UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SETH D. HARRIS, ACTING SECRETARY OF LABOR, UNITED STATES DEPARTMENT OF LABOR, Complainant, v. UNITED STATES POSTAL SERVICE, Respondent.	OSHRC DOCKET NOs. 09-1954; 10-1102; 10-1123; 10-1037; 10-1427; 10-1251; 10-1325; 10-1326; 10-1266; 10-1225; 10-1224; 10-1279; 10-1433; 10-1476; 10-1507; 10-1492; 10-1656; 10-1638; 10-1642; 10-1844; 10-1862; 10-1863; 10-2245; 10-2291; 10-2341; 10-2340; 10-2345; 10-2449; 10-2509; 10-2510; 10-2511; 10-2526; 10-2527; 10-2619; 10-2628; 11-0014; 11-0080; 11-0156; 11-0155; 11-0157; 11-0158; and 11-0154
AMERICAN POSTAL WORKERS UNION, AFL-CIO Authorized Union Representative.	

SETTLEMENT AGREEMENT
EXHIBIT A

TABLE OF CONTESTED CITATION ITEMS COVERED BY THE SETTLEMENT AGREEMENT ABATEMENT

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
1	Hampden, ME	313070096	09-1954	2.1 2.2 2.3	§1910.332(b)(1) §1910.335(a)(1)(i) §1910.335(a)(2)(i)
1	Providence, RI	312343775	10-1102	2.2a 2.2b 2.3 2.4a 2.4b 2.4c 2.5	§1910.332(b)(1) §1910.332(b)(2) §1910.332(c) §1910.333(a)(1) §1910.333(a)(2) §1910.334(c)(1) §1910.333(b)(2)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				2.6a	§1910.335(a)(1)(i)
				2.6b	§1910.335(a)(1)(iv)
				2.6c	§1910.335(a)(1)(v)
				2.7	§1910.335(a)(2)(i)
				2.8	§1910.335(b)(1)
1	Scarborough, ME	313993453	10-1433	1.1	§1910.332(b)(1)
				1.2	§1910.332(c)
				1.3a	§1910.333(a)(2)
				1.3b	§1910.334(c)(1)
				1.4	§1910.333(b)(2)
				1.5a	§1910.335(a)(1)(i)
				1.5b	§1910.335(a)(1)(iv)
				1.5c	§1910.335(a)(1)(v)
				1.6	§1910.335(b)(1)
1	White River Junction, VT	311593164	10-1638	1.1a	§1910.332(b)(1)
				1.1b	§1910.332(b)(2)
				1.2	§1910.332(c)
				1.3a	§1910.333(a)(1)
				1.3b	§1910.333(a)(2)
				1.3c	§1910.333(c)(2)
				1.3d	§1910.334(c)(1)
				1.4	§1910.333(b)(2)
				1.5a	§1910.335(a)(1)(i)
				1.5b	§1910.335(a)(1)(ii)
				1.5c	§1910.335(a)(1)(iii)
				1.5d	§1910.335(a)(1)(iv)
				1.5e	§1910.335(a)(1)(v)
				1.6	§1910.335(a)(2)(i)
1	Boston, MA	313797060	10-1656	2.1	§1910.332(b)(1)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				2.2	§1910.332(c)
				2.3a	§1910.333(a)(1)
				2.3b	§1910.333(a)(2)
				2.4a	§1910.335(a)(1)(i)
				2.4b	§1910.335(a)(1)(iv)
				2.4c	§1910.335(a)(1)(v)
				2.5	§1910.335(a)(2)(i)
1	Portsmouth, NH	314043282	10-1863	1.1a	§1910.332(b)(1)
				1.1b	§1910.332(b)(2)
				1.2	§1910.332(c)
				1.3a	§1910.333(a)(2)
				1.3b	§1910.333(c)(2)
				1.3c	§1910.334(c)(1)
				1.4	§1910.333(b)(2)
				1.5a	§1910.335(a)(1)(i)
				1.5b	§1910.335(a)(1)(iv)
				1.5c	§1910.335(a)(1)(v)
1	Shrewsbury, MA	313205353	11-0080	1.3	§1910.332(b)(1)
				1.4a	§1910.335(a)(1)(i)
				1.4b	§1910.335(a)(1)(v)
				2.1	§1910.334(c)(1)
				2.2	§1910.333(a)(1)
				2.3	§1910.335(a)(2)(i)
2	Binghamton / Syracuse, NY	314345927	10-1844	1.3	§1910.335(a)(1)(i)
3	Pittsburgh, PA	312636939	10-1251	1.2	§1910.335(a)(2)(i)
				2.1a	§1910.332(b)(1)
				2.1b	§1910.332(c)
				2.2a	§1910.333(a)(1)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				2.2b	§1910.333(a)(2)
				2.3a	§1910.335(a)(1)(i)
				2.3b	§1910.335(a)(1)(v)
				2.3c	§1910.335(a)(1)(iv)
				2.4	§1910.335(b)(1)
3	Philadelphia, PA (Byberry)	312493620	10-1325	1.1a	§1910.332(b)(1)
				1.1b	§1910.332(c)
				1.2	§1910.333(a)(2)
				1.3a	§1910.335(a)(1)(i)
				1.3b	§1910.335(a)(1)(v)
				1.4	§1910.335(a)(2)(i)
3	Philadelphia, PA	312493661	10-1326	1.1	§1910.335(a)(2)(i)
				2.1a	§1910.332(b)(1)
				2.1b	§1910.332(c)
				2.2	§1910.333(a)(2)
				2.3a	§1910.335(a)(1)(i)
				2.3b	§1910.335(a)(1)(v)
3	Capitol Heights, MD	313989063	10-1507	2.1a	1910.332(b)(1)
				2.1b	1910.332(c)
				2.2a	1910.333(a)(1)
				2.2b	1910.333(a)(2)
				2.3a	1910.335(a)(1)(i)
				2.3b	1910.335(a)(1)(v)
				2.3c	1910.335(a)(1)(iv)
				1.1	1910.335(a)(2)(i)
				2.4	1910.335(b)(1)
3	Huntington, WV	311680839	10-2341	2.1a	1910.332(b)(1)
				2.1b	1910.332(c)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				2.2	1910.333(a)(2)
				2.3a	1910.335(a)(1)(i)
				2.3b	1910.335(a)(1)(iv)
				2.3c	1910.335(a)(1)(v)
				1.1	1910.335(a)(2)(i)
3	Gaithersburg, MD	314388604	10-2345	2.1a	1910.332(b)(1)
				2.1b	1910.332(c)
				2.2a	1910.333(a)(1)
				2.2b	1910.333(a)(2)
				2.3a	1910.335(a)(1)(i)
				2.3c	1910.335(a)(1)(iv)
				2.3b	1910.335(a)(1)(v)
				1.1	1910.335(a)(2)(i)
				2.4	1910.335(b)(1)
3	Bluefield, WV	311682496	10-2628	2.2a	1910.332(b)(1)
				2.2b	1910.332(c)
				2.3a	1910.333(a)(2)
				2.3b	1910.334(c)(1)
				2.4a	1910.335(a)(1)(i)
				2.4b	1910.335(a)(1)(iv)
				2.4c	1910.335(a)(1)(v)
				2.1	1910.335(b)(1)
4	Orlando, FL	314492364	10-2291	1.8	1910.333(b)(2)(ii)(B)
				2.1	1910.335(a)(1)(i)
				1.9	1910.335(b)(1)
4	Greensboro, NC	311094858	10-2340	1.5	1910.335(a)(2)(ii)
				2.2	1910.335(b)(1)
5	Bedford Park, IL	312600356	10-1037	1.1	1910.332(b)(1)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				1.2	1910.333(a)(2)
				1.3a	1910.335(a)(1)(i)
				1.3b	1910.335(a)(1)(iv)
				1.3c	1910.335(a)(1)(v)
5	Dayton, OH	314419813	10-1642	2.1	1910.332(b)(1)
				2.2	1910.333(a)(2)
				1.6	1910.333(b)(2)
				2.3	1910.335(a)(1)(i)
5	Sharonville / Cincinnati, OH	314456211	10-1862	1.1	1910.332(b)(1)
				1.2	1910.333(a)(2)
				1.3	1910.335(a)(1)(i)
5	Eagan, MN	313177537	10-1476	1.1	1910.332(b)(1)
				1.2a	1910.333(a)(1)
				1.2b	1910.333(a)(2)
				2.1	1910.333(b)(2)(i)
				1.3a	1910.335(a)(1)(i)
				1.3b	1910.335(a)(1)(iv)
				1.3c	1910.335(a)(1)(v)
				1.3d	1910.335(a)(2)(ii)
5	Columbus, OH	313155954	10-2245	1.1	1910.332(b)(1)
				1.2	1910.333(a)(2)
				1.3a	1910.335(a)(1)(i)
				1.3b	1910.335(a)(1)(iv)
				1.3c	1910.335(a)(1)(v)
5	Evansville, IN	301091567	10-2449	1.2	1910.333(b)(2)(iii)(A)
4	Jackson, MI	301604021	10-2511	1.1	1910.335(a)(1)(i)
				1.2	1910.335(a)(2)(i)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
6	Baton Rouge, LA	313027930	10-1266	3.1	1910.335(a)(1)(i)
8	Denver, CO	313414344	10-1123	2.1 2.2 2.3a 2.3b 1.1	1910.332(b)(1) 1910.333(a)(2) 1910.335(a)(1)(i) 1910.335(a)(1)(v) 1910.335(b)(1)
9	Las Vegas, NV	313862302	10-1224	1.7	1910.332(b)(2)
9	Los Angeles, CA, Bell	313862286	10-1225	1.11	1910.332(b)(2)
9	Anaheim, CA	313862294	10-1279	1.7	1910.332(b)(2)
9	Simi Valley, CA	314258401	10-1492	1.8	1910.332(b)(2)
9	Los Angeles, CA	314704180	10-2509	1.8 2.1a 2.1b 2.2a 2.2b 1.9 2.3	1910.332(b)(1) 1910.333(a)(1) 1910.333(a)(2) 1910.335(a)(1)(i) 1910.335(a)(1)(v) 1910.335(a)(2)(i) 1910.335(b)(1)
9	San Jose (Lundy St.), CA	314704230	10-2510	1.1a 1.1b 1.2a 1.2b 1.3 1.4	1910.333(a)(1) 1910.333(a)(2) 1910.335(a)(1)(i) 1910.335(a)(1)(v) 1910.335(a)(2)(i) 1910.335(b)(1)
9	West Sacramento, CA	314688250	10-2526	1.5 1.6 1.7	1910.332(b)(1) 1910.333(a)(2) 1910.335(b)(1)

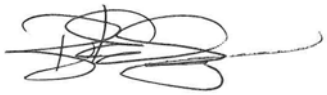
Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
9	Oxnard, San Francisco, CA	314704198	10-2527	1.1a 1.1b 1.2a 1.2b 1.4 1.3	1910.333(a)(1) 1910.333(a)(2) 1910.335(a)(1)(i) 1910.335(a)(1)(v) 1910.335(a)(2)(i) 1910.335(b)(1)
9	Oakland, CA	314688268	10-2619	1.6 1.7	1910.332(b)(1) 1910.335(b)(1)
9	San Jose, CA Glen Willow	314704321	11-0014	1.2 1.3a 1.3b 1.4 1.5	1910.333(a)(2) 1910.335(a)(1)(i) 1910.335(a)(1)(v) 1910.335(a)(2)(i) 1910.335(b)(1)
9	Phoenix, AZ (47th Ave)	314704388	11-0156	1.2 1.3 1.4	1910.333(b)(2) 1910.333(b)(2)(ii)(B) 1910.333(b)(2)(iv)(B)
9	Phoenix, AZ PDC	314704404	11-0155	1.2 1.3 1.4	1910.332(b)(1) 1910.333(b)(2)(iii)(A) 1910.335(a)(1)(i)
9	Phoenix, AZ Buckeye Rd	314709379	11-0157	1.2 1.3	1910.333(b)(2)(iv)(B) 1910.335(a)(1)(i)
9	Gilbert, AZ	314709387	11-0158	1.1 1.2	1910.332(b)(1) 1910.333(b)(2)(iv)(B)
9	Phoenix, AZ Grandview	315053827	11-0154	1.1	1910.335(a)(1)(i)
10	Portland, OR	312391709	10-1427	1.2 2.1	1910.333(b)(2) 1910.335(a)(1)(i)

UNITED STATES POSTAL SERVICE®

Management Instruction

Electrical Work Plan

Date	June 28, 2013
Effective	Immediately
Number	EL-810-2013-5
Obsoletes	EL-810-2009-1
Unit	Office of Safety and Health and Maintenance Operations



Rosemarie Fernandexz
Acting Vice President
Employee Resource Management

David E. Williams
Vice President
Network Operations

This management instruction (MI) establishes policy and requirements for an electrical work plan (EWP).

This MI applies to electrical work performed during the installation, operation, maintenance, modification, repair, and servicing of equipment that is permanently or temporarily installed in Postal Service™ facilities.

The following United States Postal Service® Headquarters authorities have jurisdiction over these policies:

- Office of Safety and Health, Employee Resource Management.
- Maintenance Operations, Network Operations.

Policy

The EWP is a written document containing policies designed to protect individuals in Postal Service facilities from serious injuries and incidents that could result from electrical hazards, such as electric shock and arc flash hazards that may arise when energized electrical work is performed. For detailed information on implementing an EWP, consult Maintenance Management Order (MMO) 023-13, *Electrical Work Plan* (or the latest revision). ("Postal facility" is defined in the Definitions section of this MI.)

The Postal Service is committed to providing a safe and healthy work environment for all employees and to complying with all electrical safety regulations established by the Occupational Safety and Health Administration (OSHA), including, but not limited to, the following:

- 29 Code of Federal Regulations (CFR) 1910.147, *The Control of Hazardous Energy.*
- 29 CFR 1910.133, *Eye and Face Protection.*
- 29 CFR 1910.137, *Electrical Protective Equipment.*
- 29 CFR 1910.301 through 1910.308, *Design Safety Standards for Electrical Systems.*
- 29 CFR 1910.331, *Scope.*
- 29 CFR 1910.332, *Training.*
- 29 CFR 1910.333, *Selection and Use of Work Practices.*
- 29 CFR 1910.334, *Use of Equipment.*
- 29 CFR 1910.335, *Safeguards for Personnel Protection.*

This MI is not intended to conflict with nor negate any collectively bargained agreement(s) regarding the performance of energized electrical tasks. In addition, the MI identifies the energized electrical

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work tasks, e.g., prohibited energized electrical work that may be performed by a contract worker. The EWP is not intended to take away electrical work performed by the bargaining unit, to decrease staffing levels, or to encourage or to mandate the use of a contract worker beyond the limited exceptions of the EWP. Subcontracting decisions must be made in accordance with Article 32 of the USPS/APWU Collective Bargaining Agreement and 530 of the *Administrative Support Manual* (ASM).

Use this MI in conjunction with the following handbooks:

- Handbook MS-1, *Operation and Maintenance (OEM) of Real Property.*
- Handbook MS-28, *Maintenance of Electrical Switchgear.*
- Additionally, manuals (e.g., OEM manuals) specific to Postal Service and building equipment and bulletins provide additional instructions on specific electrical maintenance tasks.
- To ensure that the goals of the MI are met, the Postal Service has established the following minimum policy principles:
- Postal Service and building equipment must be de-energized and an energy isolation device, lock, and accompanying identification tag must be applied before any maintenance task is performed on the equipment. “Postal Service equipment” is defined in the Definitions section of this MI, with the following two exceptions:
  - Work on energized electrical conductors or circuit parts is allowed as described in Table 2, Permissible Work Categories and Required PPE, where it is not feasible to de-energize the equipment. ONLY the tasks listed in Table 2 are allowed to be performed while the equipment is energized.
  - Work on energized electrical conductors or circuit parts is allowed to be performed using a permit, as described in the latest version of the EWP MMO Attachment 6 ONLY where it is not feasible, because of safety considerations, to de-energize the equipment. A permit must never be issued because de-energizing the equipment is inconvenient.
- Work on energized systems rated 601 volts and above, including maintenance, repair, modification, service, troubleshooting, or replacement of switchgear components, must be performed by qualified contractors.
- Operation and monitoring of dead-front switchgear components rated 601 volts and above is permitted under the limitations listed in this MI.
- Maintenance of switchgear components 601 volts and above must be performed by a qualified contractor.
- Employees must be qualified to perform energized electrical work on Postal Service or building equipment before they are assigned to install, modify, troubleshoot, repair, service, or maintain such equipment. (See the Qualifications section of this MI.)
- Employees are provided with the personal protective equipment (PPE), training, and tools appropriate for the work and the conditions to which they are exposed.

- Employees are responsible for using the PPE in the manner instructed. Employees are also responsible for the care (excluding laundering) and custody of any PPE assigned to them.
- Managers must adhere to the minimum qualification and training requirements of this MI.
- Managers must adhere to the minimum PPE requirements in this MI.
- Managers must ensure that the appropriate PPE is readily accessible to employees for use before electrical work begins, as outlined in this MI.
- Managers must instruct employees on the proper use of PPE and take prompt appropriate action when employees fail to properly use PPE.
- As described in this MI, managers must discuss the job hazards with employees.
- The installation head or plant manager, maintenance manager, and local safety professional must review and approve energized work permits before permit-required work begins. The permits must be both signed and dated.
- Employees may participate in the safety and health program without fear of restraint, interference, coercion, discrimination, or reprisal.

This policy does not apply to the following:

- Non-Postal Service employees (e.g., contractors) who perform electrical work in Postal Service facilities are not required to comply with this MI and related EWP MMO. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements, which include compliance with all related OSHA regulations and Postal Service Handbook EL-800, *Managing Contract Safety and Health Compliance.*
- Operating electrical switches that supply power when such switches are enclosed or incorporated into equipment or the building (e.g., on/off switches, pull cords for lighting receptacles, computer power buttons, other push buttons, or wall switches).
- Using approved connectors, such as cords with attachment plugs for wall receptacles and other cord and/or plug-connected equipment (e.g., lamp fixtures, corded hand tools, control devices, or other Postal Service equipment).
- Switching on or off switching-rated circuit breakers [those that have Switch Duty (SWD) marking], located in lighting distribution panels provided: the panel is in good repair; the panel is not missing any fasteners or blinds; and the breakers are rated for switching.
- Replacing light bulbs and fluorescent tubes.
- Operating DC-rated Postal Service or building equipment.

Table 1
Roles and Responsibilities for the Electrical Work Plan

Functional Organization or Position	Responsibility
Headquarters	
Office of Safety and Health, Employee Resource Management	■ Establishes policies and procedures for complying with OSHA safety and health standards. ■ Provides guidance to Headquarters functional areas, field managers, and support functions with respect to electrical work. ■ Monitors compliance with the EWP where employees perform electrical work. ■ Supports the development and revision of EWP training courses for field use.
Maintenance Operations, Network Operations, Engineering Delivery and Post Office™ Operations	■ Establishes procedures in accordance with Postal Service policy with respect to electrical work. ■ Monitors compliance with the EWP at maintenance-capable facilities and facilities where employees perform electrical work. ■ Supports the development and revision of EWP training courses for field use. ■ Ensures that new nationally deployed equipment meets OSHA regulatory and Postal Service policy requirements.

Facilities	■ Ensures that building equipment meets OSHA regulatory and Postal Service policy requirements.
	■ Monitors compliance with Postal Service policies and OSHA standards.
	■ Establishes policies and practices for facilities personnel, contract architect/ engineers, construction contractors, and design-build entities to be applied to:
	  ■ Postal Service-owned facilities and new constructions, whether owned or leased.
	  ■ Repair, alteration, and expansion of any existing Postal Service facilities, whether leased or owned.

Supply Management	■ Ensures that MPE and nationally procured industrial equipment meets OSHA regulatory and Postal Service policy requirements.
Training	■ Develops and maintains formal training for all employees impacted by the EWP. ■ Supports national implementation and distribution of training and maintains training records. ■ Develops and maintains national EWP training for management employees and field safety employees.
Areas	
Human Resources Managers	■ Monitors compliance with Postal Service policies and OSHA standards through safety manager [Area Office (AO)] and/or safety analyst (AO)].
Safety Manager (AO) and/or Safety Analyst (AO)	■ Monitors facilities for compliance with Postal Service policy and OSHA standards. ■ Provides guidance and support for EWP compliance.
Managers, Maintenance Support	■ Oversees and verifies national implementation of the EWP. ■ Provides guidance and support for national EWP compliance. ■ Monitors compliance with Postal Service policies and OSHA regulations.
Districts	
Installation Heads/Postmasters	■ Develops, implements, revises (as necessary), and enforces the local EWP. ■ Designates an EWP coordinator.

Functional Organization or Position	Responsibility
Electrical Work Plan Coordinator	■ Administers the local EWP. ■ Prepares, reviews, revises, and distributes the local written EWP. ■ Supports ongoing development and documentation of local EWP policy. ■ Advises the maintenance managers and/or senior Postal Service officials on EWP compliance issues and EWP-related Postal Service policy decisions. ■ Monitors facilities' EWP compliance through document reviews, discussions with supervisors and craft employees, and personal observations. ■ Performs an annual evaluation of EWP.
Electrical Work Plan Coordinator Lite	■ Administers the local EWP in non-maintenance-capable facilities. ■ Monitors facilities' EWP compliance through document reviews, discussions with craft employees, and personal observations at non-maintenance-capable offices. ■ Monitors EWP compliance at non-maintenance-capable facilities that require employees to perform electrical work. ■ Performs an annual evaluation of EWP.
Maintenance, Operations Managers, and Supervisors	■ Identifies and assesses electrical hazards within operations. ■ Develops plan to address on-site and off-site hazards. ■ Monitors EWP compliance at maintenance-capable facilities that require employees to perform electrical work. ■ Verifies that employees are properly trained to safely perform electrical work. ■ Works cooperatively with Safety personnel to select the appropriate PPE. ■ Verifies that that PPE is appropriate, available, in good condition, and well-maintained. ■ Verifies that employees are trained on proper use and maintenance of PPE.
District and Plant Safety Personnel	■ Monitors compliance with the EWP at maintenance-capable facilities that require employees to perform electrical work. ■ Advises and assists collateral duty facility safety coordinators/EWP coordinator in administering the EWP.
Collateral Duty Facility Safety Coordinators	■ Assists EWP coordinator in administering the EWP, as appropriate, in non-maintenance-capable facilities. ■ Works cooperatively with district plant personnel, safety personnel, and the EWP coordinator to ensure compliance with the EWP.

Facilities Requiring an Electrical Work Plan

Every Postal Service facility requires a written EWP. The elements of the EWP will vary depending on the type of facility and the type of electrical work activities performed by USPS® employees at each facility. There are two type of Postal Service facilities subject to the EWP: maintenance-capable and non-maintenance-capable facilities. For the purposes of the EWP MI and MMO, maintenance-capable and non-maintenance-capable facilities are defined as follows:

Maintenance-Capable Facilities. A maintenance-capable facility has assigned maintenance personnel qualified to maintain a facility and the equipment installed in that facility. Such facilities include, but are not limited to, Processing and Distribution Centers and Network Distribution Centers.

Non-Maintenance Capable Facilities. A facility is a non-maintenance capable facility if it does not meet the definition of maintenance-capable facility. Most electrical work in these facilities is performed by outside contractors or visiting Postal Service maintenance employees.

The installation head must determine if his or her facility is a maintenance-capable or non-maintenance-capable facility. For assistance in making this determination, consult the latest version of the EWP MMO, available on the Maintenance Technical Support Center website at *http://www.mtsc.usps.gov*.

Guidance is also available from the following individuals:

- Maintenance managers.
- District safety specialists.
- Plant safety specialists.

For facilities with no on-site EAS maintenance supervisor, the EWP coordinator or other appropriately qualified employee will assist the installation head and collateral duty facility safety coordinator in complying with EWP requirements.

For non-maintenance-capable facilities where the electrical work is performed on site by a Postal Service maintenance employee from another facility, the installation head may request compliance assistance from the EWP coordinator at the maintenance employee's home facility or the appropriate safety representative.

Elements of an Electrical Work Plan for a Maintenance-Capable Facility

A maintenance-capable electrical work plan must include the following elements:

- Designation of an EWP coordinator.
- Definitions.
- Electrical work assessment.
- Descriptions of energized and de-energized work.
- Descriptions of prohibited, permissible, and permit-required work.

- Determination of work category and the PPE required under that category.
- Qualifications for performance of work for each category.
- Training requirements.
- Training documentation.
- Protection plan to keep unqualified persons from being exposed to electrical hazards.
- Description of appropriate PPE.
- Work practices (including work practices for those non-maintenance-capable facilities the maintenance-capable facility is responsible for supporting).
- Labeling.
- Annual evaluation.
- Documentation of employee nonconformance with EWP.
- Effective dates.

Elements of an Electrical Work Plan for a Non-Maintenance-Capable Facility

A non-maintenance-capable electrical work plan must include the following elements:

- Designation of an EWP coordinator.
- Definitions.
- Electrical work assessment.
- Memorandum for the record stating how electrical work will be accomplished at the facility.
- Labeling.
- Annual evaluation.
- Documentation of employee nonconformance with EWP.
- Training requirements.
- Training documentation (including, but not limited to, retention of copies of the credentials of visiting Postal Service maintenance employees who perform work at the facility).
- Effective dates.

