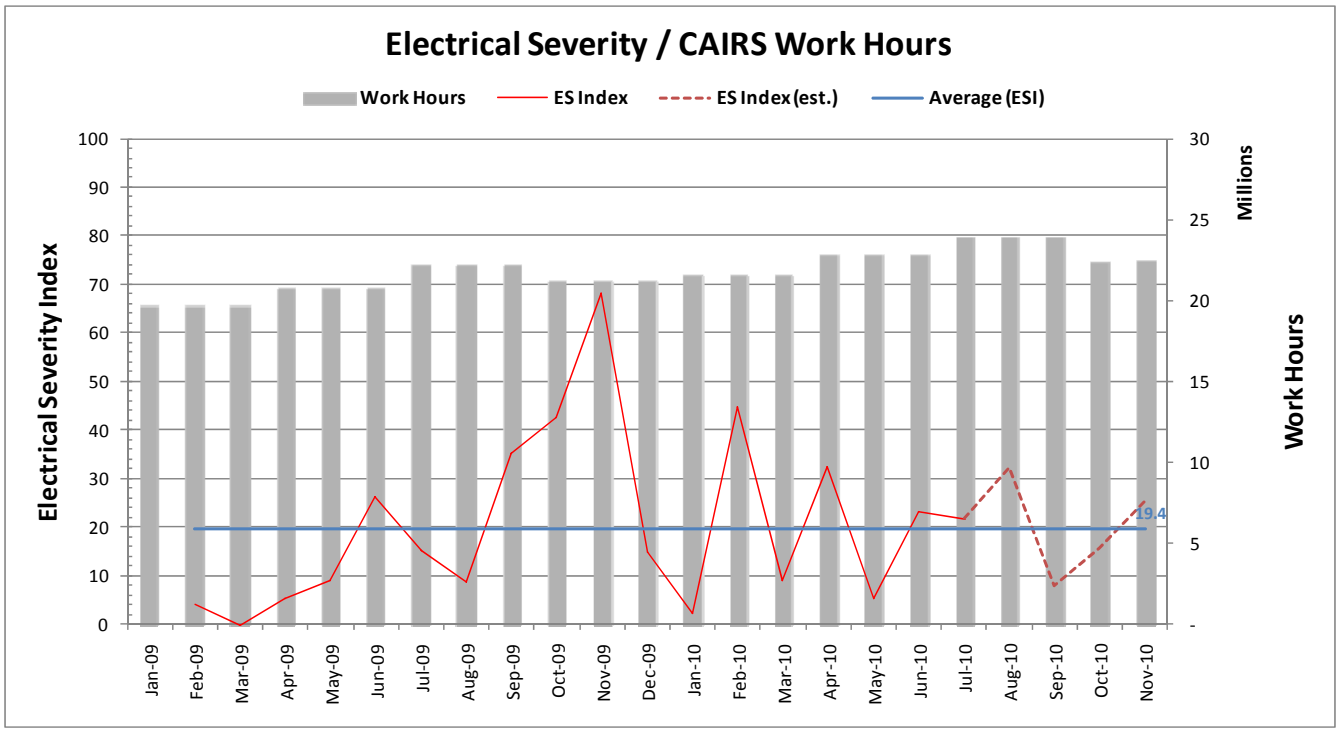
Four of the electrical events were determined to have no Electrical Severity (ES) score. The other seven events were distributed as shown below, with the highest ES score being 1100.



Number of Events with an ES Score

Electrical Severity Index

The following chart shows a calculated Electrical Severity Index (ESI) for the DOE complex.



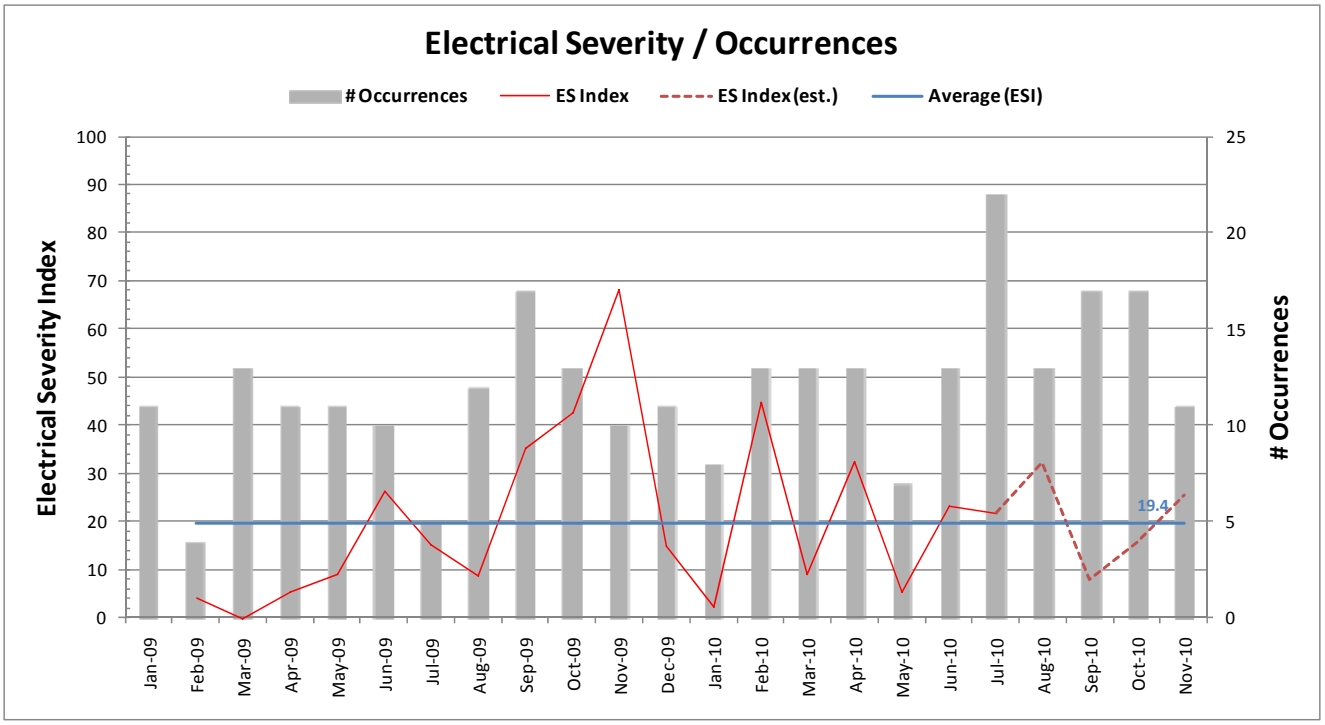
Note: An estimated ESI is calculated until accurate CAIRS man-hours are available. The chart will be updated monthly.

Category	October	November	Δ
Total Occurrences	17	11	-6
Total Electrical Severity	1,750	2,870	+1120
Estimated Work Hours	22,352,262* (22,311,575)	22,449,113	+96,851
ES Index	15.66* (15.69)	25.57	+9.91
Average ESI	19.2	19.4	+0.2

* These are estimated CAIRS work hours for October and ES Index based on the estimated hours. The estimated hours and ES Index based on the estimated hours (as reported in October) are shown below in parentheses.

Electrical Severity Index = (Σ Electrical Severity / Σ Work Hours) 200,000

The following chart shows ESI with the number of Occurrences instead of work hours.

