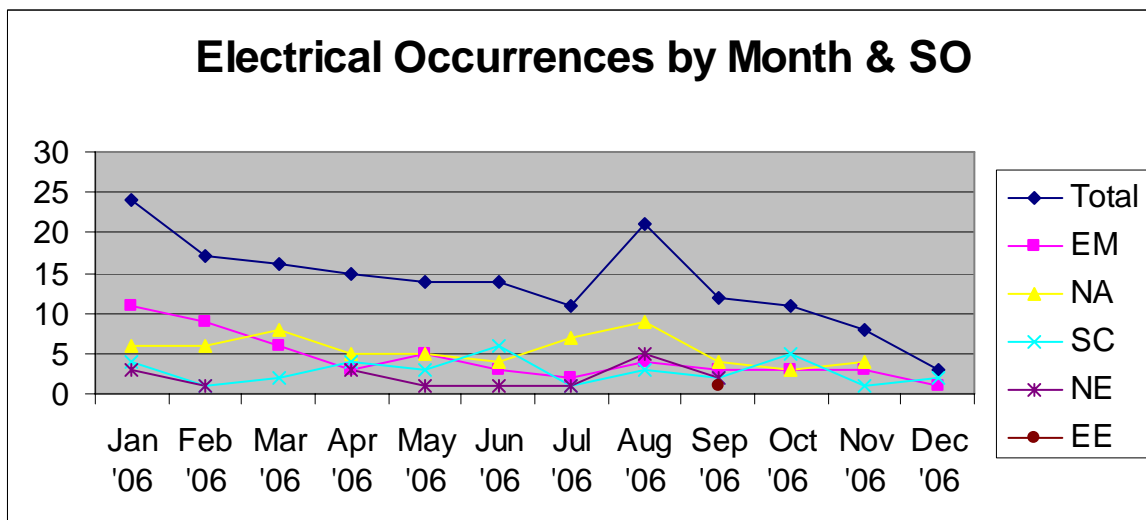


ELECTRICAL SAFETY OCCURRENCES IN CY 2006

Rate of Electrical Safety Occurrences

Trends:

- *DOE facilities experienced 166 electrical safety occurrences in CY 2006 (see Appendices I and II for details). This is near the 165 experienced in 2005, slightly more than the 149 in 2004, and significantly more than the yearly average of 106.5 reported for 2002-2003.*
- *The monthly rate of occurrences generally decreased during 2006 (see chart below). However, there were 15 electrical safety occurrences in January 2007, so the downward trend has not continued since.*



- *There were 26 electrical shocks reported in 2006. This is less than the 39 reported in 2005, near the 25 in 2004 and more than the yearly average of 17.5 per year experienced in 2002-2003.*
- *There were 3 burns from electrical occurrences in 2006, which was less than the 4 experienced in 2005, and the same as the yearly rate for 2004 and 2002-2003. The three burns in 2006 were 1st and 2nd degree burns resulting from arc flashes. One initiated a Type B Accident Investigation.*
- *41% of the electrical safety occurrences in 2006 were categorized as “Near Miss (Electrical)” by HQ Keywords in ORPS. (In contrast, 68% of the 2005 electrical safety occurrences and 77% of the 2004 electrical safety occurrences were categorized as near misses. The lower percentage of near misses in 2007 is more likely due to a shift in philosophy towards near miss categorization rather than changes in the nature of the occurrences.)*
- *Slightly more than half of the 2006 electrical safety occurrences (i.e., 84 of 166) involved non-electrical workers.*
- *39% of the electrical safety occurrences in 2006 involved subcontractors. (In contrast, only 21% of all 2006 ORPS occurrences involved subcontractors.)*

Work Activities Associated with 2006 Electrical Safety Occurrences

Trends:

- *23% of the 2006 electrical safety occurrences involved lockout/tagout issues.*
- *10% involved cutting or drilling activities.*
- *8% involved vehicles striking electrical power lines.*
- *7% involved excavation.*
- *The following is a breakdown of work activities associated with the 2006 electrical safety occurrences, as defined in the ORPS reports:*

ORPS Activity Category	Number
Normal Operations (other than Activities listed below)	62
Maintenance	44
Construction	34
Facility Decontamination/Decommissioning	8
Research	8
Facility/System/Equipment Testing	5
Startup	2
Inspection/Monitoring	2
Transportation Onsite	1
Total	166

Causes of Electrical Safety Occurrences

Trends:

- *ORPS reports identified a wide variety of apparent causes for electrical safety occurrences in 2006.*
- *Deficiencies in management policy guidance, job scoping, check of work, and communication were the four most commonly identified apparent causes for the 2006 electrical safety occurrences. These were also the top four apparent causes for the 2004 and 2005 electrical safety occurrences.*
- *56% of the 2006 electrical safety occurrences had “Conduct of Operations” assigned in the HQ Keywords.*
- *“Analyze the Hazards,” “Develop and Implement Hazard Controls,” and “Perform Work within Controls” were the leading ISM Core Functions cited by ORPS report writers for electrical safety occurrences.*