Electrical Work Plan Coordinator

Installation heads of every facility must designate an EWP coordinator. The EWP coordinator must be Executive and Administrative Schedule (EAS) level employee and is responsible for administering the EWP. In non-maintenance-capable facilities, this position will be EWP coordinator lite, and the installation head may also serve in this position.

The EWP coordinator oversees the local EWP at his/her maintenance-capable facility and assists with the EWP for any non-maintenance-capable facilities support by the maintenance-capable facility. The coordinator may delegate specific duties to other appropriate

employees, where the employees are trained and qualified to perform such work, and with the concurrence of the installation head.

The EWP coordinator must complete the current National Center for Employee Development (NCED) course(s) for EWP coordinators as identified in the Training section of this MI and all prerequisite courses. At non-maintenance-capable facilities, the EWP coordinator lite must complete the course EWP Coordinator Lite.

For detailed information about the EWP coordinator's duties, see the Roles and Responsibilities section of this MI. For information about methods the EWP coordinator employs to fulfill responsibilities, consult the latest verision of the EWP MMO.

USPS Off-Site Personnel

When a Postal Service employee is assigned to perform electrical work off site (at a Postal Service facility other than his/her home facility), the employee will receive detailed instructions on the work to be performed, so that his/her home facility can verify that the employee is qualified and has the requisite PPE to perform the work. After arriving at the host-site, the visiting Postal Service employee must present documentation to the host-site's EWP coordinator that demonstrates the employee's EWP training qualifications for the assigned electrical work. Visiting employees may include, but are not limited to, employees assigned to the National Technical Support Network (NTSN), Maintenance Technical Support Center (MTSC), or Engineering. The employees' training credentials must be copied and added to the Training Documentation section of the host-site's EWP.

All visiting Postal Service employees performing electrical work at the host-site must comply with the host-site's EWP.

When traveling, a Postal Service employee must carry his/her PPE with him/her. In the event the employee cannot bring his/her own PPE, the employee must notify the EWP coordinator at the host-site or his/her home facility for assistance in obtaining the necessary PPE, which may include having the appropriate PPE mailed to the employee or making other arrangements to have the appropriate PPE available before the visiting Postal Service employee is scheduled to perform the assigned electrical work or complete off-site training.

The host-site at which the electrical work is performed is responsible for making the local EWP available to visiting Postal Service employees, verifying that the visiting employees are qualified to perform the assigned work, and making sure that safe work practices are followed when the electrical work is performed. At its discretion, the host-site may perform documented observations of the visiting Postal Service employees while the electrical work is being performed.

The EWP coordinator or installation head at the host-site must stop the visiting Postal Service employee from performing work when unsafe work practices are observed or when the host-site is otherwise notified of an electrical safety issue. This may occur, for example, if there is non-conformance with the host-site's EWP or improper use of PPE. The host-site must also prevent unqualified individuals from accessing areas where energized electrical work is being performed.

Contractors

Only on rare occasions will some contracting agreements require long-term contractors to follow the EWP MI and MMO. In the majority of cases, contractors who perform electrical work are not required to comply with this MI or the MMO. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements for safe electrical work, which includes compliance with all related OSHA regulations and Handbook EL-800. EWP coordinators are responsible for ensuring that Postal Service employees are not endangered by contract work.

Prior to performing electrical work in a Postal Service facility, a contractor is required to certify that the work will be performed by qualified individuals and must comply with all applicable local, state, and federal requirements, which includes compliance with all related OSHA regulations and Postal Service Handbook EL-800. The Postal Service provides the contractors advance notification of the hazards associated with any electrical work that the contractors are scheduled to perform. In some cases, an electrical safety plan may be included as part of the contract.

If a Postal Service facility reasonably suspects that a contractor is performing work in an unsafe manner or has failed to comply with OSHA's regulations, the EWP coordinator or installation head must promptly discuss his/her concerns with the contractor and, if the contractor fails to address the concerns, stop the contractor from performing electrical work until the deficiencies are corrected. Such action will be taken to protect any individuals in the Postal Service facility that may be exposed to hazards created by the contractors' actions or omissions. All work performed by contractors must be in accordance with the Handbook EL-800.

Definitions

The following definitions are for the purposes of understanding the requirements in this MI and may differ from the definitions in other sources, including other Postal Service handbooks and manuals:

Contractor. An individual who is not an employee of the Postal Service (or group of such individuals) and who performs services for the Postal Service under express or implied contracts. Contractors generally retain the right to control the means, method, and manner by which the agreed upon services are performed within the contractual requirements.

De-energized electrical work. Work performed on equipment that is not connected to an electrical energy source and that has been verified not to contain residual or stored electrical energy, in accordance with USPS lockout policies [(see USPS MMO-033-05, *Hazardous Energy Control* (or the latest revision)].

Dead-front. Design that prevents exposure to any energized electrical conductors or circuit parts from the operating side or exterior of the equipment.

Energized electrical work. Any tasks performed on electrical conductors or circuit parts that have not been de-energized.

Lockout. The isolation of energy sources by applying to equipment an appropriate energy isolating device, lock, and accompanying identification tag in accordance with USPS lockout policies [(see USPS MMO-033-05, *Hazardous Energy Control* (or the latest revision)], to ensure that the energy will remain isolated until the energy isolating device is removed.

Operation. The proper utilization of equipment to perform its intended function. These functions are typically performed with electrical component covers secured in place to prevent direct exposure to energized electrical conductors or circuit parts (e.g., switching, and using key interlocks, reading instruments, indicators, or flags).

Maintenance. Performing various tasks to keep equipment in proper working condition (e.g., assembling, setting up, installing, adjusting, calibrating, inspecting, repairing, troubleshooting, replacing, modifying, and servicing equipment).

Qualified employee. An individual who has successfully completed the required training and who meets all the requirements specified in the Training Section of this MI and the EWP MMO, including demonstrating skill competency and knowledge of the work to be performed and the hazards associated with such work. With limited exceptions, an employee who is undergoing on-the-job training (OJT) is a qualified person for the purpose of performing the duties involved in his/her OJT as long as the employee has demonstrated in the course of training an ability to perform duties safely and is under the direct supervision of a qualified person.

Permissible work. A discrete list of electrical maintenance activities that may be performed on energized electrical conductors or circuit parts rated below 601 volts with the exception of operating and monitoring of dead-front switchgear, which may be greater than 600 volts.

Permit-required work. Select maintenance tasks that may be performed, with approval of the installation head or plant manager, maintenance manager, and local safety professional, on energized electrical conductors or circuit parts rated below 601 volts provided: (1) it is not feasible to de-energize the electrical conductors or circuit parts; (2) the work to be performed is not specifically listed as permissible work; and (3) the work to be performed is not considered prohibited work. An Energized Electrical Work Permit form must be completed and signed prior to the work being performed.

Personal protective equipment (PPE). Equipment, which when worn by an individual, creates a barrier between the individual and the potential hazards, thereby reducing the individual's risk of serious injury if exposed to potential hazards. (Examples include hand, eye, face, head, and body protection equipment.)

Postal Service facilities. All buildings and office space: (1) that are owned, leased or controlled by the Postal Service and (2) where Postal Service employees are responsible for performing maintenance on Postal Service or building equipment or hiring contractors to perform such maintenance on behalf of the Postal Service. If the Postal Service is not responsible for any maintenance of the building or Postal Service

equipment at the facility, then the facility is not within the scope of this MI.

Postal Service equipment. A broad range of equipment used either directly or indirectly to move the mail and provide customer service. Postal Service equipment includes mail processing equipment, customer service equipment, delivery service equipment, and support equipment.

Prohibited work. Any maintenance task performed on energized electrical conductors or circuit parts if: (1) the task is not specifically included in the list of permissible work, and (2) the installation head or plant manager, maintenance manager, and local safety professional have not approved the work through the permit work process. With the exception of operating and monitoring of dead-front switchgear, all other tasks performed on electrical conductors or circuit parts rated at 601 volts and above are considered prohibited work.

Unqualified employee. Any person who has not completed the requisite training outlined in this MI and has not successfully demonstrated his/her knowledge, skills, and abilities for the safe performance of assigned electrical work activities.

Electrical Work Assessment

Each facility must assess the types of electrical work performed and the electrical equipment present in its facility to determine the steps it must take to comply with the requirements described in this MI. The assessment includes determining the appropriate work categories and identifying “permissible work”. The assessment performed by each facility may not waive or relax any safety-related work practice in this MI or the EWP MMO. For more detailed information on performing an electrical work assessment, consult the latest version of the EWP MMO.

Energized and De-energized Electrical Work

Two general types of electrical work are performed in Postal Service work environments: energized and de-energized. Postal Service policy generally prohibits employees from performing electrical work on energized electrical conductors or circuit parts except as specifically outlined in this MI. This MI provides policies applicable to the performance of energized electrical work.

De-energized Electrical Work

Generally, Postal Service policy requires electrical conductors and circuits parts to be de-energized and an energy isolation device, lock and accompanying identification tag must be applied before preventive, predictive, and corrective maintenance activities are performed. This requirement has been Postal Service policy for more than 20 years and is a major reason why the number of electrical incidents at Postal Service facilities is low. For more information on

Postal Service policy for de-energizing and locking out equipment, consult MMO-033-05, *Hazardous Energy Control* (or the latest revision).

Energized Electrical Work

It may not always be feasible to lockout equipment and, in some situations, equipment must be energized in order to perform maintenance work. As such, Postal Service employees are allowed to perform energized electrical work in limited situations, provided all other sources of hazardous energy (for example, but not limited to, mechanical, pneumatic, and hydraulic energy) are de-energized, isolated, or otherwise rendered safe. This may be achieved by the application of energy-isolation devices to bring all energy sources to zero. This may also require the use of mechanical devices (for example, but not limited to, a block or support pin) to prevent mechanical parts with stored energy from moving. For more information on Postal Service policy and practices for de-energizing and locking out equipment, consult MMO-033-05, *Hazardous Energy Control* (or the latest revision).

All allowable maintenance tasks fall under the permissible or permit-required work categories. A list of permissible work activities are included in Table 2 of this MI and are also included in the latest EWP MMO.

Energized work requires Postal Service employees to take additional precautions as a result of the increased potential for electrical hazards. Subsequent sections of this MI discuss assessments of energized electrical work, employee training and qualifications, and PPE requirements. Additional detailed information on energized work is provided in the latest version of the EWP MMO.

Permissible, Permit-Required, and Prohibited Work

Energized work in Postal Service work environments falls under one of three different categories: permissible, permit-required, or prohibited work.

Permissible Work

Permissible work refers to the list of tasks specifically identified in Table 2 in this MI under the “energized activity limitations” column. These tasks may be performed by Postal Service employees on energized electrical conductors or circuit parts rated 600 volts or less. Postal Service policy does not permit employees to work on electrical conductors or circuit parts rated 601 volts and above, except for the operation and monitoring of dead-front switchgear rated at 601 volts and above. Some examples of permissible work include (but are not limited to): programming or testing programmable logic controllers (PLCs), adjusting variable frequency drives (VFDs) and servo drives, or operating dead-front switchgear.

Permissible work must be performed by qualified employees using the appropriate PPE as identified in the Personal Protective Equipment section of this MI.

To simplify the electrical assessment process, permissible work tasks have been broken down into four work categories based on the potential hazards associated with the tasks involved. Each work category is associated with specific requirements for employee qualifications, training, and PPE. See the section "Determination of Work Category and Required PPE" for further information.

Permit-required Work

Permit-required work refers to select maintenance tasks that may be performed, with approval of the installation head or plant manager, maintenance manager, and local safety professional, on energized electrical conductors or circuit parts rated below 601 volts provided: (1) it is not feasible to de-energize the electrical conductors or circuit parts; (2) the work to be performed is not specifically listed as permissible work; and (3) the work to be performed is not considered prohibited work.

Infrequently, it may be necessary to perform tasks on energized electrical conductors or circuit parts that fall outside the boundaries of permissible work. Postal Service employees may not be qualified to perform the work safely and effectively. Each facility has the discretion to use qualified contractors when appropriate. Refer to Handbook EL-912, Article 32 (otherwise referred to as Article 32 of the 2010-2015 American Postal Workers' Union Agreement) and the *Administrative Support Manual* (ASM) 535, Maintenance Service Contracts, when evaluating the need to contract this work.

Before a Postal Service employee performs permit-required work, the work must be expressly authorized in writing by the installation head or plant manager, the maintenance manager and the local safety professional in accordance with the Energized Electrical Work Permitting process (as outlined in the latest version of the EWP MMO). This permitting process includes verifying the assigned employee's qualifications, the facility's EWP work practices, the JSA, and appropriate PPE and tool requirements; as well as verifying that the electrical conductors or circuit parts involved are rated at or below 600 volts. A local hazard assessment must be performed to determine the necessary safety precautions for such work and an energized Electrical Work Permit must be completed as set forth in the EWP MMO.

The need to perform permit-required work should be rare. Permit-required work can usually be avoided by carefully considering various options and looking for alternatives that will allow the electrical conductors or circuit parts to be de-energized by applying an energy isolation device, lock and accompanying identification tag [see USPS MMO-033-05, *Hazardous Energy Control* (or the latest revision)].

This MI provides a foundation for identifying permit-required electrical work, but it does not provide a detailed discussion of the permit process for approving such work. In completing the permit process, the following resources are useful for assessing the PPE necessary for permit-required electrical work to address electrical and any other hazards that may be present:

- MMO-023-13, *Electrical Work Plan.*
- MI EL-810-2009-4, *Personal Protective Equipment and Respiratory Protection Programs.*

- MMO-025-04, *Personal Protective Equipment.*
- Maintenance Technical Support Center.

Prohibited Work

Prohibited work refers to work that Postal Service employees are not permitted to perform. If a task does not fall under the permissible or permit-required work category, the task is considered prohibited work. All prohibited work should be performed by a qualified contractor.

Postal Service policy does not permit employees to work on electrical conductors or circuit parts rated above 600 volts, except for the operation and monitoring of dead-front switchgear provided that all the doors and covers are in place and fastened.

Determination of Work Category and Required PPE

Methodology

The four work categories illustrated in Table 2 correspond to the potential hazards to which Postal Service employees may be exposed when performing energized electrical work. Each work category has specific safety-related requirements. These requirements include PPE, training, labeling, and general work practices.

Table 2 lists the four work categories, the permissible work allowed under each category and the corresponding required PPE.

To determine the work category for an electrical maintenance task, use Table 2 as follows:

1. Determine the nominal supply voltage and nominal supply amperage of the equipment on which work will be performed. You will use this to determine which work category is appropriate.
2. Verify that the work is listed under the “Energized Activity Limitations” column. If the work is not listed, proceed to the permit-required work process.
3. Verify that the equipment can be de-energized and an energy isolation device, lock and accompanying identification tag can be applied. If it cannot, proceed to the permit-required work process.
4. Identify the required PPE for that work category.
5. Regardless of the work category, all permissible work is limited to the tasks listed in the “Energized Activity Limitations” column of Table 2.
6. The voltage and amperage information included in Table 2 is based on nominal system voltage and amperage.

Table 2
Permissible Work Categories and Required PPE

Work category	Nominal Voltage Range	Nominal Amps	Part of the Body to Be Protected						Energized Activity Limitations
			Hands	Eyes	Hearing	Face	Head	Body	
1	0 to 49	All	NR[1]	NR[1]	NR[1]	NR[1]	NR[1]	NR[1]	No limitations.
2[2]	50 to 239	All	Voltage-rated Gloves	Prescription Safety Glasses or Safety Glasses[1]	NR[1]	NR[1]	NR[1]	Coveralls (minimum FR rated @ 8 cal/cm^2)	■ Troubleshooting energized circuits. ■ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.).
3	240 to 600	400 and Less	Voltage-rated Gloves	Prescription Safety Glasses or Safety Glasses[3]	Ear Canal Inserts[8]	Face Shield[4]	Hard Hat[5]	Coveralls (minimum FR rated @ 8 cal/cm^2)	■ Troubleshooting energized circuits ■ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.)
4	240 to 600	401 and above	Voltage-rated Gloves	Prescription Safety Glasses or Safety Glasses[3]	Ear Canal Inserts[8]	Arc Flash Hood	Hard Hat[5]	Flash Suit and Foot Protection (minimum FR rated @ 25 cal/cm^2)[6]	■ Troubleshooting energized circuits ■ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.) ■ Checking relay trip status that requires opening the breaker cubicle door. ■ Operation/ monitoring of dead-front switchgear.[7]
N/A	601 and above	All	All electrical work is prohibited, except as permitted by USPS policy.[7]						

1. *Not required under the provisions of the EWP MI.*
2. *Work performed on equipment energized at 50 to 239 V and powered by a transformer of greater than 125 KVA must be performed as Work Category 3.*
3. *Eyeglasses must provide clear color, clarity, and interpretation. Due to visual field distortions, safety goggles are not permitted.*
4. *Face shield must have a minimum FR rating of 8 cal/cm^2.*
5. *Typically Arc Flash Hood and Face Shield manufacturers require the use of a hard hat for proper fit of the arc flash hood.*
6. *Foot protection includes leather or leather-like footwear. When wearing leather-like footwear, the employee must also wear spats/leggings with an arc rating equal to that of the flash suit required for that category. Dielectric and steel-toed footwear is not required. Any deviation to the PPE protection in this footnote must be approved at the HQ level.*
7. *Operating or monitoring of dead-front switchgear may be performed on energized equipment rated over 600 V provided: (1) all covers, doors, and/or panels of all individual modules of the switchgear are in place and properly secured; and (2) all fasteners are in place.*
8. *Minimum noise reduction rating of 21dB.*

Employee Qualifications

OSHA considers an employee to be qualified when he/she has undergone appropriate training and has demonstrated his/her knowledge, skills, and abilities to safely perform energized electrical work activities. The Postal Service satisfies OSHA's requirements by requiring the employee to complete the requisite training shown in Table 3.

Employees are qualified to perform work in a particular work category when they have received the appropriate training and demonstrated knowledge, skills and ability to safely perform permissible energized electrical activities in the specific work category for which they have been trained. Employees are expected to apply the knowledge, skills, and abilities acquired from their training to similar situations that may be encountered while working within a particular work category. Employees are not required to complete NCED equipment-specific training before performing permissible energized electrical work; provided they are qualified for the appropriate work category for tasks on similar systems and equipment.

Non-maintenance employees, such as SMPs, must receive the appropriate electrical work training for the systems on which they are assigned to work. They are only allowed to perform energized electrical work on electrical conductors or circuit parts rated at 49 volts or less.

Current Maintenance Employees

All maintenance employees, who are required to work on energized electrical conductors or circuit parts, must be qualified for the work that they might perform. Employees must have the knowledge, skills and abilities to perform the work safely and discuss the safe work practices applicable to the task to be performed.

Postal Service employees' files must include documentation describing the type and scope of training received. A copy of this documentation must be maintained in the NCED Learning Management System (LMS) and at the employee's permanent duty station, preferably by maintenance management.

Although an employee may have received training in the past from the Postal Service, a previous employer, or an educational institution, maintenance employees must also receive the appropriate training under this MI and demonstrate their knowledge, skills, and abilities to safely perform energized electrical work activities.

The Training Section describes the training required to ensure that employees' knowledge of specific Postal Service electrical work policies and practices is current.

New Maintenance Employees

New maintenance employees need only take the work category courses appropriate for the work the employees are expected to perform (as shown in Table 2) provided those employee can: (1) provide documentation that they have maintained electro-mechanical industrial or building-type (or equivalent military) equipment safely for at least 6 months; and (2) demonstrate their knowledge, skills, and abilities to

safely perform energized electrical work activities. The Postal Service will retain a copy of this documentation in the appropriate files.

New maintenance employees who do not have the requisite amount of electrical maintenance experience as described above must take the work category courses appropriate for the work the employees are expected to perform and undergo 6 months of on-the-job training (OJT) with a qualified Postal Service employee to be considered qualified to independently perform any energized electrical work activities. The 6 months OJT maintaining Postal Service equipment, electro mechanical equipment, or building-type equipment may be a combination of (1) hands-on work with a qualified employee and/or (2) training on specific Postal Service equipment provided by the NCED or other authorized vendor. Before a new employee is deemed qualified, he/she must demonstrate his/her knowledge, skills, and abilities to safely perform energized electrical work activities. Please refer to the most current version of the EWP MMO for additional information on OJT.

Training

Maintenance employees permitted to work on energized electrical conductors or circuit parts must complete the specific training described in this MI. This training must be documented such that it is available via NCED/LMS and the National Training Database, as well as in each the facility's EWP files. These employees must have demonstrated ability to perform the work in a safe manner and be capable of discussing the safe work practices applicable to the tasks they will perform. OJT must be documented in eMARS as productive work hours (reported on the Preventive Maintenance route or the work order the employee has been assigned) per Handbook MS-63, *Maintenance Operations.*

Refresher Training

Refresher training (retraining) re-establishes employee proficiency and introduces new or revised work practices and procedures, as necessary. Retraining must be conducted when equipment, procedures, and/or practices change or when management otherwise reasonably believes such training is needed, such as when employees are observed deviating from the applicable work practices.

Training Responsibilities

Installation heads must ensure that all employees receive training appropriate to their jobs. The employee's immediate supervisor is responsible for scheduling and documenting the training of these employees. The EWP coordinator must also document the training and qualifications of all Postal Service employees, including managers, as part of a facility's EWP.

Maintenance managers are not responsible for ensuring that non-maintenance employees receive training under the EWP, MI, or MMO or for documenting that training. The non-maintenance employee's immediate supervisor is responsible for scheduling and documenting the training of these employees. However, upon request, maintenance

managers may provide instructions for training non-maintenance employees.

The Postal Service facility provides and documents electrical safety training for permissible or permit-required work in Category 4 (i.e., work on electrical conductors and circuit parts rated at less than or equal to 600 volts and greater than 401 amps). The trainer should be identified locally and must have an appropriate level of technical knowledge, skills, or abilities in the subjects he or she is teaching, as demonstrated by the background and experience of the proposed trainer. This training may be obtained through a vocational school, community college, equipment manufacturer or distributor, OJT program, or another equivalent source after qualifications of the proposed trainer have been reviewed and approved by the EWP coordinator and maintenance manager. EWP coordinators may seek additional assistance with evaluating or obtaining trainers through MTSC or NCED.

Use Table 3 to determine the training requirements for each employee who performs energized electrical work.

Supervisor Training

It is essential that supervisors are qualified in the safety-related work practices at the same training/qualification level in EWP as the employees being supervised. Supervisors, while not expected to perform the task on a regular basis, must have the practical skills and judgment to safely perform the tasks themselves. Safety-related work practices include PPE and tools used in performing energized electrical work, as well as the identification of electrical hazards that employees may be exposed to while performing assigned tasks. A qualified supervisor must be capable of identifying deficiencies in his/her employees' electrical safety-related work practices.

Training of Safety Representatives

It is imperative that a Postal Service safety representative receive the same EWP training as the EWP coordinator and supervisors at facilities for which the safety representative is responsible. This is necessary to enable appropriate observations of employees and evaluation of the EWP. A qualified safety professional is expected to be capable of identifying deficiencies in an employee's electrical safety-related work practices, performing a hazard assessment, labeling, following work practices for use of PPE and tools, and identifying electrical hazards to which employees may be exposed while performing assigned maintenance tasks.

Table 3
Training Requirements

Employee Position	Type of Work	Title of Course	Material Covered
All Affected Employees	All	Video – *Electrical Safety and You*	Awareness-level topics
EWP coordinators at maintenance-capable facilities[1] and the designated safety representatives	Responsible for local EWP	Electrical Work Plan Coordinator	Local program requirements
EWP coordinator at non-maintenance-capable facilities	Responsible for local EWP	Electrical Work Plan Coordinator Lite	
EWP coordinators at maintenance-capable facilities and maintenance supervisors[2]	Oversight of employees who perform electrical work	Electrical Safety for the Maintenance Supervisor	Postal Service policies related to electrical work practices for work categories 1 to 4
New Postal Service maintenance employees[3]	General maintenance	Maintenance Safety Awareness (MSA)[4]	General maintenance topics, including electrical
Postal Service employees who perform electrical work, EWP coordinator[1] at maintenance-capable facilities and the designated safety representatives	Working on 0 to 239 volts and powered by a transformer 125 KVA or less	Electrical Safety Work Categories 1 and 2	Postal Service policies related to electrical work practices and PPE required for 0 to 239 volts and powered by a transformer 125 KVA or less
Postal Service Employees who perform electrical work, EWP coordinator[1] at maintenance-capable facilities and the designated safety representatives	Working on 240 to 600 volts and 400 amps and less as well as 0 to 239 volts and powered by a transformer larger than 125 KVA.	Electrical Safety Work Category [3]	Electrical work practices and PPE required for 240 volts to 600 volts and 400 amps and less as well as for 0 to 239 volts and powered by a transformer larger than 125 KVA
Postal Service employees who perform electrical work	Working on 600 volts or less and 400 amps and less	PPE Don/Doff and Care Training Categories[3] and Below	How to select, care for, don and doff PPE for work categories[3] and below
Postal Service employees who perform electrical work and EWP coordinator[1] at maintenance-capable facilities	Working on 240 to 600 volts and 401 amps or more	Electrical Safety Work Category[4]	Electrical work practices and PPE required for 240 volts to 600 volts and 401 amps
Postal Service employees who perform electrical work	Working on 240 to 600 volts and 401 amps or more	PPE Don/Doff and Care Training Category[4]	How to select, care for, don and doff PPE for work category[4]
Postal Service employees who perform electrical work and EWP coordinator[1] at maintenance-capable facilities	Operating dead-front switchgear rated at 240 to 600 volts 401 amps or more and 601 volts and above	Locally Developed Site Specific Training	Electrical work practices for site-specific equipment PPE and tools. Operating dead-front switchgear rated at 240 to 600 volts 401 amps or more and 601 volts and above
EWP coordinators at maintenance-capable facilities[1], maintenance supervisors, the designated safety representatives, and designated trainers	Trainers for PPE don/doff and care training all categories	EWP PPE Train the Trainer (note: this course is inclusive of the EWP PPE don/doff & care training for categories 3 and 4)	When EWP PPE is required, how to determine what level of PPE is needed, and how to properly inspect, don, doff, and care for the PPE

1. *EWP Coordinators must also complete all EWP Work Category courses required for any qualified employee in his or her facility.*
2. *Maintenance supervisors must also complete all of the courses required for his or her employees.*
3. *New maintenance employees that will perform electrical work must also take the applicable courses listed under Postal Service employees who perform electrical work in the table above.*
4. *Only a portion of this 40-hour course deals with electrical work.*

Training for Hazardous Energy Control

All employees who perform energized electrical work must also be trained on the control of hazardous energy. Training requirements can be found in USPS MMO-033-05, *Hazardous Energy Control* (or the latest revision). The USPS work practices can be found in the Hazardous Energy Control MMO and in equipment-specific work practices.