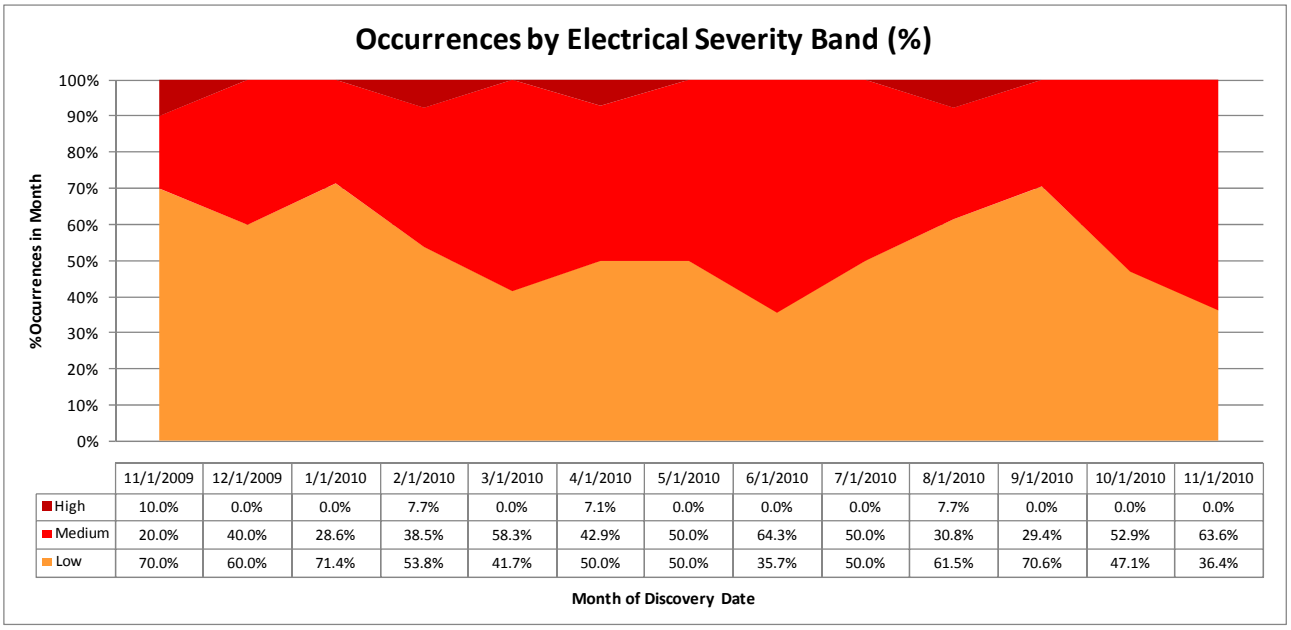


Summary of Occurrences by Severity Band

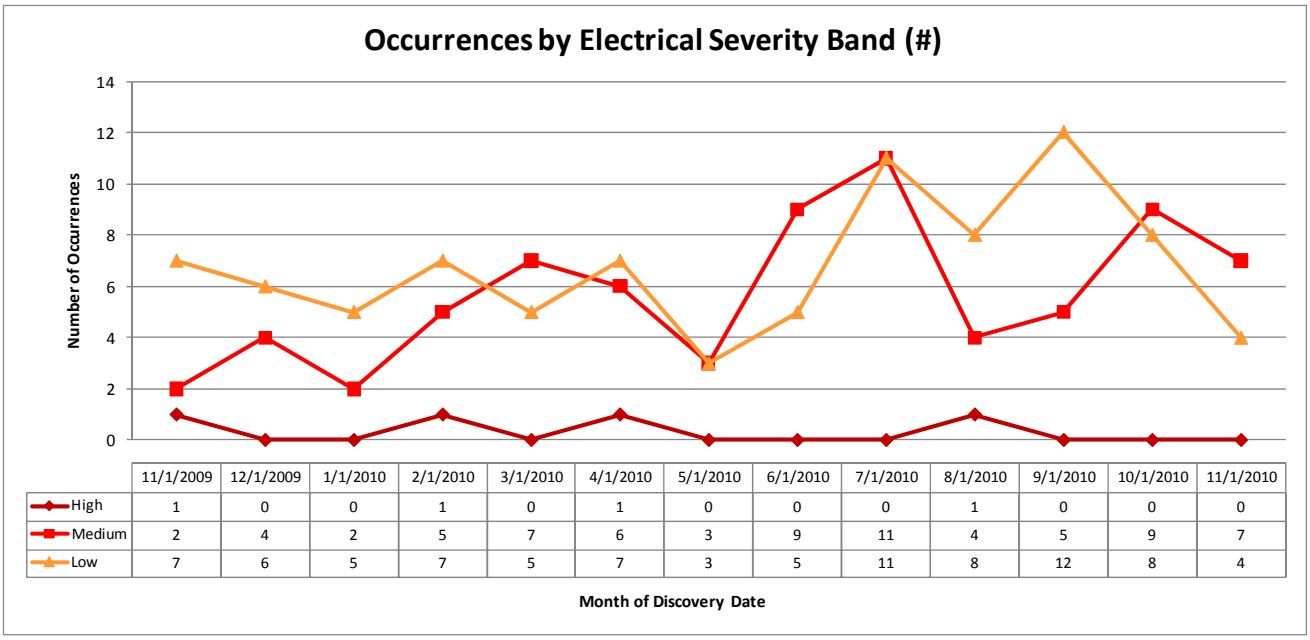
For the interval November 2009 through November 2010 (current month and the past 12), the two charts below summarize occurrences by severity band and month of discovery date:

- By percentage of total occurrences in month
- By number of occurrences in month

The key observation is that Medium severity occurrences as a group are increasing in CY2010.



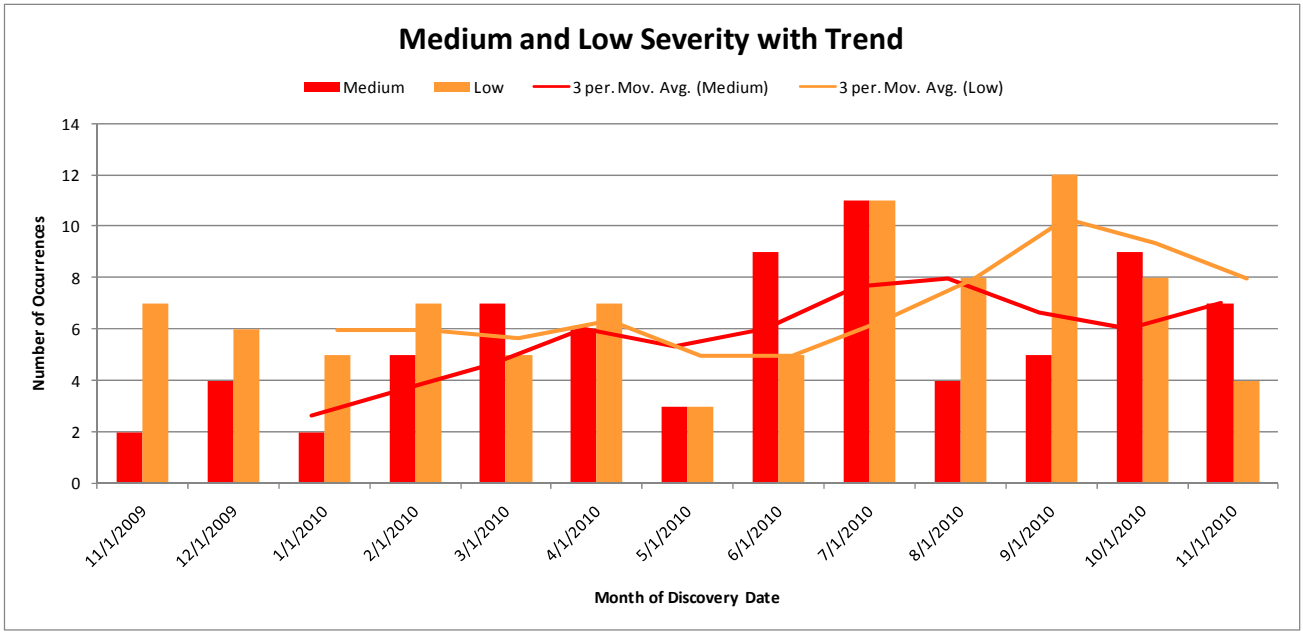
	11/1/2009	12/1/2009	1/1/2010	2/1/2010	3/1/2010	4/1/2010	5/1/2010	6/1/2010	7/1/2010	8/1/2010	9/1/2010	10/1/2010	11/1/2010
High	10.0%	0.0%	0.0%	7.7%	0.0%	7.1%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%
Medium	20.0%	40.0%	28.6%	38.5%	58.3%	42.9%	50.0%	64.3%	50.0%	30.8%	29.4%	52.9%	63.6%
Low	70.0%	60.0%	71.4%	53.8%	41.7%	50.0%	50.0%	35.7%	50.0%	61.5%	70.6%	47.1%	36.4%



	11/1/2009	12/1/2009	1/1/2010	2/1/2010	3/1/2010	4/1/2010	5/1/2010	6/1/2010	7/1/2010	8/1/2010	9/1/2010	10/1/2010	11/1/2010
High	1	0	0	1	0	1	0	0	0	1	0	0	0
Medium	2	4	2	5	7	6	3	9	11	4	5	9	7
Low	7	6	5	7	5	7	3	5	11	8	12	8	4