ORPS Code	Apparent Cause Description¹	CY06 No.
A4B1C01	Management policy guidance / expectations not well-defined, understood or enforced	32
A4B3C08	Job scoping did not identify special circumstances and/or conditions	28
A3B1C01	Check of work was LTA	14
A5B4C01	Communication between work groups LTA	14
A4B3C11	Inadequate work package preparation	12

A5B2C08	Incomplete / situation not covered	12
A3B1C03	Incorrect performance due to mental lapse	10
A3B2C05	Situation incorrectly identified or represented results in wrong rule used	10
A4B3C09	Work planning not coordinated with all departments involved in task	10
A4B5C04	Risks / consequences associated with change not adequately reviewed / assessed	10
A3B3C05	Incorrect assumption that a correlation exists between two or more facts	9
A3B1C06	Wrong action selected based on similarity with other actions	8
A3B3C03	Individual justified action by focusing on biased evidence	8
A3B3C01	Attention was given to wrong issues	7
A3B3C06	Individual underestimated the problem by using past events as basis	7
A4B1C03	Management direction created insufficient awareness of the impact of actions on safety / reliability	7
A4B1C04	Management follow-up or monitoring of activities did not identify problems	7
A1B5C02	Physical environment LTA	6
A2B6C01	Defective or failed part	6
A3B1C04	Infrequently performed steps are performed incorrectly	6
A3B2C02	Signs to stop were ignored and step performed incorrectly	6
A4B1C07	Responsibility of personnel not well defined or personnel not held accountable	6
A4B3C06	Planning not coordinated with inputs from walkdowns/task analysis	6
A4B4C02	Progress/status of task not adequately tracked	6
A4B4C03	Appropriate level of in-task supervision not determined prior to task	6
A6B1C02	Training requirements not identified	6
	(87 other causal "C nodes" identified, in quantities of 1 to 5.)	

1. The distribution of apparent causes in this table does not cover all of the electrical occurrences in 2006. Thirty four of the 166 electrical safety occurrences were reported as Significance Category 4 and thus did not require a causal analysis. Because this analysis was made in early February 2007, there may have been a few occurrences in late 2006 that had not completed their causal analyses, and so their apparent causes are not included in the table above.

ORPS Code	ORPS "HQ Keyword" Description	CY06 No.
01A	Conduct of Operations (miscellaneous)	93
08H	Safety Compliance	88
12C	Electrical Safety	87
07D	Electrical Wiring	77
14E	Work Process	70
08J	Near Miss (Electrical)	68
01M	Inadequate Job Planning (Electrical)	67

11G	Subcontractor	59
12K	Near Miss (Could have been a serious injury or fatality)	55
01Q	Personnel error	47
01B	Configuration Management/Control	41
01R	Management issues	40
01K	Lockout/Tagout (Electrical)	39
01P	Communication	38
13E	Facility Call Sheet	31
08A	Electrical Shock	26
14D	Documents and Records	26
08F	Industrial Operations	25
01F	Training	23
01N	Inadequate Job Planning (Other)	21
01O	Maintenance	21
12I	Lockout/Tagout (Electrical or Mechanical)	20
01G	Inadequate Procedure	19
07C	Power Outage	19
01E	Operations Procedures	15
07E	Electrical Equipment	10
14B	Training and Qualification	10
	(33 other keyword categories with counts between 1 and 9)	

ISM Core Functions Cited for Electrical Occurrences	CY06 No.
Define the Scope of Work	21
Analyze the Hazards	80
Develop and Implement Hazard Controls	67
Perform Work Within Controls	67
Provide Feedback and Continuous Improvement	19
N/A (Not applicable to ISM Core Functions as determined by management review.)	8

Distribution of Electrical Safety Occurrences by Secretarial Offices

Trends:

- *In 2006, NA had the largest percentage of electrical safety occurrences of all DOE Secretarial Offices. (In contrast, EM had the largest percentage electrical safety occurrences in 2002 through 2005.)*
- *NE had a significantly larger percentage of electrical safety occurrences in 2006 than it had in 2002 through 2005.*

Sec Office	No.CY06	% CY06	% CY05	% CY04	% CY02 & 03 ¹
NA	61	37%	42%	31%	28%
EM	53	32%	42%	51%	46%
SC	34	20%	13%	14%	18%
NE	17	10%	2%	1%	3%

EE	1	<1%	0%	0%	0%
RW	0	0%	<1%	2%	4%
FE	0	0%	0%	<1%	1%
Total	166	100%	100%	100%	100%

1. Percentages based on distribution in slide from [Electrical Safety Occurrences - Overview of Nature, Causes and Frequency, July 27, 2004](#).