Hazardous energy control training should be conducted by an individual who has the knowledge, training, and experience to train employees on their respective job assignments and qualified to perform observations of the execution of the applicable hazardous energy control procedures. A qualified trainer is an individual who by certificate, professional standing, or knowledge, training and experience has demonstrated the ability to train and evaluate employees. A trainer will have sufficient "experience" if he or she has the practical skills and judgment to be able to conduct the tasks safely under the conditions prevailing at the specific workplace.

Unqualified Employees

An unqualified employee is any person who has not successfully completed the necessary training to perform a particular task and has not successfully demonstrated his/her knowledge, skills, and abilities to safely perform energized electrical work activities. Employees are prohibited from performing any task for which they are not qualified.

Each facility's EWP must include a protection plan to prevent unqualified employees from accessing areas where energized electrical work is being performed. Training alone may not be used to prevent unqualified employee exposure to energized electrical work; there must be a demarcation of the work area within a 4-foot radius accomplished by appropriate barricades or other physical barriers.

Work Practices

Employees and managers need to understand the importance of supporting a safe and healthy work environment. In the Postal Service work environment, this is accomplished by using safe work practices. Generally, work practices are based on the assessment of a number of risk factors in the Postal Service work environment and the practical ability to reduce risk exposures by applying these work practices.

Electrical work practices are based on an assessment of the risk conditions observed for the voltage and current potentially present when working on energized electrical conductors or circuit parts located within Postal Service facilities.

Electrical work practices are discussed at length in the latest EWP MMO. Some key points from the electrical work practices section include the following:

- Employees must report to work wearing the appropriate clothing and foot wear for their position.

- Employees must remove conductive items including, but not limited to, watches, necklaces, earrings, and rings while performing energized electrical activates.
- Employees must wear the appropriate PPE and use the appropriate tools, including, but not limited to, insulated tools and electrical test equipment, for the work to be performed. Employees must be trained to use the PPE and tools properly.
- Employees must inspect each tool for damage to insulation as well as general damage (for example, pliers that do not close properly).
- Employees must not use damaged tools, but replace them before performing a task.
- Employees must not substitute tools of lesser quality or tools not appropriate for a task.
- Maintenance management at each facility must provide tools and PPE of sufficient quantity and quality to perform electrical work safely.
- Each facility must have sufficient quantities of tools and PPE to ensure that the appropriate tools are available to replace damaged tools or PPE.

Personal Protective Equipment

The required PPE for each work category is based on the voltage and amperage potentially present in the Postal Service or building equipment on which work will be performed.

Installation heads must provide sufficient funding to purchase the requisite PPE, and management must ensure that required PPE is readily available for EWP compliance. Managers must ensure that each qualified employee has access to the required PPE, that there is a secure storage location for PPE, and that proper procedures are established for maintaining PPE. Postal Service employees are not permitted to perform tasks without the appropriate requisite PPE.

Employees who are issued PPE for electrical work shall use it only when they are performing tasks on electrical conductors or circuit parts. Employees are responsible for the care (excluding laundering) and custody of their PPE, and they are not permitted to acquire their own PPE from outside sources.

Additional information on general PPE not related to electrical work (such as eye, face, foot, and head protection) can be found in:

- MI EL-810-2009-4, *Personal Protective Equipment and Respiratory Protection Programs.*
- MMO-025-04, *Personal Protective Equipment.*

For more information on PPE for electrical work, including, but not limited to, insulated gloves, flash suits, and arc flash hoods, consult the latest version of the EWP MMO.

Labeling

The latest version of the EWP MMO identifies the labels related to electrical shock and arc flash hazards that are authorized for application to electrical equipment located in Postal Service facilities. The MMO also provides guidelines for selecting appropriate labels for specific electrical installations.

Annual Evaluation

An annual evaluation of each written EWP must be completed every 12 months from the date of implementation.

Acronyms

AC	Alternating Current
AO	Area Office
APPS	Automated Package Processing System
ASM	*Administrative Support Manual*
CFR	Code of Federal Regulations
CSBCS	Carrier Sequence Bar Code Sorter
DBCS	Delivery Bar Code Sorter
EAS	Executive and Administrative Schedule
ELM	*Employee and Labor Relations Manual*
EWP	Electrical Work Plan
JSA	Job Safety Analysis
LMS	Learning Management System
MI	Management Instruction
MMO	Maintenance Management Order
MWO	Maintenance Work Order
MSA	Maintenance Safety Awareness
NCED	National Center for Employee Development
NTD	National Training Database
OJT	On-the-Job Training
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
SMP	Senior Mail Processor
VFD	Variable Frequency Drive

MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE

Maintenance Management Order

SUBJECT: Electrical Work Plan

DATE: June 28, 2013
NO: MMO-023-13
FILE CODE: M
rbra:mm13019ab

TO:
1. All Maintenance-Capable Office
2. All Facility Managers
3. Manager Maintenance Operations, HQ
4. Area Managers Maintenance Operations
5. Area Safety Managers
6. Director Safety & Health, HQ

This bulletin has been updated to reflect the bulletin it supersedes and to correct a reference in the second paragraph.

This Maintenance Management Order (MMO) updates existing electrical work policies and establishes the minimum requirements for a local Electrical Work Plan (EWP). An EWP is required at all Postal Service facilities. This bulletin **supersedes MMO-002-09**. This bulletin applies to Acronym ADMIN Class Code AA.

Postal facilities includes all buildings and office space: (1) that are owned, leased or controlled by the Postal Service; and (2) where Postal Service employees are responsible for performing maintenance on Postal or building equipment or hiring contractors to perform such maintenance on behalf of the Postal Service. If the Postal Service is not responsible for any maintenance of the building or Postal equipment at the facility, then the facility is not within the scope of this MMO. Any location not requiring a EWP should document the reason in the Memorandum of Record.

For those facilities requiring an EWP, the local EWP must comply with Postal Service policies contained in this MMO and Management Instruction (MI), MI EL-810-2013-5 (or latest revision), “Electrical Work Plan.” The Installation Head at every facility is responsible for designating an Executive and Administrative Schedule (EAS) employee to oversee the EWP. The Installation Head must also provide sufficient funding and personnel to implement the plan effectively.

In issuing this policy, the Postal Service’s primary goal is to prevent serious injuries and incidents that could result from electric shock and arc flash hazards. Developing an effective EWP that adheres to Postal Service policy and addresses the requirements in this MMO assists the Postal Service in meeting this goal.

This MMO addresses the Postal Service’s three electrical work classifications referred to as: permissible work, permit-required work, and prohibited work. These work classifications are the basis for all subsequent plan requirements including qualifications, training, and control methods relating to work practices, tools, labeling and Personal Protective Equipment (PPE) as detailed in the attachments of this MMO. Each attachment addresses specific requirements used to develop the local EWP.

Attachment 10, “Electrical Work Assessment” must be conducted in order to determine the local EWP requirements. Attachment 12, “EWP Coordinator’s Checklist” contains a checklist to assist with EWP oversight.

In the vast majority of circumstances, non-Postal Service employees (e.g., contractors) that perform work on or near energized electric conductors and circuits parts in Postal Service facilities are not required to comply with this MMO. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements for safe electrical work, which includes compliance with all related OSHA regulations and EL-800, “Managing Contract Safety and Health Compliance.” EWP coordinators are responsible for ensuring that Postal Service employees are not endangered by contract work.

The Electrical Work Assessments and Labeling at all Postal Facilities will be the responsibility of maintenance / qualified personnel.

The following requirements must be completed within the specified time:

- **Electrical Work Assessment**
  - At maintenance-capable facilities – 6 months following the effective date of this MMO
  - At non-maintenance-capable facilities – 21 months following the effective date of this MMO
- **Training**
  - OSHA compliance training for qualified employees – 3 months following the effective date of this MMO
  - OSHA compliance training for affected employees – 6 months following the effective date of this MMO
- **Personnel Protective Equipment** – All 6 months following the effective date of this MMO
- **Tools** – All 6 months following the effective date of this MMO
- **Labeling**
  - At maintenance-capable facilities – 6 months following the effective date of this MMO
  - At non-maintenance-capable facilities – 21 months following the effective date of this MMO

Direct any questions or comments concerning this bulletin to the MTSC HelpDesk, online at http://mtsc.usps.gov/apps/remedyticket/index.cfm or call (800) 366-4123 or (405) 573-2123.

Robert E. Albert
Manager
Maintenance Technical Support Center
HQ Maintenance Operations

Attachments:
1. Summary of EWP Management Instruction
2. Electrical Work
3. Work Categories and Required PPE
4. Qualifications and Training
5. Permissible Work
6. Permit-Required Work
7. Prohibited Work
8. Control Methods
9. Labeling Requirements
10. Electrical Work Assessment
11. Responsibilities
12. EWP Coordinator's Checklist
13. Forms
14. EWP Facility-Specific Book
15. Resources
16. Definitions

ATTACHMENT 1

SUMMARY OF

EWP MANAGEMENT INSTRUCTION

MI EL-810-2013-5 establishes policy and requirements for an Electrical Work Plan.

MI EL-810-2013-5 applies to electrical work performed during the installation, operation, maintenance, modification, repair, troubleshooting and servicing of new or existing Postal or building equipment that is permanently or temporarily installed in Postal Service facilities.

The Headquarters authorities that have jurisdiction over these policies on behalf of the United States Postal Service™ are:

- Office of Safety and Health, Employee Resource Management.
- Maintenance Operations, Network Operations.

The Maintenance Management Order (MMO) is not intended to conflict with nor negate any collectively bargained agreement(s) regarding the performance of electrical tasks. In addition, the MMO identifies the energized electrical work tasks that may be performed by a contract worker; e.g., prohibited energized electrical work. The Electrical Work Plan (EWP) is not intended to take away electrical work performed by the bargaining unit nor decrease staffing levels nor encourage or mandate the use of a contract worker beyond the limited exceptions of the EWP. Subcontracting decision must be made in accordance with Article 32 of the USPS / APWU Collective Bargaining Agreement and Section 530 of the Administrative Support Manual (ASM).

This MMO should be used in conjunction with the following Handbooks:

- MS-1, *Operation and Maintenance of Real Property*
- MS-28, *Maintenance of Electrical Switchgear*

Additionally, postal and building equipment specific manuals (e.g., OEM manuals) and bulletins provide additional instructions on specific electrical maintenance tasks.

The Postal Service is committed to providing a safe and healthy work environment for all employees and in compliance with all electrical safety regulations established by the Occupational Safety and Health Administration (OSHA), including but not limited to:

- 29 Code of Federal Regulations (CFR) 1910.147, The Control of Hazardous Energy
- 29 CFR 1910.133, Eye and Face Protection
- 29 CFR 1910.137, Electrical Protective Equipment
- 29 CFR 1910.301 through 1910.308, Design Safety Standards for Electrical Systems
- 29 CFR 1910.331, Scope

- 29 CFR 1910.332, Training
- 29 CFR 1910.333, Selection and Use of Work Practices
- 29 CFR 1910.334, Use of Equipment
- 29 CFR 1910.335, Safeguards for Personnel Protection

To ensure that the goals of this MMO are met, the Postal Service has established the following minimum policy principles for electrical work:

- Postal and building equipment must be de-energized and an energy isolation device, lock, and accompanying identification tag must be applied before any maintenance task is performed on the equipment. ("Postal equipment" is defined in Attachment 16, the Definitions section of this MI.), with only two exceptions:
  - Work on energized electrical conductors or circuit parts is allowed as described in Table 3-1, where it is not feasible to de-energize the equipment. ONLY those tasks listed in the table are allowed to be performed while the equipment is energized.
  - Work on energized electrical conductors or circuit parts is allowed to be performed using a permit, as described in Attachment 6 ONLY where it is not feasible, because of safety considerations, to de-energize the equipment. A permit must never be issued because de-energizing the equipment is inconvenient.
- Work on energized systems rated 601 volts and above, including maintenance, repair, modification, service, troubleshooting or replacement of switchgear components, must be performed by qualified contractors.
- Operation and monitoring of dead-front switchgear components rated 601 volts and above is permitted under the limitations listed in the EWP MI.
- Maintenance of switchgear components 601 volts and above must be performed by a qualified contractor.
- Employees must be qualified to perform energized electrical work on Postal or building equipment before they are assigned to install, modify, repair, service, troubleshooting or maintain such equipment (See Qualifications section of this MMO).
- Employees shall be provided with the personal protective equipment (PPE), training, and tools appropriate for the work and the conditions to which they are exposed.
- Employees are responsible for using the PPE in the manner instructed. Employees are also responsible for the care (excluding laundering) and custody of any PPE assigned to them.
- Managers must adhere to the minimum qualification and training requirements of this MMO.
- Managers must adhere to the minimum PPE requirements in this MMO.

- Managers must ensure that the appropriate PPE is readily accessible to employees for use before electrical work begins, as outlined in this MMO.
- Managers must instruct employees on the proper use of PPE and take prompt appropriate action when employees fail to use PPE properly.
- As described in this MMO, managers must discuss the job hazards with employees before electrical work begins.
- The Installation Head or Plant Manager, Maintenance Manager and local safety professional must review and approve energized electrical work permits before permit-required work begins. The permits must be both signed and dated.
- Employees may participate in the safety and health program without fear of restraint, interference, coercion, discrimination, or reprisal.

This policy does not apply to the following:

- Non-Postal Service employees (e.g., contractors) who perform electrical work in Postal facilities are not required to comply with this MMO and the EWP MI. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements, which include compliance with all related OSHA regulations and Postal Service Handbook EL-800, *Managing Contract Safety and Health Compliance.*
- Operation of electrical switches that supply power when such switches are enclosed or incorporated into equipment or the building (e.g., on/off switches, pull cords for lighting receptacles, computer power buttons, other push buttons or wall switches).
- Use of approved connectors, such as cords with attachment plugs for wall receptacles and other cord and/or plug-connected equipment (e.g., lamp fixtures, corded hand tools, control devices, or other Postal equipment).
- Switching on or off of circuit breakers, located in lighting distribution panels provided: the panel is in good repair; the panel is not missing any fasteners or blinds; and the breakers are rated for switching.
- Replacing light bulbs and fluorescent tubes.
- DC rated Postal or building equipment.

The complete Management Instruction (MI), MI EL-810-2013-5, “Electrical Work Plan” is available on the MTSC website at http://mtsc.usps.gov.

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ATTACHMENT 2

ELECTRICAL WORK

This Attachment provides information relating to the policies that make up the foundation for all of the electrical work requirements in this MMO. This attachment introduces new Postal Service terminology relating to the various types and classifications of electrical work. Postal Service employees must adhere to the policies in this MMO and the EWP MI, as these policies help protect Postal Service employees from electrical hazards that they may encounter in Postal Service facilities.

While the majority of the provisions in this MMO address electrical hazards that qualified employees may face while performing electrical work on electric circuits, parts and equipment, this MMO includes policies that apply to both unqualified and qualified employees. For example, employees that may be exposed to electric shock and arc flash hazards while performing their jobs must receive the Electrical Safety & You training described in this MMO.

The following sections discuss the various types and classifications of electrical work.

1. DE-ENERGIZED WORK

Postal Service policy requires Postal or building equipment to be de-energized and an energy isolation device, lock and an accompanying identification tag applied before any maintenance activities are performed. There are only two exceptions to this policy: Permissible and Permit-Required Electrical Work. Both are discussed below.

“Lockout” remains one very important method to protect employees from contact with energized conductors and circuit parts. In some cases, electrical work may require additional lockout for energy sources other than electrical, for example, where electrical work also exposes the employee to a pinch point powered by a different energy source. This document only addresses hazards from exposure to electric shock and arc hazards. Mechanical hazards, such as from moving equipment, are addressed by other Postal Service policies. For more information on Postal Service policy for de-energizing and “locking out” equipment, consult MMO-033-05, Hazardous Energy Control (or the latest revision) or the equipment specific handbooks. This MMO is available on the MTSC web page at http://mtsc.usps.gov.

Unless specifically allowed under this MMO, the EWP MI, or the MMO on Hazardous Energy Control, Postal Service employees are required to de-energize and apply an energy isolation device, lock, and an accompanying identification tag before performing maintenance tasks. Examples of tasks that are expected to be performed with the Postal or building equipment de-energized include but are not limited to:

- Installation of any jumpers
- Loosening or tightening terminals
- Replacing/installing wires
- Installing additional electrical components (e.g., relays, breakers, motor control devices)

- Removing, replacing, rewiring, or rebuilding relays
- Removing or replacing switches
- Replacing fluorescent ballast
- Removing, replacing, rewiring, or rebuilding motor contactors
- Installing or removing capacitors
- Replacing fuses
- Pulling wire in a panel
- Drilling into or within a panel
- Removing or replacing breakers
- Most other activities where direct contact or the potential for direct contact with energized conductors and circuit parts exists

Even though equipment has been de-energized and an energy isolation device, lock and an accompanying identification tag have been applied, the equipment is still considered to be energized until a verification test confirms the absence of voltage. Potential for employee exposure to residual or stored electrical energy in the conductors or circuit parts requires confirmation that this energy has been dissipated.

2. ENERGIZED WORK

Work on energized conductors and circuit parts is limited to situations in which it is not feasible to de-energize and apply an energy isolation device, lock and identification tag. These situations are tied to activities that require the Postal or building equipment to be energized to perform the task, either because the task cannot be performed while de-energized; such as some electrical troubleshooting tasks or because de-energizing is more hazardous than energized electrical work.

Postal Service employees are allowed to perform energized electrical work in limited situations as described in this MMO, provided all other sources of hazardous energy are de-energized, isolated, or otherwise rendered safe. Other hazardous energy sources include but are not limited to mechanical, pneumatic, and hydraulic energy. This may be achieved by the application of energy isolation devices to bring all energy sources to zero and may require the use of mechanical devices (for example but not limited to a block or support pin) to prevent mechanical parts with stored energy from moving. These procedures are not addressed in this MMO. For more information on Postal Service policy and practices for de-energizing and locking out equipment, consult MMO-033-05, Hazardous Energy Control (or the latest revision) or the equipment specific handbooks.

Energized electrical work requires additional safeguards to protect Postal Service employees from contact with energized conductors and circuit parts. These additional safeguards will vary depending on the activities to be performed, as well as the voltage and amperage for the equipment on which work will be performed.

3. PERMISSIBLE, PERMIT-REQUIRED, AND PROHIBITED WORK

At the Postal Service, there are three classes of energized electrical work: prohibited work, permissible work; and permit-required work. There are some energized electrical activities that are not subject to the EWP. These exceptions are discussed in Section 4, “Exceptions” of this Attachment.

3.1. PROHIBITED WORK

“Prohibited work” refers to the electrical work that Postal Service employees are not permitted to perform under this MMO. Postal Service policy does not permit employees to work on electrical conductors or circuit parts rated above 600 volts, except for the operation and monitoring of dead-front switchgear (under the conditions described in Table 3-1). Operation and monitoring of dead-front switchgear is Permissible Energized Work when performed with the doors and covers in place and fastened.

Additional information regarding prohibited work is located in Attachment 7, “Prohibited Work”.

3.2. PERMISSIBLE WORK

The term “permissible work” as used in this MMO, pertains to a discrete list of maintenance activities or tasks, described in Table 3-1, which may be performed, with appropriate tools and PPE, on energized conductors and circuit parts. These activities may only be performed on Postal or building equipment rated at or below 600 volts, with the exception of operating and monitoring dead-front switchgear over 600 volts provided the doors and covers are in place and fastened. Examples of permissible work include but are not limited to troubleshooting, programming, or testing programmable logic controllers (PLCs), adjusting variable frequency drives (VFDs) and servo drives, or operating dead-front switchgear that does not require racking in or out.

3.3. PERMIT-REQUIRED WORK

The term “permit-required work,” as used in this MMO, is energized electrical work that is neither prohibited work nor permissible work. This work category consists of select maintenance tasks that may be performed on Postal and building equipment rated at or below 600 volts when it is not feasible to de-energize the equipment and provided the Installation Head or Plant Manager, Maintenance Manager, and local safety professional gives specific, written approval to perform the task.

Permit-required work can usually be avoided by carefully considering various options and looking for an alternative that will allow the conductors and circuit parts to be de-energized and an energy isolation device, lock and an accompanying identification tag the equipment to be applied. The need for permit-required work should be rare, and it must never be performed out of convenience.

Permit-required work must comply with all applicable OSHA requirements included those requirements located in 29 CFR 1910.331-335. Additional information regarding permit-required work activities, limitations, and required safe work practices is located in Attachment 6, “Permit-Required Work”.

4. EXCEPTIONS

As stated in Attachment 1, there are energized electrical tasks and activities not controlled by the requirements of the EWP MI or this MMO. These tasks include the following:

- In the vast majority of circumstances, non-Postal Service employees (e.g., contractors) who perform electrical work in Postal facilities are not required to comply with this MMO and related EWP MI. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements, which include compliance with all related OSHA regulations and Postal Service Handbook EL-800, Managing Contract Safety and Health Compliance, and EWP coordinators must ensure that work performed by non-Postal Service employees does not endanger Postal Service employees.
- Operation of electrical switches that supply power when such switches are enclosed or incorporated into equipment or the building (e.g., on/off switches, pull cords for lighting receptacles, computer power buttons, other push buttons or wall switches).
- Use of approved connectors, such as cords with attachment plugs for wall receptacles and other cord and/or plug-connected equipment (e.g., lamp fixtures, corded hand tools, control devices, or other Postal equipment).
- Switching on or off of switching rated circuit breakers (have the Switch Duty (SWD) marking), located in lighting distribution panels provided: the panel is in good repair; the panel is not missing any fasteners or blinds; and the breakers are rated for switching.
- Replacing light bulbs and fluorescent tubes.
- DC rated Postal or building equipment.

5. WORK CATEGORIES

To simplify specific Personal Protective Equipment (PPE) and training required for employees who perform maintenance activities on energized equipment, several work categories have been established. The appropriate PPE and training depends on the voltage and amperage of the conductors and circuit parts. Additional information on work categories and PPE is contained in Attachment 3, “Work Categories and Required PPE”.

ATTACHMENT 3

WORK CATEGORIES AND REQUIRED PPE

1. WORK CATEGORIES

This attachment provides information relating to work categories and the corresponding PPE requirements. Four work categories (1 through 4) correlate to the voltage and amperage present in Postal Service facilities. The four work categories are shown in Table 3-1 below:

Work Category One (1): This category does not place any restrictions on the type of energized electrical work that may be performed on conductors and circuit parts rated at less than 50 volts.

Work Category Two (2): This category illustrates the restrictions for energized electrical work performed on conductors and circuit parts rated up to 239 volts, provided the equipment is powered by a transformer at 125 kVA or less. If the transformer is greater than 125 kVA, then the work falls under Category 3.

Work Category Three (3): This category illustrates the restrictions for energized electrical work performed on conductors and circuit parts rated from 240 to 600 volts and 400 amps or less. This category also includes energized electrical work performed on conductors and circuit parts rated from 51 to 239 volts when the equipment is powered by a transformer greater than 125 kVA.

Work Category Four (4): This category illustrates the restrictions for energized electrical work performed on conductors and circuit parts rated from 240 to 600 volts, and at least 401 amps.

2. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Each work category has corresponding PPE requirements. Table 3-1 lists each work category, the PPE required, and the permissible work that may be performed. Additional PPE may be required for permit-required work or for hazards other than shock and arc hazards. Refer to Attachment 6, “Permit-Required Work.”