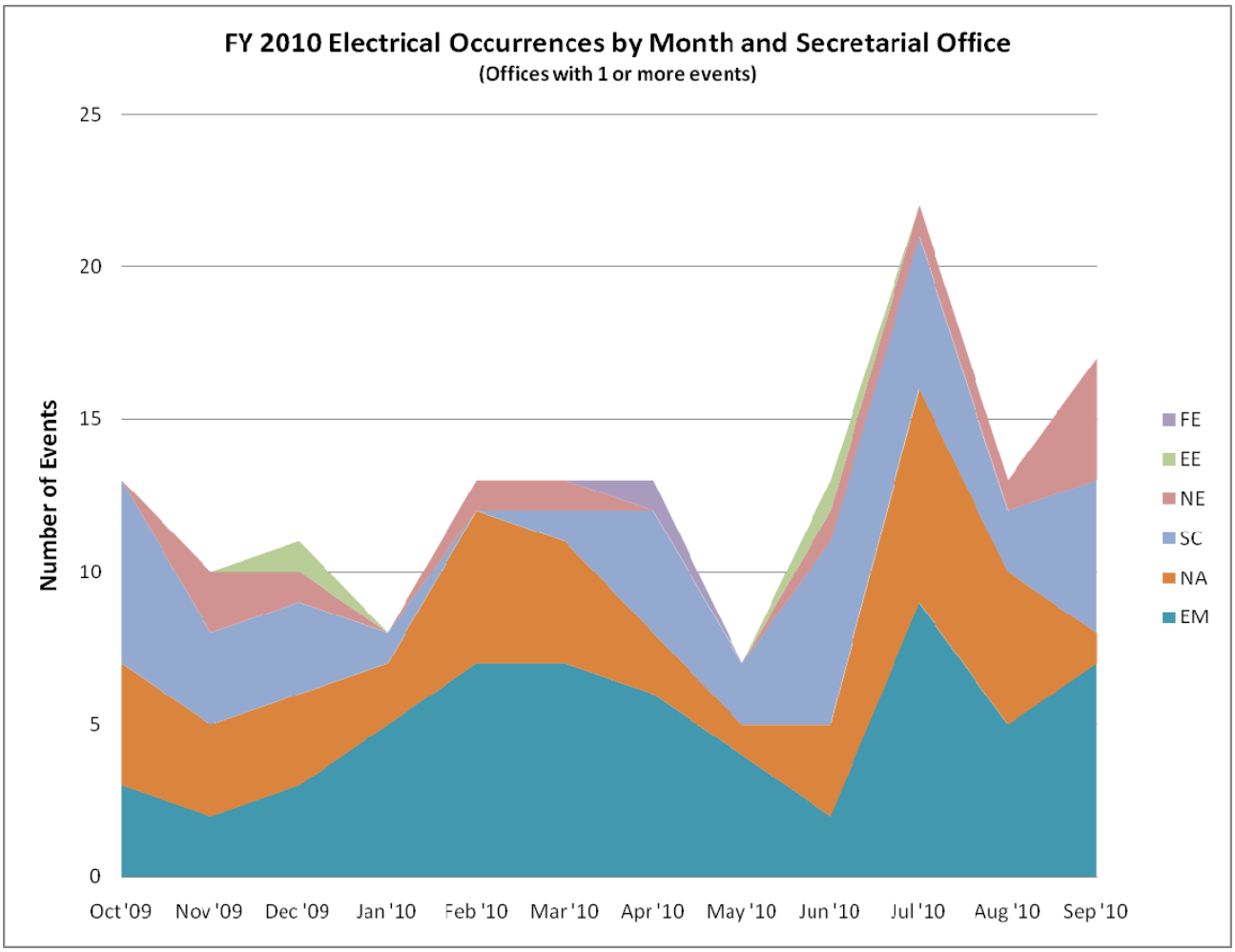
Medium and Low Severity with Trend

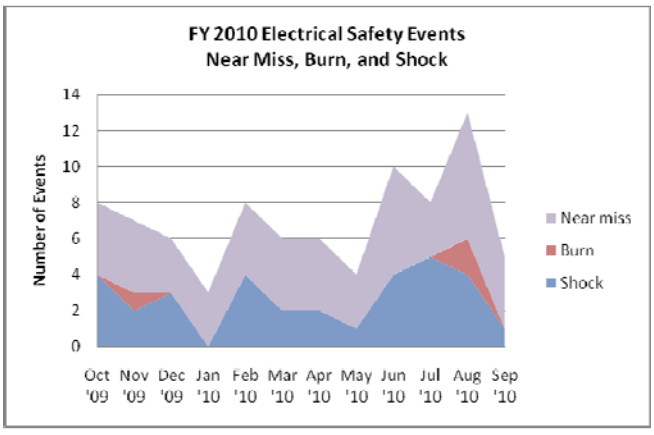
The following chart focuses on the Medium and Low severity data series for November 2009 through November 2010. Trend lines are included for each, using a 3-month moving average.

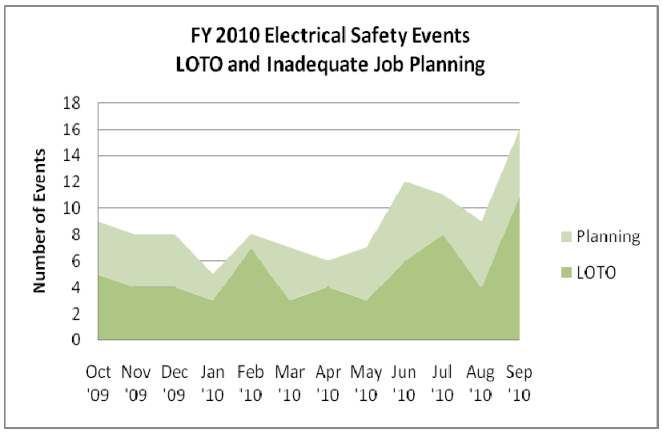


Electrical Safety Charts for FY-2010

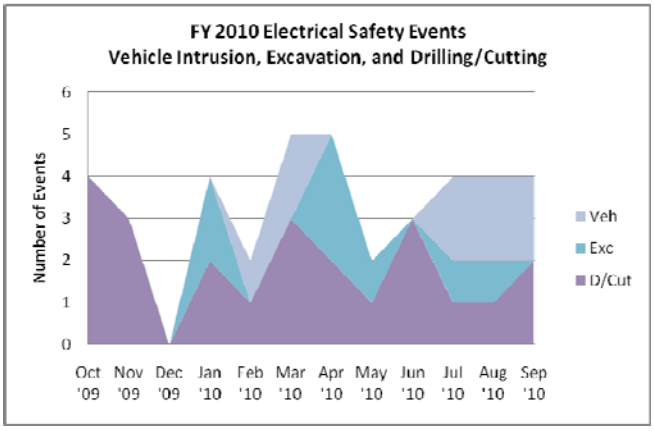
The following charts summarize electrical safety performance for the DOE Complex during the last fiscal year.

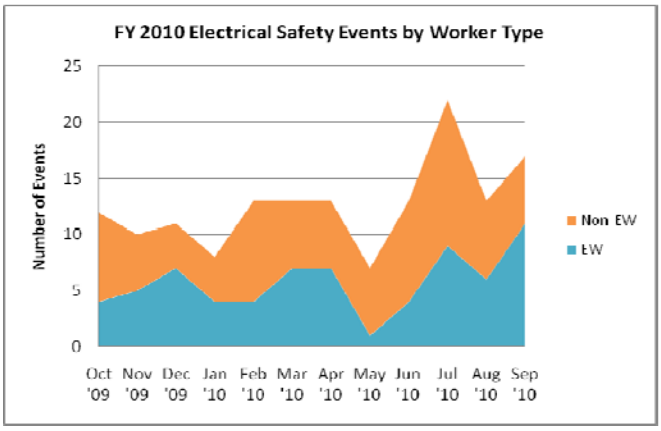




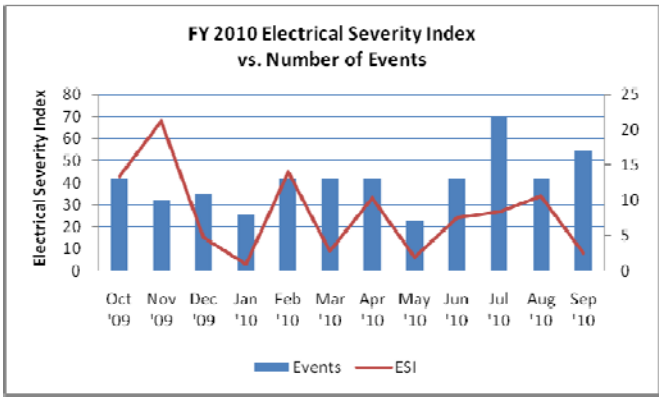


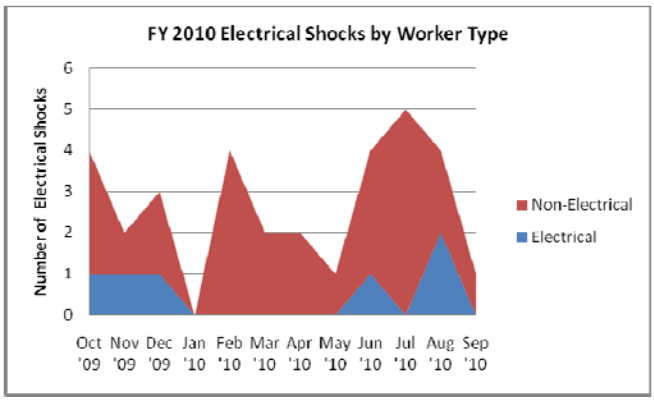
Events involving near misses, burns and electrical shocks increased towards the end of the fiscal year. Issues associated with the adequacy of job planning and hazardous energy control continued during the FY 2010 but has shown improvement in November 2010.



