Abbott Electric, Inc. Environmental, Health & Safety Program

December 19th, 2024

ABBOTT ELECTRIC, INC.
1935 Allen Ave. SE, Canton Ohio 44707

DATE	REV	REVIEW NOTE	BY
02/27/2024	0	Initial posting for 2024.	KAF
02/29/2024	1	Lockout/Tagout reviewed and updated.	KAF
12/19/2024	1	Drug Free Workplace Program added.	SNM

Abbott Electric, Inc.
Environmental, Health & Safety Program
Vision Statement

Each individual person who works at Abbott Electric is one of our most valuable assets. Success with our customers, projects, and consequently the overall success of this business, depends upon each individual -- His or her own personal commitment to quality work and a safe workplace through a personal contribution of knowledge, skills and energy.

We are concerned about the safety of our employees and the wellbeing of their families. We strive to be supportive of each other in any way possible. And at the end of each day, if even one employee is unable to return home safely, our entire business suffers.

Respecting this, Abbott Electric, Inc. continually strives to provide a safe and healthy workplace. Additionally, Abbott Electric, Inc. subscribes to the following principles:

- Accidents can be prevented through implementation of an effective Environmental, Health & Safety (EH&S) Program and the associated policies.
- EH&S Controls are major parts of our daily work. And we are all responsible for meeting the standards set forth in this Program.
- Accident prevention is a priority and just good business practice. It increases productivity and minimizes human suffering.
- Management is responsible for (1) - Providing a reasonable and safe workplace for all employees. And (2) - Providing adequate training and evaluation to allow and ensure employees perform their work duties safely.
- Employees are responsible for following safe work practices, established company policies, and for taking measures to prevent accidents and injuries.
- Management must monitor safety performance, the working environment and changing conditions to ensure that safety objectives are achieved, maintained, and reviewed regularly.
- Our EH&S Program requires the participation of all employees -- to improve safety awareness, and to prevent accidents and injuries.

Your involvement, cooperation and personal commitment to safety are essential. Achieving and maintaining a safe workplace is a team effort, and we need you to be an active member of this team. Abbott Electric, Inc. welcomes any helpful comments or suggestions.

***Together, we CAN* make a difference**. ***Together, we CAN* prevent accidents and injuries**. We must work every minute, every hour of every working day, to keep each other safe in the workplace.

Michael C. Abbott, President
Abbott Electric, Inc.

Environmental, Health & Safety Program
Authority and Accountability

The President shall accept the responsibility for providing resources and guidance for the development and implementation of the Environmental, Health & Safety (EH&S) Program; selecting and designating the Safety Director; and establishing management policies and procedures toward effective implementation of the EH&S Program.

The Safety Director shall be responsible for the overall implementation of the working plan. The President of Abbott Electric, Inc. shall have the authority to delegate portions of the EH&S Program as he deems appropriate to subordinates. However, the Safety Director will be responsible for the implementation of the EH&S Plan.

Company Field Superintendents, Supervisors & Project Managers will have the duty and authority to initiate, approve and carry out all disciplinary actions for those who violate the policies, procedures and/or rules and regulations relating to this EH&S Program. Field Superintendent, Supervisor, Project Manager and Employee responsibilities and duties relating to this EH&S Program are explained in greater detail on the following pages.

Each Employee will be responsible for abiding by the policies, procedures, rules, and regulations set forth by this EH&S Program. Each Employee should become actively involved in this program to assist Abbott Electric in maintaining a safe and healthful workplace environment for all involved. Individual employee responsibilities relating to this EH&S Program are explained in greater detail on the following pages.

Sub-contractors who perform work at an Abbott Electric, Inc. project location, are responsible for ensuring that their personnel perform their work in a manner that complies with Abbott Electric, Inc., EH&S Program standards, as well as federal Occupational Safety and Health Administration (OSHA) requirements and other pertinent local safety and health regulations.

The Abbott Electric, Inc. EH&S Program will be made available upon request to all sub-contractors for review. Likewise, each sub-contractor will provide the Safety Director with a copy of its written Safety and Health Programs relating to work that will be performed on an Abbott Electric, Inc. project location.

Environmental, Safety & Health Program
Authority and Accountability

The Safety Director shall be responsible for the overall implementation of the Abbott Electric, Inc. EH&S Program. This includes taking steps to identify workplace hazards and conditions that are unsanitary, unhealthy, or dangerous to Employees. When such hazards or conditions are identified, the Safety Director is responsible for initiating timely and appropriate corrective actions.

The Safety Director shall be knowledgeable about general workplace safety and health issues. This knowledge shall be gained through training and experience.

The Safety Director shall monitor and report directly to the President of Abbott Electric results of the EH&S Program, training and accident prevention activities as measured by criteria such as:

- Records of New Hire Safety Orientations and ongoing safety training activities.
- The tracking of accidents and “near miss” incidents.
- Injury and illness incidents that are recordable on the OSHA 300 form.
- Workers’ Compensation injury and illness, initial and ongoing reports.
- Insurance company loss runs and statistical analysis.

Other Safety Director responsibilities include, but are not limited to:

- Actively supporting and promoting the Abbott Electric, Inc. EH&S Program and activities.
- Plan, coordinate, perform and/or delegate safety training of Supervisors and Employees.
- Maintain appropriate training and testing records for each Employee.
- Conduct, or schedule to be conducted, safety inspections, surveys, audits and assessments throughout the Abbott Electric workplace and job sites.
- Review Safety Inspection Reports and reports of unsafe or unsanitary conditions that are submitted by Supervisors, Project Managers, Employees or others, and introduce corrective actions as needed.
- Resolve questions, approve and/or recommend necessary expenditures to correct unsafe conditions.
- Report unsafe Employee practices and/or behaviors to their respective Supervisors.
- Review and monitor any disciplinary actions and/or remedial training.
- Conduct or delegate regular safety meetings with Supervisors and Employees to promote safety awareness and compliance with the EH&S Program.
- Investigate or initiate the investigation of at-work accidents, injuries, illnesses and “near miss” incidents. Assist as needed when these investigations are performed by Supervisors or others.
- Review investigation reports to determine possible preventative actions. Take immediate corrective actions, as required.
- Ensure that reportable injuries are being documented on applicable state Workers’ Compensation forms and OSHA forms 300, 300A, and 301, as required.
- Review the Safety and Health programs of contractors before they perform work on an Abbott Electric job sites. Contractor Safety and Health programs must meet OSHA requirements. They should be effective in protecting contractor personnel, as well as Abbott Electric employees who may be exposed to hazards associated with work performed by subcontractors.

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AERIAL LIFT PROGRAM

A. PURPOSE AND SCOPE

This policy applies to all Abbott Electric owned equipment designed to elevate personnel on a platform that is propelled by a powered lifting device, with the controls located on the platform itself. Examples of aerial platform lifts include one-man lifts, scissor lifts, boom trucks, cherry pickers, etc.

B. RESPONSIBILITIES

Risk Management and Safety Responsibilities

- Policy: To develop an aerial platform, lift policy and revise it when necessary.
- Training: To provide for the training of operators and users of aerial platform lifts, upon request by Supervisors and to maintain training records.

Records Retention

- The Maintenance Supervisor shall maintain the following records for each aerial platform lift owned by Abbott Electric:
  - Serial number and date of purchase.
  - Written records of the frequent and annual inspections as well as the repairs performed (when required). This shall include deficiencies found, corrective actions taken, and the identification of the person(s) who performed the inspection and repairs.
- The Maintenance Supervisor shall maintain records of any employees trained in the maintenance of aerial platform lifts.

Training

- The Safety Director and Maintenance Supervisor are responsible for arranging for the training of all authorized users and maintenance personnel. No personnel shall operate or ride on an aerial platform lift if they have not received appropriate training on arial lift safety and fall protection.
- The Maintenance Supervisor shall insure that aerial platform lift maintenance is performed only by personnel who are trained in aerial lift maintenance.
- All operators and users of aerial platform lifts shall attend an aerial lift training session sponsored by the Safety Director and the Maintenance Supervisor. The contents of the training will include the following:
  - Purpose and use of manuals.
  - Pre-start inspection process.
  - Identification of malfunctions and problems.
  - Factors affecting stability.
  - Purpose of placards and decals.
  - Workplace inspections.
  - Safety rules and regulations.

- Authorization to operate.
- Operator warnings and instructions.
- Knowledge of when it is appropriate to use personal fall protection equipment.
- Operation of the aerial platform.
- Demonstrate competency.

If the user does not understand any of the above, he/she shall consult with the Maintenance Supervisor or Safety Director prior to using the lift.

Platform Qualifications

- The following criteria must be met to be an approved platform on a lift:
  - Platform width is not less than 18 inches and has a slip resistant surface.
  - The platform has a guardrail system around its periphery. It is removable or can be lowered. The means used to secure it in the normal operating position are readily accessible for inspection and maintenance.
  - The guardrail system includes a top rail that is between 39 and 45 inches high, a mid-rail that is approximately half-way from the platform to the top rail, and a toe board that is at least 4 inches high.
  - When operating an articulating, or boom type lift, that is equipped with lanyard tie off points, the use of fall protection equipment is required. If special circumstances exist that encourage the operator to use fall protection on vertical aerial platform lifts, they must tie off to a proper tie off point that is not attached to, or part of, the aerial platform lift itself.

Inspections and Maintenance

- The inspection process is a critical step in preventing aerial lift accidents that are caused by faulty or worn-out equipment. Aerial platform lifts that are not in proper operating condition shall be removed from service until the problems have been corrected by an authorized and trained maintenance technician.
- An annual inspection shall be performed on each aerial platform lift each year. The inspection must be performed by a qualified mechanic who is authorized to perform maintenance duties on the lift. The inspection should include all items specified by the manufacturer for an annual inspection.

Frequent Inspections

- Any time an aerial platform lift has not been used for a period of 3 months or more (or after the lift has been purchased), a frequent inspection shall be performed by a qualified person and shall include the following:
  - All functions and their controls for speed(s) smoothness, and limits of motion.
  - Lower controls include the provisions for the overriding of upper controls.
  - All chain and cable mechanisms for adjustment wear or damaged parts.
  - All emergency and safety devices.
  - Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant as specified by the manufacturer.

- Visual inspection of structural components and other critical components such as fasteners, pins, shafts and locking devices.
- Placard, warnings, and control markings.
- Additional items specified by the manufacturer.
- Annual Inspections

Job Site Inspections and Maintenance

- The inspection process is a critical step in preventing aerial lift accidents that are caused by faulty or worn-out equipment. Aerial platform lifts that are not in proper operating condition shall be removed from service until the problems have been corrected by an authorized and trained maintenance technician.
- Before an aerial platform lift is used and during its use at each new location, the operator shall check the area in which the aerial platform lift is to be used for possible hazards such as, but not limited to:
  - Drop-offs or holes.
  - Slopes.
  - Debris.
  - Overhead obstructions and high voltage conductors.
  - Hazardous locations and atmospheres.
  - Inadequate surface and support to withstand all load forces imposed by the aerial platform lift.
  - Wind and weather conditions.
  - The presence of unauthorized people.
  - Other possible unsafe conditions.
  - A Job Hazard Analysis shall be completed or reviewed during the Daily Safety Briefing to ensure all potential hazards are identified.
- Users shall inspect and maintain the aerial platform lift prior to operation as required by the manufacturer to ensure proper operation. Note that some employees may be approved to operate the lift, but not to perform maintenance on the lift. However, all users shall perform pre-start inspections on the lift prior to each day's use of the lift. Documentation of the pre-start inspections shall be done by completing an "Aerial Platform Lift Pre-Start Inspection Form".
- Aerial platform lifts that are not in proper operating condition shall be immediately removed from service as noted in the "Repair" section below and reported to the Maintenance Supervisor as soon as possible. The lift shall not be returned to service until appropriate repairs have been made.

Pre-Start Inspections

- Before each day's use or at the beginning of each shift in which the aerial platform lift is being utilized, it shall be given a pre-start inspection which is a visual inspection and functional test that includes the following criteria:
  - Operating and emergency controls.

- Safety devices.
- Personal protective devices.
- Air, hydraulic, and fuel system leaks.
- Cables and wiring harness.
- Loose, or missing parts.
- Tires and wheels.
- Placards, warnings, control markings and operating manual(s).
- Outriggers, stabilizers and other structures.
- Guardrail system.
- Other items specified by manufacturer.

Pre-start inspections are to be documented, signed and stored on the lift in the designated storage location.

Maintenance

- When mechanical or safety related issues are discovered on a lift, the operator who discovers the issue(s) shall tag the lift with an "Out of Service" tag and notify the Maintenance Supervisor of the associated details. The lift shall remain in an "Out of Service" status until the item(s) have been repaired. All replacement parts or components that are replaced shall be identical or equivalent to the original parts based on information provided by the manufacturer or supplier.
- The Maintenance Supervisor is responsible for each aerial platform lift and shall arrange for maintenance that is appropriate for each lift. The Maintenance Supervisor shall establish a preventive maintenance program based on the manufacturer's recommendations, the environment it is to be used in, and the frequency at which it is to be used.
- Modifications to the equipment will not be made without written approval from the manufacturer.
- The Maintenance Supervisor shall ensure that frequent and annual inspections are being performed and documented for each lift.

Markings and Decals

- In addition to any markings or decals that are placed on the lift by the manufacturer, the following information shall be displayed on all aerial platform lifts in a clearly visible, accessible area and in a durable manner:
  - The make, model, serial number, and manufacturer's name and address.
  - The rated workload, including rated number of occupants.
  - The maximum platform height.
  - Date and type of last inspection.

Standard Procedures

- To ensure safe practices, the following general procedure is used when an authorized user operates an aerial platform lift:

- Obtain any necessary authorization to use the lift.
- Check the last pre-start inspection for any comments or notes.
- Perform a pre-start inspection on the lift, document the inspection, sign it and place it in the reserved storage location on the lift.
- Perform a workplace inspection in the area where the lift will be used.
- Extend and adjust the outriggers, stabilizers, extendible axles, or other stability enhancing means.
- Ensure that the guardrails are installed and are in place.
- Ensure that the load being placed on the lift is within the rated capacity of the lift.
- Test the controls of the lift.
- Ensure that all personnel on the lift have been trained and authorized to operate or work on the platform.
- Ensure employees stand firmly on the floor and do not climb on the rails or the edge of the basket.
- Ensure that equipment will have a working back-up alarm or use a spotter when in reverse.
- Ensure a minimum clearance between electrical lines and any part of the equipment is at least 10 feet.

Responsibilities Involving Contractors

- The Safety Director is responsible for conveying appropriate information to contractors who use aerial platform lifts at the Abbott Electric facility to ensure compliance and safety on the property.

ARSENIC PROGRAM

A. PURPOSE AND SCOPE

This program outlines the procedures, precautions, responsibilities, and methods used by Abbott Electric to provide for employee safety and health, and compliance with the OSHA Inorganic Arsenic Standard. The purpose of this program is to protect employees from potential exposure to arsenic during cleaning the interior of the boilers. Arsenic is a toxic dust found as a contaminant of the coal used in the Heating Plant. The program is also intended to ensure compliance with the OSHA Inorganic Arsenic Standard, as a minimum. Reviews and updates of the written plan must be conducted at least annually.

B. LOCATION

Arsenic is found naturally on Earth. Arsenic levels vary as a contaminant in coal. Exposure may or may not occur, based on whether specific loads of coal have appreciable arsenic levels in them as contaminants. Currently, Abbott Electric considers all entrants into the boilers to have potential arsenic exposure without appropriate personal protective equipment and precautions. Compliance with our program is mandatory for coal fired boiler entry. Boiler cleaning generally only occurs for 1-2 days, 1-3 times per year.

C. EXPOSURE LIMITS AND MONITORING

The Permissible Exposure Limit (PEL) for inorganic arsenic is 10 µg/M3 as an 8-hour Time Weighted Average (TWA). Sampling has indicated that this level can be exceeded during boiler cleaning operations. Certain requirements of the Standard begin when you exceed the action level of 5 µg/M3. During boiler cleaning the potential to exceed the PEL can exist, therefore, all requirements of the Standard apply to the boiler cleaning operation; full Personal Protective Equipment (PPE), respirators, engineering controls, and trained workers are required. A Confined Space Entry Permit is also required with monitoring.

D. CONTROLS

- Establish a regulated area and control access.
- Follow the Heating Plant Standard Operating Procedure (SOP) for boiler cleaning operations.
- Open the boiler wherever possible for ventilation.
- Use Air Filtration Devices (AFDs) with HEPA filters to clean the air, maintain negative pressure, and draw fresh air into the space. Exhaust the AFDs outdoors.
- All PPE, rags, and other minor waste materials will be left in the boiler to be burned. Do not remove them from the regulated area.

E. AIR MONITORING

Air monitoring is performed **quarterly,** when the PEL is exceeded, and every 6 months when between the AL and the PEL. Since we only clean boilers **1-3 times a year**, we will need to do air monitoring each time we clean the boilers. If a combination of work practices and engineering controls bring the levels down to below the PEL, less sampling will be needed. The Heating Plant Superintendent will notify EHS as soon as a boiler cleaning date has been established, no less than a few days ahead of time, that monitoring will be needed. EHS will conduct the air sampling and report back to the Heating Plant Superintendent.

F. PPE

All coal fire boiler entrants must wear full disposable protective clothing, gloves, and a full-face air-purifying respirator. Hardhats or other PPE should be used, as necessary. All reusable PPE shall be cleaned after use. ALL PPE will be provided to the employee at no cost.

G. TRAINING

All coal fired boiler entrants must take Abbott Electric Inorganic Arsenic Program, Confined Space Entry Training and Respiratory Protection Training. Retraining is required annually thereafter for arsenic and respiratory protection. All entrants shall be adequately trained in whatever tasks must be done inside the space or when OSHA requires it for specific tasks. All training materials will be readily available on the job site for all affected employees.

H. RECORD KEEPING

Exposure records and medical records must be retained for 40 years or the duration of employment plus 20 years, whichever is longer. Workers, former employees, and their designated representatives may have access to the records upon request.

I. SIGNS

The required OSHA Arsenic Warning Sign must be posted at the entry to the boiler.

- RESTRICTED AREA

J. MEDICAL MONITORING

Medical monitoring is only required if the employee is exposed to inorganic arsenic above the action level, regardless of respiratory protection, for at least 30 days per year. Since our employees only clean the boilers a few days per year, a medical program is not required. If at any time an employee feels that they may have symptoms of arsenic related illness or when requested by a physician at Occupational Health, an employee may have a medical evaluation. Recommendations of the physician shall be followed.

K. HOUSEKEEPING

A plastic drop cloth should be placed immediately outside the area to the boiler access. All dirty clothing and equipment shall be kept on the drop cloth. Employees must not exit the drop cloth area without HEPA vacuuming themselves and removing disposable clothing. Employees should HEPA vacuum their disposable clothing after egress from the space. Air hoses are not allowed for this purpose. Disposable clothing will be removed and thrown in the boiler. Wash your hands immediately. Remove and clean your respirator. Shower before leaving work for the day. No eating, drinking, applying cosmetics, or smoking is allowed without washing your hands first. Appropriate language shall be put in all specifications for outside contractors that must enter boilers for maintenance or repair. Contractors must comply with OSHA Standards and have an acceptable program for confined space entry into boilers or comply with Abbott Electric program. If they create dust inside, they must have an arsenic protection program. Any other standards must be met: PPE, welding, scaffolding, etc. The Heating Plant Superintendent is responsible for reviewing contractor qualifications and restricting access to the space if the requirements are not met. Contact EHS or the Facilities Management Safety Representative for assistance, as needed.

ASBESTOS PROGRAM

A. PURPOSE AND SCOPE

This policy applies to all contractors and their subcontractors working with Asbestos Containing Material (ACM) at company project sites. ACM is defined as any material containing greater than 1-% asbestos. Any material suspected to be asbestos must be reported to the owner. The owner will then make a determination as to the asbestos content and arrange to have it removed, if positive. Regulated asbestos work includes, but is not limited to, the following:

- Demolition or salvage of structures where ACM is present.
- Removal or encapsulation of ACM.
- Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof that contain ACM.
- Installation of ACM products.
- Asbestos spill/emergency cleanup.
- Transportation, disposal, storage, containment of, and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which the construction activities are performed.

B. RESPONSIBILITES

- Management
    - Ensure all ACM is identified and labeled.
    - Ensure training is effective for authorized employees.
    - Conduct medical surveillance of affected employees.
    - Establish engineering controls for all work with ACM.
    - Provide adequate and proper equipment and personal protective gear.
    - Ensure proper disposal of all ACM.
- Supervisors
    - Qualified supervisors shall provide effective on-site management during work with ACM.
    - Supervisors will notify Abbott Electric immediately upon discovering damaged asbestos material.
- Employees
    - Qualified employees must follow the exact procedures for repair or removal of ACM, including proper use of containment equipment, clean up equipment and personal protective gear.
    - Unqualified employees are to stay clear of all asbestos work areas and report any damaged ACM to their supervisor.

C. HAZARDS

Asbestos is a common, naturally occurring group of fibrous minerals. Asbestos fibers have been used in a variety of building materials. Abbott Electric makes an aggressive effort to use non-asbestos containing materials in new construction and renovation projects. Generally, most asbestos is found in pipe insulation, doors, textured paints and plasters, structural fireproofing, and floor tiles. Long-term exposure to airborne asbestos can precipitate chronic lung disease and asbestos-related cancers. Significant and long-term exposure to asbestos from activities that directly disturb asbestos-containing materials can lead to a variety of respiratory diseases, including asbestosis and mesothelioma. Asbestosis is a non-malignant, irreversible disease resulting in fibrosis of the lung.

D. TRAINING

Training is required and must be documented for all employees who perform Class I through IV asbestos work. No untrained workers are to disturb any amount of asbestos. The following are the basic training requirements for the different types of asbestos work:

- Class I asbestos work involves the removal of TSI and surfacing ACM and Presumed Asbestos-Containing Material (PACM). Training for Class I work is either 32 hours (asbestos worker), or 40 hours (contractor/supervisor and function as a competent person). An annual 8-hour refresher course is required for both the worker and contractor/supervisor, or competent person level of training.
- Class II asbestos work involves the removal of ACM which is not thermal system insulation or surfacing material. This includes the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics. Training for Class II work may be the same as for Class I work (asbestos worker or contractor/supervisor) or might be 8 hours of task specific training which includes hands-on training. A separate 12-hour course for flooring removal that complies with the Flooring Industry Settlement Agreement is also offered. An annual refresher is required for all workers.
- Class III asbestos work involves repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, may be disturbed. Training for Class III work is 16 hours with an annual 4-hour refresher course.
- Class IV asbestos work involves maintenance and custodial activities during which employees contact, but do not disturb, ACM and PACM. Initial two-hour asbestos awareness training with an annual refresher is required for all custodial, maintenance, housekeeping and service personnel who work in buildings that contain asbestos.

E. MONITORING

- Asbestos Abatement Air Monitoring

All Class I and II asbestos abatement projects must include the following air monitoring during operations.

  - Task specific exposure monitoring (personal sampling) for each task and on at least 25% of the work force.
  - Task specific 30-minute Short Term Excursion Limit (STEL) personal samples at least once per day, per task.

  - Perimeter (clean area) sampling from areas adjacent to the restricted areas.
  - If negative air machines are exhausted inside the building, the exhaust must be monitored.
- Final Clearance Monitoring

At the completion of all asbestos removal projects, final clearance monitoring is conducted. As part of the final clearance, independent consulting firms are required to conduct a thorough post abatement visual inspection. After a successful visual inspection, 1200 liters of air will be collected. Aggressive final air clearances, incorporating the use of a box fan and 1-hp blower motor used to agitate the air, must be conducted for all negative pressure enclosure or critical barrier enclosure abatement systems. Passive final air clearances may only be used in abatement systems where a complete enclosure system was not required or used.

F. TIME WEIGHTED AVERAGE

Abbott Electric shall ensure that no employee is exposed to an airborne concentration of asbestos more than 0.1 fibers per cubic centimeter of air as an 8-hour time weighted average.

- Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposure of each employee.
- Abbott Electric is responsible for setting up initial monitoring for all employees who are exposed to airborne concentrations at or above the TWA permissible exposure limits.
- Additional monitoring shall take place and a written program developed whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new, or additional, exposures above the TWA permissible exposure limit and/or excursion limit, or when Abbott Electric has any reason to suspect that a change may result in new, or additional, exposure above the PEL.
- Employee monitoring shall be in accordance with 1910.1001 Appendix A.

G. REGULATED AREAS

- Regulated areas shall be demarcated from the rest of the workplace in any manner that minimizes the number of persons who will be exposed to asbestos.
- Only authorized persons shall be allowed to enter the area.
- If employees working immediately adjacent to Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such job, their employer shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to 1926.1101(f).

H. CONTROLS

- It is the responsibility of Abbott Electric to institute engineering controls to bring employee exposure below the TWA.
- Each employee entering a regulated area shall be furnished with and required to use a full-face respirator with appropriate cartridges, Tyvek suit with head covering, and gloves.