Table 3-1. Work Categories and Required PPE

Work Category	Nominal Voltage Range	Nominal Amps	Part of the Body to Be Protected						Energized Activity Limitations
			Hands	Eyes	Hearing	Face	Head	Body	
1	0 to 49	All	NR[1]	NR[1]	NR[1]	NR[1]	NR[1]	NR[1]	No limitations.
2[2]	50 to 239	All	Voltage-rated gloves	Prescrip-tion Safety Glasses or Safety Glasses[3]	NR[1]	NR[1]	NR[1]	Coveralls (minimum FR rated @ 8 cal/cm^2)	▪ Troubleshooting energized circuits. ▪ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.).
3	240 to 600	400 and Less	Voltage-rated gloves	Prescrip-tion Safety Glasses or Safety Glasses[3]	Ear Canal Inserts[8]	Face Shield[4]	Hard Hat[5]	Coveralls (minimum FR rated @ 8 cal/cm^2)	▪ Troubleshooting energized circuits ▪ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.)

[1] Not required under the provisions of the EWP MI.
[2] Work performed on equipment energized at 50 to 239 V and powered by a transformer of greater than 125 KVA must be performed as Work Category 3.
[3] Eyeglasses must provide clear color, clarity, and interpretation. Due to visual field distortions, safety goggles are not permitted.
[4] Face shield must have a minimum FR rating of 8 cal/cm2.
[5] Typically Arc Flash Hood and Face Shield manufacturers require the use of a hard hat for proper fit of the arc flash hood.

4	240 to 600	401 and above	Voltage Rated Gloves	Prescription Safety Glasses or Safety Glasses [3]	Ear Canal Inserts [8]	Arc Flash Hood	Hard Hat [5]	Flash Suit and Foot Protec-tion (minimum FR rated @ 25 cal/cm^2) [6]	▪ Troubleshooting energized circuits ▪ Electrical adjustments within a power cabinet or circuit (VFDs, time-delay relays, etc.) ▪ Checking relay trip status that requires opening the breaker cubicle door. ▪ Operation / monitoring of dead-front switchgear. [7]
N/A	601 and above	All	All electrical work is prohibited, except as permitted by USPS policy. [7]						

[6] Foot protection includes leather or leather-like footwear. When wearing leather-like footwear, the employee must also wear spats/leggings with an arc rating equal to that of the flash suit required for that category. Dielectric and steel-toed footwear is not required. Any deviation to the PPE protection in this footnote must be approved at the HQ level.

[7] Operating or monitoring of dead–front switchgear may be performed on energized equipment rated over 600 V provided: (1) all covers, doors, and/or panels of all individual modules of the switchgear are in place and properly secured; and (2) all fasteners are in place.

[8] Minimum Noise Reduction Rating of 21 dB.

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ATTACHMENT 4

QUALIFICATIONS AND TRAINING

1. QUALIFICATIONS

OSHA considers an employee to be qualified when he/she has undergone appropriate training and has demonstrated his/her knowledge, skills, and abilities to safely perform electrical work activities. To perform work on energized conductors and circuit parts in the Postal Service environment, a qualified person must be familiar with the equipment being serviced, the required safety measures, including PPE, and the tools and test equipment being used. Qualified employees must be capable of working safely on energized circuits by demonstrating their knowledge and skills related to safe electrical work.

Postal Service maintenance employees who are required to work on electrical equipment must be trained on electrical safety-related work practices, including the proper use of special precautionary techniques, PPE, and insulating tools. It is important that employees are familiar with the maintenance and operation of the equipment as well as the safe electrical practices required for the work being performed.

Each employee is required to satisfactorily complete the EWP training that corresponds to the category of work the employee is expected to perform, as determined by the voltage and current in Postal Service electrical equipment. This ensures that each employee has been equipped with the knowledge of the work practices, PPE, and tools necessary to perform their required tasks safely. An employee's familiarity with the maintenance and operation of the equipment depends on previous work experience and training.

The Postal Service considers an employee to be qualified in a particular work category when he or she has met the OSHA requirements, completed the appropriate courses relating to the applicable work categories identified in Attachment 3, Table 3-1, and satisfactorily demonstrated the knowledge, skills, and abilities to safely perform permissible energized electrical activities in the specific work category for which he/she has been trained. Employees are required to complete equipment-specific training before performing permissible energized electrical work provided they are qualified for that work category.

Non-maintenance employees, i.e. Senior Mail Processors (SMPs) (as agreed upon by the APWU), must receive the appropriate electrical work training for the systems on which they are assigned to work. They are only allowed to perform energized electrical work on electrical conductors or circuit parts rated at 49 volts or less.

1.1. CURRENT MAINTENANCE EMPLOYEES

Any maintenance employee who performs work on energized equipment must be qualified for tasks on similar systems and equipment. Employees must know how to perform the work safely and discuss the safety-related work practices applicable to the task to be performed.

Training must be documented and such documentation must indicate the type and scope of the training received. A copy of this documentation must be maintained in the Learning Management System and at the employee's permanent duty station, preferably by Maintenance Management.

Although an employee may have received training in the past from the Postal Service, a previous employer, or an educational institution, each maintenance employee must receive the appropriate training outlined in this attachment. Until that employee is trained by the USPS, he or she may not be considered to be a qualified person to perform any electrically-related task. Information in this attachment describes the training required to ensure employees are equipped with current knowledge of specific Postal Service policies and safety-related work practices.

If a maintenance employee has demonstrated the ability to maintain electro-mechanical mail-processing or building equipment safely for at least 6 months, then that employee need only take the courses applicable to the work categories in which they perform activities.

1.2. NEW MAINTENANCE EMPLOYEES

New maintenance employees need only take the work category courses appropriate for the work the employees are expected to perform (as shown in Table 4-1) provided those employee can: (1) provide documentation that they have maintained electro-mechanical industrial or building-type (or equivalent military) equipment safely for at least 6 months; and (2) demonstrate their knowledge, skills, and abilities to safely perform energized electrical work activities. The Postal Service will retain a copy of this documentation in the appropriate files.

New maintenance employees who do not have the requisite amount of electrical maintenance experience as described above must take the work category courses appropriate for the work the employees are expected to perform and undergo 6 months OJT with a qualified Postal employee in order to be considered qualified to independently perform any energized electrical work activities. The 6 months of OJT maintaining Postal Service or building-type equipment may be a combination of (1) hands-on work with a qualified employee and/or (2) equipment-specific training from NCED or other authorized vendor. "Hands-on work" means the person is actually performing the work with a qualified employee. Before a new employee is deemed qualified, he/she must demonstrate his/her knowledge, skills, and abilities to safely perform energized electrical work activities.

The structure of the OJT program differs by facility. However, OJT must be documented in eMARS as productive work hours (reported on the Preventive Maintenance route or the work order the employee has been assigned) per Handbook MS-63, Maintenance Operations.

2. ELECTRICAL SAFETY TRAINING

There are four levels of EWP related electrical safety training in the Postal Service for those employees performing work on energized conductors and circuit parts. Each

training level is based on the Work Category corresponding to the work an employee is expected to be able to perform. The various EWP courses address the following topics:

- Applicable Postal Service Policies
- Electrical Safety Theory
- Electrical safety-related work practices typically based on permissible work tasks
- Use of applicable tools
- Use and care of PPE
- Skills and techniques necessary to distinguish exposed energized parts from other parts of electrical equipment
- Skills and techniques necessary to determine the nominal voltages and currents of energized components and circuits

2.1. PREREQUISITE COURSES

One prerequisite for the electrical safety work category training is course number 10015993, entitled “Electrical Safety Awareness – SWBT”. This course is part of the 2009 STI and Safety Depends on Me kit #32, and it is available through Learning Management System (LMS).

2.2. ELECTRICAL SAFETY WORK CATEGORIES 1 AND 2

This course covers Postal Service policies established in the EWP MI, MI EL-810-2013-5, along with the supporting information on those policies contained in this MMO. Specifically, the course covers the safety-related electrical work practices for conductors and circuit parts rated from 0 to 239 volts and powered by a transformer of 125 KVA or less. This course is a prerequisite for the Electrical Safety Work - Cat 3 - WBT course.

2.3. ELECTRICAL SAFETY WORK CATEGORY 3

This course covers Postal Service policies established in the EWP MI, MI EL-810-2013-5, along with the supporting information on those policies contained in this MMO. Specifically, this course covers the safety-related electrical work practices and PPE required for performing work on conductors and circuit parts rated from 240 volts to 600 volts, and at less than 401 amps. Additionally, this course also covers the safety-related electrical work practices for conductors and circuit parts rated from 0 to 239 volts and powered by a transformer greater than 125 KVA. This course is a prerequisite for the Electrical Safety Work - Cat 4 - WBT course.

2.4. ELECTRICAL SAFETY WORK CATEGORY 4

This course covers Postal Service policies established in the EWP MI, MI EL-810-2013-5, along with the supporting information on those policies contained in this MMO. Specifically, this course covers the safety-related electrical work practices and PPE required for performing work on conductors and circuit parts rated from 240 volts to 600 volts and at 401 amps or more.

Maintenance employees who will perform work under Category 4 must also complete site-specific training related to the safe electrical work practices applicable to specific equipment. Local training must include the site specific PPE and tools necessary when working on this equipment. Examples of equipment that may fall into this category include but are not limited to switchgear and chillers.

Local site and equipment specific training must be provided to any employee who is responsible for operating switchgear rated at 240 to 600 volts at 401 amps or more and switchgear equipment rated at 601 volts or more.

Local sites must document all required training, including training for site-specific equipment through a vocational school, community college, equipment manufacturer, or distributor, or an OJT program for Work Category 4.

Table 4-1 consolidates the above course information.

While the required electrical safety courses listed above will cover the required PPE for each Work Category, the EWP Coordinator must ensure that local training will cover any and all PPE or tools that will be purchased locally. Training on PPE must instruct employees how to select the proper PPE for the task to be performed and how to properly wear, inspect, store, and maintain PPE.

3. REFRESHER TRAINING

Refresher training (retraining) re-establishes employee proficiency and introduces new or revised work practices and procedures, as necessary. Retraining must be conducted when equipment, procedures and/or practices change or when management otherwise reasonably believes such training is needed, such as when employees are observed deviating from the applicable work practices or following a safety incident. If refresher training is required to re-establish proficiency, it must be delivered immediately following any observations or incidents, and before that employee is allowed to perform further electrical work.

When management believes there are deviations from the established work practices, the employee must take the appropriate electrical safety-training course that addresses that particular work practice. If management believes the employee lacks a good understanding of basic knowledge of electrical work policies, the employee must retake Electrical Safety Work - Cat 1 & 2 - WBT, which covers the basic Postal Service policies regarding electrical work.

4. SUPERVISOR TRAINING

Supervisors must be familiar with safety-related work practices at the same training/qualification level in EWP as the employees being supervised. Supervisors, while not expected to perform the task on a regular basis, must have the practical skills and judgment to safely perform the tasks themselves. Safety related work practices include PPE and tools used in performing energized electrical work, as well as the identification of electrical hazards that employees may be exposed to while performing assigned tasks. A qualified supervisor must be capable of identifying deficiencies in his/her employees' electrical safety-related work practices

Table 4-1. Training Requirements

Employee Position	Type of Work	Title of Course	Material Covered
All Affected Employees	All	Video – *Electrical Safety and You*	Awareness-level topics
EWP Coordinators at maintenance-capable facilities[1] and designated Safety Representatives	Responsible for local EWP	Electrical Work Plan Coordinator	Local program requirements.
EWP Coordinator at non-maintenance-capable facilities	Responsible for local EWP	Electrical Work Plan Coordinator Lite	
EWP Coordinators at maintenance-capable facilities and Maintenance Supervisors[2]	Oversight of employees who perform electrical work	Electrical Safety for the Maintenance Supervisor	Postal Service policies related to electrical work practices for work categories 1 to 4.
New Postal Service Maintenance Employees[3]	General maintenance	Maintenance Safety Awareness (MSA)[4]	General maintenance topics, including electrical.
Postal Service Employees who perform electrical work, EWP Coordinator[1] at maintenance-capable facilities and designated Safety Representatives	Working on 0 to 239 volts and powered by a transformer 125 KVA or less.	Electrical Safety Work Categories 1 and 2	Postal Service policies related to electrical work practices and PPE required for 0 to 239 volts and powered by a transformer 125 KVA or less.

[1] EWP Coordinators must also complete all EWP Work Category courses required for any qualified employee in his or her facility.
[2] Maintenance supervisors must also complete all of the courses required for his or her employees.
[3] New maintenance employees that will perform electrical work must also take the applicable courses listed under Postal Service Employees who perform electrical work in the table above.
[4] Only a portion of this 40-hour course deals with electrical work.

Employee Position	Type of Work	Title of Course	Material Covered
Postal Service Employees who perform electrical work, EWP Coordinator[1] at maintenance-capable facilities and the designated Safety Representatives	Working on 240 to 600 volts and 400 amps and less as well as 0 to 239 volts and powered by a transformer larger than 125 KVA.	Electrical Safety Work Category 3	Electrical work practices and PPE required for 240 volts to 600 volts and 400 amps and less as well as for 0 to 239 volts and powered by a transformer larger than 125 KVA.
Postal Service Employees who perform electrical work	Working on 600 volts or less and 400 amps and less	PPE don/doff & care training categories 3 and below	How to select, care for, don and doff PPE for work categories 3 and below.
Postal Service Employees who perform electrical work and EWP Coordinator[1] at maintenance-capable facilities	Working on 240 to 600 volts and 401 amps or more	Electrical Safety Work Category 4	Electrical work practices and PPE required for 240 volts to 600 volts and 401 amps
Postal Service Employees who perform electrical work	Working on 240 to 600 volts and 401 amps or more	PPE don/doff & care training category 4	How to select, care for, don and doff PPE for work category 4
Postal Service Employees who perform electrical work and EWP Coordinator[1] at maintenance-capable facilities	Operating dead-front switchgear rated at 240 to 600 volts 401 amps or more and 601 volts and above	Locally Developed Site Specific Training	Electrical work practices for site-specific equipment PPE and tools. Operating dead-front switchgear rated at 240 to 600 volts 401 amps or more and 601 volts and above
EWP Coordinators at maintenance-capable facilities[1], Maintenance Supervisors the designated Safety Representatives and designated trainers	Trainers for PPE don/doff & care training all categories	EWP PPE Train the Trainer (note: this course is inclusive of the EWP PPE don/doff & care training for categories 3 and 4)	When EWP PPE is required, how to determine what level of PPE is needed, and how to properly inspect, don, doff, and care for the PPE.

5. EWP COORDINATOR TRAINING

EWP Coordinators must be familiar with safety-related work practices, PPE, and tools the employees in their facility must use in performing energized electrical work. Therefore, the EWP Coordinator must complete electrical safety courses to the highest level required of the employees at their facility. In addition, the EWP Coordinator must complete the appropriate EWP Coordinator's Course. There are two EWP Coordinator courses, one for maintenance capable facility coordinators and a different one for non-maintenance capable facility coordinators. These courses enables the EWP Coordinator to develop, implement, and manage the local EWP.

6. TRAINING FOR HAZARDOUS ENERGY CONTROL

All employees who perform energized electrical work must also be trained on the Control of Hazardous Energy. Training requirements can be found in USPS MMO-033-05, Hazardous Energy Control or the latest revision. The USPS work practices can be found in the current Hazardous Energy Control MMO and in equipment-specific work practices.

Hazardous Energy Control training should be conducted by an individual who has the knowledge, training, and experience to train employees on their respective job assignments and qualified to perform observations of the execution of the applicable Hazardous Energy Control Procedures. A qualified trainer would be an individual who by certificate, professional standing, or knowledge, training and experience has demonstrated the ability to train and evaluate employees. A trainer will have sufficient "experience" if they have the practical skills and judgment to be able to conduct the tasks safely under the conditions prevailing at the specific workplace.

ATTACHMENT 5

PERMISSIBLE WORK

The term “permissible work”, as used in this MMO, pertains to a discrete list of maintenance activities described in Table 3-1 that may be performed on Postal or building equipment rated at or below 600 volts, with the exception of operating or monitoring dead-front switchgear over 600 volts as long as the doors and covers are in place and fastened. Examples of permissible work include but are not limited to troubleshooting, programming or testing programmable logic controllers (PLCs), adjusting variable frequency and servo drives or operating and monitoring dead-front switchgear that does not require racking in or out.

Troubleshooting is a diagnostic investigation that occurs when equipment is not working properly. During troubleshooting a person analyzes circuits and components using test instruments or observation (without contact) to determine the nature/source of the problem without physically altering the equipment, such as making or tightening connections or replacing components. Once the problem has been isolated, the machine must be de-energized and locked out to perform the proper maintenance task, unless the task is specifically identified as permissible work by the latest revision of the EWP MI on this MMO – e.g., testing for a blown fuse.

When performing permissible work, specific precautionary steps must be taken to limit an employee’s exposure to electrical shock and arc flash hazards. These specific steps include wearing appropriate PPE, training, and following work practices. The PPE requirements are also listed in Table 3-1.

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ATTACHMENT 6

PERMIT-REQUIRED WORK

“Permit-required work,” as used in this MMO, is energized work that is neither prohibited work nor permissible work. It consists of select maintenance tasks that may be performed on energized electrical conductors or circuit parts rated below 601 volts when it is not feasible to de-energize the electrical conductors or circuit parts and with the approval of the Installation Head or Plant Manager, Maintenance Manager, and local safety professional.

An example of permit-required work would be replacing circuit breakers in an energized panel or racking breakers (under 601 volts) in and out.

Postal Service employees performing permit-required work must be qualified and properly equipped. When performing permit-required electrical work, a qualified employee must be accompanied by another employee with the same level of qualification. The second qualified employee must monitor the maintenance activities of the first qualified employee from outside of the immediate barricaded work area, but in continuous sight of and in communications with the first qualified employee. All energized electrical work areas must be surrounded by barricades set up with a 4-foot radius. If the second employee enters the barricaded area, they must wear appropriate PPE for the work being performed by the first employee.

Permit-required work performed by qualified Postal Service employees is limited to work on equipment and circuits rated below 601 volts. Postal Service policy generally does not permit Postal Service employees to perform maintenance tasks on energized conductors or circuit parts rated 601 volts or above. Refer to Attachment 7, “Prohibited Work.”

Permit-required work must not be performed out of convenience, but only in situations where de-energizing the equipment is not feasible or performing the work de-energized will increase the risk of an incident or injury. Permit-required work must comply with applicable OSHA regulations. Due to the infrequent occurrence of these activities, Postal Service employees who have received previous training may not retain the knowledge necessary to perform the job safely and effectively. To ensure the safety of Postal Service employees in these situations, the Installation Head and Maintenance Management has the discretion to use qualified contractors for this type of work when appropriate.

Evaluating the need to contract this work requires consideration of cost, efficiency, and qualifications of employees. Article 32 of the Handbook EL-912 must be considered when evaluating the need to contract this work. If the energized work is to be contracted, arrangements should be made in advance with local contractors or the appropriate utility companies to ensure a process and procedure is established prior to an electrical emergency.

If Postal maintenance employees perform permit-required work, all requirements addressed in the next sub-sections must be adhered to.

1. ENERGIZED ELECTRICAL WORK PERMIT

If permit-required work is to be performed by Postal Service employees, the Maintenance Manager or his designee must ensure all employees involved are qualified and provided the necessary PPE to perform the task, both safely and effectively. In addition, an Energized Electrical Work Permit form must be completed prior to the work being performed (Figure 6-1).

A properly completed form will include the appropriate approval signatures, and this form must be completed before permit-required work can begin. The form template is available on the MTSC web page at http://www.mtsc.usps.gov.

Before issuing a permit for permit-required work, a hazard assessment must be completed and a job safety analysis (JSA) must be developed to ensure the energized electrical work can be performed safely. It is strongly recommended that the Maintenance Manager engage employees in the hazard assessment and the JSA development as appropriate. The Maintenance Manager or his designee must ensure that an Energized Electrical Work Permit has been completed and approved before any permit-required work is performed by Postal Service employees.

A separate Energized Electrical Work Permit, Hazard Assessment, and JSA must be completed for each permit-required work activity, regardless of how similar the work may appear to a previous activity.

2. HAZARD ASSESSMENT

2.1. CONDUCT AND DOCUMENT A HAZARD ASSESSMENT

The Safety Representative and the Maintenance Manager, or his designee must conduct and document a hazard assessment before any Postal Service employee performs permit-required work. In addition to assessing hazards related to the energized electrical work that is to be performed, the assessment must include surveying for other types of hazards in the immediate area where the activity will be performed that could impact the safety of the employee performing the electrical work. The hazard assessment will assist in determining if hazards are present, or are likely to be present, which will necessitate the use of additional PPE or may require the implementation of additional safety precautions.

2.2. DETERMINATION OF APPROPRIATE PPE

When conducting the hazard assessment, Attachment 3, “Work Category and Required PPE” must be used initially to identify the minimal level of PPE required when performing each permit-required activity. The minimal level of PPE required will be based on the appropriate Work Category. On a case-by-case basis, more PPE than that required in Table 3-1 may be necessary depending on the hazards identified during the hazard assessment.

At a minimum, employees performing permit-required work must wear PPE equivalent to Category 3 PPE on Table 3-1. However, the specific hazard assessment and JSA may require more PPE and safety controls.

Figure 6-1. Energized Electrical Work Permit

Requested By (Print Name)	Phone No.	Issue Date	Expiration Date
1. Location of Work: Building Floor Room Column #			
2. Description of Work to be Performed			
3. Equipment to be Worked On			
4. Ratings of Equipment (Voltage and Current)			
5. Special Characteristics and Abnormalities			
6. Description of any non-electrical hazards			
7. Description of Safe Work Practices			
8. Required PPE			
9. Special Tools / Special Test Equipment			
10. Special Safety Requirements/Procedures			
11. Means of Restricting Unqualified Employees from the work area			
12. QUALIFIED EMPLOYEES ASSIGNED and Initial Job Briefing Completed			
(Name)	(Signature)	(Duties)	
13. Compelling Reason- The Justification for working on equipment energized			
APPROVAL SIGNATURES			
MAINTENANCE MANAGER			
(Name)	(Signature)		
FACILITY SAFETY PROFESSIONAL			
(Name)	(Signature)		
PLANT MANAGER			
(Name)	(Signature)		

2.3. DETERMINE TRAINING REQUIREMENTS AND DOCUMENTATION

An employee performing permit-required work must be knowledgeable of the specific equipment, as well as the tasks that may be performed while the equipment is energized. This includes familiarity with the hazards involved and applicable work practices and procedures necessary to perform the work safely. In addition, the qualified employee must be trained on the applicable JSA.

Although an employee may be qualified to perform similar permissible work, depending on the employee's electrical skills, the employee may not be qualified to perform related permit-required work. A maintenance employee's supervisor is responsible for determining if the employee has knowledge of the equipment and the skills necessary to perform permit-required work safely. This determination should be based on documented training and work experience, at a minimum. Training and work experience may be from a previous employer, if it can be documented and the employee's work performance demonstrates proficiency. Copies of previous training and work experience must be maintained with the EWP files.

When assessing an employee's knowledge of the equipment, keep in mind that infrequent exposure to the equipment will reduce the employee's knowledge, skills, and ability to perform the energized work safely. The employee may have a document stating that the employee has completed relevant training, but if the employee is not familiar with the equipment-specific work practices and procedures, the employee may not be considered qualified for the permit-required work activity.

Any qualified employee performing permit-required work must receive training on the PPE that would enable the employee to perform permit-required work. Training must include selecting the proper PPE for the task to be performed, as well as how to properly wear, inspect, store, and maintain the PPE. While the electrical safety courses discussed in Attachment 4, "Qualifications and Training" cover PPE issues for permissible work, these courses do not necessarily cover PPE that may be required for permit-required work.

Relevant PPE training must be documented in writing using Form 2548, "Individual Training Record." The employee's name, the date, and the subject of the training must be included on Form 2548.

Performing permit-required work may require training beyond that covered in the Postal Service developed electrical safety courses. The EWP Coordinator is responsible for determining if any additional training is required and then arranging for the training locally from a non-Postal Service source. Some sources where this type of training may be obtained are a vocational school, community college, equipment manufacturer or distributor, an OJT program, or another equivalent source.

2.4. MAINTAIN HAZARD ASSESSMENT RECORDS

A copy of the hazard assessment, including documentation of PPE selections and training must be maintained in the EWP files. The work sheets in Attachments 1 and 2 of the current management instruction, *Personal Protective Equipment and Respiratory Protection Programs*, addressing personal protective equipment may be used to document the hazard assessment and PPE selection.

3. JOB SAFETY ANALYSIS (JSA)

JSAs are documented assessments used to identify potential hazards. Once hazards are identified, safe work practices and procedures must be developed to eliminate or control each identified hazard. PS Form 1783, “On-the-Job Safety Review/Analysis”, must be used to complete each JSA.

As mentioned above, a job safety analysis (JSA) must be developed to ensure the energized electrical work can be performed safely before the Energized Electrical Work Permit can be completed. JSA templates should be completed on all permit-required tasks. This facilitates the development of the JSA that is required for each permit-required work activity. A copy of the JSA must be attached to the corresponding hazard assessment and the completed Energized Electrical Work Permit. The package of documents must be maintained in the EWP files. Each qualified employee expected to perform permit-required work must be trained on and receive a copy of the appropriate JSA.

PS Form 1783 is available at http://blue.usps.gov/formflow/xft/psform1783.xft. A copy of PS Form 1783 along with instructions on completing the form is located in Attachment 13, “Forms”. Additional information on completing JSAs is located in Chapter 8 of the EL-801 Supervisor’s Safety Handbook available at http://blue.usps.gov/cpim/ftp/hand/el801.pdf.