Distribution of Electrical Safety Occurrences by Operations, Field & Site Offices

Trends:

- *In 2006, electrical safety occurrences happened at most DOE Operations and Field Offices.*
- *Facilities under the Idaho Operations Office experienced the largest number of electrical safety occurrences in CY 2006.*

Operations, Field or Site Office with Electrical Occurrences	No. CY06
Idaho Operations	26
Los Alamos Site Office	19
Richland Operations	15
Sandia Site Office	13
Livermore Site Office	9
River Protection Operations	8
Stanford Site Office	8
Oak Ridge Operations Office	7
Savannah River Operations	7
Brookhaven Site Office	7
Pantex Site Office	7
Y-12 Site Office	7
Argonne Site Office	6
Berkeley Site Office	5
Ohio Operations (includes West Valley and Fernald)	4
Pacific Northwest Site Office	4
Kansas City Site Office	3
Carlsbad Field Office	2
NNSA Service Center	2
Fermi Site Office	2
Portsmouth Paducah Project Office	2
Golden Field Office	1
Nevada Site Office	1
Savannah River Site Office	1
Total	166

Summary and Conclusions

The Department-wide number of electrical safety occurrences in CY 2006 was near the same as the number experienced in CY 2005. The monthly totals for CY 2006 showed an encouraging decreasing trend. However, the monthly total for January 2007 rose significantly and so the trend has not continued.

The causes for electrical safety occurrences appear to be the same as identified in several analyses performed in the last few years. (See the reports listed on the HSS Electrical Safety website: <http://www.hss.energy.gov/CSA/Analysis/electrical.html>.) A Special Operations Report (SOR) issued in August 2006 attempted to solicit more detailed causal information but, as of early February 2007, the SOR findings had not been finalized and issued by the Undersecretaries' offices.

While the SOR addresses the operations and training of electrical workers, it is important to note that typically half of the electrical safety occurrences involve non-electrical workers. Online training for non-electrical workers is available at: http://www.efcog.org/wg/ism_estg/elecsafetytng.htm.

APPENDIX I – Identification of the 166 electrical safety occurrences in CY 2006.

ORPS was searched using the following search criteria to “screen-in” electrical safety occurrences:

Discovery dates (not notification dates) were set for dates in 2006. The following ORPS “HQ keywords” were also keyed in the searches.

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

The initial search yielded 179 occurrences. Each occurrence was next read to see it really involved electrical hazard hazards. “Recurring Occurrences” were discounted to avoid double counting. The following thirteen 2006 occurrences were culled out for the reasons so cited:

1. EM-ID--CWI-LANDLORD-2006-0007, “Deviation from Work Control Procedure” - LOTO is to prevent alarms, voltage was below 28 VAC.
2. EM-ID--CWI-PHASEOUT-2006-0001, “Lock out Tagout Violation on Crane” - LOTO was for crane movement, not electrical hazard.
3. EM-RL--PHMC-GPP-2006-0004, “Incorrect Isolation Information” - LOTO was for a 24V circuit.
4. EM-RL--PHMC-GENERAL-2006-0002, “Repetitive Issue: Hazardous Energy Control/Lockout-Tagout Process” – Recurring Occurrence
5. EM-RL--PHMC-SOLIDWASTE-2006-0009, “Management Concern Related to Compliance with Work Package Requirements” - Hazard was from rotating equipment, not electrical.
6. EM-RL--WCH-GENAREAS-2006-0005, “Recurring Events Associated with Work Control Issues Resulting in Electrical Hazards” - Recurring Occurrence
7. EM-RP--BNRP-RPPWTP-2006-0011, “Subcontractor Violates WTP Procedure” - LOTO violations was for HVAC ventilation, not electrical hazard
8. EM-SR--WSRC-FCAN-2006-0003, “Severed Antenna Tower Ground Cable (U)” - Hazard from lightning strikes, not conventional electrical hazard.
9. NA--LASO-LANL-TARGETFAB-2006-0001, “Failure to follow equipment postings results in confined space violation” - Hazard was confined space, not electrical.
10. NA--PS-BWXP-PANTEX-2006-0051, “Failure to Adhere to BWXT Subcontractor LO/TO Procedures” - LOTO violation was for HVAC ventilation, not electrical hazard.
11. NA--SS-SNL-NMSITE-2006-0004, “Recurring Occurrence Reports Associated with Performance Analysis of Cause Code A4B5C04” – Recurring Occurrence
12. NA--SS-SNL-SNLCORP-2006-0001, “Hazardous Energy Recurring Occurrence” – Recurring Occurrence
13. SC--PSO-PPPL-PPPL-2006-0002, “Lockout/Tagout Violation” - Heat hazard, not electrical.