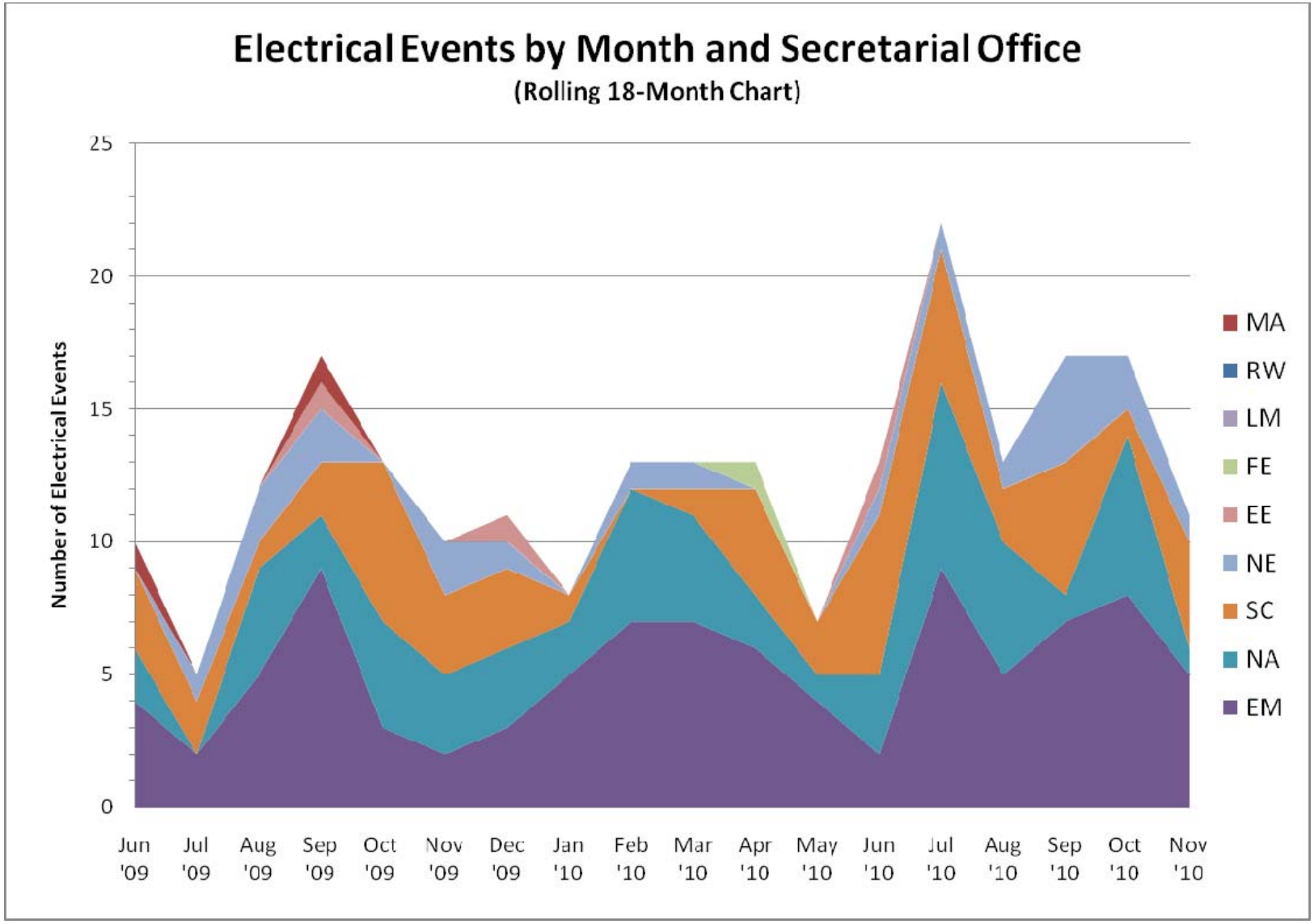


Events involving excavations or resulted in vehicle intrusions increased during the fiscal year while events involving drilling into or cutting electrical conductors decreased. Events involving electrical and non-electrical workers increased proportionally.





The trend in the number of electrical events increased during the fiscal year but the electrical severity index (ESI) decreased during the same period. The average ESI for FY 2010 was 26.3. The average ESI from June 2009 through November 2010 has decreased to 19.6. Although the trend in electrical shocks involving electrical workers decreased slight during the fiscal year, the trend for non-electrical workers continued to increase.



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 – November 2010

No	Report Number	Event Summary	SHOCK	BURN	ARCF[1]	LOTO[2]	PLAN[3]	EXCAV[4]	CUT/D[5]	VEH[6]	SC[7]	RC[8]	ES[9]
1	EM--PPPO-LKY-PGDPENVRES-2010-0006	Worker installing insulation underneath a trailer is shocked by damaged heat tracing.	X								2	2C(1)	480
2	EM-RL--CPRC-GENLAREAS-2010-0022	Subcontractor connected cables to portable generators without an eight criteria checklist in place.					X				3	2C(2)	0
3	EM-RL--CPRC-SNF-2010-0019	Maintenance was conducted within a LAB without a proper walk down.					X				3	10(2)	0
4	EM-RL--CPRC-SNF-2010-0020	Work was performed in a de-energized DC panel without a work release and lockout/tagout.				X					3	2C(2)	0
5	EM-RL--MSC-GENERAL-2010-0010	A technician steps on and damages 480-V conduit causing short circuit.									3	10(3)	100
6	NA--LASO-LANL-FIRNGHELAB-2010-0009	Unqualified worker assisted in closing door to a 480-V disconnect without proper PPE.					X				2	10(3)	550
7	NE-ID--BEA-STC-2010-0008	Worker potentially exposed to an electrical source when he opened a power panel door.									3	10(2)	200
8	SC--PNSO-PNNL-PNNLBOPER-2010-0023	Worker performed electrical work on energized 120-V terminals without the appropriate controls.				X					3	2C(2)	110
9	SC--PSO-PPPL-PPPL-2010-0004	Worker shock while removing a power cord from a power switching strip.	X								4	10(2)	330
10	SC--PSO-PPPL-PPPL-2010-0005	Violation of lockout/tagout on a Potential Transformer.				X					4	10(2)	0
11	SC--TJSO-JSA-TJNAF-2010-0010	Worker punctures conduit with a mattock. The 15-kV electrical line was not damaged.						X			4	10(3)	1100
	TOTAL		2	0	0	3	3	1	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: High is $\geq$ 1750, Medium is 31-1749, and Low is 1-30

Electrical Safety Occurrences – November 2010

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	EM--PPPO-LKY-PGDPENVRES-2010-0006	Worker installing insulation underneath a trailer is shocked by damaged heat tracing.		X		X					X			X
2	EM-RL--CPRC-GENLAREAS-2010-0022	Subcontractor connected cables to portable generators without an eight criteria checklist in place.	X		X		X				X			
3	EM-RL--CPRC-SNF-2010-0019	Maintenance was conducted within a LAB without a proper walk down.		X			X		X		X			
4	EM-RL--CPRC-SNF-2010-0020	Work was performed in a de-energized DC panel without a work release and lockout/tagout.	X		X	X					X			
5	EM-RL--MSC-GENERAL-2010-0010	A technician steps on and damages 480-V conduit causing short circuit.	X		X	X					X			X
6	NA--LASO-LANL-FIRNGHELAB-2010-0009	Unqualified worker assisted in closing door to a 480-V disconnect without proper PPE.		X			X	X	X		X			X
7	NE-ID--BEA-STC-2010-0008	Worker potentially exposed to an electrical source when he opened a power panel door.		X	X		X	X	X		X			
8	SC--PNSO-PNNL-PNNLBOPER-2010-0023	Worker performed electrical work on energized 120-V terminals without the appropriate controls.	X				X		X		X			
9	SC--PSO-PPPL-PPPL-2010-0004	Worker shock while removing a power cord from a power switching strip.		X		X					X			
10	SC--PSO-PPPL-PPPL-2010-0005	Violation of lockout/tagout on a Potential Transformer.	X		X		X				X			
11	SC--TJSO-JSA-TJNAF-2010-0010	Worker punctures conduit with a mattock. The 15-kV electrical line was not damaged.		X	X	X				X				X
	TOTAL		5	6	6	5	6	2	4	1	10	0	0	4

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

ORPS contains 54958 OR(s) with 58268 occurrences(s) as of 12/8/2010 2:27:15 PM
Query selected 11 OR(s) with 11 occurrences(s) as of 12/8/2010 2:27:38 PM

Download this report in Microsoft Word format.

1)Report Number:	EM--PPPO-LKY-PGDPENVRES-2010-0006 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Paducah Gaseous Diffusion Plant
Facility Name:	Environmental Restoration
Subject/Title:	Minor Electrical Shock During Winterization Activities
Date/Time Discovered:	11/22/2010 14:00 (ETZ)
Date/Time Categorized:	11/23/2010 09:40 (ETZ)
Report Type:	Notification
Report Dates:	Notification: 11/24/2010 11:49 (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:	2) Analyze the Hazards 3) Develop and Implement Hazard Controls
Subcontractor Involved:	No
Occurrence Description:	On November 22, 2010, at approximately 1300 hours local time, workers were performing winterization activities that included installing insulation underneath a shower trailer. One worker was fitting a piece of insulation near a pipe and felt a noticeable shock and saw the flash of an electrical arc. The workers immediately suspended their activities and notified a supervisor of the incident. In addition to feeling the shock, the worker also sustained a blackened area on the skin at the point of contact but did not report any other effects. A supervisor transported the worker to the occupational medical provider for evaluation. A Safety and Health representative was contacted and other notifications were made as required. The worker was evaluated by the occupational medical provider and released without treatment or restrictions.

A primary mission of the Paducah Environmental Remediation Project is demolition of out of service process facilities. Site personnel occupy a number of trailers that function as offices, change or shower rooms, and break areas. Plumbing fixtures in the trailers are protected from freeze damage with electrical heat trace tape that in most cases is installed by the manufacturer. Examination of the area where the shock occurred revealed that the heat trace for the piping had been severed and bare wiring from the heat trace was exposed. The electrical service to the trailer was disconnected and the heat trace placed in a safe configuration. A fact finding meeting was scheduled for 0700 hours local time on November 23, 2010.

The fact finding included personnel from both the Site Operations Surveillance and Maintenance (S&M) group and the Decontamination and Decommissioning (D&D) project and focused on recent winterization activities that had taken place at the shower trailer. Approximately one week prior to this incident, a worker from S&M had inspected the trailer in preparation to perform winterization activities. The inspection identified the damaged heat trace. While this type of maintenance is normally performed by the S&M group, the shower trailer is positioned in a manner that only personnel with authorization to enter the C-340 facility can access the trailer electrical disconnect. Since the D&D project personnel have the authorization to enter the facility and control the electrical disconnect to the trailer, the task of repairing the heat trace was assigned to D&D.