- Employees will be prohibited from eating, drinking, or chewing tobacco in designated areas.
- All hand-operated and power-operated tools which could produce, or release fibers of asbestos will be provided with local exhaust ventilation systems.
- ACM shall be worked in a wet state sufficient to prevent the emission of airborne fibers, to avoid exposing employees to levels more than the TWA.
- ACM must not be removed from the designated area without being either dampened, enclosed, or ventilated, to prevent effectively the release of airborne fibers.
- Compressed air should not be used in the removal of ACM. Shower facilities will be provided for employees who work in areas above the TWA.
- No clothing worn in designated areas is to be brought off-site to be laundered.
- Signs – Each regulated area must be posted with the following words:
    - DANGER
    - ASBESTOS
    - CANCER AND LUNG DISEASE HAZARD
    - AUTHORIZED PERSONNEL ONLY
    - RESPIRATORS AND PROTECTIVE CLOTHING THIS AREA
- Warning labels shall be placed on all debris and raw materials that are in, or removed from, designated areas.
- The training provided for all employees that work with ACM:
- Health & Safety Policy and Procedures Manual
    - Training shall be provided before the initial assignment and at least annually.
    - Training to be in accordance with 1910.1001(j)(7)(iii).

I. RESPIRATORY

All Abbott Electric employees must be provided with proper protective clothing and respirators when assigned to work in Class I-III asbestos work or Class IV work that takes place in a regulated area.

J. HOUSEKEEPING

All surfaces should be maintained as free as practicable of ACM waste, debris, and accompanying dust. Surfaces contaminated with asbestos may not be cleaned using compressed air. Do not drill holes, hammer nails into, hang objects from, touch with curtains, or move furniture that damages ACM or PACM. Waste, debris, and accompanying surface dust in areas containing accessible and/or visibly deteriorated ACM, shall not be dusted, swept, shoveled dry, or vacuumed without using a HEPA filter. All vinyl and asphalt flooring should be treated as ACM unless evidence exists to prove otherwise. The following restrictions exist for the care of ACM flooring: no sanding is permitted, stripping should be conducted using low abrasion pads at speeds lower than 300 rpm with wet methods, and burnishing or dry buffing may be performed only on flooring which has sufficient finish, so the pad doesn't contact the flooring material. Broken ACM floor tiles should only be removed by properly trained personnel.

ASSURED EQUIPMENT GROUNDING PROGRAM

A. PURPOSE AND SCOPE

This program outlines safe work practices to follow to protect workers on construction sites from all electrical injuries resulting from possible equipment malfunctions, improper grounding, and defective electrical tools. It is the policy of Abbott Electric that our employees follow safe work practices when performing work operations, such as the use of extension cord sets and receptacles that are not part of a building or structure, as well as how to use equipment connected by a cord and plug.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Have the overall responsibility for implementing this safety and health program. Abbott Electric employees should review a copy of this program. Copies will be available at the job site for inspection.

Employees

Employees will:

- Not be permitted to use any equipment that does not meet the requirements of this program.
- Use Ground Fault Circuit Interrupters (GFCI's) at Abbott Electric, in addition to an Assured Ground Fault Program on construction sites.

C. REQUIREMENTS

- Ground Fault Protection:
  - GFCI's shall be used on all 120-volt, single-phase, 15 and 20 ampere receptacle outlets that are not part of the permanent wiring of any building and are used by Abbott Electric employees. GFCI's are not required on receptacles on a two-wire single-phase portable or vehicle-mounted generator rated not more than 5kW where the circuit conductors are not part of the generator frame. All other grounded surfaces need not be protected with GFCI's.
- Assured Equipment Grounding:
  - In addition to the use of GFCI's, Abbott Electric employees should implement and follow assured equipment grounding, which is a testing and identification procedure to verify that electrical equipment is safe to operate, ruling out potential electrical hazards. Each GFCI, cord set, attachment, cap, plug and receptacle cord sets, and any equipment connected by cord and plug must be visually inspected daily for external defects.
- Daily Visual Inspection:
  - Abbott Electric employees will be instructed that each cord set, attachment cap, plug and receptacle of the cord set, and any equipment connected by cords and plugs, must be visually inspected before each day's use for external defects, such as deformed or missing pins, insulation damage, and current test verification code numbers. Any indication of possible internal damage must be checked as well. Damaged equipment shall be tagged "DO NOT USE" and taken out of service until

the required repairs and tests have been conducted. Equipment that has not been tested for 3 months must not be used.

- Test Procedure
  - GFCI's, cord sets, receptacles which are not part of the permanent wiring of a structure, and cord and plug connected equipment required to be grounded should all be tested. The tests shall be performed:
    - Before the first use.
    - Before the equipment is returned to service.
    - Before the equipment is used after any incident in which it was reasonable to suspect it became damaged.
    - At intervals not to exceed 3 months, except cord sets and receptacles which are fixed and not exposed to damage should be tested at intervals not to exceed 6 months.
  - The tests are as follows:
    - All equipment-grounding conductors should be tested for continuity and be electrically continuous.
    - Each plug and attachment plug should be tested for the correct attachment of the grounding conductor.
    - The grounding conductor should be connected to its proper terminal.
    - The method to determine the condition of the affected equipment is as follows:
      - Receptacle: Use receptacle tested to determine correct connection to terminals
      - Cord Sets: First plug the cord set into a properly wired receptacle, which has been tested as above. Then, plug the receptacle tester into the female cord connector of the cord set to determine both continuity of grounding conductor and correct connections to terminals.
      - Cord and Plug Connected Equipment: Use continuity tester. Connect or touch one terminal of continuity tester to the metal frame of the equipment or tool and the other terminal to the grounding prong of the attachment cap plug at the end of the cord. An audible or visual signal of the test indicates that there is continuity of the grounding conductor.
    - Any equipment that does not pass the tests will not be available for use by Abbott Electric employees. Equipment that fails the tests must be tagged and marked out-of-service by reading "DO NOT USE". The equipment should be removed from service until it has been repaired and has successfully passed the re-tests.
    - It is the site Foreman's responsibility to ensure that the equipment under their control has been tested. The Foreman does have the ability of performing the respective tests in the field using appropriate testing equipment. The Safety Directorr, or his designee, will perform random safety inspections to ensure compliance with this program.

D. MODEL RECORD AND COLOR KEY CODE

TEST RECORD	
Cord	
Location	
Use	
Date Tested	
Color Used	
Qualified Person	
Notes:	

MONTH	COLOR
January	White
February	White Plus Yellow
March	White Plus Blue
April	Green
May	Green Plus Yellow
June	Green Plus Blue
July	Red
August	Red Plus Yellow
September	Red Plus Blue
October	Orange
November	Orange Plus Yellow
December	Orange Plus Blue

BENZENE AWARENESS PROGRAM

A. PURPOSE AND SCOPE

The purpose of this Benzene Awareness Program is to define work practices, administrative procedures and engineering controls to protect Abbott Electric employees exposed to benzene concentrations above the OSHA action level. This plan shall be implemented and kept current by the Safety Manager as required to reflect the most recent exposure monitoring data.

This program covers all Abbott Electric employees who may be exposed to benzene while completing job duties. This written plan shall be made available to the Assistant Secretary, the Director, affected Abbott Electric employees, and designated employee representatives. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Abbott Electric employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Abbott Electric employees will be aware of the provisions of site-specific contingency/emergency plans by either Abbott Electric or of a facility owner.

B. RESPONSIBILITES

Manager or Designee

- Ensure personnel are aware of work that has the potential of exposure to benzene.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance exams.
- Ensure that emergency exams are performed if an overexposure or suspected overexposure occurs.

Supervisors

- Ensure employees have the appropriate Personal Protective Equipment (PPE) and are properly trained in its use and care.
- Ensure employees comply with the benzene control program.

Safety Manager

- Develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene. Abbott Electric will be aware of the owner's contingency plan provisions and all Abbott Electric employees must be informed where benzene is used in the host facility and aware of additional plant safety rules. In coordination with the manager, develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene.
- Coordinate monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the benzene control procedures to reflect exposure monitoring data.
- Maintain the benzene control program, notify management of any regulatory changes and ensure compliance with regulatory, client, and corporate requirements.
- Coordinate training activities.

- Coordinate the medical surveillance program, including maintenance of medical records and the administration of exams.
- Ensure that due to the flammability of benzene, fire extinguishers will always be readily available.

Employees

- Comply with the benzene control program.
- Know where benzene is used at Abbott Electric or client facilities and follow any of the additional plant safety rules required by the client.
- Comply with the medical surveillance program and attend examinations, as required.
- Maintain respiratory protection equipment in good working order and notify the supervisor or safety manager, if otherwise.

Representative

- Review material safety data sheets or consult with the supervisor to identify any container with benzene containing material.
- Not smoke in prohibited areas where benzene is present.
- Report exposures resulting in any symptoms immediately.

C. LOCATION

Locations where Abbott Electric employees may be exposed to benzene may include, but is not limited to, petroleum refining sites, tank gauging (tanks at producing, pipeline & refining operations), and field maintenance operations.

D. DEFINITIONS

- Action Level – an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average.
- Benzene – a toxic, colorless liquid or gaseous material. Benzene has an aromatic odor, is not soluble in water, and is flammable.
- Employee exposure – exposure to airborne benzene that would occur if the employee were not using respiratory protective equipment.

E. HEALTH EFFECTS

Short-term overexposure may cause irritation of eyes, nose, and skin, breathlessness, irritability, euphoria, headache, dizziness, or nausea. Long term effects may result in blood disorders, such as leukemia and anemia.

F. PROCEDURE

- Permissible Exposure Limits.
- The Time-Weighted Average limit (TWA) for benzene is: 8-hour TWA 1 ppm / 12-hour TWA 0.67 ppm
- The Short-Term Exposure Limit (STEL) for benzene is 5 ppm.

G. REGULATED AREAS

- Abbott Electric shall establish regulated areas wherever airborne concentration of benzene exceeds or can reasonably be expected to exceed the PEL or STEL.
- Abbott Electric will control access to regulated areas and limit access to authorized personnel.
- Fire extinguishers will be readily available for workers in any area where benzene is used or stored.
- The following signage shall be posted in all regulated areas when the potential exists for benzene vapors to be more than the PEL:
  - DANGER – BENZENE REGULATED AREA CANCER CAUSING AGENT FLAMMABLE
  - NO SMOKING AUTHORIZED
  - PERSONNEL ONLY RESPIRATOR REQUIRED

H. METHODS OF COMPLIANCE

- The benzene control program shall be written and implemented to comply with OSHA regulation 29 CFR 1910.1028 (Benzene).
- Abbott Electric shall establish and implement a written program to reduce employee exposure to, or below, the PEL primarily by means of engineering and work practice controls to ensure compliance with the benzene control program and federal and state requirements.

I. EXPOSURE MONITORING

- Exposure monitoring shall be performed for the 8-hour and 12-hour TWAs or for the 15-minute STEL exposure when:
  - Regulated areas are established.
  - An emergency occurs that could require a regulated area.
  - A change in the production, process, control equipment, personnel or work practices may result in new or additional exposure to benzene.
  - Cleanup of a spill, leak repair, or rupture occurs.
- If the monitoring required reveals employee exposure at, or above, the action level but at, or below, the TWA, Abbott Electric shall repeat the monitoring for each employee at least every year.
- If the initial monitoring reveals employee exposure to be below the action level, then Abbott Electric may discontinue the monitoring.
- If the monitoring reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level, then Abbott Electric may discontinue to monitor.
- Direct reading detection instruments (Drager CMS is recommended) will be used where benzene vapors may be present in work areas not previously monitored.

- Personal monitoring will be performed by use of vapor monitoring badges following manufacturer requirements. All samples shall be analyzed at an AIHA (American Industrial Hygiene Association) certified laboratory.

J. MEDICAL SURVEILLANCE

- Baseline and annual medical exams shall be provided to Abbott Electric employees that may work or are anticipated to participate in operations more than 10 times per year or may work in areas where benzene exposures may exceed the PEL over 30 days per year.
- Abbott Electric, Inc shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PELs 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer.
- Notification of monitoring results shall be provided to employees in writing within 15 working days of receipt of results.

K. PERSONAL PROTECTIVE EQUIPMENT

- PPE will be selected based on its ability to prevent absorption, inhalation and ingestion.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure and other known environmental factors but shall contain as a minimum; boots, proper eye protection, gloves, sleeves, aprons and others as determined.
- PPE shall be provided and worn when appropriate to prevent eye contact and limit dermal exposure to liquid benzene. PPE must meet the requirements of 29 CFR 1910.133 and be provided at no cost to the employees.

L. RESPIRATORY PROTECTION

- A respiratory protection program must be established in accordance with 29 CFR 1910.134. Respiratory protection is required:
  - During the period necessary to implement engineering controls or work practices.
  - When engineering and work practices are not feasible.
  - In emergencies.
- Approved respirators shall be selected according to airborne concentrations of benzene or condition of use.
  - 0 to 0.67 ppm – no respirator required.
  - 0.67 to 6.7 ppm – half-mask respirator with OV cartridges.
  - 6.7 to 33 ppm – full-face respirator with OV cartridges.
  - Greater than 33 ppm – Due to Abbott Electric policy of not permitting SCBA, no Abbott Electric employee shall enter a space containing more than 33 ppm.

M. RECORDKEEPING

- Medical surveillance records should be maintained for 30 years after termination of employment.
- Exposure monitoring records should be maintained for 30 years after completion of the project.
- Exposure and medical monitoring records shall be made available to affected Abbott Electric employees or their representatives and to OSHA upon request.

N. COMMUNICATION OF BENZENE HAZARDS

- Signs and labels should be posted at entrances of regulated areas.
- The benzene control program will be updated by Abbott Electric Safety Manager
- Project site-specific contingency and emergency procedures will be updated by the Safety Manager and made available to project staff prior to beginning work at the specific site.

BLOODBORNE PATHOGENS PROGRAM

A. PURPOSE AND SCOPE

The goal of the following the Exposure Control Plan (ECP) is to eliminate, or minimize, occupational exposures to Bloodborne pathogens.

The basis of this Plan is the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030. Although this is a General Industry standard, it can be applied to construction activities where exposure may occur, such as protection for first-aid responders. As required by OSHA in 1926.50 Medical services and first aid, and consistent with the direction in NFPA 70E Standard for Electrical Safety in the Workplace, first-aid responders will be available on all company jobsites. This program will provide protection for Abbott Electric employees against bloodborne pathogens.

B. EMPLOYEE EXPOSURE DETERMINATION

Occupational exposure to blood and bodily fluids is limited to our designated first-aid responders or Abbott Electric employees engaged in special duties where that potential may exist. However, any employee who has been exposed to blood or bodily fluids should immediately report it to their supervisor to determine the appropriate action regarding possible exposure to bloodborne pathogens**.**

Our facility may decide to offer hepatitis B vaccination to the first-aid provider after an exposure has occurred or offer pre-exposure vaccination**.**

C. RESPONSIBILITES

Safety Director

The Safety Director will:

- Provide a copy of the Plan to employees free of charge and within 15 days of the request.
- Maintain reports of any exposure incident. The report will include the first-aid responder’s name, the date, time, and description of the exposure incident.
- Train first-aid providers on the Bloodborne Pathogen requirements, including the specifics required for reporting procedures.
- Ensure that first-aid responders requesting the Hepatitis B vaccine series after an exposure incident receive it as soon as possible, but no later than 24 hours after the incident.
- Ensure that universal precautions will be observed when the differential between body fluids is difficult or impossible to find. All body fluids will be considered potentially infectious.
- Provide training and review and update the Exposure Control Plan (ECP) annually, or as needed, to include any new or modified tasks and procedures that affect occupational exposure. The update will include any new or revised employee positions with occupational exposure.

First-Aid Responders

First-Aid Responders will:

- Be trained in the Bloodborne Pathogen requirements by, or under the direction of, the Safety Director.
- Report all first aid incidents where blood, or potentially infectious materials, are present to the Safety Director before the end of the work shift.
- Use appropriate Personal Protective Equipment (PPE) when attending an exposure incident.

Health Care Provider

The Health Care Provider (HCP) will:

- Conduct post exposure examinations and administer vaccinations as needed.

Employees

All employees will:

- Abide by all engineering controls and safe work practices in place to minimize potential exposure. This includes, but is not limited to, hand washing and the use of the appropriate PPE.

D. ENGINEERING CONTROLS AND WORK PRACTICES

- Engineering controls and work practice controls will be used to prevent or minimize exposure. Hand washing facilities are available at all job sites. Abbott Electric employees will wash with antibacterial cleansers, use appropriate disinfectant means after administering first-aid, and follow all standard precautions. All equipment will be decontaminated or discarded in appropriate containers.

E. PERSONAL PROTECTIVE EQUIPMENT

- Appropriate PPE will be provided by Abbott Electric to the employees at no cost.
- First-aid responders will use PPE appropriate for administering the first-aid required. All jobsite first-aid kits will contain:
    - Gloves
    - Eye protection
    - Resuscitation bags and mouthpieces
    - Face shield or masks

F. HOUSEKEEPING

- In the event of a first-aid incident or other exposure covered by this Plan, the first-aid responders exposed will take precautions to decontaminate work surfaces, tools, and equipment. PPE will be used during cleanup. Mechanical means such as tongs, forceps, or a brush with a dustpan will be used to pick up contaminated broken glassware. The waste will be treated as regulated waste and disposed of in sealed and labeled or color-coded containers. When storing, handling, transporting or shipping regulated waste, it will

be in containers that are constructed to prevent leakage. The waste will be discarded according to federal, state, and local regulations.

- In the event of a first-aid incident in which the first-aid responder's clothes become contaminated, the following actions will be taken:
    - Contaminated laundry will be handled as little as possible and with a minimum of agitation. Appropriate PPE will be worn when handling contaminated laundry.
    - Contaminated laundry will be placed in color-coded bags at its location of use and taken by a commercial launderer. The launderer will be given the appropriate warnings.

Labeling

- Biohazard warning labels will be placed on all containers for waste which may be contaminated with blood or body fluids, or red bags will be used as required.

G. TRAINING

- All designated first-aid responders or other Abbott Electric employees covered by this Plan will receive training conducted by, or under the direction of, the Safety Director. The training program will cover, at a minimum, the following elements:
    - A copy and explanation of the standard.
    - Causes, control, and symptoms of bloodborne pathogens.
    - Modes of transmission of bloodborne pathogens.
    - The Exposure Control Plan (ECP) and a way to obtain a copy.
    - Methods to recognize tasks that risk exposure and other activities that may involve exposure to blood.
    - Use and limitations of engineering controls, work.

Practices and PPE

- PPE types, use, location, removal, handling, decontamination, disposal, and basis for selection.
- Availability procedures for the Hepatitis B vaccine and the availability at no cost. (Training will be given prior to vaccination on its safety, effectiveness, benefits, and method of administration.)
- Emergency procedures for blood and other potentially infectious materials.
- Exposure incident procedures.
- Post-exposure evaluation and follow-up.
- Signs, labels and/or color coding.
- Question and answer session.

H. POST EXPOSURE EVALUATION AND FOLLOW-UP

The Safety Director is to be contacted immediately following an exposure incident. A confidential medical evaluation and follow-up will be conducted.

The follow-up will include:

- Documentation of the routes of exposure and how the exposure occurred.
- Identification and documentation of the source employee, unless infeasible or prohibited by State or local law.
- Obtaining consent from the source employee and testing the blood, documenting these blood test results.
- If the source employee is known to be infected, testing need not be repeated.
- Providing the exposed employee with the source individual's test results and information about applicable disclosure laws and regulations concerning the source individual's identity and infectious status.
- Obtaining consent from the exposed employee, collecting blood as soon as feasible after the exposure incident, and testing blood for HBV and HIV serological status.
- If the employee does not give consent for HIV serological testing during the collection of blood for baseline testing, the baseline blood sample will be preserved for at least 90 days.
- Counseling on post exposure protocols to include precautionary measures to prevent further transmission of any bloodborne pathogen and support from the Employee Assistance Program (EAP)

The circumstances of exposure incidents will be reviewed to determine if procedures, protocols and/or training need to be revised.

I. HEALTHCARE PROFESSIONALS

Healthcare professionals (HCPs) responsible for employee's HB vaccination, post-exposure evaluation, and follow-up will be given a copy of the OSHA Blood-borne Standard. That healthcare professional will also receive:

- A description of the exposed employee's job duties relevant to the exposure incident.
- Routes and circumstances of exposure.
- Results of the source employee's blood test, if available.
- Relevant employee medical records, including vaccination status.

J. HEALTHCARE PROFESSIONAL'S WRITTEN OPINION

The designated Healthcare Professional will provide the exposed employee with a copy of the evaluating Healthcare Professional's written opinion within 15 days after completion of the evaluation.

The written opinion for post-exposure evaluation and follow-up will be limited to whether the exposed employee has been informed of the results of the medical evaluation, and any medical conditions which may require further evaluation and treatment. For HB vaccinations, the

opinion will be limited to whether the employee required or received the vaccine. All other diagnoses must remain confidential and not be included in the written report to the employer.

K. RECORDKEEPING

Medical Records

Medical records are maintained for each employee with exposure in accordance with 29 CFR 1926.33 or 1910.20. In addition to the requirements of this standard, the medical records will include:

- The name and social security number of the exposed employee.
- A copy of the exposed employee's Hepatitis B vaccination records and any medical records relative to the employee's ability to receive vaccinations.

Medical Evaluations Performed By:

- A copy of the results of all examinations, medical testing, and follow-up procedures, as required.
- A copy of all HCP's written opinions, as required by the standard.

Employee medical records will be kept confidential and will not be disclosed or reported without the employee's express written consent, except as required by the standard or by law.

Employee medical records must be maintained for at least the duration of employment plus 30 years.

Employee medical records shall be provided (within 15 working days) upon request of the employee, or to anyone having written consent of the employee.

Training Records

Bloodborne pathogen training records will be maintained by the Safety Director at a designated location. Training Records will be kept for a duration of no less than 3 years.

Transfer of Records

If Abbott Electric ceases to do business and there is not a successive employer, the employer shall notify the Director of the National Institute for Occupational Safety and Health (NIOSH) at least 3 months prior to a scheduled records disposal and prepare to transmit them to the Director of NIOSH.

L. CREDENTIAL INFORMATION

- Designated First-Aid Providers:
- Medical Evaluations Performed By:
- Designated Health Care Professional:
- Employee Assistance Program Manager:

CADMIUM

A. PURPOSE AND SCOPE

The cadmium program applies to all Abbott Electric employees who may be exposed to cadmium at or above the prescribed action level of 2.5 micrograms per cubic meter of air averaged over any eight-hour period (2.5ug/m3). The permissible exposure limit or PEL for cadmium is 5 micrograms per cubic meter of air, averaged over any 8-hour period. (5ug/m3).

Abbott Electric does not use cadmium. However, this material may be found at our client's facilities and provided to all employees. Abbott Electric should request copies of any plan or document indicating the location of regulated areas. Affected employees and their representatives will have access to cadmium written procedures. All employees must be trained in the hazards of cadmium exposure, signs, symptoms, necessary protective measures, and the location of regulated areas. Employees will be provided with annual training.

B. RESPONSIBILITIES

Abbott Electric is responsible for the implementation, enforcement, and periodic review of this plan.

- Supervisors
    - All supervisors are responsible for understanding this plan and the implementation of the plan in their area**.**
- Employees
    - All affected employees are also responsible for following the requirements outlined here as they apply to their job. The term "employee," as used in this plan, refers only to those who are exposed to greater than the PEL.

C. EXPOSURE MONITORING

When tasks are presumed to generate cadmium exposures greater that the Permissible Exposure Limit (PEL) of 5 ug/m3 of air averaged over an 8-hour period, we treat affected employees as if they were exposed above the PEL and implement procedures to protect workers until we perform an employee exposure assessment and document that an employee’s cadmium exposure is not above the PEL. Tasks estimated to generate a TWA of 5 ug/m3 of air include:

- Manual demolition, manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems where cadmium coatings or contaminants are present.
- Emergency operations that involve cadmium or cadmium burning.
- Power tool cleaning without dust collection systems where cadmium contamination is present.
- Cleanup activities where dry expendable abrasives are used, abrasive blasting enclosure movement, and removal where cadmium containing coatings or contaminants is present. Based on historical data from previous cadmium jobs, we will take measures as recommended in 29 CFR 1926.62 to protect our employees. These measures include, but are not limited to:

- Appropriate respiratory protection (protection factor of 10, 25, 5, or 100 depending on the tasks involved and the estimated exposures).
- Proper personal protective clothing and equipment.
- Changing areas.
- Hand washing facilities.
- Biological monitoring.
- Training.

- Initial Determination

  We assess each new project to determine if employees may be exposed to cadmium at, or above, the action level of 2.5 ug/m3 of air as an 8-hour TWA. This initial determination can be based on:

  - Employee exposure monitoring.
  - Objective data demonstrating that under expected conditions, specific processes, operations, or activities involving cadmium, it cannot result in employee exposure to cadmium at or above the action level.
  - Previous monitoring for cadmium exposures within the last 12 months during work operations conducted under workplace conditions closely resembling the processes, types of material, control methods, work practices, and environmental conditions used and prevailing in your operations. We base initial determinations on employee exposure data. Our employee exposure monitoring data includes:
    - Information, observations, or calculations which would indicate employee exposure to cadmium.
    - Previous measurements of airborne cadmium.
    - Employee complaints of symptoms which may be attributed to exposure to cadmium.