The screening and culling above yielded the 166 electrical safety occurrences for 2006 that were considered in this analysis.

APPENDIX II – List of 166 electrical safety occurrences in 2006.

ORPS Report Number	Subject/Title
1 EE-GO--NREL-NREL-2006-0008	<u>Roofing screws penetrate data and electrical conduits</u>
2 EM--LSO-EETEC-GENL-2006-0003	<u>Forklift Damages Electrical Conduit</u>
3 EM--PPPO-PRS-PGDPENVRES-2006-0017	<u>Exterior Bracket Installation Results in Power Interruption in Office Trailer</u>
4 EM--PPPO-UDS-PORTDUCON-2006-0001	<u>Contractor failed to follow requirements of Activity Hazards Analysis</u>
5 EM-CAFO--WTS-WIPP-2006-0004	<u>WORKER RECEIVED ELECTRICAL SHOCK</u>
6 EM-CAFO--WTS-WIPP-2006-0006	<u>WORKER DISCOVERS ENERGIZED WIRE</u>
7 EM-ID--BBWI-AMWTF-2006-0001	<u>480V Cable Entangled in Snow Blower Blades during Snow Removal Activity Outside WMF-636</u>
8 EM-ID--BBWI-AMWTF-2006-0002	<u>Lighting Panel Damaged During Snow Removal Activities Outside WMF-1604</u>
9 EM-ID--BBWI-AMWTF-2006-0010	<u>Worn Insulation On Heat Trace Terminations Creates Potential Electrical Shock Hazard</u>
10 EM-ID--BBWI-AMWTF-2006-0013	<u>LockOut/Tagout of Incorrect Isolation Point</u>
11 EM-ID--CWI-BIC-2006-0002	<u>Damaged 120 V power cord at TRA-644</u>
12 EM-ID--CWI-FUELCSTR-2006-0002	<u>Electrician Fails to Lockout 110 Volt Energy Sources During Repair Work</u>
13 EM-ID--CWI-FUELCSTR-2006-0018	<u>Work Performed Without Using Flash Calculations Identified in Work Order</u>
14 EM-ID--CWI-LANDLORD-2006-0014	<u>Oven Malfunction Causes Cafeteria Worker to Receive an Electric Shock</u>
15 EM-ID--CWI-RWMC-2006-0001	<u>Snow Removal Equipment Ran Off Road</u>
16 EM-ID--CWI-RWMC-2006-0004	<u>Damaged Electrical Cord During Ice/Snow Removal Activities</u>
17 EM-ID--CWI-TAN-2006-0001	<u>Electrical Cord Severed While Performing Snow Removal</u>
18 EM-OH-FCP-FFI-FEMP-2006-0003	<u>Pipfitter Inadvertently Cuts Live 120-v Double-Insulated Grinder Power Cord</u>
19 EM-OH-FCP-FFI-FEMP-2006-0027	<u>Heavy Equipment Operator Strikes Overhead 13.2 KV Lines while Operating a CAT 375 Excavator</u>
20 EM-OH-WVDP-WVNS-CF-2006-0001	<u>Cut Heat Trace Wire During Removal of Gutter Downspout</u>
21 EM-OH-WVDP-WVNS-UR-2006-0001	<u>Incorrect Conduit Cut during Boiler Demolition</u>
22 EM-ORO--BJC-K25ENVRES-2006-0005	<u>Energized 120 Volt AC Line Cut in K-1401</u>
23 EM-ORO--BJC-X10ENVRES-2006-0003	<u>Lockout/Tagout Violation - Trench 7, ORNL</u>
24 EM-ORO--FWEC-TRUWPFAC-2006-0001	<u>Failure to follow procedure resulted in potential for unsafe work condition</u>
25 EM-RL--PHMC-CSB-2006-0003	<u>Energized Heat Trace Found During Routine Preventative Maintenance</u>
26 EM-RL--PHMC-FFTF-2006-0001	<u>120 volt power found in Motor Control Center EF-2 Breaker Cubicle after safe conditions check had been performed.</u>
27 EM-RL--PHMC-PFP-2006-0003	<u>120-vac circuit discovered energized after the identified breaker was shut off at the lighting panel</u>
28 EM-RL--PHMC-PFP-2006-0021	<u>Extraneous electrical extension cord damaged during demolition activities resulting in a tripped GFCI</u>
29 EM-RL--PHMC-PFP-2006-0024	<u>Performance of High Mast Lighting Drilling prior to hanging Lock & Tag as required by procedure</u>