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ATTACHMENT 7

PROHIBITED WORK

1. PROHIBITED WORK

Except for the operation and monitoring of dead-front switchgear, Postal Service policy prohibits Postal Service employees from performing work on conductors and circuit parts rated above 600 volts. All other work on conductors and circuit parts rated above 600 volts should be performed by a qualified contractor.

2. OUTSIDE CONTRACTOR

In the vast majority of situations, Postal Service policies contained in MI EL-810-2013-5 and this MMO do not apply to non-Postal Service employees (e.g., contractors) who perform electrical work in Postal Service facilities. Nevertheless, non-Postal Service employees must comply with all applicable local, state, and federal requirements for safe electrical work, as well as EL-800 Managing Contract Safety and Health Compliance.

Contractors performing work on energized conductors and circuit parts must provide their own PPE and tools. The company they represent may require more stringent PPE and tools due to their company's interpretation or implementation of the applicable jurisdictional requirements in the development of their electrical work policies.

Contracting must comply with Article 32 of the most recent collective bargaining agreement between the USPS and the APWU, AFL-CIO, also known as Handbook EL-912.

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ATTACHMENT 8

CONTROL METHODS

Energized electrical work requires various methods to further protect employees from electrical hazards. Engineering controls and safety-related work practices are two methods that aid in preventing inadvertent contact with energized components and circuits. Additional control methods including insulated tools, test equipment, barricades, and PPE provide additional levels of protection for an employee should contact occur.

Each of the individual methods mentioned above provide some benefit. However, it is the layering of these methods, when appropriate, that create the level of protection necessary to prevent electrical incidents and injuries. The actual levels of protection required will always depend on the work to be performed the conditions at the work location, and the layering of control methods.

This attachment discusses engineering controls, work practices, and electrical workmanship and their importance in protecting employees from electrical incidents. With respect to quality workmanship, it is a commonly overlooked control that reduces the potential exposures an employee faces while performing electrical work. It is important to maintain the quality of workmanship throughout the life of the equipment, as this will ensure the same level of protection is afforded to employees throughout the equipment life.

1. ENGINEERING CONTROLS

Engineering controls are an effective component of an electrical work plan. They are devices that can be used to physically prevent access to, or negate the need to access energized electrical components. The main goal is to eliminate situations where accessing energized electrical components is necessary. There are a number of methods used to ensure employees are protected when they access exposed energized electrical components.

Voltage presence indicators and panel-mounted meters assist employees in determining if a panel is energized without opening the electrical panel, but do not substitute for the absence of voltage test required to verify that the equipment has been deenergized.

2. ELECTRICAL SAFETY-RELATED WORK PRACTICES

Safety-related work practices must be followed to prevent electric shock or other injuries resulting from either direct or indirect contact with exposed electrically energized equipment or circuits. The safety-related work practices that are used must be consistent with the nature and extent of the electrical hazard.

Qualified employees must be familiar with each of the following safety-related work practices. Information on each of these work practices listed below will be addressed in the electrical safety training.

- Working space around electrical equipment
- Training
- Hazardous energy control (Lockout)
- Control circuits (Recognition of high voltage versus low voltage)
- Stored electrical energy
- Energized work
- PPE required
- Illumination
- Tools and test equipment

De-energizing and applying energy isolation devices, locks and an accompanying identification tags on equipment or circuits is the best method to ensure employees are protected from inadvertent contact with energized equipment or circuits. It is Postal Service policy that employees “lock out” equipment when performing electrical maintenance tasks. Refer to the current MMO on Hazardous Energy Control for additional information on lock out policies.

When energized equipment or circuits cannot be de-energized, additional safety-related work practices must be used to protect employees who may be exposed to inadvertent contact with energized electrical circuits or components. Such safety-related work practices must protect employees against contact with energized equipment or circuits directly with any part of their body or through some other conductive object. The safety-related work practices that are used must be suitable for the conditions under which the work is to be performed.

The safe maintenance and repair of any electrical equipment, components, or circuits requires a thorough knowledge of safety and repair techniques. Employees should be familiar with the specific safety features of the equipment involved. Employees should refer to maintenance manuals, maintenance bulletins, and training materials on how to repair or service the equipment. Employees performing energized electrical work must be familiar with the safety-related work practices discussed in this MMO, as well as those covered in their electrical safety training before performing any electrical work. Electrical safety-related work practices must be regularly reviewed with all qualified employees to ensure the employees are familiar with the appropriate work practices. These reviews can be accomplished through periodic safety talks.

Common safety-related work practices required for energized work include, but are not limited to the following:

- Know the work content and the sequence in which it should be accomplished before beginning work.
- While performing energized electrical activities, employees should avoid wearing clothing made from synthetic materials, such as acetate, nylon, polyester, or rayon. Clothing made from these materials is considered dangerous when exposed to an electrical incident as the fabric will burn or melt onto the skin. Employees must wear the appropriate clothing and footwear.
- Remove metallic personal items such as rings, watches, necklaces, earrings etc., while working on energized equipment.
- Know what tools are required and how to use them.
- Know what personal protective equipment (PPE) is required to perform the job safely and how to use it.
- Limit access to the work area. Only qualified individuals who are familiar with the work or employees in training who are accompanied by qualified individuals are allowed into the work area.
- Use barricades in conjunction with safety signs where it is necessary to prevent or limit employee access to work areas; there must be a demarcation of the work area within a four-foot radius accomplished by appropriate barricades or other physical barriers. Do not use metal barricades in areas where electrical work is performed.
- Stop work and immediately report unsafe conditions to your supervisor.
- Energized work that does not meet the definition of prohibited work or permissible work requires an electrical work permit before work can begin.

When reporting electrical hazards, Postal employees are encouraged to complete PS Form 1767, Report of Hazard, Unsafe Condition, or Practice Exhibit 1-5b. Each Postal facility must ensure that a supply of PS Forms 1767 is available so that employees can obtain them while maintaining their anonymity. The purpose of PS Form 1767 is to provide a channel of communication between employees and management that ensures prompt analysis and corrective action in response to reports of alleged hazards, unsafe conditions, or unsafe practices. (For additional information on the Form 1767, refer to the EL-801, Supervisor’s Safety Handbook.)

In addition to the PS Form 1767, a summary of PS Forms 1767s, 1769-301s, and Serious Accident Reports (SAR) related to the Electrical Work Plan must be created by each facility. Please see Attachment 14 for more information on the summary.

3. WORKMANSHIP

The quality of workmanship can play a large part in preventing electrical incidents. Electrical work must be accomplished in a neat and professional manner. There must be no damaged parts (e.g., broken, bent, spliced, or cut) when the work is completed.

Deterioration caused by corrosion, chemical exposure, or overheating must be corrected as it could adversely affect safe operation of the equipment. In addition, circuit components and parts must not be damaged or contaminated by paint, plaster, cleaners, abrasives, or corrosive residues. Particular attention should be paid to the following details:

- Unused cable and raceway openings in boxes, cabinets, panels, or equipment enclosures must be effectively closed.
- Connections of cable, wires, and conductors to terminal parts or strips must be tightened to ensure a good connection without damaging the wires or conductors.
- The appropriate size wire and connectors must be used.
- Insulation must not be stripped back further than is necessary to make a good connection.
- Circuit breaker and fuse replacements must be completed with units that are rated appropriately for the circuit.
- Open spaces for circuit breakers that are not used must be covered with the appropriate blank plate.
- Covers to electrical panels and equipment must be re-installed after work is completed.
- Covers must be installed as appropriate using the correct number and size of fasteners. Fasteners must be tightened to ensure covers provide the protection as designed.

The items listed above are just a few of the items that must be addressed. Additional information on safe work practices is included in the electrical safety training courses.

4. TOOLS

The use of insulated tools is required in addition to PPE to safeguard employees working near energized equipment or circuits. This requires that tools, such as screwdrivers and pliers, be insulated when work is in close proximity to energized parts or circuit components.

It is very important to realize that insulated tools are not intended to provide protection for the employee working directly on energized circuits or components, but intended to protect the employee who works near energized electrical equipment or circuits.

Insulated tools help minimize shock hazards if the tool inadvertently comes in contact with an energized component. Additionally, if the tool is accidently dropped or otherwise makes contact across two energized conductors or a conductor to ground, it will reduce or eliminate the chance of an arc or arc flash occurring.

Insulated tools must not be relied upon solely to provide protection against energized electrical hazards, but should be used in conjunction with safety-related work practices and PPE.

The employee's immediate Supervisor at each local site is responsible for providing employees with insulated tools appropriate for the work to be performed. Insulated tools will be identified as insulated and display the voltage level rating on the tool or the insulation. There are generally two types of construction for insulated hand tools. Composite tools minimize the use of metal or conductive material by only using metal at the point of contact. Some nut drivers, screwdrivers, and sockets use this design where the contact area is metal and the rest of the tool is constructed of non-conducting composite material. Another type of insulated tools is constructed of metal and uses insulation to cover all metal except for the point of contact area. Tools that are not manufactured and tested specifically as insulated tools, should not be field-converted for use as insulated tools by applying tape or other insulating material.

Lineman tools, also known as handling equipment, provide users with protection from electrocution when working on high voltage overhead lines, generally at voltages greater than 600 volts. Therefore, lineman tools are not generally required for employees performing electrical work on Postal Service equipment.

4.1. USE AND CARE OF INSULATED TOOLS

Always follow the manufacturer's recommendations on the appropriate use of each tool and how to care for the tool. Insulated hand tools must be maintained in a safe, reliable condition and must be inspected for damage before and after each use. Insulated tools should be kept in a clean, dry state and avoid chemicals, ozone, ultraviolet (UV) light, or other conditions that could potentially damage the insulation. Any dirt, oil, or film on the tool should be cleaned following the manufacture's recommendations.

4.2. INSPECTION

Before and after each use, a visual inspection must be performed to check the insulation for damage or potential conductive material on the insulation. This visual inspection includes checking for insulation damage (including physical damage such as cuts, wear, and cracks in the insulation) or discoloration and deterioration due to chemical or UV light exposure.

Tools that are damaged must be returned to the employee's immediate Supervisor for replacement. These tools will be destroyed or disposed of in accordance with applicable Postal Service policies. Damaged metal tools of the type that are covered with insulation may be kept for non-electrical work if the insulation is completely removed, leaving no doubt that the tool can no longer be used for electrical work. Insulated tools that are made of non-conductive materials except for the point of contact must be destroyed if they show signs of damage.

Supervisors are responsible for ensuring employees receive training on the insulated tools including the proper methods for use, care, and inspection. While the training required by Attachment 4, "Qualifications and Training" discusses these issues, the supervisor must ensure local training is conducted on the specific items that are purchased locally. Equipment vendors can usually assist with these training needs.

5. TEST INSTRUMENTS AND EQUIPMENT

Only employees who are knowledgeable and have been trained to work safely with test instruments and equipment will be allowed to perform testing on electrical circuits or equipment.

Test instruments, equipment, and their accessories must be rated for the circuits and equipment they will be used on. Test equipment must be designed for the environment in which they will be used.

For example, voltmeters, both analog and digital, are designed for a number of applications from troubleshooting to power system testing. The user must read and understand the manufacturer's instructions on the use and application of the voltmeter. When a multi-function, multi-scale meter is used, it is important for the user to select the function and scale necessary for the task being performed. This will decrease the potential for injury to the employee or damage or destruction of the meter and equipment being tested.

Test instruments and equipment, as well as all associated test leads, cables, power cords, probes, and connectors must be visually inspected for external defects and damage before and after the test equipment is used. Defective or damaged items must be removed from service and tagged as defective using PS 4707. Damaged test equipment must be returned to the supervisor. This equipment must be replaced or repaired and must be tested by a manufacturer's representative before it can be placed back into use by employees.

All test instruments and equipment that require periodic calibration per the manufacturer's recommendation must be calibrated at the required frequency. A record should be maintained for each instrument, by serial number or equivalent method, showing dates of inspection, calibration data, the date when it should next be recalibrated, and any interim repair data.

6. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Under the provisions of the current EWP MI and this MMO, Postal Service employees must be provided with appropriate PPE and use it appropriately when performing electrical work. Qualified employees are responsible for determining and using the appropriate PPE based on the work category and tasks they expect to perform. PPE issued for work on electrical circuits must not be used for other purposes. Employees must not bring PPE into Postal Service facilities from outside sources. If similar PPE is needed for other activities, the employee must contact their immediate Supervisor.

When traveling, a Postal employee must carry his/her PPE with him/her. In the event the employee cannot bring his/her own PPE, the employee must notify the EWP Coordinator at the host-site or his/her home facility for assistance in obtaining the necessary PPE, which may include having the appropriate PPE mailed to the employee or making other arrangements to have the appropriate PPE available before the visiting Postal employee is scheduled to perform the assigned electrical work or complete off-site training.

Table 3-1 is used to select the appropriate PPE required for permissible work. Refer to

Attachment 6, “Permit-Required Work” when selecting the appropriate PPE required for permit-required work.

6.1. PROCUREMENT

Local management must procure and issue the appropriate PPE to qualified employees as required by the category of work for which the employees are expected to perform electrical work. In addition, the PPE that is purchased locally must comply with applicable national standards and be marked by the manufacturer to indicate compliance with standards listed in the table shown below, Table 8-1.

Table 8-1. General Industry Consensus Standards for PPE

SUBJECT	STANDARD NUMBER	TITLE
EYE (SAFETY GLASSES)	ANSI Z87.1-2003	Practice for Occupational and Educational Eye and Face Protection
FACE AND EYE (HOODS)	ASTM F 2178-08	Standard Test Method for Determining the Arc Rating and Standard Specification for Face Protective Products
HAND (INSULATING GLOVE)	ASTM D 120-09	Standard Specifications for Rubber Insulating Gloves
HAND (LEATHER PROTECTORS)	ASTM F 696-06	Standard Specifications for Leather Protectors for Rubber Insulating Gloves and Mittens
HEAD	ANSI Z89.1-2009	Requirements for Protective Headwear for Industrial Workers
FLAME RESISTANT MATERIALS - FR CLOTHING and ARC FLASH SUITS	ASTM F 1506-10a	Standard Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards
	ASTM F 1959-06ae1	Standard Test Method for Determining the Arc Rating of Materials for Clothing
BLANKETS	ASTM D 1048-11	Standard Specifications for Rubber Insulating Blankets
INSULATED TOOLS	ASTM F 1505-10	Standard Specifications for Insulated and Insulating Hand Tools

6.2. FACE SHIELDS

The face shields that are required to be worn will depend on the PPE requirements for the permissible work categories. Face shields must be rated at a minimum of 8 cal/cm^2.

Face Shields must be inspected before and after each use. Face shields that are contaminated with grease, oil, flammable or combustible liquids, or those that have been damaged must not be used. The manufacturer’s instructions for care and maintenance must be followed. Training should include specific information on wearing, inspecting, maintaining, storing, and testing.

Employees requiring face shields must be provided a hard hat as well (see Table 3-1). It is important that employees also be provided the case, bag, or any other storage device recommended by the manufacturer in order to protect the face shield when not in use.

6.3. FLAME RESISTANT (FR) COVERALLS

Coveralls must be rated at a minimum of 8 cal/cm^2 and sized to fit the employee.

Coveralls must be inspected before and after each use. Coveralls that are contaminated with grease, oil, flammable or combustible liquids, or those that have been damaged must not be used. The manufacturer's instructions for care and maintenance must be followed. Training should include specific information on wearing, inspecting, maintaining, storing, and testing.

6.4. GLOVES

When the work category requires gloves, employees must use rubber-insulated gloves with leather protectors. The gloves selected should provide enough flexibility to enable the employee to performed required tasks and must meet applicable requirements located in OSHA's regulations at 29 CFR 1910.137.

Postal Service employees are only required to wear gloves in Class 00 or Class 0 depending on the voltage of the equipment on which the work is to be performed. Each of the classes is described as follows:

Class 00 - Maximum Use Voltage = 500 volts AC

Class 0 - Maximum Use Voltage = 1,000 volts AC

Gloves must be inspected before and after each use. Gloves that are contaminated with grease, oil, flammable or combustible liquids, or those that have been damaged must not be used. The manufacturer's instructions for care and maintenance must be followed. Training should include specific information on wearing, inspecting, maintaining, storing, and testing.

6.5. FLASH SUIT AND FOOT PROTECTION

The entire flash suit, including the hood's face shield and foot protection shall have an arc rating corresponding to the requirements listed in Attachment 3. Flash suits are designed to allow easy and rapid removal. The size of the suit must be selected according to the size of the employee intended to wear the suit.

The requirement to have foot protection that meets the flash suit arc rating can be met by wearing ankle high leather footwear Dielectric and steel toe footwear is not required.

Flash suits must be inspected before and after each use. Flash suits that are contaminated with grease, oil, flammable or combustible liquids, or those that have been damaged must not be used. The manufacturer's instructions for care and maintenance must be followed. Specific training relating to the flash suits must be obtained from the vendor from which the suit was procured or a manufacturer's

representative. Training should include specific information on wearing, inspecting, maintaining, storing, and testing.

6.6. USING, INSPECTING, MAINTAINING, AND STORING PPE

Employees must visually inspect PPE immediately before and after electrical work has been completed. When voltage-rated gloves are required, employees must perform a visual inspection and an air test before and after each use. Equipment that does not successfully pass visual inspection must not be used and must be returned to the employee's immediate Supervisor for testing, repair, or disposal as applicable. PPE must be maintained in a safe reliable condition based on manufacturer's recommendations.

Required PPE should be stored as advised by the equipment manufacturer.

Rubber goods shall be stored in a location that is cool, dark, and dry. The location shall be as free as practicable from ozone, chemicals, oils, solvents, and damaging vapors and fumes. The storage location shall not be located near electrical discharge areas or in direct sunlight. Voltage-rated gloves should be stored cuff down, in a bag, box, or container that is designed for the glove. Voltage-rated gloves may be stored inside the leather protectors.

Rubber insulated gloves and leather protectors must be inspected inside and out before each use. Each must be replaced if any defects are found during the performance of an air test. To perform the air test, the glove is filled with air, expansion during the test stretches the gloves making cuts and abrasions easy to detect. This test can be done by rolling the cuff towards the palm trapping air in the glove. This is covered in more detail in the EWP PPE training.

6.7. TESTING REQUIREMENTS

Voltage-rated gloves must be subjected to periodic electrical tests as appropriate. Non-issued gloves still in the manufacturers sealed packaging must be electrically tested every twelve months.

Voltage-rated gloves that have been removed from the manufacturers original packaging must be electrically tested every 6 months and voltage-rated gloves that have not been removed from the manufacturer's original packaging must be electrically tested every 12 months.. Testing methods must meet OSHA 29 CFR 1910.137. Voltage-rated gloves required to be retested must be marked to indicate the date of retest and test results. Gloves must be marked using a non-conductive method to prevent damaging the insulating qualities of the gloves. Another acceptable method of marking is entering the test results in eMARS. If eMARS is used, there must be a direct correlation between each glove and each eMARS test result entry. The method used for tracking test results and the results of such tests shall be documented with copies maintained in the EWP files.

Testing of voltage-rated gloves must be performed by approved national testing laboratories. There are a number of approved testing laboratories that provide testing on electrical safety equipment including voltage-rated gloves. If gloves fail the test, the gloves must be destroyed. Records must be maintained that reflect the gloves have

been destroyed.

An alternative to the testing requirements is to purchase new equipment. The new insulated gloves shall be tested and marked before being put into service. Gloves tested by the vendor must be verified as having a current test. A cost comparison should be performed prior to contracting for the required electrical testing to determine if it is more cost effective to test or replace the equipment. If the equipment is replaced, then the used equipment must be destroyed and disposed of with records kept in the EWP files that document the destruction and disposal.

6.8. TRAINING

Supervisors of employees who perform energized electrical work are responsible for ensuring that qualified employees, who are required to wear PPE for electrical work, are trained in selecting the proper PPE for the task they are performing, as well as how to wear, inspect, maintain, and store the issued PPE. While the training required by Attachment 4 “Qualifications and Training” will discuss these PPE issues, the EWP Coordinator must ensure local training covers the specific types of PPE that are purchased locally. PPE vendors or manufacturer’s representative generally can assist with these training needs.

7. OTHER ELECTRICAL PROTECTIVE EQUIPMENT

Insulated blankets and insulated mats are generally used to provide protection when working on high voltage equipment and circuits. Typically, they are used in situations where the voltage levels are greater than 600 volts. Since Postal Service employees are generally prohibited from working on energized equipment and circuits rated greater than 600 volts, these devices are not usually found in Postal Service facilities.

When such items are purchased for employee use, the Postal Service facility must meet all applicable requirements for “Electrical Protective Devices” as stated in OSHA regulation at 29 CFR 1910.137. The manufacturer of the insulated blankets and mats may have additional requirements. The employees must also follow any additional requirements stated by the manufacturer’s documentation. At a minimum, the requirements discussed below must be addressed.

Insulated blankets and insulated mats must be clearly marked as applicable with its class. The class refers to the maximum use voltage. Insulating blankets and mats must not be used around energized circuits that exceed their maximum use voltage. Insulated blankets must also be marked to indicate its type, which refers to its ozone resistance. Type I is not ozone resistant; Type II is ozone resistant. Insulating mats do not require the “Type” marking. Besides the class and type marking, insulated blankets and mats may have other markings that include information on the manufacturer. Markings must be non-conductive and applied in such a manner that there is no damage to the insulating qualities of the equipment.

The EWP Coordinator must ensure insulated blankets have been tested in accordance with OSHA’s regulations as stated in 29 CFR 1910.137. Testing requires the insulated equipment to have a method of tracking the equipment’s test date and test results. Marking of equipment using manufacturer’s recommendations or entering the test dates

and results on a log are two acceptable means of meeting this requirement. For ease of tracking, it is recommended test information be entered into eMARS. The testing frequency for insulating blankets are before it is first issued and every 12 months thereafter. If the insulating blanket has been electrically tested but not issued for service, it may not be placed into service unless it has been electrically tested within the previous 12 months. Testing of insulated blankets must be performed by approved national testing laboratories. There are a number of approved testing laboratories that provide testing on electrical safety equipment including insulated blankets. To locate approved testing laboratories in a specific area go to the following link: http://www.nail4pet.org/laboratories.html.

While OSHA requires initial testing of insulating mats by the manufacturer, OSHA does not require retesting by the employer. Visual inspections must be performed to ensure the insulated mats are maintained in a safe and reliable condition as required by OSHA regulations stated in 29 CFR 1910.137. Insulated mats are intended as supplementary devices used with other appropriate electrical protective equipment and not as the sole method of protection.

Insulating blankets and mats must be cleaned as needed to remove foreign substances and must be inspected before and after each use. They should also be inspected immediately following any incident that may have caused damage. Insulating equipment found to be defective or damaged shall be immediately removed from service. Equipment must be replaced if there is a hole, tear, cut, or punctures, or if there is ozone deterioration, an object has become embedded in the rubber, or there are texture changes such as softening, hardening, swelling, stickiness, or any other defect.

Insulating equipment shall be stored in such a location and in such a manner as to protect it from light, temperature extremes, excessive humidity, ozone, and other injurious substances or conditions. Insulating blankets must be stored in a canister or other means that offer equivalent protection when the blanket is not in use. Blankets shall not be folded while in storage; however, blankets are allowed to be rolled for storage.

To ensure compliance with all applicable requirements, refer to OSHA standard 29 CFR 1910.137 and the manufacturer’s documentation.

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ATTACHMENT 9

LABELING REQUIREMENTS

1. LABELING

Postal Service policy requires marking distribution panels, switchboards, industrial control panels, and motor control centers in addition to other equipment identified through the facility electrical work assessment. Selection of the appropriate label must be based on the supply voltage and amperage as determined by the protective device (fuse or breaker) protecting the feed to the equipment. Refer to Attachment 10, “Electrical Work Assessment”.

Markings must warn qualified employees of potential electric shock and arc flash hazards.

To meet this requirement, the Postal Service has developed electrical shock and arc flash hazard labels that must be installed on the equipment. There are four different labels, one for each Work Category.

- Label 212 must be used on equipment that would fall under Category 2 work.
- Label 212-H must be used on equipment that would fall under Category 3 work.
- Label 213 must be used on equipment that would fall under Category 4 work.
- Label 214 must be used on equipment rated at 601 volts or more.

The four labels can be viewed at the end of this attachment. However, the labels are not depicted in their actual size.

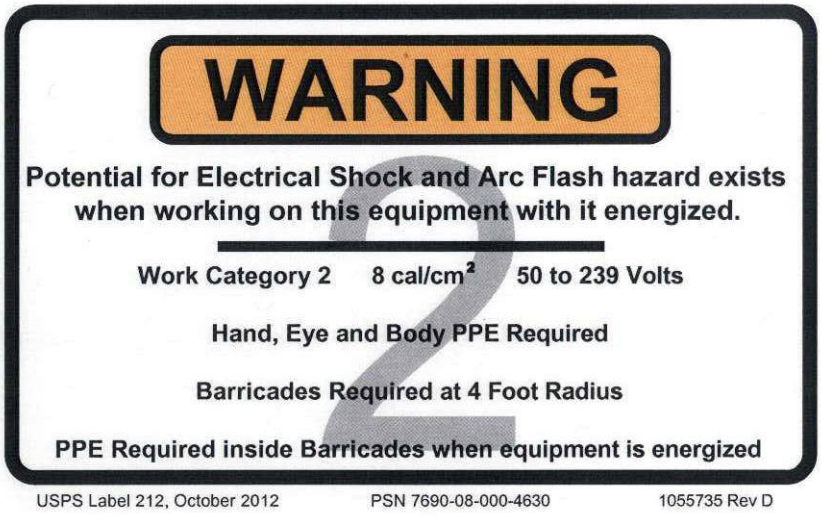
The appropriate label must be selected and applied on the outside of the panel door in proximal location to the disconnect.