- Initial Determination Results

  If our initial determination reveals employee exposure to be below the action level, we will conduct periodic air monitoring during operations to confirm that airborne cadmium levels are below the action level. If our initial determination reveals employee exposures to be at the action level, but at or below the PEL, we will conduct air monitoring and personal air sampling of 25% of the represented workforce. If our initial determination reveals that employee's exposures will be above the PEL, attempts will be made through administrative and engineering controls to reduce exposures below the PEL. If this should fail to reduce the exposure level, employees shall wear the appropriate level of PPE necessary to reduce exposures below the PEL.

- Additional Exposure Assessments

  If changes in equipment, processes, controls, personnel, or tasks occur after initial determination, we will reevaluate to determine if employees are exposed to higher concentrations of cadmium. We will conduct periodic air monitoring of the work site to determine if changes occur in the exposure levels. This program will also be reviewed at that time.

- Employee Notification

  Within five working days of completing an exposure assessment we notify each employee in writing of his/her assessment results. Our procedure for this notification process is that we will post all air monitoring results for employees to review within five working days.

- Methods of Compliance

  This program is our written strategy and schedule for protecting our workers from cadmium exposure. It incorporates all relevant information that relates to this goal, so that we can determine whether we appropriately analyzed problems and solutions relating to cadmium exposure. This program is intended to reduce employee exposure to at or below the PEL. When all feasible engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to acceptable levels, appropriate respiratory protection will be provided to supplement such controls. We have implemented engineering and work practices to include, but are not limited to, wet methods, negative air systems, and necessary PPE. Additionally, housekeeping practices that will be followed include:

  - Vacuuming floors and other surfaces where cadmium accumulates to minimize the likelihood of cadmium becoming airborne.
  - Shoveling or wet sweeping (permitted only where vacuuming or other equally effective methods have been tried and found ineffective).
  - Use of HEPA filters on vacuum cleaners.
  - Emptying vacuums so that cadmium is not reintroduced into the workplace.

  The written work practices shall be utilized to control exposure to cadmium during normal operations and maintenance activities involving specific tools and engineering controls equipment, such as ventilation machines. Our jobs are typically multi-employer worksites. The contractor must supply Abbott Electric with a copy of cadmium training certificates for all employees who may be exposed to cadmium from cadmium abatement activities. All contractor employees shall receive a site safety orientation to include the hazards of cadmium on the site prior to beginning work. We review and update our written plan every six months to reflect the current status of the program.

D. RESPIRATORY PROTECTION

As our engineering controls and work practices are generally sufficient to reduce exposures to at or below the PEL without the use of respirators, respiratory protection will not be routinely used on our worksites, unless an employee specifically requests a respirator. We provide NIOSH approved respirators, recommended in Table 1 of 29 CFR 1926.1127, to employees who request them. Any employee may ask his supervisor for a respirator, and one will be provided upon request in accordance with company policy.

E. PPE

We provide Personal Protective Equipment as interim protection for employees during exposure assessment, since our employees may be exposed to cadmium above the PEL without regard to the use of respirators, or exposed to cadmium compounds which may cause skin or eye irritation. We provide protective clothing and equipment at no cost to our employees. The types of protective clothing provided by Abbott Electric includes, but is not limited to:

- Cotton Tyvek coveralls, with hood; Saranex-coated Tyvek coveralls with hood.
- Latex gloves with taped interfaces.
- Safety glasses.
- Hardhats.

This equipment is considered disposable and is to be disposed of at the job site. We will replace or repair any damaged equipment providing the employee notifies his supervisor of the damage to his protective clothing.

F. HYGIENE

We provide hygiene facilities for our workers and ensure they follow good hygiene practices. We prohibit smoking, eating, applying cosmetics, and the presence of tobacco products, foodstuffs, or cosmetics in all work areas where employees are exposed to cadmium above the PEL. We make sure workers comply with these requirements through regular inspections by supervisory personnel. Employees who fail to comply will be subject to disciplinary actions as prescribed by company policy.

G. MEDICAL SURVEILLANCE

Abbott Electric supports the practices necessary for early detection of cadmium exposure. The medical surveillance program supplements the primary goals of the cadmium exposure control program of preventing disease through elimination or reduction of airborne concentrations of cadmium, and sources of ingestion. The medical surveillance provisions incorporate both initial and ongoing medical surveillance. We provide initial medical surveillance to employees who are occupationally exposed to airborne cadmium levels greater than the action level 30 days a year or above the PEL for greater than 10 days a year. This monitoring consists of visits with the physician, a detailed occupational history, and laboratory analysis per 1910.1027(l), as required. To ensure appropriate medical surveillance is performed, we provide the physician and/or representatives copies of the regulation and appendices, a description of the employee's duties, a list of the PPE worn by the employee, and past exposure assessment data. All medical examinations, procedures, and blood Cadmium level sampling/analysis shall be conducted by licensed healthcare practitioners and/or physicians. Our medical surveillance program shall meet the requirements of 29 CFR 1910.1028(l).

H. MEDICAL REMOVAL PROTECTION

We remove employees from work who have exposures to cadmium at, or above, the action level any time a periodic and a follow-up blood sample indicates that medical removal is necessary, as required by 1926.1127 (l)(3),(4), & (6). We remove employees from work who have exposures to cadmium at, or above, the action level when a health care professional determines that they have medical conditions which, when exposed to cadmium, places them at greater risk for those health problems. Employees who are removed from work will receive

all wages, benefits, for a period of 18 months without loss of seniority or promotion opportunities. Abbott Electric reserves the right to place an employee in a position of equal responsibility, where the employee will not be exposed occupationally to cadmium.

I. EMPLOYEE EDUCATION AND TRAINING

Employees can do much to protect themselves from the risks of occupational cadmium exposure if they know about them. In our training programs we inform employees of the specific hazards associated with their work environment, protective measures which can be taken, and their rights under the standard, including the contents of 29 CFR 1926.1127 and appendices A &B, prior to the time of initial assignment. All employees working in areas with airborne cadmium levels above the PEL are required to possess appropriate training certifications. Training certifications will detail the identity of employee trained, signature of qualified trainer, and the date of training. Training records will be retained at the corporate office for a period of no less than 1 year.

J. SIGNS

Since exposure to cadmium is a serious health hazard, we post signs that warn employees of cadmium hazards and of the possible need to use respirators and other protective equipment in the area. Appropriate cadmium warning signs will be provided at all entrances and exits to the work area. Additionally, employees will be instructed as to the meaning of the various signs at the worksite during training.

K. RECORD KEEPING

We maintain accurate biological and environmental monitoring records of employee exposure to potentially toxic materials, including cadmium. We allow employees unlimited access to their records. We include the following exposure monitoring records:

- Exposure assessment.
- Medical surveillance results.
- Medical removals.
- Objective data for exemption from requirement for initial monitoring.
- Procedures for making records available.
- Procedures for transfer of records.

L. OBSERVATION AND MONITORING

We provide our employees, or their representatives, the opportunity to observe exposure monitoring of toxic materials or harmful physical agents. When an observer is present, supervisory personnel shall ensure that the observer is provided with the following:

- An explanation of the measurement procedures being used.
- Allowing the observation of all steps related to the measurement procedures.
- The dissemination of the results when returned by the laboratory.
- The proper PPE.
- Assuring that observers comply with all applicable safety and health procedures.

M. EMERGENCY SITUATIONS

In emergency situations, which involve a substantial release of cadmium, EMA shall ensure workers are protected by following all aspects of this program. This includes limiting access to authorized employees, the provision and use of PPE, exposure monitoring, medical surveillance, hygiene facilities, work practices, fugitive emission controls, and proper disposal. A site-specific safety and health plan shall be developed in accordance with our HAZWOPER (Hazardous Waste Operations and Emergency Response) program included in our written Safety & Health Manual.

CONFINED SPACE PROGRAM

A. PURPOSE AND SCOPE

It is the policy of Abbott Electric that the first consideration in the performance of work shall be the protection of the safety and health of all employees. Abbott Electric has developed this Confined Space Entry Program to ensure that all employees receive adequate training and information relevant to the possible hazards that may be involved when entering and working in enclosed or confined spaces. The training conducted will be documented and the Safety Director will review the Confined Space Program annually and revise the program as needed. The scope of this program covers "Confined Spaces in Construction, 29 CFR 1926.1201-.1213". The following program outlines how we will accomplish this objective.

B. RESPONSIBILITIES

The Controlling Contractor

- Debrief each entity that has entered a permit space regarding the permit space program and any hazards confronted or created in the permit space during entry operations.
- Coordinate entry operations when more than one entity performs permit space entry at the same time or when entry is performed in conjunction with any activities that could foreseeably result in a hazard in the permit space.
- Coordinate entry operations when multiple employers are working simultaneously in a permit space, or elsewhere on the worksite, so that the employees of one employer do not endanger employees of any other employer.

The Entry Employer

The Entry Employer will:

- Monitor the effectiveness of the program.
- Provide atmospheric testing and equipment, as needed.
- Provide appropriate PPE, as needed.
- Provide training to affected employees and supervisors.
- Provide technical assistance, as needed.
- Preview and update the program on at least an annual basis, or as needed.

Responsible Person

Responsible Person will:

- Be responsible for managing the Confined Space Program.
- Ensure that a list of confined spaces at all Abbott Electric worksites is maintained.
- Ensure that canceled permits are reviewed for lessons learned.
- Ensure training of personnel is conducted and documented.
- Coordinate with outside responders.
- Ensure that equipment is compliant with applicable standards.
- Ensure requirements for entry have been completed before entry is authorized.

- Ensure confined space monitoring is performed by personnel who are qualified and trained in confined space entry procedures.
- Ensure a list of monitoring equipment and personnel qualified to operate the equipment is maintained by the Safety and Occupational Health Office.
- Ensure that the rescue team has simulated a rescue in a confined space within the past twelve months.
- Know the hazards that may be faced during entry, including the mode (how the contaminant gets into the body), signs or symptoms, and consequences of exposure.
- Fill out a permit.
- Determine the entry requirements.
- Require a permit review and signature from the authorized Entry Supervisor.
- Notify all involved employees of the permit requirements.
- Post the permit in a conspicuous location near the job.
- Renew the permit or have it reissued, as needed (a new permit is required every shift).
- Determine the number of Attendants required to perform the work.
- Ensure all Attendants know how to communicate with entrants and how to obtain assistance.
- Post any required barriers and signs.
- Remain alert to changing conditions that might affect the conditions of the permits (i.e., require additional atmospheric monitoring or changes in PPE).
- Change and reissue the permit or issue a new permit, as necessary.
- Ensure periodic atmospheric monitoring is done according to permit requirements.
- Ensure that personnel performing the work and all support personnel adhere to permit requirements.
- Ensure the permit is canceled when the work is done.
- Ensure the confined space is safely closed and all workers are cleared from the area.

Entry Supervisors

Entry Supervisors will:

- Be qualified and authorized to approve confined space entry permits.
- Determine if conditions are acceptable for entry by determining the hazards.
- Authorize entry and oversee entry operations.
- Terminate entry procedures, as required.
- Serve as an Attendant if the person is trained and equipped appropriately for that role.
- Ensure measures are in place to keep unauthorized personnel clear of the area.
- Check the work at least twice a shift to verify and document permit requirements are being observed (more frequent checks shall be made if operations or conditions are anticipated that could affect permit requirements).

- Ensure that necessary information on chemical hazards is kept at the worksite for the employees or rescue team.
- Ensure a rescue team is available and instructed in their rescue duties (i.e., an onsite team or a prearranged outside rescue service).
- Ensure the rescue team members have current certification in first aid and Cardiopulmonary Resuscitation (CPR).

Attendants

The Attendants will:

- At least one attendant will be stationed outside of the confined workspace for the duration of entry operations. The Rescue team will be called in if the Attendant is assigned to multiple spaces to respond to an emergency.
- Be knowledgeable of and be able to recognize potential confined space hazards.
- Maintain a sign-in/sign-out log with a count of all persons in a confined space, and ensure all entrants sign in and out.
- Monitor surrounding activities to ensure the safety of personnel.
- Maintain effective and continuous communication with personnel during confined space entry, work, and exit.
- Order personnel to evacuate the confined space if he/she:
    - Observes a condition which is not allowed on the entry permit.
    - Notices the entrants acting strangely, possibly from exposure to hazardous substances.
    - Notices a situation outside the confined space which could endanger personnel.
    - Notices a hazard within the confined space that has not been previously recognized or taken into consideration.
    - Leaves his/her workstation or must focus attention on the rescue of personnel in some other confined space that he/she is monitoring.
    - Immediately summon the Rescue Team if crew rescue becomes necessary.
    - Keep unauthorized persons out of the confined space, order them out, or notify authorized personnel of an unauthorized entry.

Rescue Team

The Rescue Team members will:

- Complete a training drill using mannequins or personnel in a simulation of the confined space prior to the issuance of an entry permit for any confined space and at least annually thereafter.
- Respond immediately to rescue calls from the Attendant or any other person recognizing a need for rescue from the confined space.
- In addition to emergency response training, receive the same training as that required of the authorized entrants.
- Have current certification in first aid and CPR.

Entrants/Affected Employees

Entrants/Affected Employees will:

- Participate in the development and implementation of all aspects of the permit-required confined space entry program.
- Read and observe the entry permit requirements.
- Remain alert to the hazards that could be encountered while in the confined space.
- Properly use the PPE that is required by the permit.
- Immediately exit the confined space when 1) they are ordered to do so by an authorized person, 2) they notice or recognize signs or symptoms of exposure, 3) a prohibited condition exists or 4) the automatic alarm system sounds.
- Alert Attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

C. DEFINITIONS

1. Confined Space:

    - A working space that meets the criteria listed below:
        - Large enough for someone to enter and work.
        - Limited or restricted means for entry or exit.
        - Not designed for continuous occupancy.
    - Examples of possible confined spaces: tanks, transformers, circuit breakers, ventilation or exhaust ducts, tunnels, and pipelines.

2. Enclosed Space:

    - A working space that meets the criteria listed below:
        - Large enough for someone to enter and work.
        - Limited or restricted means for entry or exit.
        - Is designed for periodic employee entry under normal operating conditions.
    - Note: This space under normal conditions does not contain a hazardous atmosphere but may while under abnormal conditions.
    - Examples of enclosed spaces: a manhole, vault, switching cubicle, tunnel, or shaft.

3. Hazardous Atmosphere:

    - An environment that may expose employees to the risk of death, incapacitation, injury, impairment of ability to self-rescue (escape unaided from an enclosed space), or an acute illness from one or more of the following causes:
        - Atmospheric oxygen concentration that's below 19.5% or above 23.5%.
        - Flammable gas, vapor, or mist that is more than 10% of its lower flammable limit.
        - Any other atmospheric condition that is immediately dangerous to life or health.

4. Permit-Required Confined Space:

    - A confined space that has one or more of the following characteristics:
        - Contains or has the potential to contain a hazardous atmosphere.
        - Contains material which has the potential for engulfing an entrant.
        - Has an internal configuration where an entrant may become entrapped or asphyxiated by inwardly converging walls or by a floor sloping downward and tapering to a smaller cross-section.
        - Contains any other recognized serious safety or health hazard (i.e., a safety hazard that exposes entrants to the risk of death, incapacitation, impairment of ability to self-rescue, or injury.)

5. Vented Vault:

    - A vault that has provisions for air changes using exhaust stacks and low-level air intakes operating at differentials of pressure and temperature providing for air flow which precludes the development of a hazardous atmosphere.

D. HAZARD DETERMINATION

- Abbott Electric does not intend to perform the initial evaluation of any confined space. It has chosen to rely upon the evaluation performed by the host employer or its designee to satisfy the requirements for safe entry into the confined space. Abbott Electric will leave it up to the host employer to coordinate operations if multiple employers are working in the same confined space.
- Abbott Electric's employees are not trained to enter and/or work in confined spaces that require the use of a "full permit" for entry or work in confined spaces where IDLH conditions are present.
- Our employees are trained to work in enclosed spaces or confined spaces that can utilize "Alternative Procedures" for entry and work, or one that does not require a permit (i.e. a Non-Permit Required confined space.) As these spaces will be treated in the same manner to ensure safe entry the terms confined space and enclosed spaces will be used interchangeably in this program.
- Abbott Electric will go through the necessary provisions and procedures for the protection of employees from external hazards including, but not limited to, pedestrians & vehicles.
- Entering any confined space can be very hazardous unless proper safety precautions are taken. For example, a person might work in a small area under several adverse conditions, such as poor lighting, slippery work surfaces, excessive noise levels, toxic and flammable gases, and oxygen deficient atmosphere.
- There must be a means of communication in place and operable to summon rescue if necessary.
- Employees, or their representatives, are entitled to request additional monitoring at any time.
- Rescue services will be either provided by the host facility or provided by an outside service which is given an opportunity to examine the entry site, practice rescue. The

rescue team selected will be equipped and trained to perform the needed rescue services. This is site-specific.

- Proper safety precautions shall be taken to ensure these conditions are controlled such that Abbott Electric employees who are required to work in confined spaces are provided with a safe and healthy work environment.

E. CONFINED SPACE ENTRY: NON-PERMIT

- Confined spaces may be classified as non-permit spaces if all atmospheric and/or other safety hazards are eliminated. A reclassification worksheet will be used to ensure that steps are taken to identify that the hazards have been removed.
- When changes occur within or to a non-permit space that may create an atmospheric hazard, the following actions will be taken:
    - Evacuate the space immediately.
    - Competent Person will reevaluate the space.
    - Competent person will determine how the hazardous atmosphere developed.
    - Eliminate condition(s) that created the problem, if possible.
    - Reclassify as permit-required, if necessary.
- Hazards of confined space entry:
    - Confined space entry procedures.
    - Confined space rescue procedures.
- Appropriate rescue equipment must be available to ensure the prompt and safe rescue of Abbott Electric employees from the confined space.
- Before removing the entrance cover to any confined space, identify and remove all hazards:
    - Check for the presence of atmospheric pressure or temperature differences.
    - Evaluate the possibility of a hazardous atmosphere: oxygen deficiency, flammable gases, Carbon Monoxide (CO), or Hydrogen Sulfide (H2S) by checking for expected conditions within the location.
- As mentioned above, Abbott Electric employees are prohibited from entering any “permit required” confined space because they have not been trained to do so. Therefore, do not utilize procedures for closing out the permit or terminating permits.
- Test instruments used to monitor atmospheres in a confined space must be kept in calibration according to manufacturer’s recommendations.
- Before an employee enters a confined space, the internal atmosphere must be tested from outside the space for oxygen deficiency (and flammable gases and vapors, as appropriate) with a direct-reading meter or similar instrument capable of collection and immediate analysis of data samples without the need for off-site evaluation.
- Notes:
    - If oxygen levels are below “normal” the flammability test will not be accurate.
    - If it is not anticipated that a “hazardous atmosphere” could develop, the atmosphere within the confined space must be periodically or continuously

monitored (area monitors, personal monitors, etc.), to ensure that the accumulation of a hazardous atmosphere does not occur.

- If it is reasonably anticipated that a “hazardous atmosphere” could develop, continuous forced-air ventilation shall be used, and the atmosphere within the confined space shall be continuously monitored (area monitors, personal monitors, etc.), to ensure that the continuous forced-air ventilation is preventing the accumulation of a hazardous atmosphere.
- Be sure a hazardous atmosphere (Immediate Danger to Life and Health or IDLH) does not exist within the confined space when an individual is inside.

- When it has been determined that the space is safe for entry, a written certification will be made available to each employee entering the confined space. The “Confined Space Checklist” at the end of this program can be used for this purpose.
- If a hazardous atmosphere is detected upon entry or while working the following actions will be taken:
  - Evaluate the confined space entry immediately.
  - Evaluate how the hazardous atmosphere developed.
  - Take actions to ensure the hazardous atmosphere is controlled or perform pre-entry testing just prior to re-entry to ensure the atmosphere is safe for re-entry.
- If flammable gases or vapors are detected, or an oxygen deficiency is found, forced air ventilation will be used to maintain oxygen at a safe level and to prevent a hazardous concentration of gases or vapors from accumulating. It is permissible to use a continuous monitoring program in place of ventilation to ensure that there is no increase in flammable gas or vapors, once safe levels of these substances have been detected.
- If continuous forced air ventilation is used, it will begin before any entry occurs into the confined space or enclosed space and must be maintained until a safe atmosphere is confirmed, before Abbott Electric employees are allowed to enter the work area.
- The ventilation will be directed so that it ventilates the immediate area where Abbott Electric employees are present within the confined space. Forced ventilation will continue until all Abbott Electric employees have left the space unless continuous monitoring is used.
- The air supply for continuous forced ventilation must be from a clean source and must not increase the hazards in the confined space. If open flames are used in the confined space, perform a test for flammable gases and vapors immediately before the open flame device is used and at least once per hour while the device is in use. Conduct testing more often if conditions within the confined space indicate that once per hour is insufficient to detect hazardous accumulations of flammable gases or vapors.

F. ENTRY PERMITS

The Confined Space Entry Permit is the most essential tool for assuring safety during entry in confined spaces with known hazards, or with unknown or potentially hazardous atmospheres. The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered. The permit should be used to establish appropriate conditions. Before each entry into a confined space, an entry permit will be completed by the Responsible Person. The Responsible Person will then communicate the contents of the permit to all

employees involved in the operation and post the permit conspicuously near the work location. A standard entry permit shall be used for all entries.

Key Elements of Entry Permits

A standard entry permit shall contain the following items:

- Space to be entered.
- Purpose of entry.
- Date and authorized duration of the entry permit.
- Name of authorized entrants within the permit space.
- Means of identifying authorized entrants inside the permit space (i.e., rosters or tracking systems).
- Name(s) of personnel serving as Attendant(s) for the permit duration.
- Name of individual serving as Entry Supervisor, with a space for the signature or initials of the Entry Supervisor who originally authorized the entry.
- Hazards of the permit space to be entered.
- Measures used to isolate the permit space and to eliminate or control permit space hazards before entry (i.e., lockout/tagout of equipment and procedures for purging, ventilating, and flushing permit spaces).
- Acceptable entry conditions.
- Results of initial and periodic tests performed, accompanied by the names or initials of the testers and the date(s) when the tests were performed.
- Rescue and emergency services that can be summoned, and the means of contacting those services (i.e., equipment to use, phone numbers to call).
- Communication procedures used by authorized entrants and Attendant(s) to maintain contact during the entry.
- Equipment to be provided for compliance with this Confined Space Program (i.e., PPE, testing, communications, alarm systems, and rescue).
- Other information necessary for the circumstances of a particular confined space will help ensure employee safety.
- Additional permits, such as for hot work, have been issued to authorize work on the permit space.
- Ensure the permit is canceled when the work is done.
- When work is complete in a reclassified confined space, the entry supervisor documents this on the permit. This terminates the permit and returns the confined space into a permit-required space. No one can re-enter the confined space after terminating the permit, unless you issue a new permit.
- When work is complete in a reclassified confined space, the entry supervisor documents this on the permit. This terminates the permit and returns the confined space into a permit-required space. No one can re-enter, as a permit is only valid for one shift. For a permit to be renewed, the following conditions must be met before each re-entry into the confined space:

  - Atmospheric testing should be conducted, and the results should be within acceptable limits. If atmospheric test results are not within acceptable limits, precautions to protect entrants against the hazards should be addressed on the permit and should be in place.
  - The Responsible Person shall verify that all precautions and other measures called for on the permit are still in effect.
  - Only operations or work originally approved on the permit shall be conducted in the confined space.

- A new permit shall be issued, or the original permit will be reissued, if possible, whenever changing work conditions or work activities introduce new hazards into the confined space. The Responsible Person shall retain each canceled entry permit for at least one year to facilitate the review of the Confined Space Entry Program. Any problems encountered during an entry operation shall be noted on the respective permit(s) so that appropriate revisions to the confined space permit program can be made. Changes in the use or configuration of a permit-required confined space may only be reclassified as a non-permit confined space when a competent person determines that all the applicable requirements have been met.

G. TRAINING

All affected employees who will enter confined spaces will be trained prior to initial assignment, changes in assigned duties, or upon the creation of new hazards in entry procedures and assigned duties. Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry.

Training shall include:

- Training and PPE will be at no cost to the employee and in both a language and vocabulary that the employee can understand.
- Training will be conducted before the employee is assigned confined space entry, before there is a change in assigned duties, and when there is evidence of deviation from the permit.
- Explanation of the general hazards associated with confined spaces.
- Discussion of specific confined space hazards associated with the facility, location, or operation.
- Reason for, proper use, and limitations of PPE and other safety equipment required for entry into confined spaces.
- Explanation of permits and other procedural requirements for conducting a confined space entry.
- A clear understanding of what conditions would prohibit entry.
- Procedures for responding to emergencies.
- Duties and responsibilities of the confined space entry team.
- Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and methods for alerting the Attendant(s).