ORPS Report Number	Subject/Title
30 EM-RL--PHMC-SNF-2006-0002	<u>Failure to Follow Prescribed Hazardous Energy Control Process at KW Basin</u>
31 EM-RL--PHMC-SNF-2006-0003	<u>Failure to Follow Prescribed Hazardous Energy Control Process at KE Basin</u>
32 EM-RL--PHMC-SNF-2006-0007	<u>Hose-In-Hose Lock and Tag Issue</u>
33 EM-RL--PHMC-SNF-2006-0009	<u>Exposure to Static Electricity While Working Within the Vicinity of High Voltage Power Lines</u>
34 EM-RL--PHMC-SOLIDWASTE-2006-0008	<u>Electrical Cord Pulled Loose from Female Cord Cap of Handheld Portable Equipment</u>
35 EM-RL--PHMC-WESF-2006-0002	<u>Energized Neutral Wire Found During Replacement of Light Ballast</u>
36 EM-RL--WCH-DND-2006-0006	<u>Pipefitter Receives Electric Shock Through Pipe Cut By Portaband Saw</u>
37 EM-RL--WCH-GENAREAS-2006-0003	<u>Electrical Wires Encountered While Digging in the 331 LSL Drain Field</u>
38 EM-RL--WCH-REMACT-2006-0007	<u>Road Grader Disconnects Underground Electrical Cable from Junction Box at 100-N</u>
39 EM-RL--WCH-RISS-2006-0002	<u>Worker Cuts Into Live Electrical Wire During Transite Panel Removal at 105-N Building</u>
40 EM-RP--BNRP-RPPWTP-2006-0002	<u>Configuration Management Discovery</u>
41 EM-RP--BNRP-RPPWTP-2006-0005	<u>Electrical Arc Between Welding Lead and Welding Machine</u>
42 EM-RP--BNRP-RPPWTP-2006-0014	<u>Vendor Violates WTP Lock Out/Tag Out Procedure</u>
43 EM-RP--BNRP-RPPWTP-2006-0019	<u>Tractor/Truck Backs Trailer Over Above Ground (live 480-V) Conduit</u>
44 EM-RP--BNRP-RPPWTP-2006-0026	<u>240-Volt Electrical Line Severed by Descending Scissor Lift</u>
45 EM-RP--CHG-ANALLAB-2006-0002	<u>Forklift Driver Pulls Electrical Junction Box And Conduit From Wall</u>
46 EM-RP--CHG-TANKFARM-2006-0003	<u>Bare Wire In An Existing Excavation In AN Farm Discovered</u>
47 EM-RP--CHG-TANKFARM-2006-0032	<u>Energized Wire Found While Performing Safe To Work Check Of Field Electrical Skid</u>
48 EM-SR--GOSR-GOSR-2006-0002	<u>Temporary Un-energized Power Pole Removal Incident at SRS</u>
49 EM-SR--WSRC-ETP-2006-0001	<u>Unexpected Voltage Found on Plant Air Compressor #1</u>
50 EM-SR--WSRC-HTANK-2006-0001	<u>Discovery of Inadequate L/T Boundary</u>
51 EM-SR--WSRC-HTANK-2006-0010	<u>8Q32 Single Point Lockout (SPLT) Program Nonconformance</u>
52 EM-SR--WSRC-LTA-2006-0004	<u>Voltage Found on Common Neutral Lead after L/T was Established</u>
53 EM-SR--WSRC-SW&I-2006-0003	<u>Employee Receives Electrostatic Discharge</u>
54 EM-SR--WSRC-WVIT-2006-0003	<u>704-S Cafeteria Coffee Maker Electrical Shock</u>
55 NA---GOAL-NNSASC-2006-0001	<u>Failure to Lockout/Tagout by Contractor</u>
56 NA---GOAL-NNSASC-2006-0002	<u>Near Miss with Energized Electrical Circuit</u>
57 NA--KCSO-AS-FMTNM-2006-0002	<u>Discovery of Energized Neutral Wire During Repair of Light Fixture</u>
58 NA--KCSO-AS-KCP-2006-0001	<u>120 Volts AC Electrical Plug Near Miss</u>
59 NA--KCSO-AS-KCP-2006-0006	<u>Damaged Overhead Communications Cable</u>
60 NA--LASO-LANL-ACCCOMPLEX-2006-0001	<u>Workers Discover Uncontrolled Hazardous Energy While Penetrating A Concrete Wall</u>
61 NA--LASO-LANL-ACCCOMPLEX-2006-0006	<u>Unauthorized Electrical Work Results in Near Miss to Injury</u>
62 NA--LASO-LANL-ADOADMIN-2006-0003	<u>Inadequate Work Verification Results in an Electrical Arc Flash During Switching Process</u>
63 NA--LASO-LANL-ADOADMIN-2006-0006	<u>Lockout/Tagout Violation Identified on Construction Project</u>