While preparing to repair the heat trace, D&D personnel unplugged the heat trace lines from the electrical receptacles located underneath the trailer and verified a zero energy check. D&D personnel could not complete the repair to the heat trace due to a lack of correct materials. The damaged heat trace was left unrepaired but without a defective equipment tag based on the assumption that as long as it was unplugged there was no hazard. However, at the time the work and zero energy check was being performed, electrical service to the entire trailer had been disconnected to work on other systems. The disconnection of service to the trailer would have resulted in a zero energy check for all trailer systems.

After the incident, a check of the damaged heat trace line indicated that it was energized even though it was unplugged. Further investigation found that there were three sources of electrical power to the heat trace lines; two sources were electrical receptacles under the trailer and the third was a direct connection to a breaker. When power was restored to the rest of the trailer, the damaged heat trace was energized.

The S&M personnel that arrived on November 22, to install insulation did

	not include the individual that identified the damaged heat trace line. They were unaware of the reported damage and subsequent delay in repair of the heat trace line. The workers involved in this incident had been performing similar insulation installation activities at other trailers on site and proceeded according to authorized work controls. It is an accepted site practice to work in proximity to energized heat trace lines which are considered to be a closed system. This incident was initially categorized as a Group 10 Near Miss (3) Significance Category (SC) 3 at approximately 1440 hours on November 22, 2010; however, when the incident was fully understood at the fact finding meeting the incident was recategorized as a Group 2, Subgroup C, Hazardous Energy Control (1) SC 2 event. The discovery date and time reflects the actual time of the incident and the categorization date and time reflect the recategorization of the incident at the conclusion of the fact finding meeting. The Electrical Severity Measurement Tool was used by the Electrical Safety Chairman to calculate the Electrical Severity of the incident at the Medium Range value of 480.
Cause Description:	
Operating Conditions:	Does not apply.
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	The worker that received the shock was sent to the occupational medical provider for evaluation and was released without treatment or restrictions. The affected trailer was placed in a safe configuration and barricaded with caution tape. Alternate freeze protection mitigation was implemented where needed in preparation for expected freezing temperatures through the long holiday weekend.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: Barbara Owens By When: 01/05/2011
Division or Project:	Paducah Environmental Remediation Project
Plant Area:	C-340
System/Building/Equipment:	C-340 Asbestos Shower Trailer
Facility Function:	Environmental Restoration Operations

Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	07D--Electrical Systems - Electrical Wiring 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12E--EH Categories - Equipment Degradation/Failure 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On November 22, 2010, workers were installing insulation underneath a shower trailer for winter, when one of the workers felt a noticeable shock and saw the flash of an electrical arc while fitting a piece of insulation near a pipe. The worker also sustained a blackened area on the skin at the point of contact but did not report any other effects. The workers immediately stopped work and notified a supervisor of the incident. The supervisor transported the worker to the occupational medical provider where the worker was evaluated and released without treatment or restrictions. Examination of the area where the shock occurred revealed that the heat trace for the piping had been severed and bare wiring from the heat trace was exposed. The electrical service to the trailer was disconnected and the heat trace was placed in a safe configuration. A fact finding meeting was scheduled.
Similar OR Report Number:	
Facility Manager:	Name: Bill Franz Phone: (270) 441-5902 Title: Project Integration and Operations Manager
Originator:	Name: Freels, Jennie P Phone: (270) 462-4575 Title: QA SUPPORT & PROGRAMS MANAGER
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	11/23/2010 09:40 (ETZ) Mike Auble LATA 11/23/2010 09:40 (ETZ) Barbara Owens LATA 11/23/2010 09:40 (ETZ) Don Dihel DOE 11/23/2010 09:40 (ETZ) Eddie Windhorst LATA
Authorized Classifier(AC):	Tony Hudson Date: 11/23/2010

2)Report Number:	EM-RL--CPRC-GENLAREAS-2010-0022 **After 2003 Redesign**
Secretarial Office:	Environmental Management

Lab/Site/Org:	Hanford Site
Facility Name:	Plateau Remediation General Facilities
Subject/Title:	Portable Generator connections initiated outside work package instruction at 200E (ARRA)
Date/Time Discovered:	11/03/2010 16:00 (PTZ)
Date/Time Categorized:	11/04/2010 11:15 (PTZ)
Report Type:	Notification
Report Dates:	Notification 11/08/2010 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:	
Subcontractor Involved:	Yes Sun River Electrical, Total Site Service
Occurrence Description:	On 11/3/2010, at approximately 1600 hours, near the EPC-2 building at the 200 East unsecured core area, it was discovered that a subcontractor initiated connection of cables to two portable generators without having an eight criteria (Lock and Tag) checklist in place, in accordance with work package instruction. The electrician had performed zero energy checks and hung his Authorized Worker Lock prior to performing the connections. At no time during this evolution were the generators or cables energized or planned to be energized. Management did not initially determine this as a reportable incident; however, during the event investigation it was determined that the eight criteria checklist was not in place and the incident did meet criteria of a reportable event.
Cause Description:	
Operating Conditions:	Does not apply
Activity Category:	Construction
Immediate Action(s):	- Work was stopped - Do not operate tags were hung on the two generators

	- An investigation was initiated.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: CHPRC By When:
Division or Project:	Central Plateau Remediation Project, EPC
Plant Area:	200 East
System/Building/Equipment:	200 East Unsecured Core Area, EPC-2 Building
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 13H--Management Concerns - American Recovery and Reinvestment Act (ARRA) 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On November 3, 2010, near the EPC-2 building at the 200 East unsecured core area, it was discovered that a subcontractor initiated connection of cables to two portable generators without having an eight criteria (Lock and Tag) checklist in place, in accordance with work package instruction. The electrician had performed zero energy checks and had hung his Authorized Worker Lock before making the connections. At no time during this evolution were the generators or cables energized or planned to be energized. The work was stopped and “do not operate” tags were hung on the two generators. An investigation was initiated.
Similar OR Report Number:	
Facility Manager:	Name: Richard G. Peck Phone: (509) 376-5752 Title: Project Manager
Originator:	Name: TODD, MICHAEL J Phone: (509) 372-9341

	Title: AUTHORITATIVE SOURCE
HQ OC Notification:	

Date	Time	Person Notified	Organization
NA	NA	NA	NA

Other Notifications:

Date	Time	Person Notified	Organization
11/04/2010	11:15 (PTZ)	Richard Peck	CHPRC
11/04/2010	11:16 (PTZ)	Kent Dorr	CHPRC
11/04/2010	11:28 (PTZ)	Brian Biro	DOE-RL

Authorized Classifier(AC):

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3)Report Number:	EM-RL--CPRC-SNF-2010-0019 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	Spent Nuclear Fuels Project
Subject/Title:	Work Conducted Under Overhead Power Line Without Proper Walk Down at 100K Area
Date/Time Discovered:	11/10/2010 15:47 (PTZ)
Date/Time Categorized:	11/10/2010 15:47 (PTZ)
Report Type:	Update
Report Dates:	

Notification	11/11/2010	19:36 (ETZ)
Initial Update	11/17/2010	16:26 (ETZ)
Latest Update	11/17/2010	16:26 (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:	2) Analyze the Hazards
Subcontractor Involved:	No
Occurrence Description:	On 11/10/10, during performance of a 100K Area maintenance activity to move jersey barriers across a roadway, it was not communicated or recognized that the activity would be performed under an overhead power line. As a result, proper controls were not established to perform the work.

	A generic Stop Work was issued for work under overhead electrical lines for all of 100K Area. Proper notifications have been made and a critique meeting was conducted.
Cause Description:	
Operating Conditions:	Normal operations.
Activity Category:	Maintenance
Immediate Action(s):	1. Work was stopped. 2. 100K Area Safety Representative was notified. 3. 100K Area Safety Representative notified Field Work Supervisor (FWS). 4. FWS notified K West Shift Office. 5. FWS and 100K Area Safety Representative responded to work location and began initial investigation. 6. 100K Area Safety Representative contacted K West Shift Office and requeted that specific Stop Work notification be made. 7. K West Shift Office issued Stop Work notification. 8. A critique was scheduled and conducted. 9. The event was categorized as a Management Concern and appropriate notifications made.
FM Evaluation:	Immediate actions taken were timely and appropriate. The work site is in a safe configuration. No injury resulted from the event and the piece of equipment used to move the jersey barriers did not come near or contact the overhead lines. Facility management will evaluate the corrective actions which need to be in place before the Stop Work is lifted.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: facility management By When: 11/30/2010
Division or Project:	CHPRC/100K Area
Plant Area:	100K Area
System/Building/Equipment:	jersey barriers at 100K Area
Facility Function:	Nuclear Waste Operations/Disposal
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01E--Inadequate Conduct of Operations - Operations Procedure Noncompliance 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other)

	08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12B--EH Categories - Conduct of Operations 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On November 10, 2010, a maintenance activity within a Limited Approach Boundary (LAB) was conducted without a proper walk down. The field work supervisor and individuals on the work crew did not perform a walk down to determine the LAB when moving jersey barriers into a position under an adjacent power line. A generic Stop Work was issued for work under overhead electrical lines for all of the 100K Area. Proper notifications were made and a critique was conducted to fully investigate the event.
Similar OR Report Number:	
Facility Manager:	Name: R. K. Nissen Phone: (509) 373-4547 Title: Manager, K West Facility
Originator:	Name: FEIL, RHONDA K Phone: (509) 373-4551 Title: ADMINISTRATIVE SPECIALIST
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/10/2010; Time: 15:52 (PTZ); Person Notified: L.D. Earley; Organization: RL/OOD
Authorized Classifier(AC):	