- Refresher training shall be conducted, as needed, to maintain employee competence in entry procedures and precautions.

Specific Training

Training for atmospheric monitoring personnel includes proper use of monitoring instruments, and instruction on the following:

- Proper use of the equipment.
- Calibration of equipment.
- Sampling strategies and techniques.
- Exposure limits (PELs, TLVs, LELs, UELs, etc.).

Training for Attendants includes the following:

- Procedures for summoning rescue or other emergency services.
- Proper utilization of equipment for communicating with entry and emergency/rescue personnel.

Training for Rescue Team and Emergency Response Personnel includes:

- Evaluation of a Rescuers' ability to respond to a recue summons in a timely manner.
- Evaluation of a Rescuers' service ability in terms of proficiency with tasks and equipment.
- Selection of a rescue team that has the capability to reach the victim within a time frame appropriate for the permit.
- The rescue team agrees to notify Abbott Electric immediately if the rescue service becomes unavailable.
- Inform the rescue team of the hazards that they may confront.
- Provide the rescue team with access to all permit spaces from which rescue may be necessary.
- Rescue plans and procedures developed for each type of confined space that is anticipated to be encountered.
- Use of emergency rescue equipment.
- First aid and CPR techniques.
- Practice making permit space rescues before attempting an actual rescue and at least every 12 months by means of simulated rescue operations, or rescue of actual persons from entry spaces.
- Work location and confined space configuration to minimize response time.

Verification of Training

- Periodic assessment of the effectiveness of employee training will be conducted by the Responsible Person. Training sessions will be repeated as often as necessary to maintain an acceptable level of personnel competence. The employer should maintain records with employee name, name of the trainer, and dates of training. The documents must be available for the duration of that employee's employment.

DISCIPLINARY PROGRAM

A. PURPOSE AND SCOPE

The goal of this program is to provide information for Abbott Electric to conduct their operations so that injuries to people, damage to property and/or the environment will be avoided. Every effort will be made to prevent accidents. The objective is to provide a clean, safe, and healthy working environment for all Abbott Electric employees. It is Abbott Electric's intention to comply with all safety and health standards that are enforced by local, state, or federal authorities.

The Administrative Procedures identified here more specifically address the requirements as identified in 1926.20(b) Accident prevention responsibilities to initiate and maintain such programs and 1926.21 Safety training and education to recognize, avoid and prevent unsafe conditions.

Abbott Electric will provide engineering controls, administrative controls, PPE, and training to abate hazards and to prevent injury and illness. Abbott Electric has developed policies, rules, and procedures which will contribute to the safety of all Abbott Electric employees.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Monitor the implementation and enforcement of the policies and procedures established by this safety program, as well as the requirements set forth by federal, state, and local regulations.
- Serve as the Chairman of the Safety Committee and ensure that the following actions are implemented:
    - Review the conditions of the workplace and jobsites.
    - Develop an effective plan to address the abatement of hazards.
    - Provide on-going safety training to workers, supervisors, safety committee members, and management.
    - Maintain all records and documents associated with the safety program and generate all required reports.
    - Conduct accident and incident investigations and provide corresponding reports.
    - Maintain an effective system of communication between workers, supervisors, and management relevant to the safety program and abatement of hazards.
    - Communicate company policies and procedures with other contractors, subcontractors, and hosts to ensure that all work is performed in a safe and compliant manner.
    - Conduct a periodic review of the safety program as a whole and make revisions, as needed, to address changing regulations or conditions.

Management

Management will:

- Provide the time, resources, and authority needed to develop and execute the safety program.
- Monitor the progress of the safety program and take action to ensure its success. This includes the review of incident reports, accident reports, policies, procedures, and written communication.
- Lead by example and follow the same policies, procedures, and rules established for the workers.

Supervisors

Supervisors will:

- Ensure a “competent person” is available, as needed, for each work area, or jobsite. Competent persons will have the knowledge to recognize hazards and the authority to take appropriate action.
- Evaluate their assigned work areas. They will identify hazards and take action to abate the hazards in accordance with federal, state, and local regulations as well as the policies, procedures, and rules established by Abbott Electric.
- Inspect and monitor their assigned work areas.
- Ensure that all work is performed safely and in accordance with federal, state, and local regulations, as well as the policies, procedures, and rules established by Abbott Electric.
- Enforce the policies, procedures, and rules established in the safety program in accordance with Abbott Electric employee’s disciplinary policy.
- Assist in the on-going training of workers by conducting periodic safety talks and activities. They will also bring any problems or concerns of the workers to the attention of management, the Safety Director, and/or the Safety Committee.
- If requested, will serve on the Safety Committee and complete assigned tasks needed to execute the safety program.

Employees

Employees are:

- Required to work safely in accordance with state, federal, and local regulations, as well as the rules established by Abbott Electric. This will include, but is not limited to, OSH Act 5(b) “Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.”
- Required to notify their supervisor immediately of any unsafe acts or conditions they observe.
- Encouraged to take an active role in the safety program and make recommendations to improve the program.

C. SAFETY RULES

- All Abbott Electric safety policies and procedures must be followed.
- Anyone known to be under the influence of alcohol and/or drugs shall not be allowed on company property. Persons with symptoms of alcohol and/or drug abuse are encouraged to discuss personal or work-related problems with the supervisor/or employer.
- No one knowingly shall be permitted or required to work while his or her ability or alertness is impaired by fatigue, illness, or other causes that might expose the individual or others to injury.
- Horseplay, scuffling, and other acts which tend to endanger the safety or wellbeing of Abbott Electric employees are prohibited. Fighting or instigating fights will not be tolerated.
- All injuries shall be reported promptly to the supervisor/employer so that arrangements can be made for medical and/or first aid treatment.
- Work shall be well-planned and supervised to prevent injuries when working with equipment and handling heavy materials. When lifting heavy objects, Abbott Electric employees should bend their knees and use the muscles of the legs instead of the smaller muscles of the back.
- Abbott Electric employees should check to see that all guards and other protective devices are in place and properly adjusted and should report deficiencies to management.
- Abbott Electric employees should not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties unless they have received instructions from their supervisor/or employer. Only trained and authorized Abbott Electric employees shall operate machinery, equipment, tools, or company vehicles.
- All tools and equipment must be inspected before and after each use. NEVER use damaged equipment. Destroy or tag defective tools and equipment out of service.
- Observe all warning signs and tags. Ask your supervisor if you are not sure what they mean.
- All power tools and sources of ignition that may be present should be turned off or disconnected before working with solvent materials with a low flashpoint. Smoking is only allowed in designated areas.
- Machinery must not be repaired or adjusted while energized, or in operation. All adjustments and repairs must be done in accordance with the Hazardous Energy Control Plan.
- Abbott Electric employees should cleanse thoroughly after handling hazardous substances and follow special instructions from authorized sources.
- Sturdy work shoes, preferably high-top leather with nonskid soles, are recommended. Inappropriate footwear must not be worn. Insulated shoes should be worn, as needed. Only clothing that will not contribute to injury from electric arcing and burns shall be worn. Flame Resistant (FR) clothing may be needed per our Electrical Safety Program. Pants should be long-legged. Hats and gloves must be worn when necessary. Loose or frayed clothing, dangling ties, finger rings, etc. must NOT be worn around moving machinery or other places where they can get caught.

- Approved protective equipment shall be worn in specified work areas and in the execution of tasks that require their use.
- In addition to the rules established here, Abbott Electric employees are expected to follow all safety policies, procedures, and instructions provided in training.

D. ACCIDENTS/INCIDENTS

- Each Abbott Electric employee has the responsibility to immediately report all work-related accidents, incidents (near miss accidents), or illnesses to his/her supervisor.
- Unsafe acts and conditions observed by any employee should immediately be brought to the attention of the supervisor.
- Supervisory personnel are required to document all accidents, incidents, illnesses, and unsafe acts and conditions reported by Abbott Electric employees and submit a report to the Safety Director as soon as possible.
- Supervisory personnel are required to immediately take the appropriate corrective action that will ensure the prevention of future accidents and/or incidents.
- The Safety Director will ensure that a thorough investigation of the incident/accident is made and that additional corrective action, if required, is taken.
- In the case of a fatality or hospitalization of three or more Abbott Electric employees the Safety Director will be notified as soon as possible. The Safety Director will notify the local OSHA Office or contact 1-800-321-OSHA to report the accident within 8 hours of receiving notice of it.

E. RECORDS

- The Safety Director will ensure that all records and documents related to the safety program are properly maintained. This includes safety data sheets, accident/incident reports, and the OSHA Log and Summary.
- The Safety Director will ensure accidents are entered in the OSHA log within 6 days of knowledge of the accident.
- Medical records, if required, will be kept with the physician administering the service.
- Requests for documents and records should be submitted to the Safety Director.

F. COMMUNICATION AND TRAINING

- No employee will be allowed to perform a job or task unless they have received training on the hazards present and the precautions necessary to perform the job safely. The Safety Director will ensure the following training is provided:
    - **Orientation Training**

      Each new and newly assigned worker will participate in a safety orientation training session. Participants will be instructed in all elements of the safety program and will complete all safety training required by federal and local agencies.

    - **Refresher Training**

      On-going safety training will be a primary component of Abbott Electric employee's safety program. This training may take the form of classroom or on-the-job instruction. The Safety Director and Safety Committee will establish a training

agenda. This agenda will include all refresher training required by federal, state, and local agencies.

- **Job Briefings**

  Jobsite supervisors will conduct a job briefing at the beginning of each shift. Briefings will be performed per Abbott Electric employee protocols and the briefings checklist used. The job briefing will identify job assignments, procedures to be followed, and the actions that will be taken to protect workers in the performance of their assigned tasks. Additional briefings will be conducted as tasks, assignments, or conditions warrant.

- **Safety Talks/Meetings**

  The Safety Director will ensure that periodic safety talks, activities, and meetings are conducted by supervisors on the job. They will provide refresher training to workers and introduce new policies, procedures, and hazard controls to be applied. The meetings will also serve as a means for workers to bring safety concerns to the attention of management.

- **Management/Supervisor/Safety Committee Training**

  Special training will be provided to management, supervisors, and safety committee members. This training will address the requirements of OSHA regulations and the best safety practices used in our industry. Training will be provided on an on-going basis so that our safety program is kept current and effective.

G. SAFETY EVALUATIONS & INSPECTIONS

- The training agenda will also be based on a recent hazard analysis and review of accident/incident reports.
- Hazard Specific Training

  Before beginning a new job, a review of the hazards will be conducted by the supervisor. Training will be provided for any new hazards introduced to the workers. This may include the introduction of new substances, equipment, tools, processes, or procedures.

- Each employee will perform a safety check of the work area at the beginning of the shift. They will also check equipment, tools, and PPE before each use.
- The supervisor will evaluate their assigned work area for hazards and ensure that a plan is established to abate hazards. They will ensure that hazards are abated in accordance with federal, state, and local regulations, as well as the policies, procedures, and rules established by Abbott Electric.
- Supervisors will inspect the work area, equipment, tools, and protective equipment at the beginning of each shift. Supervisors will continue to monitor activity throughout the shift so that incidents/accidents are prevented.
- The Safety Director, Safety Committee, or an assigned representative will perform periodic inspections. A report of the inspections will be generated, and action taken to improve the safety and health of workers.

H. MULTI-EMPLOYER WORKSITE POLICY

- The Safety Director will ensure that all safety procedures are reviewed with the Host Employer, General Contractor, and Affected Contractors before a job begins. Specific written policies and procedures will be shared. This review will include material safety data sheets, labeling, emergency action plans, and the interpretation of signs and tags. All relevant information will be communicated to supervisors and workers.

I. VISITORS

- No visitors will be allowed on company property or jobsites unless they have received permission from a designated Abbott Electric representative and completed all necessary paperwork.
- Visitors entering will be escorted by designated personnel and receive a briefing on appropriate safety precautions to be observed. Required PPE will be provided, as needed.

J. DISCIPLINARY POLICY

- Abbott Electric strives to create a safe and healthy workplace for all Abbott Electric employees. To achieve this objective, it will require the cooperation of everyone. Supervisors must enforce all company safety policies and procedures.
- If any employee deliberately fails to follow the prescribed safe work procedure, or deliberately fails to use the prescribed safety equipment, disciplinary action may be initiated, and these actions will be documented.
- Incidents that involve imminent danger, or in the opinion of the supervisor, show a complete disregard for safety will be immediately referred to management for appropriate action.

K. SAFETY COMMITTEE

- Abbott Electric has established a joint employee-management safety committee to protect the safety and health of its employees.
- **The Safety Committee will:**
    - Perform an ongoing evaluation of the safety program.
    - Review the conditions of the workplace and assist in developing plans to address the hazards and comply with OSHA regulations.
    - Review all documents, records, and reports associated with the safety program and recommend actions to improve performance and compliance with OSHA regulations.
    - Review all communication between workers, supervisors, and management relevant to the safety program and recommend actions to be taken.
    - Accept and complete assigned tasks needed to execute the safety program.
- **Organization of the Safety Committee**
    - The Safety Committee will be comprised of supervisors and selected workers who have taken an interest in safety. The Safety Director will serve as a representative of management and act as Chairman of the Safety Committee.

- **Safety Committee Procedures**
  - The safety committee will meet once a month.
  - The Chairman will establish an agenda to be followed.
  - The Chairman will ensure that minutes of each meeting are taken. The Chairman will review the results of the meeting with management and take appropriate actions.
  - A report of the meeting will be posted or communicated to Abbott Electric.

ELECTRICAL SAFETY AWARENESS PROGRAM

A. PURPOSE AND SCOPE

A universal safety concept is to control all forms of hazardous energy. This applies to all forms of energy, including mechanical, pneumatic, hydraulic, and electric. This Electrical Safety Program will focus on safely working with electrical hazardous energy. Abbott Electric normally does work covered by OSHA's 29 CFR 1910.147, Subpart S Electrical of the General Industry Standards & Subpart K Electrical of the Construction Industry Standards and the National Electrical Code (NEC). In some instances, work is done that is covered by OSHA's 29 CFR 1910.269 & 1926 Subpart V and the National Electrical Safety Code (NESC). It also recognizes NFPA 70E as the Standard for Electrical Safety in the Workplace, which offers guidance on certain electrical safety procedures.

OSHA and the NFPA 70E:

- OSHA requirements are not recommendations. There are a number of OSHA requirements that address the hazards of working on or near exposed energized parts for construction and maintenance work. These requirements are often written in performance language, requiring compliance without necessarily stating how to comply.
- The NFPA 70E, Standard for Electrical Safety in the Workplace, is written in prescriptive language and is an important national consensus standard that defines the requirements for an overall electrical safety program.
- As such, the procedures found within this policy are taken directly from the NFPA 70E - Electrical Safety in the Workplace and will cover most of the work locations and tasks our electricians and contractors face. It is NOT all encompassing.
- Certain tasks performed on very high hazard electrical systems and equipment, those with high level available fault currents and/or long fault clearing times, or exposures exceeding 600 volts will require the direct use of the current edition of the NFPA 70E standard to determine proper PPE and safe work practices and procedures.

B. RESPONSIBILITIES

General Contractor/Host

The General Contractor/Host will:

- Review the letter provided by Abbott Electric on Customer or General Contractor electrical related hazards and responsibilities.
- Inform the Abbott Electric Safety Director of known hazards associated with electrical installation, maintenance, or repair that is related to the work Abbott Electric will be performing and might not be recognized by our employees.
- Inform the Abbott Electric Safety Director about the installation that the contract employer needs to make the assessments.
- Report any safety violations that are observed concerning Abbott Electric employees to the Abbott Electric Safety Director.

Safety Director

The Safety Director will:

- Monitor this Electrical Safety Program. Questions regarding this program and any information associated with it should be directed to the Safety Director.
- Ensure that all Abbott Electric employees are properly trained for the tasks they will perform. Only persons specifically approved by the Safety Director may install, modify, repair, or work on electrical conductors and equipment.
- Participate in the approval of all energized work and preparation of the Energized Electrical Work Permit required for work to begin.
- With the assistance of the supervisor and/or their designees, perform periodic assessments of Abbott Electric employees to ensure their abilities are appropriate for the tasks performed.
- Perform an annual audit of the electrical safety principles identified in this program.

Supervisors

Supervisors will:

- Ensure that safe work methods and procedures are being utilized.
- Ensure that the right tools are available and used for the jobs performed.
- Ensure that the required inspections, testing, and maintenance is being performed. Where tools or equipment are found to be defective, they shall be tagged, removed from service, and reported to the Safety Director as soon as possible.

Employees

All employees:

- Must continuously remain alert to his or her surroundings and the work activities being performed.
- Will follow all safety procedures described in this program.
- Will perform inspections on all equipment and tools before each use. When tools or equipment are found to be defective, they shall be tagged, removed from service, and reported to supervision as soon as possible.
- Shall report any conditions or activities which pose a risk to themselves or others. Remember, when you see that a safety rule is being violated, that silence is consent!
- Will refer all questions to the Safety Director or supervisor.

C. LOCK OUT

The following basic principles are the foundation upon which this electrical safety program has been established. All Abbott Electric employees including management, the Safety Director, and Supervisors shall apply these principles to all tasks.

- When working on or near exposed de-energized parts, they will be treated as live.
- The inspection and evaluation of electrical equipment will be part of all procedures.

- All electrical conductors and circuit parts should be considered energized until tested and placed in an electrically safe working condition.
- The integrity of equipment enclosures and insulation shall be maintained unless exposure is deemed necessary, and actions have been taken to provide the appropriate protection (e.g. work cannot be performed with the enclosure in place and equipment and conductors have been placed in an electrically safe work condition or an Energized Electrical Work Permit has been completed in accordance with this program.)
- Work will not begin on a job unless a written plan is in place identifying the procedures to be used. Jobs which have not been performed, and for which no plan exists, will require the development of a new plan.
- The primary method for ensuring safety is to de-energize, or create an electrically safe work condition, in accordance with the Abbott Electric Lockout/Tagout (LOTO) program.
- Work that must be performed energized shall be justified as follows and requires completion and approval of an Energized Electrical Work Permit.
- Energized work shall only be justified when it can be demonstrated that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Energized parts that operate at less than 50 volts to ground shall not be required to be de-energized if there will be no increased exposure to electrical burns or to explosion due to electric arcs.
- Examples of increased or additional hazards include, but are not limited to, interruption of life support equipment, deactivation of emergency alarm systems, and shutdown of hazardous location ventilation equipment.
- Examples of work that might be performed on or near exposed energized electrical conductors or circuit parts because of infeasibility due to equipment design or operational limitations, include performing diagnostics and testing (e.g., start-up or troubleshooting) of electric circuits that can only be performed with the circuit energized, and work on circuits that form an integral part of a continuous process that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.
- While preparing for a job, an effort will be made to anticipate unexpected events through a hazard/risk evaluation, completion of a planning checklist, and job briefing.
- Based on the hazard/risk evaluation, actions will be taken to minimize or eliminate hazards and protect Abbott Electric employees from shock, burn, blast, and other hazards due to the working environment.
- Abbott Electric employees shall not knowingly be permitted to work on electrical circuits, parts, or equipment:
    - When their alertness is recognizably impaired due to illness, fatigue, or other reasons.
    - Where obstructions or the lack of illumination prevent a clear view of the work to be performed.

D. EMPLOYEE INFORMATION AND TRAINING

All Abbott Electric employees are trained in and familiar with:

- Safety-related work practices.
- Safety-related work procedures.
- Safety-related protective equipment.
- Safety-related PPE.

Qualified Abbott Electric employees are knowledgeable, trained, and have demonstrated proficiency in:

- Skills and techniques necessary to distinguish exposed live parts from other parts.
- Skills and techniques to determine the nominal voltage of exposed live parts.
- Minimum approach distances corresponding to those in Table S5 when working in the vicinity of overhead lines.

*****NOTE***** ONLY IBEW TRAINED EMPLOYEES WORK ON, AROUND, OR NEAR ENERGIZED AND NON-ENERGIZED SYSTEMS.

- The proper use of special precautionary techniques, PPE, insulating and shielding materials, and insulated tools, as required to perform the assigned work.
- Refresher training will be conducted prior to performing those tasks which have not been performed within the past year, or when observation of the employee's work performance demonstrates the need for refresher training.
- A Job Briefing shall be conducted as described in the administrative section of this manual.

ENERGIZED ELECTRICAL WORK

A. PURPOSE AND SCOPE

- This program has been established to keep our electrical workers safe from hazards associated with energized electrical work tasks. Using this policy will help keep our NECA and IBEW electrical contractors compliant with state and federal requirements for employee safety in the workplace.
- OSHA and NFPA 70E standards require that all energized circuit parts and equipment be DE-ENERGIZED before any employee works on or near them. De-energizing must be used as the primary method of worker protection from electrical hazards.
- Exemptions to Work Permit: There are very few exceptions to this rule. Work performed on or near live parts by qualified persons related to tasks such as testing, troubleshooting, voltage measuring, etc. shall be permitted to be performed without an energized electrical work permit, provided appropriate safe work practices and PPE in accordance with this procedure are provided and used.

B. DEFINITIONS

ARC FLASH HAZARD ANALYSIS:

- A study investigating a worker's potential exposure to arc-flash energy, conducted for the purpose of injury prevention and the determination of safe work practices, arc flash protection boundary, and the appropriate levels of PPE.

ARC FLASH HAZARD:

- A dangerous condition associated with the possible release of energy caused by an electric arc.

ARC RATING:

- The value attributed to materials that describes their performance against exposure to an electrical arc discharge.
- The Arc is expressed in cal/cm2 and is derived from the determined value of the Arc Thermal Performance Value (ATPV) or Energy of Break-open Threshold (EBT).

BOUNDARY, ARC FLASH:

- When an arc flash exists, an approach limit will be based on the distance from a prospective arc source within which a person could receive a second degree burn if an electric arc were to occur.

BOUNDARY, LIMITED APPROACH:

- An approach limit at a distance from an exposed energized electrical conductor or circuit part within which a shock hazard exists.

BOUNDARY, RESTRICTED APPROACH:

- An approach limit at a distance from an exposed energized electrical conductor or circuit part, within which there is an increased likelihood of electric shock due to electrical arc-over combined with inadvertent movement for personnel working near the energized electrical conductor or circuit part.

CALORIE PER CENTIMETER SQUARED (cal/cm2):

- The unit of measurement that is used to express the amount of thermal energy released during an arc flash event.

ELECTRICAL HAZARD:

- A dangerous condition where contact or equipment failure can result in electrical shock, arc flash burn, thermal burn, or blast.

ELECTRICALLY SAFE WORK CONDITION:

- A state in which an electrical conductor or circuit part has been disconnected from energized parts, locked and tagged in accordance with established standards, tested to ensure the absence of voltage, and grounded if determined necessary.

EMERGENCY PROCEDURES:

- Abbott Electric employees exposed to shock hazards will be trained and regularly instructed in methods of release and resuscitation of victims from contact with exposed energized electrical conductors or circuit parts.

ENERGIZED ELECTRICAL WORK (EEW):

- Working on or near exposed energized parts 50 volts or greater and/or within the flash protection boundary.

ENERGIZED ELECTRICAL WORK PERMIT:

- If live parts are not placed in an electrically safe working condition, work by a qualified person shall be performed by written permit only.
- Exception: Diagnostics, testing, troubleshooting, and voltage measuring shall be permitted to be performed without an EEW permit, provided appropriate safe work practices PPE is provided and used.

EQUIPMENT LABELING:

- Equipment shall be field marked with a label containing the available incident energy or required level of PPE.

PPE EXPOSED:

- As applied to energized electrical conductors or circuit parts: The capacity of being inadvertently touched or approached nearer than a safe distance by a person. It applies to energized parts that are not suitably guarded, isolated, or insulated.

HAZARD IDENTIFICATION AND RISK ASSESSMENT PROCEDURE:

- An electrical safety program shall include a hazard identification and risk evaluation procedure to be used before work is started within the Limited Approach Boundary or within the Arc Flash Boundary of energized electrical conductors and circuit parts operating at 50 volts or more, or where any electrical hazards exist.

HOST AND CONTRACT EMPLOYER RESPONSIBILITIES:

- The host employer (general contractor, customer or owner) and the contract employer(s) shall inform each other of existing hazards, PPE including arc-rated clothing requirements, safe work practices, and emergency & evacuation procedures applicable to the work to be performed. There shall be a documented meeting between the Host and Contract Employers. NFPA 70E

INCIDENT ENERGY:

- The amount of energy impressed on a surface, a certain distance from the source, generated during an electrical arc event. One of the units used to measure incident energy is cal / cm2.

JOB BRIEFING:

- Before starting each job, the employee in charge shall conduct a job briefing with the Abbott Electric employees involved. The briefing shall cover subjects identified on the Energized Electrical Work Permit such as hazards associated with the job, work procedures involved, special precautions, energy source controls, and PPE requirements.