ORPS Report Number	Subject/Title
64 NA--LASO-LANL-BOP-2006-0001	<u>Contract Worker hits 480V Circuit with Jackhammer</u>
65 NA--LASO-LANL-BOP-2006-0003	<u>Contract Worker hits 120V Circuit with Jackhammer</u>
66 NA--LASO-LANL-BOP-2006-0006	<u>Crane Contact with 480 Volt Buss Bar</u>
67 NA--LASO-LANL-ESHGUPT-2006-0001	<u>Forklift Mast Contacts Overhead Power Line During Transport</u>
68 NA--LASO-LANL-FIRNGHELAB-2006-0001	<u>Electric shock with no injury from contacting live wires inside control chassis</u>
69 NA--LASO-LANL-FIRNGHELAB-2006-0003	<u>Damaged plug strip leads to spark and unexpected discovery of hazardous energy.</u>
70 NA--LASO-LANL-FIRNGHELAB-2006-0004	<u>Worker strikes 120v circuit within modular furniture power pole</u>
71 NA--LASO-LANL-FIRNGHELAB-2006-0005	<u>Arc flash from contacting 480V power within motor control center</u>
72 NA--LASO-LANL-HEMACHPRES-2006-0004	<u>Management Concern: Change of Scope Introduced Unevaluated Hazards</u>
73 NA--LASO-LANL-LANL-2006-0002	<u>Buildings Flooded Due to Excess Rain</u>
74 NA--LASO-LANL-MATSCCMPLX-2006-0001	<u>Worker Cuts Energized Electrical Wire</u>
75 NA--LASO-LANL-PHYSTECH-2006-0007	<u>Upright Vehicle Antenna Mast Snags and Severs Overhead Communication Line During Transport</u>
76 NA--LASO-LANL-PHYSTECH-2006-0008	<u>Unplanned Power Outage Occurs Due to Inadvertent Tripping of Circuit Breaker in the Electrical Distribution System</u>
77 NA--LASO-LANL-TA55-2006-0008	<u>Management Concern: Combination Fluorescent Light and Emergency Light Failed When Test Button was Pushed After Tube Replacement</u>
78 NA--LASO-LANL-TA55-2006-0023	<u>Employee Cut Electrical Cord While the Cord was Plugged Into a 120 Volt Wall Outlet</u>
79 NA--LSO-LLNL-LLNL-2006-0005	<u>Improper Use of a Crimping tool for Electrical Wiring Work</u>
80 NA--LSO-LLNL-LLNL-2006-0008	<u>Building 131 Elevator Replacement - 110V Electrical Arc</u>
81 NA--LSO-LLNL-LLNL-2006-0010	<u>Off-site Warehouse Exit Sign Installation - Electrical Arc</u>
82 NA--LSO-LLNL-LLNL-2006-0017	<u>Near Miss to Electrical Shock</u>
83 NA--LSO-LLNL-LLNL-2006-0033	<u>Electrical Panel LOTO - Management Concern in Building 451</u>
84 NA--LSO-LLNL-LLNL-2006-0038	<u>Electric Outlet with Reverse Polarity and Disconnected Ground Wire (110v) Results in Mild Shock</u>
85 NA--LSO-LLNL-LLNL-2006-0041	<u>Electrical Line Severed (480v) During Building 490 Re-Roof Project</u>
86 NA--LSO-LLNL-LLNL-2006-0050	<u>Electrical Arc Inside Wire-Way Gutter Outside of Building 162</u>
87 NA--NVSO-NST-NTS-2006-0003	<u>Energized Underground Power Lines Cut By Grader</u>
88 NA--PS-BWXP-PANTEX-2006-0012	<u>Cut Electrical Wire at Extraction Well Field</u>
89 NA--PS-BWXP-PANTEX-2006-0020	<u>Failure to Control Known Hazardous Energy</u>
90 NA--PS-BWXP-PANTEX-2006-0030	<u>12-5C Bridge Crane Electrical Short</u>
91 NA--PS-BWXP-PANTEX-2006-0056	<u>Electric Arc at an Abandoned Conduit Containing Energized 208 Volt Wiring</u>
92 NA--PS-BWXP-PANTEX-2006-0073	<u>Unexpected Discovery of Electrical Energy (83 Volts)</u>
93 NA--PS-BWXP-PANTEX-2006-0075	<u>Cut 110 Volt, Three Conductor Wiring, Zone 4 Magazine</u>
94 NA--PS-BWXP-PANTEX-2006-0113	<u>Release of Hazardous Energy Due to Site Condition</u>
95 NA--SRSO-WSRC-TRIT-2006-0001	<u>Incorrect Performance of UPS #2 Annual Maintenance</u>
96 NA--SS-SNL-1000-2006-0017	<u>Contract Employee Received Shock from Plasma Torch Cutter at the 6710 Welding Shop</u>
97 NA--SS-SNL-12000-2006-0001	<u>Unexpected Discovery of Exposed Live Electrical Circuit at Manzano Non-Nuclear Storage Bunker</u>