To standardize Postal Service labeling requirements, the labels identified above are the only electrical shock and arc flash hazard labels authorized for application on electrical equipment located in Postal Service facilities. These labels can be ordered through the Topeka Materials Distribution Center (TMDC). Ordering information and label examples are located at the end of this attachment.

Equipment located in a non-maintenance-capable office that requires a label must be labeled by the Area Maintenance Technician (AMT) or other qualified maintenance employee within 12 months of the effective date of this MMO. Visits by a qualified maintenance employee are not required solely for the purpose of applying the labels.

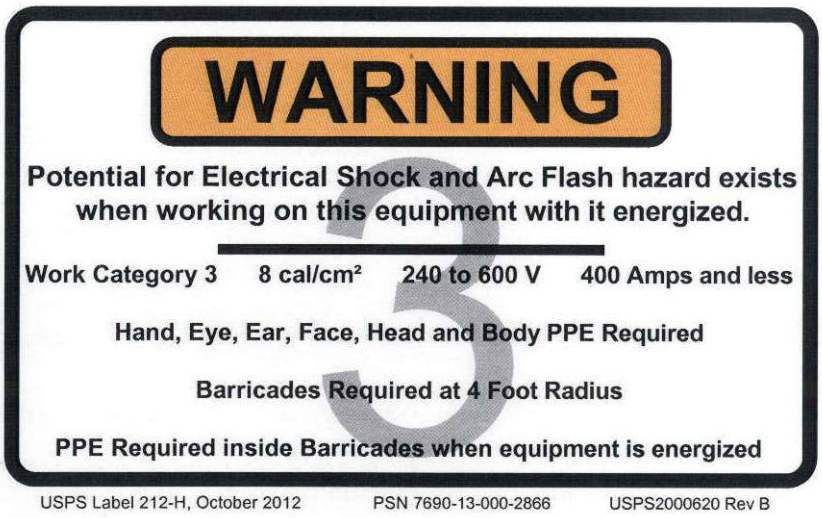
Label 212

Label 212 can be ordered using PSN 7690-08-000-4630.



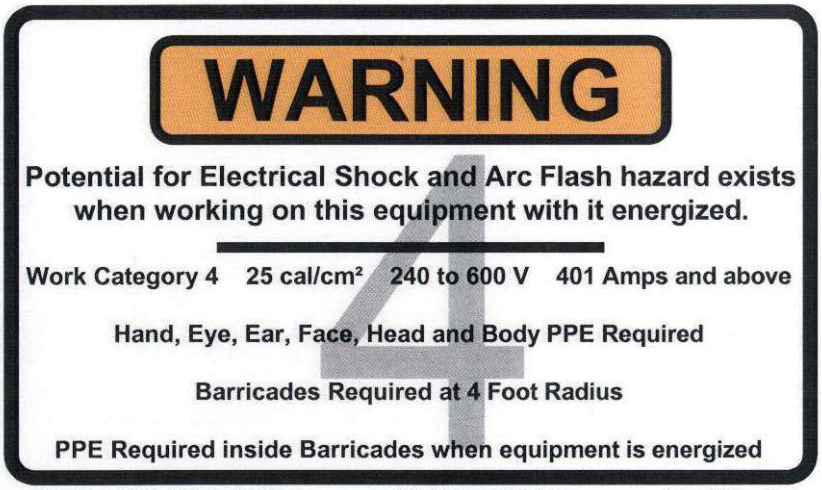
Label 212 H

Label 212-H can be ordered using PSN 7690-13-000-2866.



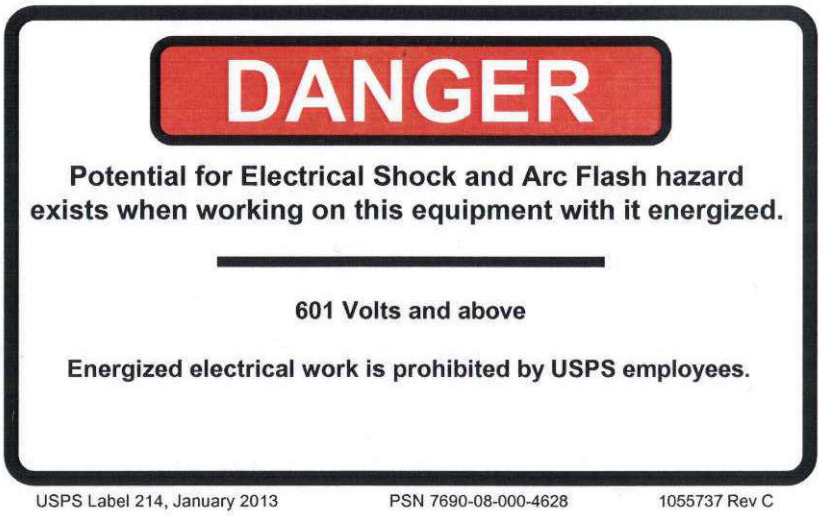
Label 213

Label 213 can be ordered using PSN 7690-08-000-4631.



Label 214

Label 214 can be ordered using PSN 7690-08-000-4628.



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ATTACHMENT 10

ELECTRICAL WORK ASSESSMENT

An electrical work assessment of existing Postal and building equipment must be completed.

- At maintenance-capable facilities – 6 months following the effective date of this MMO.
- At non-maintenance-capable facilities – 21 months following the effective date of this MMO.

Performing the assessment will assist in identifying the applicable work category and labeling requirements for each piece of equipment, based on the supply voltage and amperage, as determined by the protective device (fuse or breaker) protecting the feed to the equipment. Refer to the information in Attachment 3, “Work Categories and Corresponding PPE” when performing this work assessment. The electrical work assessment must be updated as new equipment is installed in the facility.

The electrical distribution voltage for equipment maintained by Postal Service employees will normally be one of the following:

- 120 volt, single phase (is one phase to neutral of the three phase 208 volt system)
- 208 volt, three phase
- 240 volt, single or three phase
- 277 volt, single phase (is one phase to neutral of the 480 volt three phase system)
- 480 volt, three phase

NOTE

In small Postal Service facilities, the 120 volt, single-phase supply may result from one leg of a 240 volt single-phase system.

Identifying the work category will assist in determining the work practices, qualification, training, and PPE required when performing energized electrical work on the equipment. Therefore, it is important that the assessment’s work categories are reviewed and updated when changes or modifications are made to the equipment.

When completing the Electrical Work Assessment in relation to switchgear components, it is important to list the various components separately. These components are contained in separate enclosures, even though they are usually attached together giving the appearance of a common enclosure. Common switchgear components that must be listed separately include the incoming supply switch, transformers (step down or step up), and the downstream switchgear components.

Attachment 13, “Forms” contain the blank template of the Electrical Work Assessment along with instructions for completing the form. Electrical Work Assessment forms are also available on the MTSC web page at http://www.mtsc.usps.gov.

NOTE

It is important to read this entire MMO prior to performing the assessment. Please contact MTSC if you have any questions on implementing this MMO.

ATTACHMENT 11

RESPONSIBILITIES

1. SUPERVISOR'S RESPONSIBILITIES

The Supervisor of an employee qualified to perform electrical work shall ensure such work is performed safely. The Supervisor shall:

- Ensure employees have received all formal training as required and any applicable On-The-Job Training (OJT).
- Ensure employees have the required qualifications to perform assigned electrical work safely.
- Ensure qualified employees are provided the appropriate PPE and tools required for the electrical tasks they perform.
- Ensure qualified employees are trained to select the proper PPE for the task they are performing.
- Ensure qualified employees are trained on the proper methods of wearing, inspecting, maintaining, and storing PPE.
- Ensure qualified employees use electrical PPE and tools only when they are performing tasks on electrical circuits and not for other purposes.
- Ensure qualified employees do not use PPE from outside sources.
- Conduct frequent observations to ensure employees are inspecting, wearing, maintaining, and storing PPE as appropriate.
- Ensure qualified employees have access to current work practices, procedures, and JSAs as appropriate.
- Observe employees that perform energized electrical work to ensure they adhere to appropriate policies, work practices, and use the proper tools and PPE.
- Ensure periodic safety talks address electrical safety issues.
- Address and resolve safety deficiencies noted in safety inspections and random observations.
- Participate in the facility Electrical Work Assessment.
- Participate in the development, review, and update of locally developed electrical work practices.
- Participate in investigations of electrical incidents.
- Complete electrical safety training as required. Level of electrical safety training must be equivalent to the maximum level of training required by employees that are supervised.

2. QUALIFIED EMPLOYEE'S RESPONSIBILITIES

Qualified employees must adhere to all electrical policies and safety-related work practices when performing electrical work. Qualified employees must also adhere to the following:

- De-energize and lock out electrical equipment unless work activities fall under permissible work or an Energized Electrical Work Permit is approved.
- Maintain qualifications by participating in formal classroom and on-the-job electrical safety training as required.
- Be aware of and warn others about electrical hazards in the workplace.
- Immediately report any electrical incidents such as shock, arc flashes, or fires to their supervisor.
- Stop electrical work immediately if unanticipated incidents occur and report the situation to their supervisor.
- Immediately report any electrical tasks that exceed their resources, competency, or level of qualification to their supervisor.
- Use appropriate safety-related electrical work practices.
- Report to work wearing the appropriate clothing and foot wear for your position.
- Inspect PPE before and after each use.
- Use, store, and maintain PPE as appropriate.
- Participate in the facility electrical work assessment when required.
- Participate in the development, review, and verification of locally developed electrical work practices when required.
- Consult supervisor or site EWP Coordinator in regards to any questions related to electrical work.

3. UNQUALIFIED EMPLOYEE'S RESPONSIBILITIES

Unqualified employees must be trained to adhere to the following safe work practices:

- Unqualified employees must not perform any energized electrical work, except during OJT while working with a qualified person.
- Observe warning signs and barricades, which limit access to energized work areas.
- Unless an unqualified employee is receiving on-the-job training, they must remain at least four feet away from where exposed energized electrical work is being performed.
- Must avoid approaching or distracting an individual who is performing electrical work.
- Must never place themselves in danger to help someone.

- Must never touch an individual who appears to be performing electrical work.
- Never spray water on a suspected electrical fire.

4. NATIONAL TECHNICAL SUPPORT CENTER (NTSC) RESPONSIBILITIES

Electronic Technicians that are assigned to perform work for NTSC must complete electrical safety training for work categories 1 through 4 (refer to Attachment 4, "Qualifications and Training"). This ensures they are qualified to perform permissible work activities on electrical systems rated up to 600 volts.

As maintenance employees qualified to perform energized electrical work, they must comply with all responsibilities listed in Section 2, "Qualified Employee's Responsibilities" of this attachment.

An Electronic Technician must not perform permit-required work at sites away from their domiciled office unless they receive the appropriate tools, PPE, and training to perform the site-specific. Additionally, a site specific energized electrical work permit must be completed prior to beginning any permit-required work. At a minimum, they must receive the equivalent training and PPE that a local employee would require while performing the permit-required work.

5. EWP COORDINATOR RESPONSIBILITIES

The EWP Coordinator will oversee the local EWP. The Coordinator may, with the concurrence of the Installation Head, delegate specific duties to other appropriate EAS level employees. The following are the minimum responsibilities of the Coordinator:

- Administers local EWP to ensure all requirements of an EWP are addressed as applicable.
- Prepares, reviews, revises, and documents local written EWP and maintains a copy in the EWP book. This includes a requirement to perform an annual review of the local EWP plan.
- Assists with the development and documentation of local EWP policy.
- Advises the Maintenance Manager or Senior Postal Service Official on compliance issues and national Postal Service policy decisions concerning EWP.
- Ensures each employee receives electrical training appropriate to his or her Postal Service job function. The EWP Coordinator should work in conjunction with local maintenance management to ensure each employee who performs electrical work has received the appropriate training.
- Provides local management personnel, having funding authority, the budget requirement to ensure funding is available for training, PPE, tools, and other protective devices as appropriate.
- Ensures that all required PPE testing is conducted and documentation is obtained /retained at the appropriate intervals.

- Monitors adherence to the EWP through documentation review, discussions with supervisors and craft employees, and personal observations. Copies of documentation must be maintained in the EWP book.
- Completes electrical safety training as required. Level of electrical safety training must be equivalent to the level of training required by qualified employees in the facility.
- Completes the current NCED course(s) for EWP Coordinators as defined in Table 4-1.
- Maintains the EWP facility-specific book (see Attachment 14).
- Ensures that barricades or other notification devices are erected around electrical work areas that could expose Postal Service employees to electrical hazards.
- EWP coordinator must follow the procedures in Postal Service Handbook EL-800, *Managing Contract Safety and Health Compliance to* stop the work if a contractor creates an unsafe condition.

ATTACHMENT 12

EWP COORDINATOR'S CHECKLIST

(FOR NON-MAINTENANCE CAPABLE OFFICES REFER TO ATTACHMENT 14 FOR RESPONSIBILITIES)

1. WORK CLASSIFICATIONS

- Ensure local policies regarding permissible, permit-required, and prohibited work are available to qualified employees maintaining electrical equipment and circuits.
- Ensure a hazard assessment, a JSA, and an authorized Energized Electrical Work Permit form has been completed for each instance of permit-required work with copies maintained in the local EWP file.

2. ELECTRICAL WORK ASSESSMENT

- Perform an Electrical Work Assessment (refer to Attachment 10. "Electrical Work Assessment") to evaluate existing electrical equipment.
- Update the Electrical Assessment as necessary to reflect current electrical equipment and maintain an updated copy in the EWP book.

3. QUALIFICATIONS AND TRAINING

- Coordinate with local supervision to determine what level of qualification each employee must attain based on the electrical equipment and systems he/she will be assigned to maintain.
- Maintain list of "qualified electrical employees", based on each employees' level of training. A separate list must be maintained for each qualification level (i.e., Electrical Safety-Work Categories 1 and 2, Electrical Safety-Work Category 3, and Electrical Safety-Work Category 4) (Refer to Attachment 4, "Qualifications and Training").
- Schedule training and refresher training as necessary (refer to Attachment 4, "Qualifications and Training").
- Coordinate with local supervision to schedule any required On-the-Job (OJT) training.
- Ensure maintenance management and safety professionals complete applicable electrical safety courses.
- Maintains training documentation in local EWP files.

4. CONTROL METHODS

- Review and revise, as necessary, electrical work practices and procedures for applicability to local conditions or equipment modifications.
- Oversee development and revisions of locally developed electrical work practices.

- Maintain a file of all current electrical work practices and procedures that are applicable locally.
- Identify and procure all tools and test equipment necessary for use by qualified employees when performing energized electrical work.
- Identify and procure other PPE as appropriate for energized electrical work.
-
- Establish and document the procedures for the selection, testing, repair, replacement, and disposal of PPE as appropriate.
- Ensure applicable tools, test equipment, and PPE are tested and test documentation is obtained / retained as required.

5. LABELING

- Determine which electrical panels and equipment require a warning label based on the Electrical Work Assessment (Refer to Attachment 10, “Electrical Work Assessment”) and information contained in Attachment 9, “Labeling Requirements.”
- Order appropriate EWP labels from the Topeka Material Distribution Center (TMDC).
- Ensure labels are applied to the appropriate panels.

6. RECORDKEEPING

- Ensure all required records are current, complete, and accurate.
- Maintain copies of electrical safety training records locally, including, but not limited to:
  - All category training
  - Site specific training on PPE and tools
  - Site specific training on Category 4 equipment, including Switchgear Operations
- Ensure training records are accessible, even when the EWP Coordinator is not available.
- Maintain an EWP Facility-Specific Book:
  - Essential quick reference resource for those needing information on the compliance status or other details of the local EWP.
  - Demonstrates compliance with the EWP MI and MMO for internal auditing or OSHA inspection.
  - Track Forms 1767, 1769-301 and SARs that involve energized electrical work.
  - See Attachment 14 for more details on the requirement for the EWP facility-specific book.

ATTACHMENT 13

FORMS

This attachment contains the following forms:

- ELECTRICAL WORK ASSESSMENT
- ENERGIZED ELECTRICAL WORK PERMIT
- JOB SAFETY ANALYSIS, FORM PS 1783
- EXAMPLE MEMORANDUM FOR THE RECORD
- EXAMPLE OF THE QUALIFIED EMPLOYEE EWP CARD

ELECTRICAL WORK ASSESSMENT FORM

ELECTRICAL WORK ASSESSMENT

ELECTRICAL EQUIPMENT	LOCATION (FLOOR & COLUMN)	SUPPLY			WORK CATEGORY	USPS LABEL
		VOLTS	AMPS	TRANSFORMER kVA		
UTILITY FEED					**Prohibited**	
SWITCHGEAR						
DISTRIBUTION PANELS						
LIGHTING PANELS						
MOTOR CONTROL CENTERS						
HVAC CHILLERS						
AIR COMPRESSORS						
AFSM 100						
AFSM 100 W/ AI						
AFSM 100 W/PRS						
DBCS						
OTHER MAIL-PROCESSING EQUIPMENT						
OTHER BUILDING EQUIPMENT						

Electrical Work Assessment Form Instructions:

The “ELECTRICAL EQUIPMENT” column is used to list the specific equipment found in the facility that may have electrical work performed by qualified Postal Service employees or may require some electrical maintenance work at some time in the future. Each piece of equipment requires a separate entry. Although there are numerous pieces of equipment that appear to be virtually the same, such as common mail processing equipment, it is important to identify them individually to enable one to distinguish between them for location purposes, should their electrical feed conditions differ.

The “LOCATION (FLOOR & COLUMN)” column should reference the location of the equipment. The method used should be common to the facility and familiar to the employees at the facility. Some common reference may include room numbers, column coordinates, basement, penthouse, or the floor number with column coordinates for multi-story buildings. The actual identifier can also be used if it indicates the location, such as LP-H3 for lighting panel at column H3.

Under the “SUPPLY” column, the “VOLTS” column is the supply voltage of the equipment or the highest electrical distribution voltage in the particular cabinet or panel.

Under the “SUPPLY” column, the “AMPS” column is the trip rating or setting of the upstream protective device used to protect the circuit, panel, or equipment.

Under the “SUPPLY” column, the “TRANSFORMER” column is size in kVA of transformer supplying the machine.

The “WORK CATEGORY” column is determined using Attachment 3, Table 3-1.

The “USPS LABEL” column documents the label that must be applied to the equipment based on its supply voltage and amperage rating. Refer to Attachment 9, “Labeling Requirements” for additional information on labeling requirements.

The Electrical Work Assessment Form must be reviewed and updated as needed when equipment is moved, relocated, or added.

ENERGIZED ELECTRICAL WORK PERMIT FORM

ENERGIZED ELECTRICAL WORK PERMIT

Requested By (Print Name)	Phone No.	Issue Date	Expiration Date
1. Location of Work: Building Floor Room Column #			
2. Description of Work to be Performed			
3. Equipment to be Worked On			
4. Ratings of Equipment (Voltage and Current)			
5. Special Characteristics and Abnormalities			
6. Description of any non-electrical hazards			
7. Description of Safe Work Practices			
8. **Required PPE**			
9. Special Tools / Special Test Equipment			
10. Special Safety Requirements/Procedures			
11. Means of Restricting Unqualified Employees from the work area			
12. QUALIFIED EMPLOYEES ASSIGNED and Initial Job Briefing Completed			
(Name)	(Signature)	(Duties)	
13. Compelling Reason- The Justification for working on equipment energized			
APPROVAL SIGNATURES			
MAINTENANCE MANAGER			
(Name)	(Signature)		
FACILITY SAFETY PROFESSIONAL			
(Name)	(Signature)		
PLANT MANAGER			
(Name)	(Signature)		

ENERGIZED ELECTRICAL WORK PERMIT

PREPARATION, REVIEW, AND APPROVAL INSTRUCTIONS

1. Specify the location of work to be performed.
2. Provide a general summary of the work to be performed.
3. Identify equipment to be worked on.
4. Identify equipment ratings.
5. Identify and provide a description of any special characteristics or abnormalities.
6. Special characteristics of the equipment may include Uninterruptible Power Supplies (UPS), Automatic Transfer Switches (ATS), or unlabeled wires.
7. Special characteristic should include abnormalities like unlabeled wires, no color-coded wires, color-coding of wires appear incorrect, fluid puddle inside enclosure, missing lockout, and racked or otherwise deformed panel door.
8. Abnormalities indicate an unexpected condition or defect of the equipment.
9. Identify and describe any non-electrical hazards associated with the tasks.
10. Determine safe work practices to be used by reviewing JSA for the task.
11. Determine the required protective equipment to be used (e.g., gloves and other PPE).
12. Identification of special tools and test equipment, along with special instructions for safe use.
13. Identify special safety requirements and procedures.
14. Describe barriers or other methods used to restrict access of unqualified persons.
15. Identification of employees assigned to the work and their duties; use additional pages as necessary. Employees' signatures attest to completion of an initial job briefing covering all job specific hazards. Other periodic job briefings may also be required.
16. Explanation of why it is not feasible to de-energize equipment before performing the maintenance activity.

NOTES:

- A minimum of two qualified employees define the scope of work, assess the hazards, and hazard mitigation of the job. The two qualified employees can include an equally qualified employee, supervisor, the EWP Coordinator, or a knowledgeable safety professional.
- A copy of the approved permit must be maintained in the EWP files for at least one year.

- It should be stressed that the signatures of the qualified employees(s) and safety professional indicate concurrence with the hazard assessment and controls that have been completed.
- The signature of the Maintenance Manager indicates the training records for those employees that are assigned the work have been reviewed and are verified as having an adequate level of training necessary to perform the work safely.

JOB SAFETY ANALYSIS FORM PS 1783

United States Postal Service

On-the-Job Safety Review/Analysis

(See instructions on reverse)

		Date	
Location *(e.g., Station, Branch, BMC)*	Unit *(Inbound, Outbound, etc.)*	Specific Task Analyzed	
Title of Employee Performing Task	Required and/or Recommended Personal Protective Equipment to Perform the Task		
Completed By *(Title)*	Reviewed By *(Title)*	☐ Concurrence ☐ Non-Concurrence	No. of Employees Involved

Sequence of Basic Task Steps	Potential Hazard or Accident	Recommended Action to Prevent Accident or Eliminate Hazard

PS Form **1783**, January 1989

Instructions

A. What Is an On-the-Job Safety Review/Analysis?

An On-the-Job Safety Review/Analysis is a procedure to analyze a specific task to uncover hazards or accidents producing situations:

1. That may have been overlooked in the layout of the operation, design of machinery, equipment, and work practices;
2. That may have developed after the job or work was started.

B. What Job Tasks Should Be Reviewed?

Assigned jobs usually involve a combination of different tasks during an eight hour shift. Select for analysis specific tasks of a job, e.g., stacking pallets, unloading BMC containers from a trailer, culling mail, etc. Consideration should be given to selecting those tasks which involve:

1. A high frequency of accidents;
2. Disabling injuries;
3. The potential for severe injury; exposure to hazardous materials; or physical agents;
4. New jobs, changes in equipment or processes.

C. How Should an On-the-Job Review/Analysis Be Performed?

1. Record the Basic Task Steps

   Break down the task into successive steps and list them numerically in Column A. To determine the basic steps, ask "What step starts the task?" Then, "What is the next basic step?" and so on. Keep it brief, but specific. Begin each step with an **action** word such as, "remove," "open," "lift," "position," and then follow it with an item to which the action applies, such as "remove jam," "open trailer door," "lift each to top tier," "position nutting truck," etc.

D. Record Hazards or Potential Accidents

After listing all the steps begin the search for hazards or potential accidents. Address the accidents that could happen to the employee doing this job step. Closely studying the mechanics involved in each step, discussing it with the employee, and recalling causes of past accidents will aid you in developing answers. Other helpful questions are:

1. Is there a potential for lifting injuries due to manual handling procedures?
2. Is there a danger that employees could be exposed to potentially hazardous materials, harmful noise levels, or breathing harmful vapors or dust?
3. Can the employee slip or fall? Can the employee fall on the same level or to another level?

Record any hazards or potential accidents in Cloumn B next to the task step involved. Be brief in identifying each hazard or potential accident. But be specific, e.g., "fall from dock," "hands can get caught between containers and wall," "strain from lifting in awkward position," "defective utility cart guard," etc.

E. Recommended Action

Record in Column C the action necessary to eliminate the hazard or prevent an accident. Possible actions may include finding a new way to do the job, changing the physical conditions that create the hazard, or changing the job procedure. The action indicated must be specific, i.e., What changes should be made? How should the job be done?

F. Disposition

After completion route the form through the Safety Office or other designated Department under existing local procedures.

Guide to Preparing a Job Safety Analysis (Sequence of Basic Task Steps)

Sequence of Basic Task Steps (Column 1)	**Divide the job into a sequence of steps, each describing what is being done.** To avoid two common errors when dividing the job into sequenced steps: ■ Do not make the division so detailed that an excessively large number of steps result. ■ Do not make the division so general that basic steps are not recorded. To apply a good technique of dividing the job: ■ Select a person to observe. ■ Brief that person on the reason for your observation. ■ Observe the person performing the job and try to divide the job into basic steps. ■ Record each step in the process. ■ Check the process with the person observed. **Remember:** Each step must describe what work is done, not how it is completed. Begin each step with an action word such as *remove*, *lift*, or *drive*.