LESS THAN 50 VOLTS:

- For voltages of less than 50 volts, the decision to de-energize should include consideration of the capacity of the source and any over current protection between the energy source and the worker.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

- Abbott Electric employees working in areas where electrical hazards are present shall be provided with, and shall use, protective equipment that is designed and constructed for the specific part of the body and for the work to be performed. The equipment shall be maintained in a safe, reliable condition and shall be visually inspected before each use.

QUALIFIED PERSON:

- A person who is trained and knowledgeable of the construction and operation of equipment or a specific work method and is trained to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method and has received safety training to recognize and avoid the hazards involved. Such persons shall also be familiar with the proper use of special precautionary techniques, personal protective equipment, including arc-flash, insulating and shielding materials, and insulated tools and test equipment. A person can be considered qualified in respect to certain equipment and methods, but still be unqualified for others.

RATING:

- Test instruments, equipment, and their accessories shall be rated for circuits and equipment to which they will be connected. They shall be inspected, and correct operation verified before and after an absence of voltage test is performed.

SAFETY TRAINING:

- Abbott Electric employees should be trained to understand the specific hazards associated with electrical energy. They will be trained in safety-related work practices and procedural requirements, as necessary, to provide protection from the electrical hazards associated with their respective job or task assignments. Abbott Electric employees will be trained to identify and understand the relationship between electrical hazards and possible injury.

SHOCK HAZARD ANALYSIS:

- A shock hazard analysis shall determine the voltage to which personnel will be exposed, boundary requirements, and the PPE necessary to minimize the possibility of electric shock to personnel.

WORK DE-ENERGIZED:

- Live parts shall be put into an electrically safe work condition (by de-energizing and using lockout/tagout) before an employee is exposed to electrical hazards.

(See Lockout / Tagout Procedures)

- When the employer can demonstrate that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operation limitations, energized work may be allowed.

Examples of increased or additional hazards:

- Interruption of life support equipment.
- Deactivation of emergency alarm systems.
- Shutdown of hazardous location ventilation equipment.

Examples of infeasibility due to equipment design or operational limitations:

- Diagnostics and testing/troubleshooting.
- Circuits that form an integral part of a continuous process that would otherwise need to be completely shut down to allow work on one circuit or piece of equipment.
- Once boundaries have been established, determine the level of potential arc flash hazard from the appropriate tables located in NFPA 70E or use the NECA PPE Selector Guide.

When using the tables of NFPA 70E

- Locate the specific electrical task or condition for the equipment to be worked upon, select the Arc Flash.
- Perform shock and arc flash hazard analysis to determine arc flash protection and shock protection boundaries, predict potential incident energies and select appropriate PPE.
- Keep in mind that Arc Flash Protection Boundary distances vary based on the amount of available fault current and the clearing times of overcurrent protection devices. Shock Protection Boundaries vary based on the nominal voltage and fixed electrical parts (buss) vs. moveable conductors (overhead lines = 10’ clearance).
- Default distances for this document: Shock - exposed fixed parts = 42” minimum Arc Flash & 4’ minimum for systems not exceeding maximum 100KA cycles (product of clearing time multiplied by available fault current)

Shock Boundaries

- Restricted Approach = 12” Limited Approach = 42” Arc Flash Boundary = 48” PPE Category. This number will identify what PPE is required for arc flash related hazards.
- Document your selections on the Energized Electrical work permit.
- Remember! Energized electrical work must be justified and only then shall qualified and protected people be allowed to cross these boundaries.

C. RESPONSIBILITIES

Safety Director

The Safety Director:

- Will receive all requests to work energized.
- Will coordinate the completion and approval of the Energized Electrical Work Permit and Hazard/Risk Assessment.
- Or their designee, shall ensure that all Abbott Electric employees are qualified and have received specific training needed to work energized on the project.
- Shall compile and maintain a list of authorized individuals who have received training that qualifies them to perform specific tasks energized.

Supervisor

The Supervisor will:

- Ensure that an Energized Electrical Work Permit is revised before allowing work to begin on an energized circuit.
- Confirm that the individuals assigned to work energized on the jobsite are authorized.
- Ensure PPE is provided and worn in accordance with the Hazard Assessment and Energized Electrical Work Permit.
- Ensure all boundaries are maintained.

Employee

Abbott Electric employees will:

- Not perform any energized work for which they have not been authorized.
- Comply with the Energized Electrical Work Permit and all company safety principles including the electrical safety principles.

D. ACTIONS

- Where planning has determined a phase of a project requires work to be performed energized, those involved will consult with the Safety Director.
- Any employee assigned to a task that feels that it must be performed energized will submit a request to the Safety Director.
- An Electrical Hazard Analysis will be performed. This involves conducting both a shock hazard and arc flash hazard analysis. The Host Company shall be consulted for any information needed to complete the analysis.

The following will be documented on Abbott Electric:

Hazard/Risk Assessment Sheet for that project:

- Shock Hazard Analysis Result.
- Limited, and Restricted Approach Boundary requirements.
- Flash Hazard Analyst.
- Flash Protection Boundary (FPB).

PPE when inside the FPB:

The Energized Electrical Work Permit shall be completed and approved for each task before work can begin. The Permit must include:

- A description of the circuit, equipment to be worked on, and the location.
- Justification for why the work must be performed in an energized condition.
- A description of the safe work practices to be employed
- Results of the shock hazard analysis
- Determination of shock protection boundaries
- Results of the flash hazard analysis
- The Flash Protection Boundary.

- The necessary PPE to safely perform the assigned task.
- Means employed to restrict access of unqualified persons from the work area with a distance of at least 10 feet.
- Evidence of completion of a job briefing, including a discussion of any job-specific hazards.
- Energized work approval signatures.

Exemptions to Work Permit:

- Work performed on or near live parts by qualified persons related to tasks such as testing, troubleshooting, voltage measuring, etc. shall be permitted to be performed without an energized electrical work permit, provided appropriate safe work practices and PPE, in accordance with this procedure, are provided and used.
- A single Energized Electrical Work Permit may be allowed for work that is routine and/or repetitive in nature, such as troubleshooting on a construction project. This permit must be on file with the Safety Director and a list of the specific tasks to which it applies identified. Abbott Electric employees must notify the Safety Director of any conditions that change, or if new hazards are introduced and a new permit is created.
- The Energized Electrical Work Permit shall be reviewed by each employee performing the work and will be maintained in the immediate work area.
- Abbott Electric employees working in areas where electrical hazards are present will be provided with and use protective equipment that is designed and constructed for the specific part of the body to be protected and for the work to be performed. Clothing and equipment shall comply with the specifications set forth by NFPA 70E for the task to be performed and the incident energy level to which they may be exposed.
- No Abbott Electric employees shall be allowed to work within the FPB where the incident energy level exceeds 167.36 J/cm2 (40 cal/cm2).
- Protective equipment must be maintained in a safe, reliable condition. The protective equipment will be visually inspected before each use. The requirements for periodic testing of electrical protective equipment found in the ANSI and ASTM standards referenced in NFPA 70E shall be used for this purpose.
- Protective clothing (i.e. AR apparel) shall be inspected before each use. The garment manufacturer’s instructions for the care and maintenance of AR apparel shall be followed.
- Clothing should cover potentially exposed areas as completely as possible. Shirt sleeves shall be fastened at the wrists, and shirts and jackets shall be closed at the neck.
- Work clothing or flash suits that are contaminated, or damaged to the extent their protective qualities are impaired, should not be used. Protective items that become contaminated with grease, oil, or flammable liquids or combustible materials should not be used.
- Conductive articles of jewelry and clothing (such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear, or metal frame glasses) should not be worn where they present an electrical contact hazard with exposed live parts.
- Abbott Electric employees must use insulated tools and/or handling equipment when working inside the Limited Approach Boundary of exposed live parts where tools or handling equipment might make accidental contact. Insulated tools will be protected from damage to the insulating material.

- Insulated tools will be rated for the voltages on which they are used.
- Insulated tools should be designed and constructed for the environment to which they are exposed and the manner that they are used.
- Fuse or fuse holder handling equipment, insulated for the circuit voltage, should be used to remove or install a fuse if the fuse terminals are energized. Ropes and hand lines used must be nonconductive. Fiberglass reinforced plastic rod and tube used for live line tools will meet the requirements of ASTM F 711.
- Standard Specification for Fiberglass-Reinforced Plastic (FRP) Rod and Tube Used; in Live Line Tools, 1989 (R1997).
- Portable Non-Conductive ladders should meet the requirements of ANSI standards for ladders listed in NFPA 70E. Portable ladders will have non-conductive side rails.
- Protective shields, protective barriers, or insulating materials should be used to protect each employee from shock, burns, or other electrically related injuries while that employee is working near live parts that might be accidentally contacted, or where dangerous electric heating or arcing might occur.
- Normally enclosed live parts that are exposed for maintenance or repair should be guarded to protect unqualified persons from contact with the live parts.
- Rubber insulating equipment used for protection from accidental contact with live parts should meet the requirements of the ASTM standards listed in NFPA 70E.
- Plastic guard equipment for protection of Abbott Electric employees from accidental contact with live parts, or for the protection of Abbott Electric employees, or energized equipment or material from contact with ground should meet the requirements of the ASTM standards listed in NFPA 70E).
- Conductive materials, tools, and equipment that are in contact with any part of an employee's body should be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include, but are not limited to, long conductive objects, such as ducts, pipes and tubes, conductive hose and rope, metal-lined rules and scales, steel tapes, pulling lines, metal scaffold parts, structural members, bull floats, and chains.
- When an employee works in a confined or enclosed space (i.e. a manhole or vault) protective shields, protective barriers, or insulating materials should be used as needed to prevent inadvertent contact with these parts. Doors, hinged panels, and the like should be secured to prevent their swinging into an employee and causing the employee to contact exposed live parts.
- Abbott Electric employees should not perform housekeeping duties inside the Limited Approach Boundary where there is a possibility of contact, unless adequate safeguards, such as insulating equipment or barriers, are provided to prevent contact.
- Barricades, signs, and warning tape shall be used to identify and maintain boundaries as determined by the Electrical Hazard Analysis.

E. EMPLOYEE INFORMATION AND TRAINING

Qualified Personnel (i.e. authorized to work energized) will be trained in:

- The applicable procedures associated with securing and implementing an Energized Electrical Work Permit.
- NFPA 70E.
- OSHA Electrical Safety Work Practices.
- Electrical safety work practices needed for the tasks to be performed.

Non-Qualified Personnel (workers who will assist, such as an electrical apprentice) will be trained in:

- The applicable procedures associated with securing and implementing an Energized Electrical Work Permit.
- NFPA 70E.
- OSHA Electrical Safety Work Practices.

Qualified and Non-Qualified personnel will:

- Receive retraining as needed.
- Participate in the job debriefing and understand all safety precautions determined by the applicable Energized Electrical Work Permit

ELECTRIC TRANSMISSION AND DISTRIBUTION SYSTEMS

A. PURPOSE AND SCOPE

- This procedure shall be used to provide a safer workplace with respect to the electrical hazards associated with electric transmission and distribution. It addresses the electrical safety requirements found in 1926 Subpart V Power Transmission and Distribution and 1910.269 Electric Power Generation, Transmission, and Distribution.
- It is the responsibility of the host and contract employers to share information related to safety-related work matters and they must coordinate work rules and procedures between them.

B. MINIMUM APPROACH DISTANCES (MADS)

- No employee may approach or take any conductive object closer to exposed energized parts as identified by OSHA in the Minimum Approach Distances (MAD) tables unless:
    - The employee is insulated from the energized part by using proper class rubber insulating gloves with protectors.
    - The energized part is insulated from the employee and any other conductive object at a different potential.

C. POSITIONING OF EQUIPMENT AND WORKERS

- Aerial equipment should be placed so that the employee can select and maintain a work position that will provide the best protection from potential hazards. When working outside

aerial lifts, the employee should select and maintain a work position that will provide the best protection from potential hazards. Before attempting to do any work on or around energized lines or equipment (e.g., busses, transformers, switchgear, and switching cubicles) the layout should be studied carefully so that a position can be taken that will provide the greatest amount of clearance. It is especially important that inadvertent movement be anticipated, and where practical, a position taken that will avoid contact with energized lines or equipment.

- When working on overhead conductors or busses from the pole, structure or aerial device, the worker should take a position below the energized part being worked, whenever practical. No employee may be immediately under the work area while work is in progress unless it is necessary to assist Abbott Electric employees working above.
- Where public safety is an issue, equipment shall be positioned at a location that provides the least hazard to the public while still being able to perform the work safely. Special precautions must be taken when booms, cranes, poles, etc. are maneuvered near energized conductors or exposed to traffic and other hazards.

D. APPAREL

- Any employee that is potentially exposed to hazards from flames or an electrical arc must wear clothing that is arc rated and will not ignite and continue to burn.
- When work is performed within reach of exposed energized lines or equipment, all exposed conductive articles (e.g., key or watch chains, rings, wrist watches or bands) should be removed or rendered nonconductive.
- Loose-fitting clothing, key or watch chains, rings, and wrist watches or bands present a hazard when climbing, working around rotating equipment, mobile equipment; therefore, they should not be worn when performing these tasks.

Note: Long hair also presents a hazard when working around rotating and reciprocating equipment; thus, a hair net should be worn when working in these areas.

E. PROTECTIVE COVER-UP

- Once workers reach a position within reach of energized circuits, they should immediately cover with electrical protective equipment all live parts (e.g., adjacent wires, cables, neutrals and associated parts) and any paths-to-ground with which a worker could make accidental or incidental contact. This includes the covering of the conductor, cable, or associated parts being worked on, in so far as practical, while still leaving room to perform the work. The reason for covering conductors, neutrals, and associated parts, and paths-to-ground is to limit the likelihood of incidental contact with phase wires and paths-to-ground in case a worker should slip, or in some manner make an unanticipated move that could result in the accidental or incidental contact with live parts or a path-to-ground. Therefore, the electrical protective cover-up installed around the work area shall be arranged to limit the likelihood of any contact with live parts or paths-to-ground.
- When all work is completed, the protective equipment should be removed in a manner that provides the worker with maximum protection at all times while removing the electrical protective equipment and moving out of the energized area.

F. OVERHEAD WORK

- The appropriate Class II or III rubber insulating gloves with glove protectors should always be worn on both hands when working on, within reach, or extended reach of 25 kV or less, phase-to-phase, or 15 kV or less phase-to-ground. A hardhat, safety glasses, and FR clothing are also required to be worn. These requirements exist regardless of the type of work being performed and even when protective equipment is in place or is being installed.

Note: For voltages from 0 - 600 volts, Class "0" gloves with protectors may be worn provided all MADs are maintained at all times. Note: Class "00" gloves are available for use under 500V.

- When installing or removing insulated protective equipment without the use of a live-line tool and when working directly on energized conductors above 5 kV phase-to-phase, the following additional rules should be complied with:
    - Workers should isolate themselves from ground contact by use of an insulated aerial device. Approved insulated platforms may be utilized on voltages less than 15 kV phase-to-phase. Any equipment used for this purpose shall be specifically approved and maintained for this work. Workers shall maintain MADs or provide insulation from all paths-to-ground, including poles, and from other phase conductors.
    - Vehicular and mechanical equipment will be operated so that a clearance of 10 ft. (305cm) is maintained from energized overhead lines.
    - Work shall not be performed during rain, snow, mist, or heavy fog. If such conditions develop when work is in progress, common sense and good judgment should be used to determine the proper course of action. This action could include:
        - Leaving the job as is, making the job temporarily safe with live-line tools or other methods, or finishing the task or job with live-line tools.

Note: When line hoses, blankets and hoods are wet, they do not provide adequate protection for the worker.

G. LIVE-LINE TOOL WORK

- Live-line tool work is a work method which provides the worker with adequate clearance from surfaces at different potential by using tools and equipment of sufficient length and dielectric strength to maintain clearance and insulation from these surfaces.
- Energized distribution lines of voltages 25 kV volts or below, phase-to-phase, or 15 kV volts or below, phase-to-ground, should be worked using approved methods, either directly with rubber insulating gloves with protectors or with live-line tools with the worker isolated from the energized conductors.
- All energized lines above 25 kV volts, phase-to-phase or 15 kV volts phase-to-ground should not be handled except with approved live-line tools or equipment and methods designated for the voltage of the line being worked.
- MADs shall be maintained while using live-line tools.
- Tools and equipment for doing live-line work should be used in the manner for which they were designed. While handling live parts with live-line equipment, positive control must always be maintained. Apart from handling short jumpers, workers should not depend upon their physical ability alone to maintain positive position or control of energized

conductors. Collar ropes, rope blocks, tong saddles, clamps, lever lifts or other approved equipment, should be used regardless of how light the weight or strain of the conductor might appear to be.

- Lines used to hold out energized conductors, if practical, should not be depended upon alone to hold energized conductors away from workers. Auxiliary live-line arms, hand poles, lift poles, etc. should be used to maintain more positive control of the energized conductors.
- Approved synthetic rope may be allowed to contact energized conductors. All ropes allowed to contact energized conductors must be kept clean and dry to ensure adequate dielectric strength.
- When tying or untying conductors on insulators, extreme care should be taken to prevent tie wires and the metal part of tie sticks from contacting arm, pole, or hardware.
- Protective equipment with insulated handles is considered a live-line tool and may be installed from the pole or structure provided proper clearances are maintained.
- All live-line tools should be electrically tested according to OSHA requirements. Only live-line tools made of fiberglass and rated at 100 kV per foot are approved for use on energized conductors.
- Appropriate containers (i.e. canvas, hot stick boxes, or canisters on trucks) should be used to keep live-line tools, including jibs, clean, dry, and protected from scars and abrasions.
- Live-line tools must be visually inspected for defects and compliance with the test date before use each day.
- All live-line equipment should be kept clean and waxed to preserve its insulating qualities. If a live-line tool is refinished or repaired, it must be electrically tested before being returned to service.
- Fiberglass beams, liners, and baskets on insulated aerial devices should be kept clean, dry, and maintained as a live-line tool using approved methods to preserve their insulating qualities when such equipment is used to insulate the worker.
- Cable and chain hoists should not be used on or near energized conductors.
- Hot line hoists shall be insulated from any path-to-ground when used on energized conductors above 600 volts. These hoists should be kept clean and dry. The handles of these hoists should be maintained as a live-line tool.
- Insulated mechanical jumpers must be given a thorough periodic inspection. Prior to each use, they should be given a visual inspection to check for physical damage to the insulation.

H. DENERGIZING LINES AND EQUIPMENT FOR EMPLOYEE PROTECTION

Clearances

- The employee in charge of the job is responsible for obtaining and releasing clearances. The employee in charge must have a thorough understanding of the Host Company's clearance procedure. Request from the Host Company any procedure(s) that contain the general instructions for obtaining and releasing clearances and handling of electric equipment, lines, and loads. The instructions should be studied and adhered to in all instances.

- Clearances should not be given or accepted on lines or equipment without an open-air break between all sources of supply and the line or equipment on which work is being done. Under certain circumstances, it may be impractical to obtain an open-air break. Under these circumstances specific methods and equipment, approved by the Host Employer or Management, may be used to obtain clearances. These should be documented on the Job Briefing form and thoroughly discussed during the job briefing.
- Multiple crews working on the same line or equipment must have either a single worker in charge responsible to coordinate all activities or independently comply with the provisions of all standards that apply:

Hot line tags are important and shall be obtained according to the Host Company's policy.

- Hold Tags should be attached to all components listed on the clearance instructions.
- Hold Tags should not be removed without proper authorization!

I. GROUNDING FOR PROTECTION OF EMPLOYEES

Grounding of Lines and Equipment – "If it isn't grounded, it isn't dead!"

- All equipment and/or lines that are not properly cleared, tagged, tested for voltage (voltmeter or fuzzing – only above 13.2Y / 7.62 kV), and grounded are energized and must be worked accordingly.

  Note: On secondary lines operating at less than 600 volts, if it becomes impractical to begin or continue work with temporary grounds in place, the grounds may be removed, and the secondary worked without PPE provided that:

  - The secondary is isolated from all source voltages.
  - There is no possibility of induced voltages.
- Grounds may be temporarily removed only as necessary for test purposes. Extreme caution shall be exercised during this procedure.
- The best protection is obtained when all points in the work area are at the same potential (i.e. within an equipotential zone.) Common sense and good judgment are required in the application of system safety grounds to maintain maximum protection for workers.
- A temporary ground is used to help establish an equipotential zone (i.e. work zone of protection.) Protective grounding equipment must be capable of handling the maximum available fault current that could flow for the time necessary to clear the fault.
- When applying a temporary ground, the ground-end connection should be applied first, and the other end attached to the line or equipment with an approved live-line tool. When the ground is to be removed, it should be removed from the conductor using an approved live-line tool before the ground-end connection is removed.

Note: for lines or equipment operating at 600 volts or less, insulating equipment other than live-line tools may be used if the following procedure is used:

- Before the grounds are applied to the lines or equipment and prior to de-energizing, test for voltage using a voltmeter.
- After de-energizing the lines or equipment, check for the absence of voltage with the same voltmeter used above.
- Properly install grounds.

- Before the grounds are removed ensure that the lines or equipment are not energized at the time a ground is removed.
- Properly remove grounds.

- On jobs where conductors or switches are to be opened, or openings are to be closed, additional system safety grounds should be installed in the immediate work area to bridge the opening and keep the work area at the same potential for the worker. This practice will limit the likelihood the worker will contact ungrounded points, or points at different potentials.
- The system neutral is a current carrying conductor, therefore, if the neutral is to be cut, or a broken neutral is to be spliced together, additional system safety grounds should be installed in the immediate work area to bridge the opening and keep the work area at the same potential for the worker.
- Open wire high-line telephone lines and insulated overhead ground wires may have high-induced voltage on them and should be worked with approved live-line tools or be properly grounded.
- If the possibility of step potential exists, workers on the ground must wear approved rubber overshoes.
- The ground connection shall be made to one or more of the following in order of preference.

For Distribution Systems this may be:

- Common neutral.
- Permanent ground, such as driven ground or counterpoise system.
- Temporary driven grounds outside the normal work area around the pole.

The Host Employer may state a preference here.

J. UNDERGROUND ELECTRICAL (UD) INSTALLATIONS

On Underground Distribution (UD) systems the appropriate Class 0 (only for direct buried cables operating a ≤ 600 V), Class II or III rubber insulating gloves with protectors, a hardhat, safety glasses, FR clothing, and approved rubber overshoes should be worn when:

- Opening or closing pad mounted or above ground enclosures housing direct buried cables.
- Spiking cables.
- Performing switching.

Notes:

- For the sole purpose of opening or closing for inspection of underground enclosures, Class II gloves are permitted up to 25 kV phase-to-phase, and Class III gloves are permitted up to 45 kV phase-to-phase.
- Caution must be exercised to determine if any abnormal condition exists, such as a single phasing condition before opening any pad-mounted enclosure.
- The appropriate Class II or III rubber insulating gloves with protectors should always be worn on both hands when working on, or when working within reach or extended reach of

MADs of the direct buried cables and associated parts such as elbows and bushings energized at 25 kV or less, phase-to-phase, or 15 kV volts or less phase-to-ground, regardless of the type of work being performed. A hardhat, safety glasses, FR clothing, and approved rubber overshoes are also required to be worn.

- For voltages from 0 - 600 volts, Class “0” gloves may be worn provided all MADs are always maintained. (Note: Class “00” gloves are available for use under 500V.) Unprotected parts of the employee’s body may encroach within the MADs of such cables and associated parts. If there is likelihood that any unprotected part of the body can come into incidental contact with exposed energized parts, protective cover-up shall be installed over such cables and associated parts to prevent any incidental contact. This work may be performed only when absolutely necessary during rain, snow, mist, or heavy fog.
- The neutral of a direct buried cable is part of the system neutral; thus, cannot be cut or separated without first jumping out the neutral conductor. The semi-conducting covering is a grounded sheath and is a path-to-ground.
- Exposed live parts such as live-front terminations operating above 5 kV phase-to-phase or 3 kV phase- to-ground must be worked with live-line tools.
- All previously energized primary UD cables, regardless of their condition, must be spiked with an approved spiking tool before cutting the cable.
- The energized conductor of an insulated direct buried cable should be considered within reach or out of reach as follows:
    - With the concentric neutral and a semi-conducting covering in place, the conductor is considered out of reach.
    - With the concentric neutral removed, and the semi-conducting covering is in place, the conductor is considered within reach. With proper protective equipment in place over the semi-conducting covering, the conductor is considered out of reach.
    - With both the concentric neutral and the semi-conducting covering removed, the conductor is considered within reach. Even when adequately covered with proper protective covering and/or physical barriers, any exposed energized terminations should be considered within reach.

  Note: When making terminations to UD cables in place, exposed energized parts from 0 - 600 volts may be considered out of reach when covered with properly installed protective equipment or isolated with physical barriers.

K. DIRECT BURIED CABLES

Uncovering Cables

- Common sense and good judgment should be used when removing the dirt from energized direct buried cables. After the dirt has been removed, a visual inspection shall be made before working on these cables. Rough handling of energized direct buried cables should be avoided. Before uncovering direct buried UD secondary cables by hand digging, these cables should be de-energized and grounded. Energized UD secondary cables operating from 0 - 600 volts may be uncovered by hand digging provided that:
    - The cable route and depth are generally known.
    - The hand tool has a non-conductive handle such as fiberglass, and the workers wear AR clothing, hardhat, protective eyewear, and approved rubber footwear.