ORPS Report Number	Subject/Title
98 NA--SS-SNL-12000-2006-0002	<u>Unexpected Discovery of an Uncontrolled Hazardous Energy Source on Air Handler #2 at MBC-H that Damaged Wiring and Components</u>
99 NA--SS-SNL-2000-2006-0003	<u>Defeat of Electrical Interlock</u>
100 NA--SS-SNL-2000-2006-0006	<u>Drilling into Dock Impacted Energized Electrical Wire at WETL, Pantex</u>
101 NA--SS-SNL-2000-2006-0007	<u>Metal Oxide Varistor (MOV) Accelerated Life Tester Electrical Shock in Bldg. 878</u>
102 NA--SS-SNL-3000-2006-0002	<u>Office Worker Receives Shock from Task Light Fixture</u>
103 NA--SS-SNL-6000-2006-0001	<u>Worker Receives a Minor Shock While Testing a Data Acquisition System</u>
104 NA--SS-SNL-CASITE-2006-0002	<u>Unexpected Discovery of an Uncontrolled Electrical Energy Source Building 912 Photo Studio Electrical Shock</u>
105 NA--SS-SNL-CASITE-2006-0004	<u>Subcontract Electrician Performs Unauthorized Energized Work on 110-Volt #12 Conductors</u>
106 NA--SS-SNL-NMFAC-2006-0001	<u>Asbestos Abatement Worker Receives Shock while Vacuuming in 9990 Containment Area</u>
107 NA--SS-SNL-NMFAC-2006-0002	<u>Electrical Subcontractor Performs Energized Electrical Work in Building 890 Without an Energized Work Permit</u>
108 NA--SS-SNL-NMFAC-2006-0008	<u>Subcontractor Employee Shock</u>
109 NA--YSO-BWXT-Y12CM-2006-0002	<u>Cut Conduit at 9996</u>
110 NA--YSO-BWXT-Y12CM-2006-0004	<u>Discovery of an uncontrolled hazardous energy source - cover plate missing on an electrical junction box on the Kathabar 3360 control panel.</u>
111 NA--YSO-BWXT-Y12NUCLEAR-2006-0003	<u>Loss of Power to Emergency Notification System Horns and Lights</u>
112 NA--YSO-BWXT-Y12NUCLEAR-2006-0022	<u>Dump Truck Snaps Overhead Communication Line Which Contacts Adjacent Power Line</u>
113 NA--YSO-BWXT-Y12SITE-2006-0001	<u>Mear Miss - Electrical Shock to Utilities Operator's Hand</u>
114 NA--YSO-BWXT-Y12SITE-2006-0004	<u>LO/TO Concern Associated with the Compressed Air Upgrade Project (CAUP)</u>
115 NA--YSO-BWXT-Y12SITE-2006-0005	<u>Lockout/Tagout Management Concern</u>
116 NE-ID--BEA-AL-2006-0001	<u>Near Miss - Snow Removal Activities Snag Energized Temporary 480V Power Cord</u>
117 NE-ID--BEA-ATR-2006-0001	<u>Work Performed Under Lockout/Tagout Without Zero Energy Check Verification</u>
118 NE-ID--BEA-ATR-2006-0003	<u>Discovery of Uncontrolled Hazardous Energy Source</u>
119 NE-ID--BEA-ATR-2006-0011	<u>Energy Discovered in Motor Control Center After Lockout/Tagout</u>
120 NE-ID--BEA-ATR-2006-0013	<u>Work Performed on Sonoxide System Electrical Panel Prior to Zero Energy Checks Being Performed</u>
121 NE-ID--BEA-ATR-2006-0017	<u>Underground Electrical Conduit Severed by Subcontractor - INL</u>
122 NE-ID--BEA-CFA-2006-0001	<u>Inadequate Posting for Exposed Electrical Hazard</u>
123 NE-ID--BEA-FCF-2006-0002	<u>Personnel Shock at CFA-625 Laboratory 120</u>
124 NE-ID--BEA-INLLABS-2006-0002	<u>Radioactive Liquid Waste Treatment Facility Lockout/Tagout Administrative Errors - MFC</u>
125 NE-ID--BEA-MFC-2006-0004	<u>Workers Exposed to 120 Volt Electrical</u>
126 NE-ID--BEA-MFC-2006-0006	<u>Energized 2400 V Power Cable Breached During Excavation</u>
127 NE-ID--BEA-RTC-2006-0006	<u>Snow removal activities snag 120 volt power cord</u>
128 NE-ID--BEA-SMC-2006-0001	