4)Report Number:	EM-RL--CPRC-SNF-2010-0020 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	Spent Nuclear Fuels Project
Subject/Title:	Hazardous Energy Control Concern in A-9 Switchyard at 100K Area
Date/Time Discovered:	11/11/2010 11:00 (PTZ)
Date/Time Categorized:	11/11/2010 12:45 (PTZ)
Report Type:	Notification
Report Dates:	Notification: 11/15/2010 20:14 (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:	Yes RAI subcontracted through CHRPC EPC
Occurrence Description:	On 11/11/10, the D&D Project became aware of a potential work control/hazardous energy control concern that occurred in the 100K Area A-9 Switchyard on 11/10/10. Work was performed in a DC panel that had been de-energized (e.g., two supply breakers set to OFF/OPEN) without work release and without application of Lockout/Tagout. D&D Project management determined that the condition was reportable and a critique was conducted on 11/11/10. A Stop Work was declared on all subcontracted electrical work through the CHPRC D&D Project.
Cause Description:	
Operating Conditions:	Routine work
Activity Category:	Construction
Immediate Action(s):	1. Management conducted a field walk-down to determine the extent of the hazardous energy control concern. 2. A verbal Stop Work was issued until additional investigations were completed. 3. A critique was scheduled for 1330 Hours. 4. The event was categorized as reportable and appropriate notifications were made. 5. A Stop Work was issued on all subcontractor electrical work.
FM Evaluation:	The work location was verified to be in a safe condition. No personnel injury resulted from this event. Immediate actions were timely and appropriate and resulted in issuance of a Stop Work on subcontractor electrical work to allow a full analysis of the event.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? Yes By Whom: Facility Management/EU By When: 11/30/2010
Division or Project:	CHPRC/100K Area

Plant Area:	CHPRC/100K Area
System/Building/Equipment:	De-energized Panel in A9 Electrical Switchyard
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 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 November 11, 2010, D&D Project management became aware of a potential work control/hazardous energy control concern that occurred in the 100K Area A-9 Switchyard on November 10. A subcontractor had performed work in a DC panel that had been de-energized (i.e., two supply breakers set to OFF/OPEN) without a work release and without application of a lockout/tagout. D&D Project management determined that the condition was reportable and a critique was conducted on November 11. The work location was verified to be in a safe condition. No personnel injury resulted from this event. A Stop Work was issued on subcontractor electrical work to allow a full analysis of the event.
Similar OR Report Number:	
Facility Manager:	Name: R. K. Nissen Phone: (509) 373-4547 Title: Manager, K West Facility
Originator:	Name: FEIL, RHONDA K Phone: (509) 373-4551 Title: ADMINISTRATIVE SPECIALIST
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/11/2010; Time: 13:45 (PTZ); Person Notified: D.H. Splett; Organization: RL/OOD
Authorized Classifier(AC):	

5)Report Number:	EM-RL--MSC-GENERAL-2010-0010 **After 2003 Redesign**
Secretarial Office:	Environmental Management
Lab/Site/Org:	Hanford Site
Facility Name:	General

Subject/Title:	1200 Jadwin Electrical Event
Date/Time Discovered:	11/11/2010 11:30 (PTZ)
Date/Time Categorized:	11/11/2010 13:15 (PTZ)
Report Type:	Notification
Report Dates:	Notification 11/16/2010 13:12 (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:	Yes APEX
Occurrence Description:	An APEX telephone technician was working on the sixth floor in the utility room of 1200 Jadwin, which contains phone, LAN and electrical distribution systems. While working around a floor mounted 480 V/208V transformer, the employee stepped on the 480V primary supply conduit entering the transformer's base. Since the conduit was 6 inches above the floor and had minimal wall support, it separated from the transformer base, allowing the relatively sharp end of the conduit to cut through the 480 volt wiring insulation and cause a short circuit, which tripped the supply breaker. Damage to the wires was noted. Two individuals that were present in the room were not injured. The two individuals were working in a government leased facility. The area where the individuals were working was a common area controlled by the building owner who is a non-government entity.
Cause Description:	
Operating Conditions:	Does not apply
Activity Category:	Maintenance
Immediate Action(s):	1. Secured the area 2. Area was cordoned off with yellow hazard tape 3. Fluor Government Group notified Lockheed Martin management of incident

	4. Interviewed affected employee and assessed individual for injuries 5. Building owner made request and circuit was repaired 6. Power restored to the affected area within several hours of the event
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:	Government Leased Facility
Plant Area:	RCHN
System/Building/Equipment:	Electrical/1200 Jadwin/480v Transformer and conduit
Facility Function:	Balance-of-Plant - Machine shops
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	07D--Electrical Systems - Electrical Wiring 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 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On November 11, 2010, an APEX telephone technician stepped on a 480-volt conduit, which broke the conduit, causing the sharp edge of the conduit to cut the insulation of the wiring inside the conduit. This resulted in a short circuit that tripped the supply circuit breaker. The technician was working on the sixth floor utility room of 1200 Jadwin, which contains phone, LAN, and electrical distribution systems. The technician was working around a floor mounted 480-volt/208-volt transformer; the conduit was 6 inches above the floor and had minimal wall support. When the conduit was stepped on, it separated from the transformer base and cut through the wiring insulation. Damage to the wires was noted. Two individuals that were present in the room were not injured. The individuals were working was a common area in a government-leased private building. The area was secured and cordoned off with yellow hazard tape. Management notifications were made. The technician was interviewed as part of the event investigation process. The circuit was repaired and power restored to the affected area within several hours of the event.

Similar OR Report Number:	
Facility Manager:	Name: TS Eckman Phone: (509) 376-2696 Title: LMSI Deputy Director
Originator:	Name: CRARY, NEWELL L Phone: (509) 376-3030 Title: OCCURRENCE NOTIF. CTR. DUTY OFFICER
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	11/11/2010 13:00 (PTZ) M Irwin DOE-RL 11/11/2010 13:43 (PTZ) L Earley DOE-RL 11/11/2010 14:30 (PTZ) C Ashley DOE-RL 11/11/2010 15:32 (PTZ) R Hastings DOE-RL
Authorized Classifier(AC):	

6)Report Number:	NA--LASO-LANL-FIRNGHELAB-2010-0009 **After 2003 Redesign**
Secretarial Office:	National Nuclear Security Administration
Lab/Site/Org:	Los Alamos National Laboratory
Facility Name:	Firing Sites and HE Lab.
Subject/Title:	Unqualified Worker Without Proper PPE Enters Restricted Approach Boundary Near Live 480V Disconnect
Date/Time Discovered:	11/02/2010 13:00 (MTZ)
Date/Time Categorized:	11/08/2010 11:00 (MTZ)
Report Type:	Notification
Report Dates:	Notification: 11/09/2010 20:03 (ETZ) Initial Update Latest Update 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:	
Subcontractor Involved:	No
Occurrence Description:	Management Synopsis: At approximately 1400 on 10/29/2010, at TA-15-285, a worker who was not a qualified electrical worker and did not have proper PPE assisted an electrician in closing the door to a 480 volt disconnect. This placed the worker within the National Fire Protection Associations 70E Arc Flash Boundary. This event is being reported as a near miss to a person contacting hazardous energy. A number of work control and procedural compliance issues were identified during the critique. These concerns included: the use of a generic work control document (IWD), failure to evaluate when work conditions changed and the work needed to be re-evaluated, and lack of a two person rule implementation for energized electrical work. Background: On 10/29/2010, preventive maintenance work was being performed inside TA-15-285. Details of the event, including the event sequence and involved workers, have not yet been fully determined. What has been established is that work on a 480V disconnect, related to crane maintenance, was being performed. During the work evolution one employee who did not meet the training requirements broke the approach distance without proper PPE.
Cause Description:	
Operating Conditions:	Normal
Activity Category:	Maintenance
Immediate Action(s):	- Upon discovery of the event, the FOD began immediate investigation.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: WFO and CAO-PF By When: 12/23/2010
Division or Project:	Weapons Facility Operations
Plant Area:	TA-15-285
System/Building/Equipment:	Crane Disconnect
Facility Function:	Balance-of-Plant - Machine shops

Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01F--Inadequate Conduct of Operations - Training Deficiency 01M--Inadequate Conduct of Operations - Inadequate Job Planning (Electrical) 01O--Inadequate Conduct of Operations - Inadequate Maintenance 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 12K--EH Categories - Near Miss (Could have been a serious injury or fatality) 14B--Quality Assurance - Training and Qualification Deficiency 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On October 29, 2010, a worker, who was not a qualified electrical worker and did not have proper PPE, assisted an electrician in closing the door to a 480-volt disconnect. This placed the worker within the National Fire Protection Associations 70E Arc Flash Boundary. Preventive maintenance was being performed on the electrical disconnect related to crane maintenance. This event is being reported as a near miss to a person contacting hazardous energy. A number of work control and procedural compliance issues were identified during the critique. These concerns included: the use of a generic work control document, failure to evaluate when work conditions changed and the work needed to be re-evaluated, and lack of a two person rule implementation for energized electrical work. An investigation was begun.
Similar OR Report Number:	
Facility Manager:	Name: Raeanna Sharp-Geiger Phone: (505) 667-4246 Title: Facility Operations Director
Originator:	Name: KIRSCH, MICHELLE M Phone: (505) 665-8146 Title: OCCURRENCE INVESTIGATOR
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/03/2010; Time: 14:56 (MTZ); Person Notified: David Stewart; Organization: NNSA
Authorized Classifier(AC):	Michelle Kirsch Date: 11/09/2010