When the energized secondary cables are exposed and become within reach, Class “0” gloves with protectors may be utilized unless primary cables are also within reach – which would then require Class II or III rubber insulating gloves with protectors. Splicing and Tapping UD Secondary Cables

- Only trained and qualified workers at the jobsite may splice or tap up UD secondary cables, operating from 0 - 600 volts, energized or de-energized.

L. SUBSTATIONS

Any employee entering an attended substation, who does not regularly work in the station, should report his or her presence to the employee in charge.

EMERGENCY ACTION PLAN

A. PURPOSE AND SCOPE

The potential exists at every workplace that natural or manmade disasters can threaten the safety of individuals working at, or occupying, a facility or jobsite. The goal of this program is to provide an Emergency Action Plan to effectively respond to any threat and provide protection in the event of an incident. This plan describes the basic management procedures that are to be followed during emergencies. It also addresses the requirements for Emergency action plans as identified in General Industry 1910.38 and Construction 1926.35, as well as offering specific actions that are to be taken in response to various emergencies. This Emergency Action Plan should be kept in the workplace and available to all employees for review.

B. RESPONSIBILITIES

The response to an incident is both event and location specific. The responsibilities that follow are fundamental to the success of any Emergency Response Plan. Abbott Electric may have several representative individuals for each of the following titles at a given location. Depending on the size of the jobsite or location, multiple individuals for each title may share responsibility. These individuals will be identified to the host and/or general contractor at the pre-job meeting and to employees before the job begins.

Safety Director

The Safety Director will:

- Contact Emergency Medical Services (EMS), internal and/or external Emergency Response Units, and/or law enforcement agencies, as needed and if they have not already been contacted.
- Provide communication between Abbott Electric, Host Employer, General Contractor, or Construction Manager and EMS, internal or external Emergency Response Units, and/or law enforcement agencies, as needed.
- Notify the Management of the emergency and of any actions taken.
- Respond to an incident as instructed by Management.
- Provide information to others affected by the emergency (property owners, contractors, etc.) regarding emergency and evacuation procedures, evacuation routes, and assembly area(s).
- Interface with all contractors to ensure coordination of their emergency response procedures with this Emergency Response Plan.

Management

The Management will:

- Authorize the Safety Director to serve as the Emergency Response Coordinator. Provide a list of back-up coordinators if the emergency will impact evening and night operations.
- Assess the situation(s) and determine the level(s) of response necessary.
- Consult with the Safety Director and site supervisor, as needed, to assist in the assessment.
- Evaluate the data provided by the Safety Director regarding the situation.

- Provide authorization to respond, including, but not limited to, evacuation of additional areas, buildings, etc. in the vicinity, as needed.
- Establish an Emergency Operations Center (EOC) or determine if one has been established for the jobsite.
- Appoint an Incident Commander to manage the EOC or assign a company representative to the EOC if it has been established by others.
- Designate a Public Relations Officer or spokesperson for Abbott Electric and inform him/her of the emergency and any actions taken.

Public Relations (or Designated Spokesperson)

The Public Relations Spokesperson will:

- Serve as the contact and provide communication to the media and other public agencies regarding the emergency.

Supervisor

The Supervisor will:

- Provide instructions to employees on actions to take when an emergency occurs, notification to emergency responders, evacuation procedures, routes and assembly area(s).
- Coordinate emergency and evacuation procedures, evacuation routes, and assembly area(s) with others on site.
- Make sure employees and visitors exit the site/building and meet at the prearranged assembly area(s) during an evacuation.
- Be responsible for conducting headcounts to account for all employees, contractors, and visitors.
- Assist Management, the Safety Director, and Public.
- Relations with communications, as requested.
- Provide technical support on-site based on the emergency to handle jobsite or building systems controls, as necessary.
- Assist with crowd control during evacuation, as designated by the Safety Director.

Designated employees will:

- Assist in the evacuation of buildings (i.e. assist the handicapped and check rooms to ensure all have exited, providing it is safe to do so.)
- In the event of a bomb threat, assist in conducting a sweep of the jobsite, building areas or buildings, as directed by the Safety Director and response teams. Note: Employees familiar with the search area may often provide the best assistance to the Safety Director and/or search teams in identifying unusual objects that do not belong in the search area.

Visitors/Contractors

- In an emergency, individual employees are responsible for the safety of their visitors. If an individual is visiting you, you are to aid the visitor regarding emergency procedures and evacuation routes. The Safety Director will work with all contractors to ensure coordination of their emergency procedures with this Emergency Action Plan.

C. EMERGENCY REPORTING AND NOTIFICATION PROCEDURES

- Emergency (life safety, fire, and other disasters) reporting for all jobsites shall be the 911 system unless other emergency services have been designated for your specific location, as indicated below. When using 911, details of the incident will be provided to the dispatcher. They will ensure appropriate services such as EMS, Fire, and Police respond. Each location/jobsite will have an emergency notification system to make all employees aware of any incidents. At some locations a Public Address (PA) system is installed to provide information and emergency broadcast announcements.
    - Location Specific Reporting Instructions.
    - Safety Coordinator.
    - Notification Procedures.
    - Phone Number: 911 or Employee Emergency
    - Other.

Individuals calling in an emergency will:

- State the location (i.e. jobsite address or descriptors, building and location on the jobsite, floor and/or room).
- Identify the type of situation requiring emergency assistance.
- Employees are directed to address personal safety first. Calls should be made only when it is safe to do so. Procedures for specific threats are contained in this program.
- Emergency Alarm/Employee Notification
- The following system(s) are available at the jobsite/workplace to notify personnel of an emergency situation:
    - Alarm Bell/Siren
    - Voice Broadcast/Bullhorn

Evacuation Procedures for Critical Plant Operations Employees

- Safety is a top priority at Abbott Electric and there are no critical operations worth risking one's welfare to perform. If believed a job has critical operations requiring one or more employees to remain in the building during an evacuation (this should be a rare occurrence), Abbott Electric will develop a specific plan of action.

- If employees are unable to leave a building that is being evacuated to maintain critical processes that will create an increased hazard if left unattended, or employee is injured or trapped, attempt to alert someone evacuating the building of your inability to leave.

- Advise them of your name, department, and room number or location. Make sure they know to advise the Supervisor for Emergency Conditions of the situation.

- Take steps to reduce your exposure to additional risks posed by remaining in the building. If an employee is able to shut down or control critical processes, and subsequently evacuate, do so immediately. If an employee is injured or trapped, remain where you are, unless in life threatening danger, so that rescue can be attempted by emergency responders alerted to your location.

- No one can require anyone to remain inside a building that is being evacuated.
- When evacuation is necessary, individuals will leave by means of the nearest exit using escape routes as designated by the supervisor and assemble at the pre-designated meeting areas.

E. SHELTER-IN-PLACE

Depending on the emergency (tornado, biological or chemical attack, or civil disturbance), evacuation or in-place sheltering may be necessary. The supervisor shall identify “shelter in place” locations for employees to respond accordingly to alarms/emergency notifications based on the emergency procedures in this plan.

F. TRAINING

General

- The Safety Director reviews the Emergency Response Plan with management. Supervisors train their employees to ensure they have a thorough understanding of the Emergency Response Plan. New employees receive training during their first day of employment.

Special

- Personnel assigned to special tasks associated with a given emergency receive training regarding the hazards, control measures, and their responsibilities in emergency response and assisting in safe and orderly evacuation of other employees. Only employees who are trained in the use of fire extinguishers are directed to use them. All other personnel must evacuate buildings or follow the instructions of emergency response personnel.

Practice

- The Safety Director will coordinate with appropriate outside emergency services and the local Fire Department to schedule evacuation exercises and fire drills.

G. MEDICAL EMERGENCY

If someone requires emergency medical attention, EMS is contacted per the Emergency Reporting and Notification Procedures. The Safety Director is notified as soon as possible once the immediate needs of the victim are managed. Training on the availability and location of defibrillators as well-trained operators shall be provided as part of the emergency response plan training. Individuals will not attempt to move an individual in need unless trained in First Aid/CPR and/or the victim is in greater danger if not moved.

H. ELEVATOR ENTRAPMENT

- Various types of elevators may be found on any jobsite. The following provides our company procedures in the event employees are trapped in one.
- Where available a button next to the telephone symbol/icon located on the call plate may be used to automatically call building operations or security personnel.
- Where available a telephone receiver or a panel marked with a telephone provides access to a receiver that may be used to automatically call building operations or security personnel.

- Callers will provide the responder with the elevator and floor it has stopped. Callers will stay on the phone and await further instructions. Procedures for elevators that do not have communication devices are as follows; remain calm, be patient for someone to notice the elevator is malfunctioning and call aloud for help in a loud voice to alert passers-by and/or responders. In all cases qualified persons shall respond and assist. Trapped individuals should remain in the elevator unless specifically directed to attempt escape.

I. FLOODING

- The Safety Director shall be notified of any flooding on the jobsite. The Safety Director will arrange to have the water supply shut off and to send qualified personnel to respond and assist.
- If possible, and if it can be done safely, disconnect all electrical equipment. If the source of water is overhead and time will allow, the affected area will be cleared to minimize water damage.

J. POWER OUTAGE

- When work is performed in areas where power is normally provided and a power outage occurs, the Safety Director shall be notified due to the threat of fire. A visual inspection of the area will be conducted to rule out fire (electrical or otherwise) as the cause of the outage. Where emergency lighting allows, and/or flashlights are available, an evacuation of the building or area shall occur.

K. FIRE & EXPLOSION

- On job sites where a fire alarms system is in place, notification of a fire shall be provided through activation of the system by smoke, fire, or a pulled alarm.
- When an alarm is activated, everyone shall exit the buildings immediately via the appropriate exit-way.
- When a fire has been observed and the alarm system has not been activated, employees shall exit the immediate area. As soon as it is safe, they will pull an alarm or follow the instructions in the Emergency Reporting and Notification Procedures.
- Where they exist, doors shall be closed behind exiting employees to delay the spread of the fire.
- Employees should move to the safe area 200 feet from the building, as identified by the supervisor before the job began.
- A headcount will be taken by managers and supervisors to ensure everyone has exited.
- Employees shall remain in the safe area until further instructions are provided by the Supervisor, Safety Director or other authority assigned to the area.

L. BOMB THREAT

- Employees shall immediately report suspicious objects or parcels, or bomb threats to their Supervisor or the Safety Director. Suspicious packages shall be identified as having some of the following characteristics:
    - Protruding wires, aluminum foil, oil stains and/or emit a peculiar odor.
    - Address labels that display restricted endorsements (PERSONAL or PRIVATE.)

- Address labels that are: handmade, written with distorted handwriting or made with cut and paste lettering.
- Address labels that contain inaccuracies in the addressee's name and/or title.
- Display a return address or the return address may be fictitious.
- Having excessive postage.
- Wrapped unprofessionally and irregular shapes, bulges or soft spots in the form of a letter bomb, usually feel rigid and appear uneven or lopsided.

Suspicious Parcel or Object

- When a suspicious parcel or object is identified, it should:
  - Not be touched or moved.
  - Be isolated and, if possible, the area evacuated.
  - Kept away from others.

Information about the package who handled it, when/where it was discovered, etc. should be noted and provided to the safety director or responding agency. Information about the package must not be shared with any other individuals.

Verbal Telephone Threats

When a verbal telephone threat is received, the following actions are taken:

- The caller shall be kept on the line as long as possible so that you can gather more information. A record of the words spoken by the caller should be kept. If caller ID is available, the caller's phone number should be recorded.
- If the caller does not indicate the location of the bomb or the time of possible detonation, the employee on the line shall request this information.
- Attention shall be given to background noises such as motors running, music, or any other noise, which may give an indication as to the location of the caller.
- The voice (male/female), voice quality (calm/excited), accents or speech impediments, and approximate age (young or old) should be noted.
- The Safety Director shall be notified immediately of any bomb threats. The person who received the call should remain available until the Safety Director arrives. In some instances, that individual may be asked to meet with Safety Director at another location. Evacuation of the area shall be determined by the Safety Director or law enforcement.

Written Threats

Employees should respond to written bomb threats as follows:

- Immediately notify the Safety Director upon receipt of a threat.
- Promptly write down everything about the threat (i.e., location, room, area, wall, floor, etc.).
- Remain calm and do not discuss the threat with others.
- Save all materials, including envelopes, or containers. Once the message is recognized as a bomb threat, further unnecessary handling should be avoided.

The Safety Director will notify appropriate law enforcement and management.

M. CHEMICAL EMERGENCIES

There are two types of chemical emergencies that can occur, a chemical leak or chemical attack. A chemical attack is the deliberate release of a toxic or unknown gas, liquid, or solid that can poison people and/or the environment. This can be associated with a terrorist act. A chemical leak is associated with a malfunction of a system or activity, such as a traffic accident near a jobsite involving a chemical tanker truck. The following addresses common emergencies and basic procedures to approach hazardous chemicals should there be a release on the jobsite or in the workplace.

Chemical Leak - Natural Gas Leak

Leaks can occur on indoor lines or when outdoor lines are damaged. In the event of a natural gas leak the following procedures shall be followed which are identified by the three R's: Recognize, React, and Report.

Recognize

- In its natural state, natural gas is colorless and odorless. Utility companies add a distinctive odor of rotten eggs, to make even the smallest leaks easier to detect. You should smell this odor when a leak occurs. Other signs of a leak include a blowing or hissing sound, dead or discolored vegetation in an otherwise green area, flames (if a leak has ignited), dirt or dust blowing from a hole in the ground, and/or bubbling in wet or flooded areas.

React

- Assess the immediate threat to human life if a fire or explosion were to occur.
- Evacuate the area as needed by providing verbal instructions and move 200 feet away from the area of the leak or the building. When in doubt about the level and possible threat, evacuate.
- TURN OFF AND DO NOT USE cellular phones, radios, pagers.
- DO NOT TURN ON/OFF flashlights, lights, alarms, electrical equipment, elevators or other devices capable of producing static electricity, sparks, arcs, or open flames.
- If possible, stay away from carpeted areas to avoid sparks of static electricity.
- Do not start vehicles.

Report

- When you are away from the gas leak contact your Supervisor or the Safety Director.
- The Safety Director will notify Building Operations or the gas company, as appropriate.

Chemical Attack

Typically, notification of a terrorist act will come through local law enforcement agencies. The actions described below offer procedures to follow in the event of a threat. A chemical attack may occur without advance warning. Signs of a chemical attack include many people suffering from watery eyes, twitching, choking, difficulty breathing, or losing coordination. Many sick or dead birds, fish, or other small animals are also cause for suspicion. The following also provides procedures to follow when an incident occurs without warning.

- If a threat of a chemical attack is received, the Safety Director will notify law enforcement.

- If necessary and time allows for a safe evacuation of the jobsite, law enforcement will make the decision. Supervisors will be contacted regarding the evacuation.
- If time does not permit a safe evacuation or an evacuation would require individuals to pass through contaminated areas, supervisors will be contacted to instruct employees, other contractors, and visitors where to seek shelter. Follow the procedures for in-place sheltering, as provided below. Depending upon the security considerations, the PA system may or may not be used.
    - Supervisors, or their designees, will take the lead and ensure exterior doors/windows and air vents are closed as quickly as possible.
    - Staff assigned to the building will turn off all fans, heating, and air conditioning systems. Some systems automatically provide for exchange of inside air with outside air. These systems need to be turned off, sealed and/or disabled.
    - If informed there is a possibility or danger of explosion, close the window shades, blinds, or curtains as appropriate.
    - All individuals will be directed to gather whatever essential disaster supplies are available in the building from offices, custodial closets, etc. This includes items such as nonperishable food, bottled water, battery-powered radios, first-aid supplies, flashlights, batteries, duct tape, plastic sheeting, and plastic garbage bags.
    - Select interior room(s) above ground floor with the fewest windows or vents. Room(s) should have adequate space for everyone to be able to sit. Avoid overcrowding by selecting several rooms, if necessary. Large storage closets, utility rooms, pantries, copy and conference rooms without exterior windows will work well. Avoid selecting a room with mechanical equipment like ventilation blowers or pipes. This equipment may not be able to be sealed from the outdoors.
    - It is ideal to have a hard-wired telephone in the room(s) you select. Call emergency contacts and have the phone available if you need to report a life-threatening condition. Cellular telephone equipment may be overwhelmed or damaged during an emergency.
    - Take emergency supplies and go into the room you have designated. Seal all windows, doors, and vents with plastic sheeting and duct tape or anything else you have on hand. Do not cover glass, just joints.
    - Write down the names of everyone in the room. Call the Safety Director with this information.
    - The Safety Director will monitor law enforcement communications as well as local radio and television or use the Internet. The law enforcement will be kept apprised of the situation and provide further instructions. Wait at your location until you are told all is safe or to evacuate.

Spill Containment Plan

The purpose of this spill containment plan is to inform employees about the hazards associated with the unexpected release of Hazardous Substances (HS) in the areas where personnel are performing tasks. Safety Data Sheets (SDS) for the chemicals commonly used by employees in the performance of their duties and responsibilities should be readily accessible. By being aware of the potential of accidental release of these and other chemicals, we can eliminate or minimize any exposure to personnel or the environment. Throughout each day, employees may be exposed to chemicals used by other contractors and plants where work is being performed, and each employee must be familiar with the Hazard Communication Plan for each jobsite where their work is performed.

- Each Site Superintendent, Foreman, or Lead Electrician must review drawings or other information provided by the Owner, General Contractor, Project Coordinator or other interested party about the location, labeling, handling procedures, and contact information of the responsible party for the chemicals known to be present onsite where work is to be performed.
- Each Employee shall be given the proper information concerning any exposure to the chemicals known to be present and the proper abatement procedures, should any release occur. This includes notification to plant personnel, signs and symptoms of exposures, visual and audible warning signals, and the proper PPE needed for safe handling.
- Every employee onsite must be familiar with the location of any spill response kit, drains, plant emergency contact information, and proper egress from areas where chemicals may be used, stored, loaded, or unloaded.
- Preventive measures include:
    - Employees who are trained to reduce the number of human errors that contribute to spills.
    - Visual inspections prior to commencing work for any signs of spills or leakage from any hazardous substances that may be present in the work area.
    - Methods and procedures available for the containment of any release of hazardous substances.
    - Placement of temporary liners or absorbent material prior to the use or transfer of any hazardous substance for containment purposes.
    - Locations of nearest communication interface for summoning Emergency Personnel and the nearest medical facility, should medical attention be necessary.

Response Actions in Case of Spill

- If safe to do so, control the source to prevent further spillage.
- Cover and/or block all drains in the spill area to prevent the material from entering sewer, stormwater, or septic systems.
- Notify emergency contact and/or plant personnel, per site procedures.
- Fire/Rescue: 911 or local number.

Plant Emergency Contact

- Use absorbent material to contain the spill (i.e. Dry Litter, Absorbent pads, or Synthetic Absorbents)

- Secure the site from unauthorized person(s) to prevent unnecessary exposures.
- If safe to do so and the spill is minimal, clean up the spill and treat it as hazardous. Store in an approved container for proper disposal per approved procedures. If the spill is too large, contact the appropriate emergency response agencies for assistance.
- Report the spill to proper authorities or appropriate agencies.

Local Authority_____

Other Specific Agency: _____

Spill Reporting

As soon as practical, please forward the following information to the plant contact individual, company safety supervisor, and/or the owner for the proper reporting of accidental spillage and/or release of hazardous substances.

- Location of the spill and time it was discovered.
- Material or substance released in the spill.
- Cause of the spill or release.
- Description of the containment area and the methods used to contain the spillage.
- Estimated amount of volume released.
- List of personnel exposed during the spill, containment, and cleanup, if applicable.
- Weather conditions.
- Procedures for preventing future release and spillage of the material involved.

N. EARTHQUAKE

The following procedures should be followed in the event of an earthquake:

- Stay inside until the shaking stops and it is safe to go outside. Most injuries during earthquakes occur when people are hit by falling objects when entering or exiting buildings.
- Drop, Cover, and Hold On! Minimize your movements during an earthquake to a few steps to a nearby safe place.
- If you are indoors, take cover under a sturdy desk, table, or bench, or against an inside wall, and hold on. Stay away from glass, windows, outside doors, or walls and anything that could fall, such as lighting fixtures, wall hangings or furniture.
- If there is not a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building. Doorways should only be used for shelter if they are near you and if you know that it is a strongly supported load-bearing doorway.

- If you are outdoors, stay there. Move away from buildings, streetlights and utility wires.
- If you become trapped in debris:
  - Do not light a match.
  - Do not move about or kick up dust.
  - Cover your mouth with a handkerchief or clothing.
  - Tap on a pipe or wall so rescuers can locate you.
  - Use a whistle if one is available. Shouting should only be used as a last resort, as it can cause you to inhale dangerous amounts of dust.
- If you must go out after an earthquake, watch for fallen objects, downed electrical wires, weakened walls, bridges, roads, and sidewalks.
- Be prepared for aftershocks. These secondary shock waves are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures.
- If the electricity goes out, use flashlights or battery powered lanterns. Do not use candles, matches or open flames indoors after the earthquake because of possible gas leaks.
- Evacuate buildings if fumes are detected and the building is not well-ventilated.

O. TORNADO

A tornado is a violently rotating column of air extending from a thunderstorm to the ground. They are most likely to occur during the spring and summer months between 3 p.m. and 9 p.m. but can occur at any time of day or night and at any time of the year. When conditions are right for a tornado the National Weather service will issue a Tornado Watch. This means tornadoes are possible. If they issue a Tornado Warning, a tornado has been sighted or indicated by weather radar.

Tornado Watch Procedures

In the event of a tornado watch, remember the following:

- The Safety Director will monitor NOAA Weather Radio and commercial radio or television newscasts for the latest information and keep law enforcement appraised of conditions.
- If necessary, law enforcement will close the affected facility (or facilities). Building occupants will be notified of what to do over the PA system. If a PA system is not available, supervisors will be contacted to notify employees, other contractors, and visitors of the closure and what to do.
- In the event time does not permit a safe evacuation, building occupants are to seek safe shelter.

Tornado Warning Procedures

In the event of a tornado warning, remember the following:

- When a tornado has been sighted, seek shelter immediately.
- Seek shelter in buildings as listed below.
- If you are in a building without a basement, go to an interior room on the lower level (i.e. closets and interior hallways). Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck. Stay there until the danger has passed.
- Stay away from windows, doors, and outside walls.
- Go to the center of the room. Stay away from corners because they attract debris.
- If caught outside with no shelter, lie flat in a nearby ditch or depression, and cover your head with your hands. Be aware of the potential for flooding.

Typical locations that offer a good shelter in place for tornadoes are basements, hallways, corridors, and internal break rooms. Places to avoid include lobbies, near windows, away from large overhanging fixtures, etc.

P. HURRICANE PREPAREDNESS PLAN

Hurricane/Typhoon:

A storm or cyclone in which the maximum sustained surface wind is 74 mph (119 km/hr) or more. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline. It is important to know the difference between a Hurricane Warning where winds in excess of 74 mph are expected within 36 hours and a Hurricane Watch where winds are possible within 48 hours of announcement.

When a Hurricane Watch is announced, take preliminary precautions, and prepare to follow instructions in the event a Hurricane Warning is issued. These include:

- Plan evacuation route for personnel, be site-specific.
- Contact your local Emergency Management Office or American Red Cross for the community hurricane preparedness plan.
- Maintain vehicles with fuel for evacuation.
- Maintain supplies for personnel to include:
    - Flashlights and batteries.
    - Portable radio and batteries.
    - First-Aid kit.
    - Drinking Water and non-perishable food supplies.
    - Can opener (manual type).
    - Remind employees to have all medicines and prescriptions needed.
- Secure Tools, Equipment, and Vehicles remaining onsite.
- Secure all portable tools and equipment in storage units and lock for safety and security.

- Safely secure any material left onsite and exposed.
- Turn off all temporary electrical wiring to prevent damage and/or exposure to live electrical potential during the emergency.
- Tape or protect windows with minimum 1/2’” plywood.
- Ensure all tie-downs are in place and used.

Follow all instructions from Emergency Management Office and State/Local Officials and Deputies responsible for the coordination and evacuation of individuals located within the Hurricane Warning/Watch region.

Q. WORKPLACE VIOLENCE

Intervention is the key to workplace violence situations. Employees shall report any pattern of behavior and attitude that causes concern to their supervisor and/or the Safety Director. The Safety Director will work with the appropriate entities to discuss procedures for diffusing the situation. For crimes in progress, violent incidents, or specific threats of imminent violence employees will:

- Get to safety as quickly as possible.
- Immediately contact emergency services, as provided in the Emergency Reporting and Notification Procedures. If able, use a phone out of sight and/or hearing of the individual, or ask another to call for help.
- Not attempt to intervene physically or deal with the situation himself/herself. It is critical that law enforcement take charge of any incident that can or does involve physical harm.
- When making the call, stay on the line and provide the following information:
    - Location.
    - Your name.
    - Nature of the problem.
    - Number of individuals involved.
    - Whether or not weapons are involved.