Hazards and Potential Accidents (Column 2)	**Identify all hazards and potential accidents — both those produced by the environment and those connected with the job procedure.**
	To apply a good technique for identifying all hazards:
	■ Observe closely.
	■ Repeat the job observation as necessary until you are confident you have identified all hazards and possible accidents.
	■ Ask yourself these questions about each job step:
	  ■ Is there a danger of striking against, being struck by, or making any other injurious contact with an object?
	  ■ Can the employee be caught in, between, or by objects or moving parts?
	  ■ Is there potential for a slip, trip, or fall? Can the employee fall on one level or to another level?
	  ■ Can pushing, pulling, lifting, bending, or twisting cause a strain on the employee?
	  ■ Is there an environmental exposure hazard, such as gas, radiation, or heat?
	■ Check with the employee being observed; an experienced employee may be able to suggest additional ideas.
	■ Make no attempt to develop solutions while analyzing each job step for hazards. Thinking about solutions at this stage interferes with the process of spotting hazards.

Recommended Action to Prevent Accident or Eliminate Hazard (Column 3)	**Develop a recommended safe job procedure to prevent the occurrence of potential accidents.** Principle solutions may include: ■ *Find a new way to do the job*. Determine the work goal of the job and then analyze various ways of reaching the goal to determine the safest procedures. ■ *Change or eliminate the physical conditions that create the hazard*. Ask yourself what changes in tools, materials, location, or equipment, for example, can eliminate the hazard or prevent the accident. ■ *Change work procedures to eliminate or minimize any hazards still present*. Ask yourself what the employee should do, or not do, to eliminate or minimize this particular hazard. ■ *Reduce the frequency with which the job is required*. **Note:** Be sure to check or test your proposed solutions by observing the job again and discussing the changes with the workers who do the job.

Example of the Qualified Employee EWP Card

UNITED STATES POSTAL SERVICE

EWP TRAINING CARD

Qualified Employee Name:_____

- Electrical Safety, Categories 1 & 2 (Course Number 1960175)
- Electrical Safety, Categories 3 (Course Number 1960180)
- Electrical Safety, Categories 4 (Course Number 1960178)
- EWP PPE employee thru level 3-L (Course number 10018101)
- EWP PPE employee thru level 5 Course number 10018188)

Supervisor Name: _____
Date: _____

EXAMPLE MEMORANDUM FOR THE RECORD

EWP - MEMORANDUM FOR THE RECORD

UNITED STATES POSTAL SERVICE

[Date]

[Facility Name]
[street address]
[city, state and zip]

This is an Electrical Work Plan (EWP) Memorandum for the record documenting that this facility is a non-maintenance capable facility; and therefore does not have any assigned maintenance personnel who are qualified to electrically maintain this facility and the equipment installed within this facility. Additionally, all necessary electrical work is accomplished in the following manners [mark the appropriate box(es) below]

☐ All of the electrical work occurring at this facility is performed on-site by Postal employees from the following maintenance capable facility supporting facility.

_____ [insert name of maintenance capable supporting facility]

☐ All of the electrical work occurring at this facility is performed on-site by outside contractors.

☐ All electrical work is performed off-site. Equipment requiring electrical work is removed from the site, repaired, and returned to the site, or equipment requiring electrical work is removed from the site and replaced with equipment that is in good working order.

☐ This is a leased facility and all electrical work is the responsibility of the lessor. Documentation of lease agreement is attached.

The Electrical Work Assessment for this facility must be completed and included in this facility's EWP along with all the other items identified per MI- EL-810-2013-5 Electrical Work Plan, section titled "Elements of an Electrical Work Plan for a Non-Maintenance-Capable Facility."

Sincerely,

[Installation head name]
[Installation head title]
[Installation head phone number(s)]

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ATTACHMENT 14

EWP FACILITY-SPECIFIC BOOK

I. MAINTENANCE-CAPABLE EWP FACILITY-SPECIFIC BOOK

The Maintenance-Capable EWP facility-specific book contains essential information on the local EWP. This book is compiled by the EWP Coordinator. It serves to document compliance with this MMO and the EWP MI as well as a helpful resource book.. The issues log in the book must be used for auditing EWP performance and tracking electrical hazards and their abatement.

The Maintenance-Capable EWP facility-specific book should contain the following sections and information:

1. Table of Contents
2. Introduction
    a. Facility information (Name, Location, & Telephone Number, brief description of facility)
    b. Letter of Designation:
        i. Identification as maintenance-capable
        ii. Location of Program
        iii. Location of training records
        iv. Name, title and contact information for the Installation Head
        v. Name, title and contact information for the EWP Coordinator
        vi. Name title and contact information for the Maintenance Manager
        vii. Name title and contact information for the Safety Manager
3. Written Plan Specific to facility
    a. Copy of written EWP
        i. Please refer to the MI for the elements of a site-specific EWP.
    b. Document retention and disposal
4. Assessment should include
    a. Name of individual that completed the assessment
    b. Qualifications – highest level of qualification
    c. Name of supervisor that verified the assessment
5. Training
    a. Records for all qualified employees
    b. Training records for non-maintenance-capable facilities will be located at parent site, available for review when requested.

c. Documentation of completed observations
d. Documentation of employee non-conformance
e. Retraining records

6. PPE
    a. Source info
        i. Name
        ii. Part numbers
        iii. Manufacturer and item description
            1. Manufacturer’s instructions for each unique piece of PPE
            2. Item description to include testing requirements
            3. Inspection procedures
            4. Expiration information (useful life)
        iv. Contact info
        v. PO / eBuy copies
    b. Check out process (if PPE is checked out and not issued).
    c. Issuance information
        i. Employee name
        ii. Item name
        iii. Copy of the national stocking numbers included (all sites to use the same NSN in their eMARS toolbox module if issuing)
        iv. Date of issuance
    d. PPE Testing info
        i. Required testing per site’s eMARS as a route.
        ii. Copy of the route to be printed and maintained in the EWP book.
        iii. Annual reviews can use the route number to verify compliance.
        iv. Daily testing verbiage to be added to all eCBM and eMARS routes. (eMARS to include text for all work ordered written on MPE or building work to state before and after testing for EWP PPE.)
        v. Source info for outside testing laboratories
            1. Name
            2. Part numbers
            3. Contact info

4. PO / eBuy copies
5. Results for each item tested

e. Cleaning – Source Information
   i. Name
   ii. Contact info
   iii. PO / eBuy or contract info

f. Disposition documentation
   i. Disposal procedure
   ii. Documentation of Disposal

7. Insulated Tools

a. Source info
   i. Name
   ii. Part numbers
   iii. Manufacturer & model
   iv. Contact info
   v. PO / eBuy copies

b. Check out process if tools are checked out and not issued.

c. Issuance information
   i. Employee name
   ii. Item name (may need unique ID number for tracking)
   iii. Copy of the national stocking numbers included (all sites to use the same NSN in their eMARS toolbox module (if issuing)
   iv. Date of issuance

d. Manufacturers documentation for each item
   i. Required testing per site's eMARS as a route.
   ii. Copy of the route to be printed and maintained in the EWP book.
   iii. Annual reviews can use the route number to verify compliance.
   iv. Daily testing verbiage to be added to all eCBM and eMARS routes. (eMARS to include text for all work ordered written on MPE or building work to state before and after testing for EWP PPE.)
   v. Source info for outside testing laboratories
      1. Name
      2. Part numbers

3. Contact info
4. PO / eBuy copies
5. Results for each item tested

e. Disposition documentation
    i. Disposal procedure
    ii. Documentation of Disposal

8. Completed Energized Electrical Work Permits
    a. Complete permit form
    b. JSA for each completed form (JSA review is required, before the task is performed)
9. A summary of PS Forms 1767, 1769-301 and Serious Accident Reports (SAR) related to energized electrical work (A sample is included at the end of this Attachment.)
10. Barricades
    a. Description of barricades
        i. Type
        ii. Color
        iii. Pictorial representation
    b. Source info
        i. Part numbers
        ii. Manufacturer & model
        iii. Contact info
        iv. PO / eBuy copies
    c. Check out process if barricades are checked out and not issued.
    d. Issuance information
        i. Employee name
        ii. Item name (may need unique ID number for tracking)
        iii. Copy of the national stocking numbers included (all sites to use the same NSN in their eMARS toolbox module (if issuing)
        iv. Date of issuance
    e. Required per site’s eMARS as a route.
    f. Copy of the route to be printed and maintained in the EWP book.
    g. Annual reviews can use the route number to verify compliance.

h. Daily testing verbiage to be added to all eCBM and eMARS routes. (eMARS to include text for all work orders written on MPE or building work to state before and after testing for EWP PPE.)

11. Policy reference
    a. Copy of current MI
    b. Copy of current MMO
    c. Examples of current labels (one of each label)

II. NON-MAINTENANCE-CAPABLE EWP FACILITY-SPECIFIC BOOK

The Non-Maintenance-Capable EWP facility-specific book contains essential information on the local EWP. This book is compiled by the EWP Coordinator. It serves to document compliance with this MMO and the EWP MI as well as a helpful resource book.

The Non-Maintenance-Capable EWP facility-specific book should contain the following sections and information if applicable:

1. Table of Contents
2. Introduction
    a. Facility information (Name, Location, & Telephone Number, brief description of facility)
    b. Identification as non–maintenance-capable “Memorandum for the Record”
    c. Letter of Designation:
        i. Parent site
        ii. Location of Program
        iii. Location of training records
        iv. Name, title and contact information for the Installation Head
        v. Name, title and contact information for the EWP Coordinator
        vi. Name title and contact information for the Maintenance Manager
        vii. Name title and contact information for the Safety Manager
3. Written Plan Specific to facility
    a. Copy of written EWP
        viii. Please refer to the MI for the elements of a site-specific EWP.
    b. Document retention and disposal
4. Assessment should include
    a. Name of individual that completed the assessment
    b. Qualifications – highest level of qualification
    c. Name of supervisor that verified the assessment
5. Training
    a. Records for all qualified employees
    b. Training records for non-maintenance-capable facilities will be located at parent site, available for review when requested.
    c. Documentation of completed observations
    d. Documentation of employee non-conformance

e. Retraining Records

6. PPE
    a. PPE information for non-maintenance-capable facilities will be located at parent site, available for review when requested.
7. Insulated Tools
    a. Insulated Tool information for non-maintenance-capable facilities will be located at parent site, available for review when requested.
8. Completed Energized Electrical Work Permits
    a. Complete permit form
    b. JSA for each completed form (JSA review is required, before the task is performed)
9. Barricades
    a. Barricade information for non-maintenance-capable facilities will be located at parent site, available for review when requested.
10. Policy reference
    a. Copy of current MI
    b. Copy of current MMO
    c. Examples of current labels (one of each label)
11. A summary for PS Forms 1767, 1769-301 and Serious Accident Reports (SAR) related to energized electrical work (A sample is included at the end of this Attachment.)

EXAMPLE

Summary of PS Forms 1767s, 1769-301s and SARs that are related to the Electrical Work Plan

This form should be filled out by the Maintenance-Capable office on behalf of all the facilities for which the facility is responsible.

The EWP coordinator at the responsible Maintenance-Capable office must complete this summary whenever a form is received that suggests an electrical hazard is present. The EWP coordinator is responsible for assuring that each electrical hazard indicated on the forms is abated. Whenever the hazards reported suggest other than an isolated hazardous electrical condition, the EWP Coordinator, through the safety committee, will report the hazard, along with the actions taken to abate it, to the appropriate Area safety personnel to report to National Headquarters.

Facility Location	Brief Description (e.g., barriers or PPE issue)	Tracking Numbers		
		1767	1769-301	SARs

ATTACHMENT 15

RESOURCES

1. OSHA

OSHA's home page - http://www.osha.gov

2. POSTAL SERVICE DOCUMENTS

- MI EL-810-2013-5, Electrical Work Plan

  http://blue.usps.gov/cpim/miid.htm
- MI-EL-810-2009-4 Personal Protective Equipment and Respiratory Protection Programs -

  http://blue.usps.gov/cpim/miid.htm
- Current MMO, Personal Protective Equipment -

  http://www.mtsc.usps.gov
- Current MMO, Electrical Work Plan -

  http://www.mtsc.usps.gov
- Current MMO, Hazardous Energy Control Program (Lockout) -

  http://www.mtsc.usps.gov

3. NATIONAL CENTER FOR EMPLOYEE DEVELOPMENT (NCED)

3.1. ALL MAINTENANCE EMPLOYEES

10015993 – Electrical Safety Awareness - SWBT

3.2. EWP COORDINATOR COURSES

10015998 – Electrical Work Plan Coordinator - WBT

10022095 – EWP Coordinator Lite for Non-Maintenance Capable Offices

Training that enables the EWP Coordinator to develop, implement, and manage the local EWP.

3.3. ELECTRICAL SAFETY COURSES FOR ELECTRICAL WORKERS

10010788 – Electrical Safety Work - Cat 1 & 2 - WBT

Training covers Postal Service policies relating to Electrical Work. Included is specific information relating to work on energized electrical equipment and circuits rated less than 240 volts. Information includes work practices, tools, and PPE requirements. This course is a prerequisite to the Electrical Safety, Work Category 3.

10015994 – Electrical Safety Work - Cat 3 - WBT

Training covers specific information relating to work on energized electrical equipment and circuits rated from 240 to 600 volts with currents rated at less than 401 amps. Information includes work practices, tools, and PPE requirements. This course is a prerequisite to the Electrical Safety, Work Category 4.

10015996 – Electrical Safety Work - Cat 4 - WBT

Training covers specific information relating to work on energized electrical equipment and circuits rated from 240 to 600 volts with currents rated and over 400 amps. Information includes work practices, tools, and PPE requirements. This course is a prerequisite to any required local site-specific training.

10010580 – Electrical Safety, Local - ATF

This course number is used to track any required local site and equipment specific training as appropriate.

Additional training information may be located on NCED's web page at http://nced.usps.gov/.

ATTACHMENT 16

DEFINITIONS

The definitions presented are for the purposes of this MMO and are intended to provide greater clarity. Thus, the specific definitions may differ from the definitions from other sources.

Contractor. An individual who is not an employee of the Postal Service (or group of such individuals) and who performs services for the Postal Service under express or implied contracts. These individuals generally retain the right to control the means, method and manner by which the agreed upon services are performed within the contractual requirements.

Dead-front. Design that prevents exposure to any energized electrical conductors or circuit parts from the operating side or exterior of the equipment.

De-energized electrical work. Work performed on equipment not connected to an electrical energy source and has been verified not to contain residual or stored electrical energy, in accordance with USPS lockout policies (See USPS MMO-033-05, Hazardous Energy Control (or the latest revision).

Energized electrical work. Any tasks performed on electrical conductors or circuit parts that have not been de-energized.

Lockout. The isolation of energy sources by applying to equipment an appropriate energy isolating device, lock and accompanying identification tag in accordance with USPS lockout policies (See USPS MMO-033-05, Hazardous Energy Control or the latest revision), to ensure that the energy will remain isolated until the energy isolating device is removed.

Maintenance. Performing various tasks to keep equipment in proper working condition (e.g., assembling, setting up, installing, adjusting, calibrating, inspecting, repairing, trouble-shooting, replacing, modifying, and servicing equipment).

Operation. The proper utilization of equipment to perform its intended function. These functions are typically performed with electrical component covers secured in place to prevent direct exposure to energized electrical conductors or circuit parts (e.g., switching, using key interlocks, and reading instruments, indicators, or flags).

Permissible work. A discrete list of electrical maintenance activities that may be performed on energized electrical conductors or circuit parts rated below 601 volts with the exception of operating and monitoring of dead-front switchgear, which may be over 600 volts.

Permit-required work. Select maintenance tasks that may be performed, with approval of the Installation Head or Plant Manager, Maintenance Manager and local safety professional, on energized electrical conductors or circuit parts rated below 601 volts provided: (1) it is not feasible to de-energize the electrical conductors or circuit parts; (2) the work to be performed is not specifically listed as permissible work; and (3) the work to be performed is not considered prohibited work. An Energized Electrical Work Permit form must be completed and signed prior to the work being performed.

Personal protective equipment (PPE). Equipment, which when worn by an individual, creates a barrier between the individual and the potential hazards, thereby reducing the individual's risk of serious injury if exposed to potential hazards. (Examples include hand, eye, face, head, and body protection.)

Postal equipment. A broad range of equipment used either directly or indirectly to move the mail and provide customer service. Postal equipment includes mail processing equipment, customer service equipment, delivery service equipment and support equipment.

Postal facilities. All buildings and office space: (1) that are owned, leased, or controlled by the Postal Service; and (2) where Postal Service employees are responsible for performing maintenance on Postal or building equipment or hiring contractors to perform such maintenance on behalf of the Postal Service. If the Postal Service is not responsible for any maintenance of the building or Postal equipment at the facility, then the facility is not within the scope of this MI.

Prohibited work. Any maintenance task performed on energized electrical conductors or circuit parts if: (1) the task is not specifically included in the list of permissible work; and (2) the Installation Head or Plant Manager, Maintenance Manager and local safety professional have not approved the work through the permit work process. With the exception of operating and monitoring of dead-front switchgear, all other tasks performed on electrical conductors or circuit parts rated at 601 volts and above are considered prohibited work.

Qualified employee. An individual who has successfully completed the required training and who meets all the requirements specified in the Training Section of the MI and the EWP MMO, including demonstrating skill competency and knowledge of the work to be performed and the hazards associated with such work. With limited exceptions, an employee who is undergoing on-the-job training (OJT) is a qualified person for the purpose of performing the duties involved in his/her OJT as long as the employee has demonstrated in the course of training an ability to perform duties safely and is under the direct supervision of a qualified person. See Attachment 4.

Unqualified employee. Any person who has not completed the requisite training outlined in this MI and has not successfully demonstrated his/her knowledge, skills, and abilities for the safe performance of assigned electrical work activities.

UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SETH D. HARRIS, ACTING SECRETARY OF LABOR, UNITED STATES DEPARTMENT OF LABOR, Complainant, v. UNITED STATES POSTAL SERVICE, Respondent.	OSHRC DOCKET Nos. 09-1954; 10-1102; 10-1123; 10-1037; 10-1427; 10-1251; 10-1325; 10-1326; 10-1266; 10-1225; 10-1224; 10-1279; 10-1433; 10-1476; 10-1507; 10-1492; 10-1656; 10-1638; 10-1642; 10-1844; 10-1862; 10-1863; 10-2245; 10-2291; 10-2341; 10-2340; 10-2345; 10-2449; 10-2509; 10-2510; 10-2511; 10-2526; 10-2527; 10-2619; 10-2628; 11-0014; 11-0080; 11-0156; 11-0155; 11-0157; 11-0158; and 11-0154
AMERICAN POSTAL WORKERS UNION, AFL-CIO Authorized Union Representative.	

SETTLEMENT AGREEMENT
EXHIBIT D

ABATEMENT MILESTONES CHART

USPS Abatement Milestones	
Deadline	**Actions**
Within 30 days	**Notice.** USPS will give stand-up talks that cover the Electrical Work Plan ("EWP") settlement, including notifying all employees previously considered qualified by the USPS that the work practices in the previous USPS EWP MI EL-810-2009-1 ("MI") and EWP MMO-002-09 ("MMO") have been changed, and will be replaced by the new EWP MI EL-810-2013-5 and updated EWP MMO-023-13. These stand-up talks will be administered to all maintenance employees. **Training.** Immediately begin Qualified Employee Compliance Training for all employees deemed qualified under the previous EWP (including employees at non-maintenance capable facilities who perform energized electrical work); Maintenance EAS employees; EAS Field Trainers; Safety Representatives; and EWP Coordinators at maintenance-capable facilities.
Within 3 months	**Training.** Complete the Qualified Employee Compliance Training provided to all employees deemed qualified under the previous EWP (including employees at non-maintenance capable facilities who perform energized electrical work); Maintenance EAS employees; EAS Field Trainers; Safety Representatives; and EWP Coordinators at maintenance-capable facilities.
Within 6 months	**Training.** Complete the Compliance Training for all affected employees at maintenance-capable facilities. **EWP Coordinator Training**. Complete the EWP Coordinator Training for all EWP Coordinators and Safety Representatives at maintenance-capable facilities. **PPE/Training.** Complete the acquisition of all electrical Personal Protective Equipment ("PPE") (as described in the MMO) in all maintenance-capable facilities, and distribute this PPE to the appropriate facilities. **Signage/Labeling/Charts.** Labeling complete at maintenance-capable facilities; Complete placement of Work Category and Required PPE Chart (contained in the EWP MMO-023-13, Table 3-1) inside sleeves with

	existing Lockout procedures on equipment.
Within 9 months	**Training.** Complete the EWP Coordinator training for all EWP Coordinators and Safety Representatives at non-maintenance-capable facilities.
Within 12 months	**Training.** Complete the Compliance Training for all affected employees at non-maintenance-capable facilities. **Internal Auditing Program.** Complete audits at 25% of maintenance-capable facilities with automated mail processing equipment (for example, but not limited to, Processing and Distribution Centers ("PDC"), Processing and Distribution Facilities ("PDF"), National Distribution Centers ("NDC"), and International Service Centers ("ISC")). The USPS will provide advance notification to the APWU of the audit schedule, so that the APWU and USPS may jointly conduct audits as many facilities as possible. The audits shall include: 1. A physical inspection of the facility; 2. Observation of employees performing work subject to the EWP; 3. Assessment of the knowledge, skill and understanding of the employees and supervisors; and 4. Assessment of the administration of the EWP program.
Within 15 months	**Internal Auditing Program.** USPS to continue its audits of PDC, PDF, NDC and ISC facilities.
Within 18 months	**Internal Auditing Program.** USPS to continue its audits of PDC, PDF, NDC and ISC facilities.
Within 21 months	**Labeling/Charts.** Charts posted and complete at all facilities. Labeling completed at all maintenance-capable facilities and at non-maintenance-capable facilities where maintenance activity has occurred and employee would have been exposed to electrical hazards. **Internal Auditing Program.** Complete audits of all PDC, PDF, NDC and ISC facilities.

UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SETH D. HARRIS, ACTING SECRETARY OF LABOR, UNITED STATES DEPARTMENT OF LABOR, Complainant, v. UNITED STATES POSTAL SERVICE, Respondent.	OSHRC DOCKET Nos. 09-1954; 10-1102; 10-1123; 10-1037; 10-1427; 10-1251; 10-1325; 10-1326; 10-1266; 10-1225; 10-1224; 10-1279; 10-1433; 10-1476; 10-1507; 10-1492; 10-1656; 10-1638; 10-1642; 10-1844; 10-1862; 10-1863; 10-2245; 10-2291; 10-2341; 10-2340; 10-2345; 10-2449; 10-2509; 10-2510; 10-2511; 10-2526; 10-2527; 10-2619; 10-2628; 11-0014; 11-0080; 11-0156; 11-0155; 11-0157; 11-0158; and 11-0154
AMERICAN POSTAL WORKERS UNION, AFL-CIO Authorized Union Representative.	

SETTLEMENT AGREEMENT
EXHIBIT E
TRAINING IMPLEMENTATION PLAN

The USPS will implement abatement in 2 phases. During Phase 1, to be completed within 30 days after the signing of the Agreement, maintenance employees at maintenance-capable and non-maintenance-capable facilities will be informed of the settlement and the timeline for abatement through a series of stand-up talks performed by their supervisors. During Phase 2, the USPS will provide the training specified below at maintenance-capable and non-maintenance-capable facilities.

Phase 1

Training: Settlement Information Session

Employees trained:	All employees deemed qualified under the previous EWP at maintenance-capable and non-maintenance-capable facilities; all EAS field trainers; Maintenance EAS employees; Safety Representatives; and EWP Coordinators at maintenance-capable facilities.
Estimated duration:	15 minutes
Estimated duration:	Within 30 days

How accomplished:	Stand-up talks performed by the employee's supervisor, supplemented with notices posted at all facilities and links on the USPS internal web page which will have the stand-up talk to download. Field Maintenance Managers will be required to provide this information along with the requirement to give talks within 30 days, to the management at all facilities where domiciled maintenance employees perform energized electrical work.
Trainer:	Employee's supervisor.
Qualifications:	None required.
Documentation:	Supervisor certification.
Verification:	None required.