7)Report Number:	NE-ID--BEA-STC-2010-0008 **After 2003 Redesign**
Secretarial Office:	Nuclear Energy, Science and Technology
Lab/Site/Org:	Idaho National Laboratory

Facility Name:	Science and Technology Campus
Subject/Title:	Service Vendor Potentially Exposed to Energy Source - REC - INL
Date/Time Discovered:	11/12/2010 09:10 (MTZ)
Date/Time Categorized:	11/12/2010 11:00 (MTZ)
Report Type:	Notification
Report Dates:	Notification 11/15/2010 17:05 (ETZ) Initial Update Latest Update Final
Significance Category:	3
Reporting Criteria:	10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	
ISM:	
Subcontractor Involved:	Yes Power Engineering Company
Occurrence Description:	On November 12, 2010 at the Idaho National Laboratory (INL) Research and Education Complex (REC) in Idaho Research Center (IRC) 603 at approximately 0830 hours a vendor was collecting water samples per an approved statement of work SOW-3449. The vendor tried to collect the water sample from pump 13 and discovered it was not running. The Vendor went to the motor control panel and discovered the indicator light was not illuminated. He cycled the supply switch on the panel and the light still did not illuminate. The Vendor pulled the disconnect handle in another attempt to get the pump to start with no results. He then opened the pump power panel door using the flat edge of his pocket knife. An INL pipefitter in the area immediately stopped the Vendor and instructed him not to proceed. The pipefitter notified the Facility Project Manager of the situation and requested support in placing the panel back into a safe configuration using a qualified INL electrician. An initial investigation concluded the conductors inside the panel were not energized and a Lockout/Tagout would not have been required to open the panel door. There were no injuries as a result of this incident. Further investigation will continue.

Cause Description:	
Operating Conditions:	Normal
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)
Immediate Action(s):	Work was immediately stopped by a nearby worker. Management was notified of the incident at 0910. DOE-ID notified of the incident and categorized at 1100. A critique of the event was conducted on 11/15/2010 at 0900. The INL Pipefitter was commended for his action in stopping this work.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: INL Management By When:
Division or Project:	Facility Management
Plant Area:	IRC
System/Building/Equipment:	Pump 13 and MCC 1 IRC
Facility Function:	Balance of Plant - Infrastructure (Other Functions not specifically listed in this Category)
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	11G--Other - Subcontractor 12C--EH Categories - Electrical Safety 14E--Quality Assurance - Work Process Deficiency 14G--Quality Assurance - Procurement Deficiency
HQ Summary:	On November 12, 2010, at the Idaho National Laboratory (INL) Research and Education Complex in Idaho Research Center 603, a vendor collecting water samples was potentially exposed to an electrical source. The vendor was working under an approved statement of work. The vendor tried to collect the water sample from pump 13 and discovered that it was not running. The vendor went to the motor control panel and discovered that the indicator light was not illuminated. He cycled the supply switch on the panel and the light still did not illuminate. The vendor pulled the disconnect handle in another attempt to get the pump to start with no results. He then opened the pump power panel door using the flat edge of

	his pocket knife. An INL pipefitter in the area immediately stopped the vendor and instructed him not to proceed. The pipefitter notified the Facility Project Manager of the situation and requested support in placing the panel back into a safe configuration using a qualified INL electrician. An initial investigation concluded the conductors inside the panel were not energized and a lockout/tagout would not have been required to open the panel door. There were no injuries as a result of this incident. Management notifications were made. An event critique was conducted on November 15. The INL pipefitter was commended for his action in stopping this work. Further investigation is underway.
Similar OR Report Number:	
Facility Manager:	Name: LINDBERG, STEVEN Phone: (208) 526-4007 Title: REC FACILITY COMPLEX MANAGER
Originator:	Name: LINDBERG, STEVEN Phone: (208) 526-4007 Title: OPERATIONS MANAGER
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	11/12/2010 10:55 (MTZ) Jim Geringer DOE-ID 11/12/2010 11:00 (MTZ) Mike Goriup DOE-ID
Authorized Classifier(AC):	Jeffrey L. Garner Date: 11/15/2010

8)Report Number:	SC--PNSO-PNNL-PNNLBOPER-2010-0023 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Pacific Northwest National Laboratory
Facility Name:	Energy Research Programs (PNNL)
Subject/Title:	Electrical Diagnostic and Testing Performed Without Appropriate Controls
Date/Time Discovered:	11/15/2010 13:00 (PTZ)
Date/Time Categorized:	11/19/2010 16:43 (PTZ)
Report Type:	Notification
Report Dates:	Notification: 11/23/2010 13:48 (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.
Cause Codes:	
ISM:	4) Perform Work Within Controls
Subcontractor Involved:	No
Occurrence Description:	On November 15, 2010, a staff member working in Oman (Southwest Asia) received a 24 volt DC shock while performing work on a control panel. The staff member reported the event to the PNNL Operations Center on November 19, 2010 and the event was categorized as non-reportable based on the reported voltage. Upon further investigation, it was learned that the staff member also performed electrical work on energized 120V terminals without the appropriate controls which is not in compliance with PNNLs Hazardous Energy Control Program. There were no injuries associated with this event. The event was re-categorized as an 2C(2), SC-3 reportable occurrence at 1643 hours.
Cause Description:	
Operating Conditions:	Dry
Activity Category:	Facility/System/Equipment Testing
Immediate Action(s):	A critique was held Monday, November 22, 2010.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	Yes. Before Further Operation? No By Whom: By When:
Division or Project:	National Security Directorate
Plant Area:	Offsite
System/Building/Equipment:	Oman
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) 08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 08H--OSHA Reportable/Industrial Hygiene - Safety Noncompliance 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On November 15, 2010, a staff member working in Oman (Southwest Asia) received a 24-volt DC shock while performing work on a control panel. The staff member reported the event to the PNNL Operations Center on November 19, and the event was categorized as non-reportable based on the reported voltage. Upon further investigation, it was learned that the staff member also performed electrical work on energized 120-volt terminals without the appropriate controls, which is not in compliance with the PNNL Hazardous Energy Control Program. There were no injuries associated with this event. The event was re-categorized as a reportable occurrence. A critique was held on November 22.
Similar OR Report Number:	
Facility Manager:	Name: Freier, K. D. Phone: (509) 375-6744 Title: Manager, Nonproliferation Systems Integration
Originator:	Name: POLLARI, ROGER A Phone: (509) 371-7700 Title:
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/19/2010; Time: 16:43 (PTZ); Person Notified: Carlson, J. L.; Organization: PNSO
Authorized Classifier(AC):	Pollari, R. A. Date: 11/19/2010

9)Report Number:	SC--PSO-PPPL-PPPL-2010-0004 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Princeton Plasma Physics Laboratory
Facility Name:	Princeton Plasma Physics Lab. (BOP)
Subject/Title:	Electrical Safety Management Concern-Power Strip Shock
Date/Time Discovered:	11/17/2010 15:30 (ETZ)
Date/Time Categorized:	11/29/2010 14:00 (ETZ)
Report Type:	Notification/Final
Report Dates:	Notification: 11/30/2010 16:13 (ETZ) Initial Update: 11/30/2010 16:13 (ETZ)

	Latest Update	11/30/2010	16:13 (ETZ)
	Final	11/30/2010	16:13 (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:	No		
Occurrence Description:	In the Princeton Plasma Physics Laboratory’s Computer Center (PPLCC) new power switching "strips" have been installed which are supplied with power from two sources. One power line is connected to UPS power the other to house power. The strip allows all connected computers to run on either or both power sources (i.e. on either UPS or house power or both). This configuration allows a computer with a single power supply to run on either UPS or house power without interruption. At approximately 15:30 on November 17, 2010 an individual removed the power cord for one of these power switching strips from an outlet. As the individual moved it to the side the end of the power cord (the male three prong end) brushed his hand, and he received a mild shock. He did not experience a burn, but rather a shock. Further investigation into this incident is in-progress to determine how/why this event occurred, and whether or not material failure was the root cause or were other reasons the fault.		
Cause Description:			
Operating Conditions:	Does not apply		
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)		
Immediate Action(s):	An investigation is in-progress to determine if the source of the mild shock was due to a material failure or other source of failure.		
FM Evaluation:			
DOE Facility Representative Input:			
DOE Program Manager Input:			
Further Evaluation is Required:	No		
Division or Project:	Information Technology/Systems & Networking Group		

Plant Area:	PPPLCC
System/Building/Equipment:	Computer Center (PPLCC-Power Switching Strip)
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	08A--OSHA Reportable/Industrial Hygiene - Electrical Shock 12C--EH Categories - Electrical Safety 14L--Quality Assurance - No QA Deficiency
HQ Summary:	On November 17, 2010, a Princeton Plasma Physics Laboratory Computer Center (PPLCC) worker received a mild shock as he was removing a power cord from a power switching strip. The PPLCC had new power switching strips installed with power supplied from two sources. One power line is connected to UPS power and the other to house power. The strip allows all connected computers to run on either or both power sources (i.e. on either UPS or house power or both). This configuration allows a computer with a single power supply to run on either UPS or house power without interruption. As the worker removed the power cord for one of these power switching strips from an outlet and moved it to the side, the male three-prong end of the power cord brushed his hand and he received the shock. Further investigation is being conducted into this event. The investigation will determine if material failure was the event root cause or if other causal factors were responsible.
Similar OR Report Number:	
Facility Manager:	Name: WILLIAMS, MIKE Phone: (609) 243-2866 Title: ASSOC DIRECT FOR ENGIEERING & INFRAS
Originator:	Name: MALSBURY, JUDITH A Phone: (609) 243-2415 Title: HEAD, QUALITY ASSURANCE
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/29/2010; Time: 07:53 (ETZ); Person Notified: Leif Dietrich; Organization: DOE/PSO
Authorized Classifier(AC):	