Hostage Situation

If involved in a hostage situation, employees should take the following actions:

- Immediately contact emergency services, as provided in the Emergency Reporting and Notification Procedures, if possible. Supply as many details as possible, including number of persons involved, description of hostage takers, weapons displayed, threats made, etc.
- Do what they are told without argument.
- Do not attempt to negotiate or argue with a hostage taker.
- Try to get others to remain calm. Tell them to do what they are told.

Civil Disturbance

Any indication of a civil disturbance such as a demonstration, picketing, or riot shall be reported immediately to the Safety Director.

Jobsite/building personnel should:

- Remain in the building and/or on the jobsite away from the disturbance area, unless instructed to do otherwise, and stay away from windows.
- Avoid confrontation with demonstrators, picketers, or rioters.
- Leave the telephone lines clear in case contact is necessary.
- It may be necessary to lock exterior doors.
- The Safety Director will arrange for escorts to enter or exit the buildings/job sites as needed.

FALL PROTECTION PROGRAM

A. PURPOSE AND SCOPE

Fall hazards are a major concern in our industry. This fall protection program has been developed to ensure that all Abbott Electric employees are protected from these hazards while working on elevated surfaces and that they comply with OSHA 29 CFR 1926 Subpart M Fall Protection.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Coordinate the type of fall protection, such as fixed protection systems or PPE, to be used on the jobsite with the general contractor/host/construction manager.
- Ensure that all fall protection equipment meets the required specifications for the intended use.
- Ensure that all personnel required to use fall protection equipment have been medically qualified and trained in the proper use of the equipment.
- Ensure that a qualified person develops the site-specific fall protection plan and maintains it at the job site under the supervision of a competent person.

Supervisors

Supervisors will:

- Ensure that personal fall protection systems are used where required.
- Inspect fall protection equipment on a weekly basis.
- Designate a specific employee to work in controlled access zones. No other employee may enter controlled access zones.

Employees

Employees will:

- Be trained to recognize fall hazards and the procedures to minimize these hazards.
- Use personal fall protection equipment as trained.
- Inspect their fall protection equipment before each use.
- Inform their supervisors of any conditions that may hinder their ability to work at heights or use personal fall arrest equipment.

C. INSTALLATION AND USE OF EQUIPMENT

All equipment will be installed and used in accordance with OSHA standards and the manufacturer's instructions.

The installation and use of equipment will be inspected and approved by a competent person. All equipment will be used only for the application for which it was designed.

D. FALL PROTECTION EMERGENCIES

- Potential fall emergencies will be evaluated.
- An equipment inventory will be conducted by the supervisor before each job where fall protection is required.
- The supervisor will ensure that fall protection equipment or tools are available for post-fall recovery (ladders, scaffolds, man-lifts etc.), emergency phone numbers are posted, and first-aid equipment and personnel are prepared to respond to a fall emergency.
- Accident investigations will be conducted in the event of a fall, near miss, or other serious incident to determine if the fall protection plan needs to be changed and those changes will be implemented as a preventative action.
- Abbott Electric will provide prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

E. TRAINING

Abbott Electric employees will receive mandated annual training on the use of fall protection that will be documented. The training will pertain to the recognition of fall hazards and how to minimize those hazards. This will include information on the use of fall protection equipment, inspection, installation and maintenance, OSHA Safety Standards, and company procedures. Training will consist of toolbox talks and hands-on demonstrations, as needed.

Topics to be included:

- The nature of the fall hazards Abbott Electric employees may be exposed to.
- Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.
- The use and operation of controlled access zones, guardrails, personal fall arrest systems, warning lines, and safety monitoring systems.
- The role of each employee in safety monitoring.
- System (if one is used).
- Correct procedures for equipment and materials handling, storage, and erection of overhead protection.
- Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M.
- Prompt rescue of employees in the event of a fall, and in some cases, assure that employees are able to rescue themselves.
- Retraining will be provided if:
    - It is determined that employees already trained do not have the necessary understanding of a skill.
    - The workplace changes.
    - There are fall protection systems or equipment changes that render previous training obsolete.

  All Retraining is documented and maintained.

F. FALL PROTECTION SYSTEMS

Covers

- All covers should be secured to prevent accidental displacement.
- Covers should be color-coded or bear the markings “HOLE” or “COVER.”
- Covers located on roadways must be able to support twice the axle load of the largest vehicle that might cross them.
- Covers must be able to support twice the weight of Abbott Electric employees, equipment, and materials that might cross them.

Guardrail Systems

Each Abbott Electric employee on a horizontal or vertical walking/working surface with an unprotected side or edge, which is 6 feet or more above a lower level, must be protected from falling by the use of a guardrail system, safety net, or fall arrest system. Guardrail systems should be erected at unprotected edges, ramps, runways, or holes which is 6 feet or more above lower level, where it is determined by the Safety Director that erecting such systems will not cause an increased hazard to Abbott Electric employees. The following specifications will be followed in the erection of guardrail systems.

Top rails should be:

- At least ¼ inch in diameter (steel or plastic banding is unacceptable.)
- Flagged every 6 feet or less with a high visibility material if wire rope is used.
- Inspected by the Safety Director as frequently as necessary to ensure strength and stability.
- Placed forty-two inches (plus or minus 3 inches) above the walking/working level.
- Adjusted to accommodate the height of stilts, if they are in use.

Mid-rails, screens, mesh, intermediate vertical members, and solid panels should be erected in accordance with the OSHA Fall Protection Standard.

Gates or removable guardrail sections must be placed across openings of hoisting areas or holes when they are not in use to prevent access.

Personal Fall Arrest Systems

Personal fall arrest systems will be issued to and used by Abbott Electric employees, as determined by the Safety Director, and may consist of anchorage, connectors, a body harness, deceleration device, lifeline, or suitable combinations.

Personal fall arrest systems must:

- Limit the maximum arresting force to 1,800 pounds.
- Be rigged so an employee cannot freefall more than 6 feet or contact any lower level.
- Bring an employee to a complete stop and limit the maximum deceleration distance traveled to 3½ feet.
- Be strong enough to withstand twice the potential impact energy of an employee freefalling 6 feet, or the freefall distance permitted by the system, whichever is less.

- Be inspected prior to each use for damage and deterioration.
- Be removed from service if any damaged components are detected.
- All components of a fall arrest system should meet the specifications of the OSHA Fall Protection Standard and must be used in accordance with the manufacturer's instructions.
- The use of non-locking snap hooks is prohibited.
- Dee-rings and locking snap hooks should:
    - Have a minimum tensile strength of 5,000 pounds.
    - Be proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or suffering permanent deformation.
- Lifelines should be:
    - Designed, installed, and used under the supervision of the Safety Director.
    - Protected against cuts and abrasions.
    - Equipped with horizontal lifeline connection devices capable of locking in both directions on the lifeline when used on suspended scaffolds, or similar work platforms that have horizontal lifelines that may become vertical lifelines.
- Self-retracting lifelines and lanyards must have ropes and straps (webbing) made of synthetic fibers, and should:
    - Sustain a minimum tensile load of 3,600 pounds if they automatically limit freefall distance to 2 feet.

      or
    - Must sustain a minimum tensile load of 5,000 pounds where they do not limit freefall to 2 feet. This includes rip stitch, tearing, and deforming lanyards.
- Anchorages must support at least 5,000 pounds per person attached and should be:
    - Designed, installed, and used under the supervision of the Safety Director.
    - Capable of supporting twice the weight expected to be imposed on it.
    - Independent of any anchorage used to support or suspend platforms.

Safety Monitoring Systems

In situations when no other fall protection has been implemented, the Safety Monitor will monitor the safety of Abbott Electric employees in these work areas.

- The Safety Monitor should be:
    - Competent in the recognition of fall hazards.
    - Capable of warning workers of fall hazard dangers.
    - Operating on the same walking/working surfaces as Abbott Electric employees and able to see them.
    - Close enough to work operations to communicate orally with Abbott Electric employees.
    - Free of other job duties that might distract them from the monitoring function.

- No Abbott Electric employees other than those engaged in the work being performed under the Safety Monitoring System are allowed in the area.
- All Abbott Electric employees under a Safety Monitoring System are required to promptly comply with fall hazard warnings of the Safety Monitor.

Warning Line Systems

Warning line systems consisting of supporting stanchions and ropes, wires or chains should be erected around all sides of roof work areas.

- Lines shall be flagged at no more than 6-foot intervals with high-visibility materials.
- The lowest point of the line, including sag, should be between 34 and 39 inches from the walking/working surface.
- Stanchions of warning line systems must be capable of resisting at least 16 pounds of force.
- Ropes, wires, or chains must have a minimum tensile strength of 500 pounds.
- Warning line systems must be erected at least 6 feet from the edge, except in areas where mechanical equipment is in use. When mechanical equipment is in use, warning line systems should be erected at least 6 feet from the parallel edge and at least 10 feet from the perpendicular edge.

FIRE PROTECTION/EXTINGUISHER PROGRAM

A. PURPOSE AND SCOPE

The goal of the Fire Protection program is to establish safety rules regarding the prevention and response to workplace fires. This written program works to create and maintain a safe work environment for Abbott Electric employees as required in:

- 29 CFR 1926 Subpart F as well as 1926.50 (First Aid).
- 1926.65 (Hazardous waste/emergency response).
- 1926.35 (Emergency action plans).

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Develop, implement, and administer a site-specific fire prevention and protection program that will cover all jobsite offices and storage trailers, temporary warehousing and material lay down areas, vehicles and mobile equipment, and work activities.
- Ensure firefighting equipment is installed and maintained at all jobsites, in vehicles, and work areas.
- Identify fire hazards at the jobsite.
- Conduct fire safety training sessions that will include actual and potential fire hazards, causes of workplace fires, and the procedure for work area inspections and hazard elimination or control.

Supervisors

The Supervisors will:

- Take prompt corrective actions whenever unsafe fire conditions or acts are identified.
- Inspect entire work area to ensure flammables are stored correctly and adequate fire protection is provided in all areas.

Employees

Employees will:

- Comply with all site fire prevention rules including, but not limited to, proper flammable storage.
- Know the emergency telephone number to call in case of a fire emergency.
- Report all fires immediately by way of telephone or radio and notify other nearby workers.
- Be trained to recognize potential fire hazards and the location and operation of the fire extinguisher that is located on the jobsite.
- Maintain a fire-safe work area.

C. FIRE EMERGENCY NOTIFICATION PROCEDURES

- Abbott Electric Employees will be trained in the established emergency notification procedures.

- Emergency telephone numbers will be posted within each jobsite trailer that is equipped with a telephone, as well as other jobsite locations such as the material lay-down areas, vehicles and mobile equipment refueling areas, personnel change trailers, and work areas.
- All Abbott Electric employees will immediately report all fires by calling the project's emergency phone number.
- Abbott Electric Employees will report a fire emergency on a site radio when no telephone is located nearby.

D. PORTABLE FIRE EXTINGUISHERS

- Portable Fire Extinguishers rated for the potential hazard will be installed, maintained, and inspected with monthly visual inspections and an annual maintenance check that is in accordance with 29 CFR 1926 Subpart F.

E. TEMPORARY HEATING DEVICES

- Only temporary heating devices approved by the Safety Director will be used on the jobsite. These will be operated by electricity, propane gas, LPG, or steam.
- The use of kerosene, wood, or oil-fired salamanders are not permitted inside temporary buildings.
- Stoves and heaters will be properly vented, and all vent pipes must have tight joints and be well supported.
- Each heating device will have the following information permanently affixed to the unit:
    - Clearances.
    - Ventilation.
    - Fuel type and input pressure.
    - Lighting, e Portable fire extinguishers will be installed on company trucks and mobile equipment.
- All portable fire extinguishers will have an attached monthly inspection tag that indicates the fire extinguisher is ready to use and fully charged.
- When a portable fire extinguisher has been discharged or found to be defective, it is tagged and immediately removed from service and replaced with a fully charged extinguisher of the same type and size.
- All Abbott Electric employees that may be required to use a fire extinguisher will be trained to use an extinguisher of the type that is used on the jobsite.
- Requirements in ANSI A10.10 "Safety Requirements for Temporary and Portable Space Heating Devices and Equipment Used in the Construction Industry" will be used.

F. TRANSPORTATION AND STORAGE OF FLAMMABLE LIQUIDS

- Flammable liquids will be transported only in containers approved by a national testing laboratory. These containers will be clearly labeled to identify the contents.
- Flammable liquids will be transported on the jobsite in FM approved or UL listed metal safety cans with self-closing openings.

- Drums, pails, or other containers that contain or have previously contained a flammable liquid will be kept closed except when contents are removed or transferred.
- OSHA Standard 1926.152(b) which covers indoor storage of flammable and combustible liquids will be fully complied with.
- Temporary/portable storage tanks of 1,000-gallon maximum size will be placed at least 75 feet from buildings, construction equipment, parking lots, etc. to minimize exposure to fire involving the tank per NFPA recommendations.
- Storage tanks will be placed in a lined dike to contain spills equal to the storage capacity of the tank.
- Containers from which flammable liquids are dispensed are to be electrically grounded and will be equipped with bonding wires to complete the grounding with the vessel receiving the liquid.
- Smoking or open flames will not be permitted in flammable liquid storage areas. Signs prohibiting smoking must be posted.

G. TRAINING

- Employee training will be conducted prior to initial job start and annual thereafter and includes, but is not limited to, the following:
    - The ability to identify the causes of workplace fires.
    - The procedures for workplace inspections to eliminate or control fire hazards.
    - Identify and describe the three classes of fires and know which type of fire extinguisher should be selected to fight each class.
    - Describe actions that should be taken in the event of a fire, the sounding of a fire alarm and what to do when responding to a fire victim.
    - Demonstrate competence in the use of a portable fire extinguisher and how to fight a fire. Remember the PASS method:
        - **P** – Pull the pin.
        - **A** – Aim at the base of the fire, not at the flames.
        - **S** – Squeeze the trigger or handle.
        - **S** – Sweep the hose from side to side until the fire is completely out.
    - Electrical power supply characteristics.

FIRST AID MEDICAL PROGRAM

A. PURPOSE AND SCOPE

The goal of the Medical/First Aid program is to develop site-specific medical and first aid procedures that will provide Abbott Electric employees with timely and reliable emergency medical care and first aid treatment. This written program works to create and maintain a safe work environment, as required in 29 CFR 1926.23 First aid and medical attention and 1926.50 Medical services and first aid, as well as those referenced in 1926.950 regarding first aid.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Formulate and implement Abbott Electric's site-specific medical and first-aid program that will be obtained from the U.S. Bureau of Mines or the American Red Cross.
- Ensure that trained individuals are on site that can provide basic first-aid treatment for non-serious injuries and illnesses and emergency treatment for serious injuries or illnesses until the employee can be placed under the care of Emergency Medical Services.
- Prepare and maintain a current and complete company medical and first aid records and logs in compliance with OSHA and State Workers' Compensation Commission.
- Ensure that first aid equipment and supplies are properly maintained.
- Ensure that first aid kits are periodically assessed to ensure the availability of adequate first aid supplies.

Supervisor

The Supervisor will:

- Arrange for Abbott Electric employees to attend basic and advanced first aid and CPR training.
- Provide appropriate first aid equipment and supplies to meet the requirements of the work and the maximum number of Abbott Electric employees on the jobsite.
- Assign light-duty work only after receiving the approval of the treating physician.

Employees

Employees will:

- Report an emergency condition (i.e. medical, fire, spill etc.) according to Abbott Electric policy.
- Know the location of on-site first aid treatment facilities.
- Know the location of first aid kits, stretchers, eye wash stations and showers, fire extinguishers and blankets, chemical spill kits, site evacuation routes, and emergency procedures.
- Immediately report work-related personal injuries or illnesses to their supervisor.

C. MEDICAL/ FIRST AID ACTIONS

- In addition to receiving First aid (FA), Basic Life Support (BLS) training including Cardiopulmonary Resuscitation (CPR) and the use of an Automatic External Defibrillator (AED); Abbott Electric employees will follow company procedures when responding to a jobsite injury. This procedure is in place to help reduce the occurrence of injuries of Abbott Electric employees rushing in to assist injured coworkers. By following these steps, the injured will be taken care of with no additional injuries.
- **Survey the scene of the accident:**
    - Look at the victim, but also the entire scene of the accident.
    - Check for fallen wires, toxic fumes, fire, or any other hazards.
- **Do a primary survey of the victim:**
    - Is the victim in immediate danger? If not, leave them where they are. If they must be moved, do so as trained in basic first aid.
    - If the victim is conscious, ask how the injury occurred and the extent of the injuries.
    - If the victim is unconscious, check for breathing and pulse. Administer CPR and get the AED, if one is available. Provide mouth to mouth resuscitation and/or CPR if needed.
    - Call Emergency Medical Services (EMS).
        - Depending on geographic location, this might be 911 or you may need to dial a local number.
        - Give a thorough description of the accident scene, the victim's condition and what first aid is being given. Provide the location of the victim to the authorities and any special instructions that EMS responders may need.

D. TRAINING

- In addition to any basic or advanced first aid and BLS training given to Abbott Electric employees, they will also receive training that includes, but is not limited to:
    - Responding to emergency situations of the jobsite.
    - Correctly transmitting information involving a medical emergency to emergency personnel.
    - Knowing the correct number to call when accessing emergency personnel; If 911 is available or if there is a local number.
    - Blood-borne Pathogen Training if they are a First Responder.

FITNESS FOR DUTY PROGRAM

A. PURPOSE AND SCOPE

Employees must be able to perform their job duties in a safe, secure, productive, and effective manner and remain able to do so through the entire time they are working. Employees who are not fit for duty may present a safety hazard to themselves, other employees, Abbott Electric, or to the public. This program will provide information on fitness for duty.

B. RESPONSIBILITIES

- Employees are responsible for:
    - Managing their health in such a way that they can safely perform their essential job functions with or without reasonable accommodation.
    - Notifying their supervisors when they are not fit for duty.
    - Notifying the supervisor when they observe a coworker acting in a manner that indicates the coworker may be unfit for duty. If the supervisor's behavior is the focus of concern, an employee may inform the upper-level manager or may call the Employee Health Services for further guidance.
    - Employees must notify their supervisor when taking prescription or over-the-counter medication that could impair his/her ability to work safely.
    - Employees must notify their supervisor if they are fatigued to the point of not being able to perform their work duties.
- Supervisors are responsible for:
    - Observing the attendance, performance, and behavior of the employees they supervise.
    - For following this policy's procedures when presented with circumstances or knowledge that indicate that an employee may be unfit for duty.
    - Confidentiality of medical records
- Note: any document containing medical information about an employee is considered a medical record and is regarded as confidential. Employee Health Services will maintain medical records in a file separate from all other employee records.

C. PROCEDURES

- Drug and alcohol screening for pre-employment, post-accident, or random as prescribed by the host facility will be conducted.
- The supervisor who receives reliable information that an employee may be unfit for duty, or through personal observation believes an employee to be unfit for duty, will validate and document the information or observations as soon as is practicable.
    - Actions that may trigger the need to evaluate an employee's fitness for duty include, but are not limited to, problems with dexterity, coordination, concentration, memory, alertness, vision, speech, inappropriate interactions with coworkers or supervisors, inappropriate reactions to criticism, or suicidal or threatening statements.

- The determination by a supervisor to refer an employee for a fitness for duty evaluation must involve consultation with a Human Resources representative.
- Supervisors requesting a fitness-for-duty evaluation will complete a Supervisor's Observation Report and forward it to Human Resources.
- The supervisor will present the information or observations to the employee at the earliest possible time in order to validate them and will allow the employee to explain his or her actions, or to correct any mistakes contained in the description of those actions. The supervisor will then determine whether the employee should leave the workplace immediately for safety reasons.

- In situations where there is a basis to think that a crime may have been committed and/or the employee is making threats to harm themself or others or is acting in a manner that is immediately dangerous to himself or herself or others, the supervisor shall contact the police.
- Employees being referred for a fitness for duty evaluation will be relieved of duties and placed on paid administrative leave pending completion of the evaluation and receipt of the results.
  - Human Resources will forward documentation from the supervisor to the Medical Director for Employee Health and Wellness, who will determine what type of fitness-for-duty examination is indicated.
  - The decision as to which health care provider will perform the fitness-for-duty evaluation will be made by the Medical Director. The employee's home department will pay the cost of a fitness-for-duty evaluation.
  - Employee Health and Wellness will help locate an appropriate health care provider for employees requiring a fitness-for-duty evaluation upon receipt of documentation from the supervisor.
  - If an employee is found to be unfit for duty, his/her employment and pay status will be determined on a case-by-case basis in accordance with company policies and procedures. Applicable employee leave accruals will be used to cover continued approved leaves of absence from work.
  - In all cases an employee who has been referred for a fitness-for-duty evaluation must provide documentation from the independent evaluator indicating his/her fitness for duty in order to return to work.
  - Non-compliance with a request for a fitness-for-duty evaluation may constitute misconduct, leading to disciplinary action up to and including dismissal.

D. DEFINITIONS

- Fitness for Duty - Whether an employee is physically and mentally capable of safely performing the essential functions of his/her job with or without reasonable accommodation.
- Fitness for Duty Evaluation - Evaluation by an impartial, independent health care professional with appropriate expertise in one or more of the following: medical conditions, psychological conditions, and/or conditions related to the use or abuse of alcohol or other substances.

FORKLIFT PROGRAM

A. PURPOSE AND SCOPE

The purpose of this Powered Industrial Truck Program is to protect the health and safety of all Abbott Electric employees assigned to operate powered industrial trucks and to comply with the requirements of 29 CFR 1910.178 (Powered Industrial Trucks).

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Develop specific policies and procedures pertaining to the operation and maintenance of powered industrial trucks.
- Implement a training program based on the general principles of safe truck operation, the type of vehicles being used in the workplace, and the hazards of the workplace created by the use of the vehicles.
- Coordinate the training and performance testing of powered industrial truck operators.
- Maintain the training certification records and performance tests of Abbott Electric employees included in the training sessions.
- Periodically review the effectiveness of the program.

Supervisor

The Supervisor will:

- Ensure that Abbott Electric employees who operate powered industrial trucks in their departments have received appropriate training.
- Provide observations and feedback to operators to ensure safe equipment operation.
- Ensure that the vehicles under their responsibility are properly inspected and maintained in a safe operating condition.

Employees

The Employees will:

- Operate powered industrial trucks in a safe manner.
- Inspect powered industrial trucks at the beginning of each work shift and complete the appropriate inspection forms, if requested.
- Report equipment defects and/or maintenance needs to their supervisors immediately.

C. DEFINITION OF TERMS

The following terms are associated with the design, type, and use of powered industrial trucks:

- Backrest: Supports the load when tipped back and adds stability.
- Carriage: The part of the mast where the forks and backrest are mounted.
- Counterbalance Forklifts: Designed for both indoor and outdoor use, counterbalance truck wheels as their center of gravity and can be powered by battery, propane, gasoline, or diesel fuel.

- Full-tapered Forks: Forks that gradually increase in thickness from the tip of the fork all the way back to the fork's heel (rear). Full-tapered forks are used to lift lighter loads.
- Half-tapered forks: Forks that gradually increase in thickness from the tip of the fork (front) to about midway back where the blade reaches its maximum thickness. Half-tapered forks are used to lift heavier loads.
- Identification Plate: Contains information about the truck's design and capacity, including information about the truck's engine, load capacity, serial number, weight, and the truck's type designation. The identification plate may also contain additional information specific to that type of truck.
- Lift Cylinders: Hydraulically operated single acting cylinders used to lift the carriage.
- Load Center: The distance from the heels of the forks to the load's center of gravity.
- Mast: The mechanism on the truck that raises and lowers the load. The mast is made up of a set of tracks that house bearings and chains.
- Material Handling: Any activity that involves picking up and moving materials, parts, and/or finished products.
- Powered Industrial Truck: An industrial vehicle used to carry, push, pull, lift, or stack material that is powered by an electric motor or an internal combustion engine. Included are vehicles that are commonly referred to as forklift trucks, rider trucks, motorized or powered hand trucks, pallet trucks, and tugs. Not included is compressed air or nonflammable compressed gas-operated industrial trucks, farm vehicles, or vehicles intended primarily for earth moving or over-the-road hauling.
- Powered Pallet Jack: A type of powered industrial truck designed to move palletized materials. These trucks may be called walkies or walkie riders.
- Order Picker: A type of truck designed to allow the operator to ride up and down the load, so that individual items can be pulled from a rack or storage self.
- Overhead Guard: A guard over the operator's head that protects the operator from falling debris. Note: The overhead guard is not designed to withstand the full impact of falling objects.
- Rated Capacity: The maximum weight that the truck is designed to lift as determined by the manufacturer. To lift the maximum rated capacity, the load must be as close as possible to the drive wheels. The rated capacity of a truck can be found on the Identification Plate on the vehicle and/or in the manufacturer's operator manual.
- Side Stability: Refers to the truck's ability to resist tipping sideways under various loaded and unloaded conditions.
- Tilt Cylinders: Hydraulically operated double acting cylinders used to tilt the backrest and forks. Tilt cylinders work in both forward and backward directions.
- Type designation: Refers to the truck's power source (diesel, gas, electric, or liquefied propane gas) and if the truck is equipped with any additional safeguards to the exhaust, fuel, and/or electrical systems. The designation will also indicate any locations where the truck may not be used such as in atmospheres containing flammable vapors or dusts.