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129 NE-ID--BEA-STC-2006-0003	<u>Worker Recieves Shock from Light Switch - STC - INL</u>
130 NE-ID--BEA-STC-2006-0004	<u>Tripped Ground Fault - WCB - STC</u>
131 NE-ORO--ORNL-X10HFIR-2006-0006	<u>Phase Rotation Testing - Near Miss</u>
132 NE-ORO--ORNL-X10HFIR-2006-0010	<u>Unauthorized Facility Modification Outside Work Control Process</u>
133 SC--ASO-ANLE-ANLE-2006-0007	<u>Unexpected Energized Shared Neutral Wires While Removing Light Fixture</u>
134 SC--ASO-ANLE-ANLEAPS-2006-0004	<u>Heat Tape Power Wire Unknowingly Energized While Unterminated and Shorts to Ground</u>
135 SC--ASO-ANLE-ANLEAPS-2006-0005	<u>Electrical Transformer Found Unexpectedly Energized After Precautionary LOTO</u>
136 SC--ASO-ANLE-ANLEER-2006-0001	<u>Improper implementation of lockout/tagout requirements for electrical energy</u>
137 SC--ASO-ANLE-ANLEER-2006-0003	<u>Noninjurious Electrical Hand Shock When Switching on Light Fixture Above Glovebox</u>
138 SC--ASO-ANLE-ANLEIPNS-2006-0002	<u>Improper Cord Causes Short Circuit in 110 Volt GFCI Wall Plug</u>
139 SC--BHSO-BNL-AGS-2006-0002	<u>400 Amp Electrical Switch Failure</u>
140 SC--BHSO-BNL-AGS-2006-0003	<u>Unsafe Protection Scheme for Electrical Hazard</u>
141 SC--BHSO-BNL-BNL-2006-0001	<u>Energized Conductor Discovered in Cut Conduit</u>
142 SC--BHSO-BNL-BNL-2006-0009	<u>Exposed Electrical Terminals in Legacy Installed Light Timer</u>
143 SC--BHSO-BNL-BNL-2006-0014	<u>Painter's spackling knife contacts abandoned live electrical wiring</u>
144 SC--BHSO-BNL-BNL-2006-0020	<u>Work on Energized Equipment by Vendor</u>
145 SC--BHSO-BNL-NSLS-2006-0002	<u>Unexpected Energized Cord Cut</u>
146 SC--BSO-LBL-AFRD-2006-0001	<u>Unexpected discovery of electrical current from heater</u>
147 SC--BSO-LBL-ENG-2006-0001	<u>Potential Heater Tape electrical shorting</u>
148 SC--BSO-LBL-OPERATIONS-2006-0004	<u>B55A LOTO violation</u>
149 SC--BSO-LBL-OPERATIONS-2006-0006	<u>Misidentified source of electrical power during precautionary investigation and core drilling</u>
150 SC--BSO-LBL-OPERATIONS-2006-0007	<u>Management Concern due to Penetration Permit Incidents</u>
151 SC--FSO-FNAL-FERMILAB-2006-0009	<u>Following procedures avoided injury during saw cutting operations</u>
152 SC--FSO-FNAL-FERMILAB-2006-0010	<u>Loose Ground Pin Causes Internal Fault of 250 VAC, 30 amp, 3 phase Connector</u>
153 SC--PNSO-PNNL-PNNLBOPER-2006-0005	<u>Management Concern Related to Hazardous Energy Control</u>
154 SC--PNSO-PNNL-PNNLBOPER-2006-0007	<u>Discovery of Unknown Energy Source and Near Miss to Reportable Injury</u>
155 SC--PNSO-PNNL-PNNLBOPER-2006-0010	<u>Failure to Follow Hazardous Energy Control at PDL-E</u>
156 SC--PNSO-PNNL-PNNLBOPER-2006-0019	<u>Management Concern Associated with Electrical Shock</u>
157 SC--SSO-SU-SLAC-2006-0002	<u>Carpenter's Screw Penetrates Romex Wire</u>
158 SC--SSO-SU-SLAC-2006-0004	<u>Working Without Applying Personal Locks and Tags</u>
159 SC--SSO-SU-SLAC-2006-0006	<u>Subcontractor Cut Lighting Cable.</u>
160 SC--SSO-SU-SLAC-2006-0007	<u>Subcontractor Cut 110/208V AC Energized Electrical Lines</u>
161 SC--SSO-SU-SLAC-2006-0008	<u>Contractor Cuts Energized 110V Line</u>
162 SC--SSO-SU-SLAC-2006-0009	<u>110V Extension Cord Jacket Nick</u>
163 SC--SSO-SU-SLAC-2006-0011	<u>Equipment Electric Fan Shock</u>
164 SC--SSO-SU-SLAC-2006-0012	<u>Cutting of Energized Electrical Wire</u>
165 SC-ORO--ORAU-ORISE-2006-0001	<u>Exposed Live Electrical Wiring in SC-1 Annex Remodeling Project</u>

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[Near-Miss: Subcontractor Electrician Accidentally Drills Into Energized 480-volt Cable](#)