Phase 2

Training: Qualified Employee Compliance Training

Employees trained:	All employees deemed qualified under the previous EWP at maintenance-capable and non-maintenance-capable facilities; all EAS field trainers; Maintenance EAS employees (including Maintenance Supervisors); Safety Representatives; and EWP Coordinators at maintenance-capable facilities. Employees deemed qualified under the previous EWP will be allowed to perform their duties prior to completing this training. Employees who have not received the previous EWP Category training will first receive that training before taking the Compliance Training.
Estimated duration:	2 hours (including Q&A session)
Estimated completion time:	Within 3 months following the date the Settlement Agreement is signed.
How accomplished:	Training will be delivered in two stages. Stage one will be the training of designated maintenance EAS field trainers for the OSHA Compliance Training for the Electrical Work Plan. This training will be delivered using a Webinar interactive format. Stage two will entail the maintenance EAS field trainers giving classroom sessions to their peers and the employees they supervise. Employees at non-maintenance-capable facilities that perform energized electrical work must also be trained. Trainees will have the opportunity to ask questions. Any questions that cannot be answered immediately will be escalated by the trainers to the Area Coordinator, and if still not resolved, through an existing e-mail that is answered by one of the national support

team members. These questions can also be answered by technical staff at the National Center for Employee Development (NCED) in Norman, Oklahoma. The training will be supplemented with PPE selection charts kept in the maintenance office, with copies placed near each piece of equipment where lockout/tagout procedures are currently stored. Additionally, employees expected to work on energized circuits will be trained on how to select the appropriate PPE for each work category by using the Permissible Work Categories and Required PPE chart; and a trainer will demonstrate selection and proper fit of PPE, and how to don and doff the PPE in front of the classroom. Then, each employee who will be required to wear PPE as part of his or her job assignment, including supervisors who will breach the 4-foot boundary, will demonstrate their understanding of the PPE training through questions and answers after the demonstration by the trainer. Understanding will also be verified through supervisors observing qualified employees correctly using PPE while working on energized equipment. The trainer for this PPE training will be selected based on appropriate education, training and experience.

Subjects trained: The following subjects will be covered:

- Updated chart with new Work Categories and PPE Requirements
- Qualifications for work assignments
- 125 kVA exception
- PPE changes for all categories of work
- The definition of prohibited energized work and exceptions
- The definition of permissible energized work and the task changes (e.g., racking breakers in/out on switchgear)
- Eliminated terminology – e.g., finger-safe
- Changes in allowed work – e.g., one-hand work
- Safe work practices when unqualified but in the vicinity of energized work
- Selection, fit, care and custody of PPE
- New label format
- Procedural changes for visiting employees performing maintenance work

Trainer: Stage one training will be accomplished by NCED using interactive Web Conferencing technology. This web-based training will be developed by National Headquarters Safety Staff.

	Stage two training will be conducted at the facility level in a classroom format. Training on the selection, care, use, and donning and doffing of PPE will be provided by local site instructors that have taken the EWP PPE "Train the Trainer" course or by equipment vendors.
Qualifications:	Local EAS trainers are required to successfully complete LMS courses, Electrical Safety Categories 1 and 2, Electrical Safety Category 3, and the OSHA Compliance Training "Train the Trainer" courses before giving the classroom instructions and before answering questions. NCED personnel have extensive experience training USPS employees in operational electrical tasks, qualifying them to answer technical questions. PPE vendors have extensive experience in training customers on selection, donning, doffing, care and use of PPE.
Documentation:	USPS computerized training records, supplemented by trainers' certification of completed training, logged in the facility-specific EWP book.
Verification:	Employees expected to perform energized work will demonstrate understanding of the selection, care, use, donning and doffing of PPE during the classroom training sessions if the PPE is available. If the PPE is not available the trainer will demonstrate donning and doffing and ask questions to confirm the participants understand. If the PPE is not available during the classroom sessions, the supervisor of the employee will issue the PPE to the employee, ask questions and answer questions and observe the employee donning and doffing the PPE to verify the employee understands the proper use. Ongoing observations will be performed by supervisors to verify that employees are using the PPE properly in the work environment. In a separate course, all Maintenance Supervisors will receive training on how to select the appropriate PPE for each work category by using the Permissible Work Categories and Required PPE chart; and how to observe qualified employees to verify compliance with the correct use of PPE. The understanding of MMO changes will also be verified through classroom interaction. Deviations from the new procedures will be recorded and corrected by supervisors. Periodic audits of EWP documentation will be conducted to verify compliance.

Training: EWP Coordinator Training

Employees trained:	EWP Coordinators and Safety Representatives
Estimated duration:	8 hours for EWP Coordinators at maintenance-capable facilities, and 2 hours for EWP Coordinators at non-maintenance-capable facilities.

Estimated completion time: Within 6 months following the date the Settlement Agreement is signed for all maintenance-capable facilities, and within 9 months at non-maintenance-capable facilities.

How accomplished: Training will be created and delivered by web-based modules with multiple-choice questions to assess understanding. There will be two separate courses, one for Maintenance EWP Coordinators and a second one for Non-Maintenance EWP Coordinators. Any questions that cannot be answered locally will be escalated by the EWP coordinator up to the Area Coordinator, and if not resolved at this level, through an existing e-mail that is answered by one of the national support team members.

EWP Coordinator Course

Subjects trained: The following subjects will be covered:

- Introduction covers an overview of arc flash hazards, the EWP and policy documents
- Responsibilities at HQ; Area; District; Facility; and oversight of non-maintenance-capable facilities
- Required EWP Program Elements for Maintenance-Capable and Non-Maintenance-Capable Facilities
- Overview of Assessments and Labeling Requirements
- Training Requirements
- Required PPE and Tools
- Identification and Abatement of Issues and Concerns
- Brief Overview of Permit and Permissible Work
- Identification and Abatement of Issues and Concerns
- Audits
- Recordkeeping

EWP Coordinator Lite Course

Subjects trained:

- Introduction covers an overview of arc flash hazards, the EWP and policy documents
- Non Maintenance Capable EWP Facility Coordinator Responsibilities
- EWP Memorandum for the Record
- Required EWP Program elements for non-maintenance facility

- Assessment and Labeling
- Employee awareness
- Verifying visiting employee training before work begins
- Handling Contractor on-site
- Required Documentation
- Addressing electrical issues or concerns

Trainer:	This will be a web-based training, developed by National Headquarters Safety Staff. There will be an option to call or e-mail technical staff at the NCED.
Qualifications:	NCED and HQ staff personnel have extensive experience training USPS employees in operational electrical tasks, qualifying them to answer technical and administrative questions.
Documentation:	USPS computerized training records, supplemented by logging in the facility-specific EWP book.
Verification:	Employees demonstrate understanding through multiple-choice testing. Additionally, EWP Program compliance will demonstrate understanding, and will be assessed through National HQ audits.

Training: PPE (for EWP) Training for Maintenance Supervisors and Safety Representatives

Employees trained:	Maintenance Supervisors and Safety Representatives
Estimated duration:	2 hours
Estimated completion time:	Must be completed prior to classroom training.
How accomplished:	This training will provide the necessary knowledge of selecting, donning and doffing the appropriate PPE which will be necessary for training employees and for observing employees to verify correct use of the equipment. Those EAS Maintenance Supervisors and other EAS employees who are not qualified to perform work on energized circuits (and therefore must remain outside the 4-foot boundary when live work is being performed), must take this training in order to have an understanding of PPE requirements to a level that will allow them to manage compliance of their employees through observations and interactions, and must also demonstrate that they understand the training, including the new EWP policies and procedures. They must demonstrate that they know how to select and don and doff the appropriate PPE, either through a test or interaction with the trainer, documented by trainer

	certification of completed training, logged into facility-specific EWP book.
Subjects trained:	The following subjects will be covered: • How to interpret the updated chart for Permissible Work Categories and Required PPE to determine which PPE is required for a specific work category • Selection, fit, care and custody of PPE
Trainer:	This course is an online course in LMS. After taking this online course the participant will be able to ask questions of the local facility trainer on PPE for the EWP. EAS trainers will be trained by NCED and HQ Safety using Web-based training, developed by Headquarters Safety Staff. First line questions will be answered by the employee's supervisor, with the option to call or e-mail technical staff at the NCED.
Qualifications:	Local EAS trainers and/or the employee's supervisors are required to successfully complete OSHA Compliance Training first before answering questions. NCED personnel have extensive experience training USPS employees in operational electrical tasks, qualifying them to answer technical questions.
Documentation:	USPS computerized training records, supplemented by logging in the facility-specific EWP book.
Verification:	For this group, knowledge will be demonstrated through classroom interaction and performance on EWP audit results.

Training: Compliance Training for Affected Employees

Employees trained:	Affected employees, as determined locally by the EWP coordinator. Affected employees are those employees that are not qualified to perform energized electrical work but are likely to work in close proximity to a person performing energized electrical work.
Estimated duration:	10 mins (including questions)
Estimated completion time:	Within 6 months following the date the Settlement Agreement for all maintenance-capable facilities, and within 12 months at non-maintenance-capable facilities.
How accomplished:	Stand-up talks by employee's supervisor.
Subjects trained:	

- Brief overview of the EWP Program and coordinator responsibilities for addressing reported hazards and non-compliance issues
- Explanations for electrical arc hazards
- What precautions to take when in the vicinity of employees performing energized electrical work such as not crossing barricaded areas and not interrupting qualified employees while they are working on equipment
- How to identify and report unsafe activities
- Do not to attempt to operate “locked-out” equipment
- Do not enter electrical equipment rooms unless authorized to do so.

Trainer:	Employee’s Supervisor
Qualifications:	Successful completion of USPS EWP Coordinator Training. Briefing from EWP Coordinator.
Documentation:	Supervisor certification in the facility-specific EWP book
Verification:	Interaction with the supervisor.

UNITED STATES OF AMERICA
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AMERICAN POSTAL WORKERS UNION, AFL-CIO Authorized Union Representative.	

SETTLEMENT AGREEMENT
EXHIBIT F
EWP IMPLEMENTATION STATUS REPORTS

EWP Implementation Status Reports

All the new EWP Implementation Status (EWP IS) reports rely on the data entered into the EWP IS module. If data does not exist for a particular facility, then the reports do not take those facilities into account when performing calculations based upon the EWP IS module data.

1. Electrical Work Plan Qualified Employee Compliance Training

This report shows the number of employees who are required to receive the OSHA Qualified Employee Compliance Training. Most qualified employees are in maintenance-capable facilities. There are however, a small number of qualified employees domiciled in non-maintenance-capable facilities and the numbers will reflect this. This number also includes EAS Field Trainers, Maintenance EAS employees and Maintenance Supervisors, Safety Representatives and EWP Coordinators at maintenance-capable facilities. If a facility does not provide the number of qualified employees (by entering that data into the EWP IS Module), then this report treats the facility as having zero qualified employees.

Electrical Work Plan Qualified Employee Compliance Training

National Report

Area	Facility Type	# Facilities	Qualified Employees to be trained for full compliance	Percentage of final number of qualified employees who have received OSHA Compliance Training
Capital Metro	Maintenance Capable			
Capital Metro	Non-maintenance Capable			
Eastern	Maintenance Capable			
Eastern	Non-maintenance Capable			
Great Lakes	Maintenance Capable			
Great Lakes	Non-maintenance Capable			
HQ	Maintenance Capable			
HQ	Non-maintenance Capable			
Northeast	Maintenance Capable			
Northeast	Non-maintenance Capable			
Pacific	Maintenance Capable			
Pacific	Non-maintenance Capable			
Southern	Maintenance Capable			
Southern	Non-maintenance Capable			
Western	Maintenance Capable			
Western	Non-maintenance Capable			

2. Electrical Work Plan Area Training Completion Date

The Estimated Date of Completion indicates when the Area will be fully compliant. The date is the latest date out of *all* the completion dates reported by the Area's facilities. This report also shows the total number of *qualified* employees in each Area to be trained by the date shown in the estimated date of completion column. The third column indicates the percentage of *qualified* employees trained so far. The fourth column indicates the percentage of *affected* employees trained so far at maintenance-capable facilities.

Most qualified employees are in maintenance-capable facilities. There are however, a small number of qualified employees domiciled in non-maintenance-capable facilities and the numbers will reflect this. If a facility does not provide the number of qualified employees, then this report treats the facility as having zero qualified employees. Tracking of affected employees only applies to maintenance-capable facilities.

Electrical Work Plan Area Training Completion Date

National Report

Area	Estimated date of completion	Qualified Employees to be trained by final abatement	Percentage of final number of qualified employees who have received OSHA Compliance Training	Percentage of final number of affected employees who have received OSHA Compliance Training (MC Only)
Capital Metro				
Eastern				
Great Lakes				
HQ				
Northeast				
Pacific				
Southern				
Western				

3. Electrical Work Plan Facilities to be Physically Audited

This report shows the number of maintenance-capable facilities in each Area that have completed a physical audit. The final column shows the *percent* of facilities in each Area that have completed a physical audit.

Electrical Work Plan Facilities to be Physically Audited

National Report

Area	# Completed	% Completed
Capital Metro		
Eastern		
Great Lakes		
HQ		
Northeast		
Pacific		
Southern		
Western		

4. Electrical Work Plan Physical Audit Summary

This report shows the number of maintenance-capable facilities that have passed and failed their last physical audit and the number of actions the evaluation required. The category columns show the number of qualified employees who were retrained in Categories 2, 3, and/or 4.

Most qualified employees are in maintenance-capable facilities. There are however, a small number of qualified employees domiciled in non-maintenance-capable facilities and the numbers will reflect this. If a facility does not provide the number of qualified employees, then this report treats the facility as having zero qualified employees

Electrical Work Plan Physical Audit Summary

National Report

Area	# Passed	% Passed	Follow up actions required	# of qualified employees retrained		
				Wrk Cat 2	Wrk Cat 3	Wrk Cat 4
Capital Metro						
Eastern						
Great Lakes						
HQ						
Northeast						
Pacific						
Southern						
Western						

5. Electrical Work Plan Electrical Concerns to Date

This report uses the data captured within the Hazard Log form 1767 built into the Safety Toolkit. Only those electrical hazards with one of the following categories are included in the report: Electrical Equipment, Electrical Other, Electrical PPE, Electrical Safety, and Electrical Training. The 'Follow-Up Actions' column (OSHA's term) shows the type of action taken to address the hazard. This is the same as the "Approving Official's Action" entered on the USPS Hazard Log Form: Corrective action was taken to eliminate the hazard; Work order was submitted to the Maintenance Manager; or No reasonable grounds to determine such a hazard exists.

An Approving Official's Action was not required in the past, although it is now. For those past hazards where the Approving Official's Action was not required, the 'Follow-Up Actions' column is left blank.

Electrical Work Plan Electrical Concerns to Date

National Report

Area	Fiscal Year	Number Of Reports	Equipment	Training	PPE	Other	Follow Up Actions

6. Electrical Work Plan Progress toward Full Compliance at Maintenance-Capable Facilities

This report indicates the number of maintenance-capable facilities that: have not named and/or trained their EWP Coordinator, have not trained qualified employees, and who have not stocked PPE. Lastly, the report indicates the estimated full compliance date for the Area. This date is the 'greatest' date out of *all* the completion dates reported by the Area's facilities. This data is based on EWP IS module input.

Electrical Work Plan Progress toward Full Compliance a Maintenance-Capable Facilities

National Report

Area	Failure to name and/or train EWP Coordinator	Failure to train qualified employees	Failure to stock PPE	Latest report date to reach full compliance
Capital Metro				
Eastern				
Great Lakes				
HQ				
Northeast				
Pacific				
Southern				
Western				

7. Electrical Work Plan Implementation Status Report

This Excel report indicates the percentage of each Area's facilities that have: completed training of qualified employees, stocked PPE, and labeled their electrical equipment. The last four columns indicate the status of the Area's facilities' data entry status for the EWP Implementation Status data entry requirement.

Full Compliance indicates that all the questions have been answered and those answers indicate that the facility is in compliance. Implementing indicates that all the questions have been answered, but that those answers indicate that the facility is not in compliance. Draft means that some of the questions have not been answered. Not Started indicates the percentage of facilities that do not have an EWP IS record in the system. The denominators used to determine these percentages are the number of facilities in each Area as currently listed in the Safety Toolkit.

Area	Training	PPE	Labels	Full Compliance	Implementing	Draft	Not Started
Capital Metro							
Eastern							
Great Lakes							
HQ							
Northeast							
Pacific							
Southern							
Western							

8. Electrical Work Plan Labeling

This report splits the Area's facilities into maintenance-capable and non-maintenance-capable. It then shows the number and percentage of facilities for each type that have labeled their facility's electrical equipment. The denominators used to compute the percentages are determined by the current inventory of facilities included in the Safety Toolkit.

Electrical Work Plan Labeling

National Report

Area	Number and % of each type of facility fully labeled			
	Maintenance Capable Complete	% Maintenance Capable Complete	Non-Maintenance Capable Complete	% Non-Maintenance Capable Complete
Capital Metro				
Eastern				
Great Lakes				
HQ				
Northeast				
Pacific				
Southern				
Western				

9. Electrical Work Plan Maintenance Postal Area Compliance Status

This report splits the Area's facilities into maintenance-capable and non-maintenance-capable. For each Area, the report then provides the total number of facilities (determined by Safety Toolkit records), number in Full Compliance (from EWP IS), and those facilities having named and trained EWP Coordinators (from EWP IS).

For the maintenance-capable facilities, this report also indicates the total number of facilities that have had a physical audit completed, and the number of qualified employees that have been trained (from EWP IS).

Electrical Work Plan Maintenance Postal Area Compliance Status

National Report

Area	Maintenance Capable						Non-Maintenance Capable		
	# Facilities	# In full compliance	# Employees who have received Qualified Employee Compliance Training Course	# Facilities physically audited in the postal area	EWP Coordinators named and trained	# With proper PPE stock	# Facilities	# In full compliance	EWP Coordinators named and trained
Capital Metro									
Eastern									
Great Lakes									
HQ									
Northeast									
Pacific									
Southern									
Western									

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AMERICAN POSTAL WORKERS UNION, AFL-CIO Authorized Union Representative.	

SETTLEMENT AGREEMENT
EXHIBIT G

NOTICE AND SUMMARY OF ENTERPRISE-WIDE SETTLEMENT AGREEMENT BETWEEN USDOL AND THE USPS

Notice and Summary of Enterprise-Wide Settlement Agreement Between USDOL and the USPS

This is notice of the Settlement Agreement reached between the US Department of Labor, Occupational Safety and Health Administration (OSHA) and the U.S. Postal Service (USPS) regarding compliance with OSHA's standards on electrical safe work practices, 29 CFR §§ 1910.331-335. The settlement agreement was executed on June 28, 2013 and took effect immediately, including a nationwide prioritized hazard abatement, with full abatement within 21 months. The US Occupational Safety and Health Review Commission will enter an enforceable final order regarding the cases that are the subject of this settlement agreement. The full text of the Settlement Agreement can be viewed at OSHA's website, www.osha.gov.

Background

In 2009 and 2010, OSHA issued citations to the USPS for allegedly violating OSHA standards on electrical safe work practices at 42 USPS facilities. The citations alleged that USPS did not provide adequate hazard assessments outlining proper procedures when working on or near energized equipment, including appropriate PPE and training. The Postal Service denied these allegations. The affected employees are primarily members of the American Postal Workers Union, AFL-CIO (APWU). The APWU exercised party status and has participated in the settlement.

Major points of the settlement

- ### Energized vs. de-energized work

Under the new Management Instruction (MI) Number EL-810-2013-5 and Maintenance Management Order Number (MMO) MMO-023-13, the USPS has modified how electrical work is performed at its facilities.

- ### PPE

Energized work, including voltage testing, now requires use of electrically protective gloves and full body arc flash protection (PPE). The level of PPE required depends on the potential severity of the hazard. The required PPE are listed in a table in the MI and MMO, and on a chart to be kept at all electrical and mail processing equipment.

- ### Training

The USPS will re-train all employees performing electrical work to comply with the OSHA requirements for qualified employees for electrical work. Their supervisors will also receive additional training on electrical safe work practices. Personnel who may be affected by electrical work being performed close by will also receive enhanced training in compliance with OSHA standards.

- ### Permit-required electrical work

The USPS continues to have some flexibility to perform live electrical work, in compliance with the OSHA standards, in limited circumstances.

- **EWP Coordinators**

To ensure compliance with USPS electrical policies, each facility will be assigned an Electrical Work Plan Coordinator (EWP Coordinator).

- **Abatement progress and compliance monitoring**

The USPS will audit the implementation of the electrical safe work program at all facilities, and report the results to OSHA quarterly during the two year term of the agreement. In addition, OSHA will meet with USPS at three month intervals to discuss the results of OSHA monitoring inspections and USPS audits, as well as any concerns or problems encountered, including APWU concerns.

- **Penalty**

The original penalties totaled $6,101,525. Under the settlement, USPS will pay an aggregate penalty, with no apportionment among the cited facilities. The final penalty will be $3,100,000, of which $100,000 was paid when the settlement agreement was signed. The remainder of the penalty is suspended pending full abatement of the hazards. OSHA will monitor USPS progress toward abatement using negotiated milestones.

- **Employee reporting of hazards and EWP violations**

The USPS will encourage employees to immediately notify USPS management of electrical hazards or violations of the EWP program. The USPS will not discriminate or retaliate in any manner against employees who report safety and health concerns as defined by § 11(c) of the Occupational Safety and Health Act, 29 U.S.C. § 660(c).

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SETTLEMENT AGREEMENT
EXHIBIT H

TABLE OF CONTESTED CITATION ITEMS BASED ON STANDARDS OTHER THAN ELECTRICAL SAFETY-RELATED WORK PRACTICES, 29 C.F.R. §§ 1910.331-335

(THESE CITATION ITEMS ARE NOT COVERED BY THE SETTLEMENT AGREEMENT ABATEMENT TERMS)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
1	Hampden, ME	313070096	09-1954	1.1 1.2 1.3 1.4 1.5 3.1	1910.147(c)(4)(i) 1910.147(c)(6)(i) 1910.212(a)(1) 1910.219(c)(3) 1910.219(i)(2) 1910.304(g)(5)
1	Providence, RI	312343775	10-1102	1.1 1.2	1910.147(c)(4)(i) 1910.147(c)(4)(ii)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				1.3a 1.3b 1.3c 1.4 2.1	1910.147(c)(7)(iii)(B) 1910.147(f)(3)(ii)(C) 1910.147(f)(3)(ii)(D) 1910.147(e)(3)(ii) 1910.147(c)(6)(i)(A)
1	Scarborough, ME	313993453	10-1433	2.1	1910.303(g)(1)(ii)
1	Boston, MA	313797060	10-1656	1.1	1910.147(c)(6)(i)(A)
1	Shrewsbury, MA	313205353	11-0080	1.1 1.2	1910.147(c)(6)(i)(A) 1910.303(b)(2)
3	Pittsburgh, PA	312636939	10-1251	1.1 3.1	1910.305(e)(1) 1910.305(b)(2)
3	Bluefield, WV	311682496	10-2628	1.1	1910.147(c)(6)(i)(A)
4	Orlando, FL	314492364	10-2291	1.1 1.2 1.3 1.4 1.5 1.6 1.7	1910.132(a) 1910.133(a)(3) 1910.303(g)(1) 1910.303(g)(2)(ii) 1910.304(g)(5) 1910.305(b)(2) 1910.305(j)(2)(vii)
5	Dayton, OH	314419813	10-1642	1.1 1.2 1.3 1.4 1.5	1910.147(c)(5)(i) 1910.147(c)(6)(i) 1910.147(c)(7)(i) 1910.147(d)(4)(i) 1910.304(f)(1)(iv)
5	Evansville, IN	301091567	10-2449	2.1 2.2 3.1	1910.22(a)(1) 1910.37(b)(2) 1910.157(c)(1)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				1.1a 1.1b 3.2	1910.303(e)(1)(i) 1910.303(e)(1)(ii) 1910.305(b)(1)(ii)
6	Baton Rouge, LA	313027930	10-1266	1.1 2.1	1910.147(c)(4)(i) 1910.147(c)(6)(i)
9	Los Angeles, CA, Bell	313862286	10-1225	2.2	1910.147(c)(6)(ii)
9	Anaheim, CA	313862294	10-1279	1.1 2.1	1910.37(b)(2) 1910.147(c)(6)(ii)
9	Simi Valley, CA	314258401	10-1492	2.1 2.2	1910.132(d)(2) 1910.132(f)(4)
9	Los Angeles, CA	314704180	10-2509	1.1 1.2 1.3 3.1 1.4 1.5 3.2 3.3 1.6 3.4 1.7	1910.22(a)(1) 1910.23(c)(1) 1910.27(f) 1910.147(c)(5)(ii)(B) 1910.176(a) 1910.303(b)(2) 1910.303(e)(1)(i) 1910.303(e)(1)(ii) 1910.303(f)(2) 1910.303(g)(1)(i) 1910.305(b)(1)(ii)
9	West Sacramento, CA	314688250	10-2526	1.1 1.2 1.3 1.4	1910.147(c)(5)(ii)(B) 1910.147(c)(6)(i) 1910.303(b)(2) 1910.303(g)(1)(i)(A)
9	Oakland, CA	314688268	10-2619	1.1 1.2	1910.147(c)(4)(i) 1910.147(c)(6)(i)(A)

Region	Location	Insp. No.	Dkt. No.	Item	Standard (29 C.F.R. §1910.xxx)
				1.3 1.4a 1.4b 1.4c 1.5	1910.147(c)(7)(i)(A) 1910.219(c)(4)(i) 1910.219(d)(1) 1910.219(e)(1)(i) 1910.303(g)(1)(i)(A)
9	San Jose, CA Glen Willow	314704321	11-0014	1.1	1910.305(b)(1)(ii)
9	Phoenix, AZ (47th Ave)	314704388	11-0156	1.1	1910.147(c)(7)(i)
9	Phoenix, AZ PDC	314704404	11-0155	1.1	1910.147(c)(6)(i)
9	Phoenix, AZ Buckeye Rd	314709379	11-0157	1.1	1910.147(c)(4)(ii)(D)