10)Report Number:	SC--PSO-PPPL-PPPL-2010-0005 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Princeton Plasma Physics Laboratory
Facility Name:	Princeton Plasma Physics Lab. (BOP)

Subject/Title:	Electrical Safety Management Concern-violation of Danger tag-LO/TO
Date/Time Discovered:	11/26/2010 14:00 (ETZ)
Date/Time Categorized:	11/29/2010 14:00 (ETZ)
Report Type:	Notification/Final
Report Dates:	Notification 11/30/2010 16:30 (ETZ) Initial Update 11/30/2010 16:30 (ETZ) Latest Update 11/30/2010 16:30 (ETZ) Final 11/30/2010 16:30 (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 Not clear if subcontractors caused the problem
Occurrence Description:	An electrical Subcontractor had performed a lockout/tagout on a Potential Transformer (PT) located in C-Site Motor Generator Building in preparation for electrical switchgear maintenance. The tagout included the application of grounds, the removal of the fuses in the PT, and the tagging open (not locks) of the PT drawer. It should be noted that the PT drawer is closed to "close-in" the transformer for operation so tagging the drawer open provides another level of protection. On Friday November 26th at approximately 14:00 an individual from PPPL's AC Power Group recognized that the drawer (door) had been closed violating the Danger Tag. A second subcontractor working in the area performing removals was not able to provide any insight into the matter. There were no immediate hazards caused by the closing of the drawer due to the fact that the fuses had been removed and grounds were in place; however, the violation of the Danger Tag is being further investigated in an attempt to determine how/why the drawer was closed and to determine alternate methods that may be employed in the future that can effectively lock this type of cabinet to prevent this type of incident for re-occurring.
Cause Description:	
Operating Conditions:	Does not apply
Activity Category:	Normal Operations (other than Activities specifically listed in this Category)

Immediate Action(s):	The second subcontractor working in the area was given additional Lockout/Tagout Training even though there was no claim of responsibility. Additional investigation is in-progress in an attempt to determine how/why the PT drawer was closed.
FM Evaluation:	
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	Engineering & Infrastructure/AC Power
Plant Area:	C-Site MG Building
System/Building/Equipment:	C-Site Motor Generator Switchgear
Facility Function:	Laboratory - Research & Development
Corrective Action:	
Lessons(s) Learned:	
HQ Keywords:	01K--Inadequate Conduct of Operations - Lockout/Tagout Noncompliance (Electrical) 11G--Other - Subcontractor 12I--EH Categories - Lockout/Tagout (Electrical or Mechanical) 14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On November 26, 2010, a violation of a lockout/tagout had occurred after an electrical subcontractor had performed a lockout/tagout on a Potential Transformer (PT) located in the C-Site Motor Generator Building in preparation for electrical switchgear maintenance. The tagout included the application of grounds, the removal of the fuses in the PT, and the tagging open (not locks) of the PT drawer. It should be noted that the PT drawer is closed to "close-in" the transformer for operation so that tagging the drawer open provides another level of protection. A PPPL AC Power Group worker recognized that the drawer (door) had been closed violating the Danger Tag. A second subcontractor working in the area performing removals was not able to provide any additional information concerning the matter. There were no immediate hazards caused by the closing of the drawer due to the fact that the fuses had been removed and grounds were in place. However, the violation of the Danger Tag is being further investigated in an attempt to determine how/why the drawer was closed. The investigation will also determine alternate methods that may be employed in the future that can effectively lock this type of cabinet to prevent this type of incident for re-occurring.
Similar OR Report Number:	
Facility Manager:	Name: WILLIAMS, MIKE

	Phone: (609) 243-2866 Title: ASSOC DIRECT FOR ENGIEERING & INFRAS
Originator:	Name: MALSBURY, JUDITH A Phone: (609) 243-2415 Title: HEAD, QUALITY ASSURANCE
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/29/2010; Time: 11:35 (ETZ); Person Notified: Leif Dietrich; Organization: DOE/PSO
Authorized Classifier(AC):	

11)Report Number:	SC--TJSO-JSA-TJNAF-2010-0010 **After 2003 Redesign**
Secretarial Office:	Science
Lab/Site/Org:	Thomas Jefferson National Accelerator Site
Facility Name:	Thomas Jefferson Nat'l Accelerator
Subject/Title:	TEDF-10-1021-New; 15kV line near miss reported by M.A. Mortenson, TEDF General Contractor
Date/Time Discovered:	11/03/2010 10:00 (ETZ)
Date/Time Categorized:	11/03/2010 14:00 (ETZ)
Report Type:	Update
Report Dates:	Notification: 11/16/2010 10:35 (ETZ) Initial Update: 11/17/2010 17:21 (ETZ) Latest Update: 12/02/2010 11:07 (ETZ) Final:
Significance Category:	3
Reporting Criteria:	10(3) - A near miss, where no barrier or only one barrier prevented an event from having a reportable consequence. One of the four significance categories should be assigned to the near miss, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 3 occurrence)
Cause Codes:	A1B3C02 - Design/Engineering Problem; Design / documentation LTA; Design/documentation not up-to-date
ISM:	1) Define the Scope of Work
Subcontractor Involved:	Yes Bayside Concrete (Lower-tier sub to M.A. Mortenson
Occurrence Description:	Existing buried 15kV electrical line conduit conflicted with foundation

	footer for TEDF construction. Conduit was not where indicated on site utility plan. It was located by electronic locator device and pot-holing, then marked with flags and paint per industry practices. Soil was hard-packed, mixed with large quantity of broken concrete. During hand-digging (round-nose shovel and mattock) within tolerance zone for buried electrical cable, mattock was deflected by adjacent steel pipe, and it struck PVC conduit with sufficient force to cause a puncture. Digging was stopped, situation assessed, and conduit was patched. Electrical cable was not affected. No injury or loss of electrical service.
Cause Description:	1. Inaccurate as-built utility drawings 2. Location conflict between existing utilities and new concrete footer 3. Difficult hand-digging due to extremely hard soil mixed with rock and concrete debris 4. Mis-aim/deflection of digging tool by worker
Operating Conditions:	Mild weather, clear skies, little wind
Activity Category:	Construction
Immediate Action(s):	Suspended task; assessed and repaired damage to conduit.
FM Evaluation:	Use more conservative work-planning and excavation methods in the vicinity of buried utilities where exact position is uncertain or where soil conditions impair hand digging.
DOE Facility Representative Input:	
DOE Program Manager Input:	
Further Evaluation is Required:	No
Division or Project:	TEDF
Plant Area:	TEDF Construct Site
System/Building/Equipment:	New Technical Engineering Development Facility
Facility Function:	Accelerators
Corrective Action 01:	**Target Completion Date:**12/09/2010 **Tracking ID:**NE-2010-19-02
	Extent of Condition check and corrective actions for TEDF-10-1021-NEW, 15kV line near miss during TEDF construction.
Lessons(s) Learned:	
HQ Keywords:	01B--Inadequate Conduct of Operations - Loss of Configuration Management/Control 08J--OSHA Reportable/Industrial Hygiene - Near Miss (Electrical) 11G--Other - Subcontractor 12G--EH Categories - Industrial Operations 14D--Quality Assurance - Documents and Records Deficiency

	14E--Quality Assurance - Work Process Deficiency
HQ Summary:	On November 3, 2010, a conduit containing a 15-kV electrical line was struck by lower tier subcontractor workers that were excavating using a mattock. The mattock was deflected by an adjacent pipe and resulted in a puncture of the PVC conduit. The excavation work conflicted with a foundation footer for the Technical Engineering Development Facility (TEDF) construction. The soil in the TEDF digging area was hard-packed and mixed with large quantity of broken concrete. During hand-digging (round-nose shovel and mattock) within the tolerance zone for buried electrical cable, the mattock was deflected by an adjacent pipe, and it struck the PVC conduit with sufficient force to cause a puncture. Digging was stopped, the situation assessed, and the conduit was patched. The electrical cable was not damaged. There was no injury or loss of electrical service. The conduit was not where it was indicated on site utility plan. It was located by electronic locator device and pot-holing. It was then marked with flags and paint per industry practices.
Similar OR Report Number:	1. SC--TJSO-FMD-TJNAF-2010-0001
Facility Manager:	Name: KELLY, JOHN JACKSON Phone: (757) 269-7531 Title: Reporting Officer
Originator:	Name: KELLY, JOHN JACKSON Phone: (757) 269-7531 Title: EMERGENCY MANAGER
HQ OC Notification:	Date: NA; Time: NA; Person Notified: NA; Organization: NA
Other Notifications:	Date: 11/03/2010; Time: 10:00 (ETZ); Person Notified: R. Korynta; Organization: TJSO
Authorized Classifier(AC):	John Kelly Date: 11/08/2010