The following definitions help to explain the principle of stability:

- Center of Gravity: A point on an object at which all of the object's weight can be considered to be concentrated.
- Counterweight: The weight that is a part of the truck's basic structure which is used to offset the load's weight and to maximize the vehicle's resistance to tipping over.
- Fulcrum: The truck's axis of rotation when it tips over.
- Grade: A surface's slope that is usually measured as the number of feet of rise or fall over a hundred-foot horizontal distance (measured as a percentage).
- Lateral stability: A truck's resistance to tipping over sideways.
- Line of action: An imaginary line through an object's center of gravity.
- Load center: The horizontal distance from the load's edge, or the fork's or other attachment's vertical face, to the line of action through the load's center of gravity.
- Longitudinal stability: The truck's resistance to overturning forward or rearward.
- Moment: The product of the object's weight times the distance from a fixed point. In the case of a powered industrial truck, the distance is measured from the point that the truck will tip over to the object's line of action. The distance is always measured perpendicular to the line of action.
- Track: The distance between wheels on the vehicle's same axle.
- Wheelbase: The distance between the centerline of the vehicle's front and rear wheels.

D. POWERED INDUSTRIAL TRUCK RULES FOR SAFETY

The following is a list of safety rules pertaining to the operation of a powered industrial truck.

Truck Operations:

- A safe distance will be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car.
- When leaving the truck unattended, the forks will be fully lowered, the controls placed in neutral, the power shut off, the brakes set to, and the key or connector plug removed. The wheels will be blocked if the truck is parked on an incline. **Note:** A powered industrial truck is considered unattended when the operator is 25 feet or more away from the vehicle which remains in his/her view or whenever the operator leaves the vehicle, and the truck is not in view.
- When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- Trucks will not be used to open or close freight doors.
- The brakes of trucks, trailers, and railroad cars will be set, and wheel chocks or stops will be in place to prevent movement during loading or unloading operations. Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars will be checked by the operator for breaks and weakness before driving these vehicles into these surfaces.

- An overhead guard will be used as protection against falling objects. Note: The overhead guard is intended to offer protection from the impact of small packages, boxes, or bagged materials only.
- A load backrest extension will be used whenever necessary to minimize the possibility of the load or part of the load falling rearward.
- Fire doors, access to stairways, fire extinguishers, and emergency exits will always be kept clear.
- Only approved industrial trucks will be used in hazardous conditions.
- Powered industrial trucks will not be driven up to anyone standing in front of a bench or other fixed object.
- No person will be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- Passengers are not permitted to ride on powered industrial trucks unless authorized and the truck is equipped with a safe place for the passenger to ride.
- The operator will never place his/her arms or legs between the uprights of the mast or outside the running lines of the truck.
- The operator will never push one load with another load.
- Spinner knobs must not be attached to the steering handwheels of trucks not originally equipped with such knobs.
- Never lift people on the forks of a powered industrial truck unless the truck has a properly designed safety platform securely attached to the lifting carriage and/or forks. If the truck is equipped with vertical controls only, or vertical and horizontal controls elevatable with the lifting carriage or forks, means will be provided whereby personnel on the platform can shut off power to the truck. Protection from falling objects as indicated necessary by the operating conditions will also be provided.
- Safety platforms, firmly secured to the lifting carriage and/or forks, shall be used.

E. TRAVELING

- Traffic regulations will be observed, including observing all STOP signs and authorized plant speed limits.
- A safe distance of approximately three truck lengths from the truck ahead will be maintained whenever possible.
- The “Right of Way” will be yielded to ambulances or other vehicles in emergency situations.
- The operator will slow down and sound the horn at intersections and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the operator will travel in reverse with the load trailing.
- Railroad tracks will be crossed diagonally whenever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- Grades will be ascended or descended slowly. When ascending or descending grades in excess of 10 percent, loaded trucks will be driven with the load upgrade. Unloaded trucks

will be operated on all grades with the load engaging means downgrade. On all grades the load, and load engaging means, will be tilted back and raised only as far as necessary to clear the road surface.

- The operator will slow down on wet and slippery floors.
- Dock boards or bridge plates will be properly secured before they are driven over, and their rated capacity will never be exceeded. Dock boards or bridge plates will always be driven over carefully and slowly.
- Elevators will be approached slowly and then entered squarely after the elevator car is properly leveled. Once on the elevator, the transmission will be in neutral, the engine shut off and the brakes set to prevent movement.
- Motorized hand trucks must always enter elevators with the load end forward.
- When making turns, the operator will reduce the truck's speed to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.
- Other trucks traveling in the same direction or at intersections, blind spots, or other dangerous locations will not be passed.
- Horseplay and stunt driving, including spinning of the tires, is not permitted.
- Running over loose objects in aisle ways will be avoided.
- Under all travel conditions, the truck will be operated at a speed that will permit the truck to be brought to a stop in a safe manner.
- The operator will always look in the direction of travel and keep a clear view of the path of travel.

F. LOADING STAFFING

- Only stable and safely arranged loads will be handled. Use extreme caution when handling off-centered loads that cannot be centered on the forks.
- Only loads within the rated capacity of the truck will be handled.
- The forks will be placed under the load as far as possible, and the mast carefully titled backward to stabilize the load.
- Extreme care will be used when tilting the load forward or backward, especially when high tiering. Tilting forward with load engaging means elevated is prohibited, except to pick up a load. An elevated load will not be tilted forward, except when the load is in a deposit position over a rack or stack of material.
- When stacking or tiering loads, the operator will tilt the load backward only enough to stabilize the load.
- The operator will remove unsafe containers and pallets from service.
- Trucks equipped with attachments will be operated as a partially loaded truck when not handling a load.
- The operator will adjust long and high loads, including multiple-tiered loads that may affect the capacity of the truck.

- The operator will ensure there is always a safe distance between the mast and overhead lights, pipes, and sprinkler systems.

G. MAINTENANCE OF THE TRUCK

- Powered industrial trucks will be inspected before being placed in service. This inspection will be made at least daily. Trucks used on a round-the-clock basis will be inspected after each shift.
- If at any time during the driver's shift a truck is found to be unsafe, the operator will immediately notify his/her supervisor and remove the truck from service until it has been restored to safe operating condition.
- Fuel tanks should not be filled while the engine is running. Spillage must be avoided.
- Spillage of excess oil or fuel will be carefully cleaned up and disposed of in accordance with state and federal regulations. Appropriate authorities will be notified, if required by law. The fuel cap must be replaced before restarting the engine.
- The operator will always wear the proper PPE when fueling the truck or performing any other maintenance on the truck.
- No repairs shall be made in class I, II, and III locations.
- No truck will be operated with a leak in the fuel system until the leak has been corrected.
- Open flames will not be used to check the electrolyte level in batteries or gasoline level in the fuel tank.
- Smoking is not allowed while changing LPG tanks, refueling gas powered trucks, or changing or charging batteries for electric powered vehicles.

H. EQUIPMENT INSPECTION AND MAINTENANCE

- The operator will conduct an examination of the truck before the vehicle is placed into service. This inspection must be made at least daily. When trucks are used on a round-the-clock basis, each truck will be inspected after each shift. The results of these inspections will be documented on a Powered Industrial Truck Inspection. The operator will immediately notify his/her supervisor if the truck is found to be in need of repair and/or unsafe.
- If repairs are needed on a powered industrial truck that prevents its safe operation, the truck will be taken out of service until the repairs have been made.
- Repairs must be made by authorized personnel only.
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, the vehicle must be removed from service and not returned to service until the cause for the overheating has been eliminated.
- Any vehicle that emits hazardous sparks, flames, or smoke from the exhaust system will be removed from service and not returned from service until the cause for the hazardous emissions has been corrected.
- Powered industrial trucks are to be kept in a clean condition and free of excess lint, oil, and grease. Only noncombustible agents should be used for cleaning trucks. Cleaning trucks with low flash point solvents (below 100 degrees Fahrenheit) is not permitted.

- Precautions regarding toxicity, ventilation, PPE, and fire hazards are to be followed as stated on the warning label and/or the Material Safety Data Sheet (MSDS) for that particular cleaning agent.
- Parts used in any industrial truck requiring replacement will be replaced only with parts equal in safety to those parts originally provided by the manufacturer.

I. OPERATOR TRAINING

- Only Abbott Electric employees who have successfully completed training in accordance with 1910.178(l) will be permitted to operate a powered industrial truck.
- Training will consist of a combination of formal instruction (i.e. lecture, discussion, videotape program, written material) practical training (i.e. demonstrations performed by the trainer and practical exercises performed by the trainee,) and evaluation of the operator's performance in the workplace.
- Operator training and evaluation will be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.
- The formal (classroom) training will include a review/discussion of the following topics:
    - The factors that affect the stability of the truck.
    - The safe operation of powered industrial trucks.
    - Truck controls and instrumentation; where they are located, what they do and how they work.
    - The similarities and differences between powered industrial trucks and automobiles.
    - Steering and Maneuvering.
    - The proper techniques of battery charging and refueling.
    - The inspection of powered industrial trucks.
    - Vehicle capacity.
    - Load manipulation, stacking and unstacking.
    - Pedestrian traffic in areas where the vehicle will be operated.
    - Narrow aisles and other restricted places where the vehicle will be operated.
    - Other unique and potentially hazardous environmental conditions in the workplace that could affect the safe operation of the vehicle.
- Refresher training in relevant topics will be provided to the operator when:
    - The operator has been observed to operate the vehicle in an unsafe manner.
    - The operator has been involved in an accident or near-miss incident.
    - The operator has received an evaluation that reveals that the operator is not operating the truck safely.
    - The operator is assigned to drive a different type of truck.
    - A condition in the workplace changes in a manner that could affect the safe operation of the truck.

- An evaluation of each PIT operator's performance will be conducted at least once every three years.
- If an operator has previously received training in a topic specified in paragraph 29 CFR 1910.178, and the training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.
- Training will be documented on the Powered Industrial Trucks. The certification will contain each employee's name, the date of training and the name of the instructor.

J. PROGRAM REVIEW

- The Safety Director will review and evaluate the effectiveness of this program when any of the following occurs:
    - On an annual basis using the Powered Industrial Truck Safety Checklist provided in Appendix D.
    - When there are changes to the OSHA Powered Industrial Truck Standard that require a revision to this program.
    - When there are changes to related procedures that require revision.
    - When there are facility operational changes that require revision.
    - When there is an accident or near miss that relates to this area of safety.

GENERAL WASTE MANAGEMENT PROGRAM

A. PURPOSE AND SCOPE

This General Waste Management Plan is designed by Abbott Electric to be adhered to by all subcontractors, along with Abbott Electric, and other jobsite personnel during the construction of this project. Abbott Electric will implement, discuss goals, and issues as part of subcontractor coordination meetings, and document this plan through the course of construction activities.

B. PROJECT GOALS

The goals for this project shall meet the requirements set forth by The Host to recycle or salvage a minimum of 75 percent (by weight) of non-hazardous construction waste. In order to help achieve these goals, Abbott Electric will provide a cost analysis for recycling and separating the following waste materials (versus land filling):

- Cardboard.
- Clean dimensional wood.
- Beverage and food containers.
- Brick and CMU.
- Ferrous and non-ferrous metals.
- Recyclable Plastic Gypsum wallboard.
- Asphalt and concrete paving.
- Ceiling Tile.
- Carpeting.
- Existing Windows.
- Used equipment oil.
- All other waste materials not listed above will be handled as general refuse and disposed of at a licensed and permitted landfill.

C. IMPLEMENTATION

Waste Determination

Each work site will estimate the waste, trash, and scrap that will be generated and taken into consideration prior to work being performed, so the need for waste disposal and removal can be organized and predetermined. Abbott Electric employees must coordinate with the host employer to ensure the proper method to dispose of waste and scrap material. Employees will be instructed on managing waste generated at the work site and on the proper disposal methods of waste.

- Examples:
    - Instruction of the proper handling, storage, organization, and disposal of wastes, and depending on the waste generated at the site, to also include general instruction on disposal of non-hazardous wastes, trash, or scrap materials.

  - If the waste generated is classified as hazardous, then employees will be trained to ensure proper disposal and compliance with regulations.

- Recycling
  - The collection of recycled material will reduce the total load on the environment.
  - Abbott Electric employees will encourage proper segregation of waste materials to ensure opportunities for reuse or recycling at each site.
  - Waste should be recycled whenever possible.
- Waste Management Plan

  This waste management plan will be distributed to all employees and subcontractors working on this project. Abbott Electric will discuss goals and handling procedures of the waste generated with its employees and subcontractors during coordination meetings. The project's first coordination meeting will provide an orientation discussion of the Construction Waste Management Plan. Items that will be discussed at this orientation will be as follows:

  - Plan requirements.
  - A review of waste handling procedures.
  - Location of dumpsters/bins.
  - Waste segregation requirements.
  - Discussion regarding the cross contamination of waste.
  - Discussion regarding the responsibility of moving waste from the building to applicable bins.
  - Enforcement requirements.
  - Open discussion for suggestions/comments regarding the effectiveness of the plan. The management staff will determine what type of waste will most likely be generated in the immediate future and instruct the subcontractors as to where it shall be placed for recycling, salvaged, or to be disposed. A waste management log or cost analysis will be maintained monthly by Abbott Electric. It will list the materials recycled, the weight of these materials, and a cost analysis from reusing or recycling materials.

HAND AND POWER TOOLS PROGRAM

A. PURPOSE AND SCOPE

The goal of the Hand and Power Tools Program is to reduce the number of tool related injuries. This can be accomplished by using the correct tool, using that tool correctly, and proper tool maintenance. The following program outlines how Abbott Electric will accomplish this objective. This policy covers all potential workplace exposures involving tools and machines as defined by 29 CFR 1926 Subpart I and 29CFR 1910 Subparts O and P.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Ensure all Abbott Electric employees are trained on the proper use of hand and power tools and never assume “everybody knows how.”
- Designate proper storage facilities for all tools in the tool room or on the jobsite.

Supervisor

The Supervisor will:

- Ensure any damaged or defective hand or power tools are immediately tagged and removed from service.
- Ensure that the tools are returned to the designated storage facilities when not in use.
- Inspect hand and power tools periodically.
- Only allow those Abbott Electric employees certified in the use of a Powder Actuated Tool to operate the tool for which they are certified.

Employees

Employees will:

- Use the appropriate PPE when using hand and power tools.
- Only use hand and power tools for their designed purpose.
- Inspect hand and power tools at the beginning of their shift for any defects. If any defects are found, the tool will be tagged and removed from service.
- Use guards on power tools whenever they are in place.
- Use Powder Actuated tools only if certified to use that model of tool.

C. TRAINING

To ensure the safety of all Abbott Electric employees, they will be trained in the proper use of hand and power tools. This training will include but not be limited to:

- Training Abbott Electric employees to select the correct tool for a job.
- Tool inspection and tagging procedures of damaged tools.
- Choosing the appropriate PPE.

HAZARDOUS COMMUNICATION PROGRAM

A. PURPOSE AND SCOPE

The goal of this program is to ensure that all Abbott Electric employees receive adequate information relevant to the possible hazards that may be involved with the various hazardous substances used in Abbott Electric operations and processes. The following program outlines how this objective will be accomplished. This policy covers all potential workplace exposures involving hazardous substances as defined by federal (29 CFR 1910.1200/1926.59), state, and local regulations.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Monitor this Hazard Communication program.
- Inform all employees of hazards involved in non-routine tasks.
- Inform employees of hazards that are associated with chemicals contained in unlabeled pipes in their work areas.
- Answer all questions regarding this program and any information associated with it.

Employees

The Employees will:

- Follow all safety procedures described in this program, consult the written program and SDS's as needed for additional safety precautions, and report all chemical container labeling issues used at the jobsite. All questions should be referred to the Safety Director or Supervisor.
- Not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

C. HAZARD CLASSIFICATIONS

Abbott Electric does not intend to evaluate any of the hazardous substances purchased from suppliers and/or manufacturers but have chosen to rely upon the evaluation performed by the suppliers or manufacturers of the substances to satisfy the requirements for hazard classification.

- Chemicals can cause two types of hazards: Physical and Health

D. WRITTEN PROGRAM

- The written hazard communication program will be developed, implemented, & maintained at each workplace.
- Every company must develop a written hazard communication program that complies with the provisions of 1910.1200(e).

E. LABELS AND OTHER FORMS OF WARNING

- No container or hazardous substance will be released for use unless the container is correctly labeled and the label is legible in English.

- All chemicals in bags, drums, barrels, bottles, boxes, cans, cylinders, reaction vessels, storage tanks, or the like will be checked by the receiving department to ensure the manufacturer's label is intact, legible in English, and has not been damaged in any manner during shipment. The use & care of labels and other forms of warning are important. Any containers found to have damaged labels will be quarantined until a new label has been installed.
- All secondary containers shall be labeled. The information must include the details of all chemicals that are in the referenced container.
- The label must contain a Product Identifier, Signal Word, Hazard Statement, Pictograms, Precautionary Statement, and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

There are two Signal Words to be used:

- "Danger" – Most Severe Hazard
- "Warning" – Less severe than Danger

Pictograms must be in the shape of a square set at a point and have a black hazard symbol on a white background within a red frame that represents a distinct hazard. OSHA has designated nine pictograms under this standard.

Multi-employer Worksites

- At multi-employer worksites the Safety Director will offer to the site general contractor the copies of the following elements of the hazard communication program:
    - The list of chemicals at the site.
    - All SDS that are used at the site.
    - The physical location of the employer's Hazard Communication Program (HCP) at the worksite.
    - The name of the employer's HCP Administrator at the worksite.
    - The site phone number of the employer's HCP.
- Exposure to chemicals from other employers at the multi-employer worksite:
    - The HCP Administrator at the site will contact the following personnel to obtain information about chemicals other employers are using which affect employees at the site: Site general contractor HCP Administrator; or Site Safety Director; or HCP Administrators of the other employers.
- The HCP Administrator will obtain the following information from the site general contractor, site safety director, or other hazard communication program administrators:
    - A list of site chemicals for each employer to which the employees are exposed.
    - Copies of SDS sheets for chemicals to which the employees are exposed.
    - The SDS and lists should be marked to indicate the employer source.
- The HCP Administrator will use the information obtained from the other employers to provide additional training, update the site written hazard program for employees, and ensure that other elements of the program are updated for the exposed employees.

HEAT ILLNESS PREVENTION PROGRAM

A. PURPOSE AND SCOPE

This program is intended to serve as a guideline for Abbott Electric employees to protect themselves against the effects of heat illness and to meet Federal OSHA requirements. Heat illness is a serious medical condition resulting from the body's inability to cope with heat and to cool itself. The effect of heat illness can range from sunburn to heat exhaustion and heat stroke. The hot temperatures and humidity that Ohio experiences throughout the year make it imperative that all employees affected are provided with the appropriate materials and training needed to keep themselves safe. The Heat Illness Prevention Program (HIPP) is applicable to all employees who work outdoors.

B. RESPONSIBILITIES

General Manager, Assistant General Managers, and Division Managers responsibilities are consistent with those outlined in the Injury and Illness Prevention Program (IIPP).

- Supervisors, in addition to the responsibilities listed in the IIPP, are responsible for:
    - Being trained in the employer's heat illness emergency response procedures.
    - Learning and following this Heat Illness Prevention Program.
    - Providing training to their employees on how to prevent and treat heat illness.
    - Providing potable drinking water and a shaded break area for all employees covered by the Heat Illness Prevention Program.
    - Checking the temperature and humidity forecast before each shift.
    - Knowing and being able to recognize the signs and symptoms of heat illness.
    - Knowing the first aid procedures needed to treat the various forms and stages of heat illness.
    - Posting HIPP Emergency Response Procedures.
    - Contacting emergency services and accurately reporting the work location to 911 when needed.
- Employees, in addition to the responsibilities listed in the IIPP, are responsible for:
    - Familiarizing themselves with and following the HIPP.
    - Knowing and being able to recognize the signs and symptoms of heat illness.
    - Knowing the first aid procedures needed to treat the various forms and stages of heat illness.
    - Frequently consuming the provided drinking water throughout the workday.
    - Taking a five-minute break in an adequately shaded area when a preventative recovery period is needed.
    - Contacting emergency services and accurately reporting the work location to 911 when needed.

C. ACTION DETAILS

Each Abbott Electric employee exposed to the environmental risk factors of heat illness will be included in this program. This means that they will be provided with an adequate water supply, shade for recovery periods, and heat illness prevention/treatment training. To ensure all employees comply with rules and maintain a safe workplace, the compliance system includes:

- Identifying weather conditions in which the program will take effect.
- Check heat index before beginning work. If a heat advisory is released or the heat index is in the extreme caution (yellow), danger (light red) or extreme danger (dark red), the HIPP should be implemented.
- Providing water and shade for employees:
    - Ensure all employees working outdoors have access to potable drinking water. Abbott Electric will set aside funds for the purchase of water in locations where it is not plumbed or otherwise continuously supplied.
    - Each applicable location will be provided with one quart of water per person per hour.
    - Each applicable location will determine how water will be distributed to employees, (e.g. water coolers or water bottles).
    - Water should be kept out of direct sunlight to remain as cool as possible.
- Shade:
    - Shade is defined as the blockage of direct sunlight; some sources of shade may include trees, canopies or buildings.
    - All employees will be provided with a shaded area, or other cooling methods that are at least as effective, for their rest/recovery breaks.
    - Shade is not adequate when heat in the area of shade does not allow the body to cool. Examples of inadequate places to seek shade are cars, parking booths (unless air conditioned), and heat generating machinery.
    - Employees shall be allowed and encouraged to take a rest in the shade for a period of no less than five minutes at a time when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times.

D. TRAINING

Training provided by Abbott Electric will cover the following topics:

- Environmental and personal risk factors.
- The procedures for complying with the requirements of Title 8 California Code of Regulations Section 3395.
- The importance of water consumption.
- Acclimatization.
- The different types, signs, and symptoms of heat illness.
- Reporting symptoms or signs of heat illness for themselves or for co-workers.

- Procedures for responding to symptoms of possible heat illness.
- Procedures for contacting emergency medical services.
- Procedures for ensuring that in the event of an emergency, clear and precise directions to the work site can and will be provided to emergency responders.

Environmental and personal risk factors

- Environmental risk factors for heat illness are "working conditions that create the possibility that heat illness could occur." These risk factors include, but are not limited to:
    - Air temperature
    - Humidity
    - Air movement
    - Work severity and duration
    - Personal Protective Equipment (PPE)
- Personal risk factors for heat illness include, but are not limited to:
    - Age
    - Health
    - Water consumption
    - Consumption of diuretics
    - Degree of acclimatization
    - Use of prescription and non-prescription medications

Procedures for complying

- Provide all employees and supervisors with required training.
- Provide fresh water and shade for each employee.
- Develop and implement written procedures for complying with the heat illness prevention standard.
- All employees will be trained prior to working outdoors.
- When possible, working hours will be modified to work during the cooler hours of the day.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will stay alert to the presence of heat related symptoms.

Consumption of water

It is important that employees do not rely on thirst to prompt them to drink water. Once a person begins to feel thirst, the body has already lost a significant amount of water. During heavy physical activity an employee may need to drink 8-12 oz. of water every 20 minutes in order to prevent dehydration and heat illness.

Employees are to avoid drinks with excessive amounts of sugar and carbohydrates, as these ingredients may cause the employee to feel full or even sick. Employees should come to work

well-hydrated and should take 5-minute recovery periods to allow the body to cool off throughout the workday. If possible, keep water out of direct sunlight and encourage employees to frequently drink small quantities of water when the work environment is hot, and employees are likely to sweat more than usual.

Acclimatization

When supervisors and employees are exposed to the environmental and personal risk factors for heat illness, they should take the proper precautions. Use of acclimatization, the gradual adaptation of the body to work in the heat, can help minimize an employee's chances of falling ill. Most people become acclimated to significant changes in temperature by progressively increasing their workload over a period of four to ten days. The human body needs time to adjust to working in hot and humid conditions. Acclimatization is important for employees that are: returning to work after a prolonged absence, returning to work after being off sick, moving from a cooler climate to a hotter climate, or are in an area experiencing a heat wave bringing higher temperatures or humidity levels.

The different types, signs, and symptoms of heat illness

There are five different types of heat illness that employees and supervisors need to be aware of and be able to recognize while working. It is important that all employees working in the sun remain aware of how their bodies are handling working under the various environmental and personal risk factors. They should also be aware of how their co-workers are handling working under extreme conditions.

- Sunburn
- Heat Rash
- Heat Cramps
- Heat Exhaustion
- Heatstroke (or sunstroke)

Reporting the symptoms or signs of heat illness

If employees are experiencing any of the heat illness signs or symptoms they should:

- Immediately report these signs or symptoms to their immediate supervisors.
- If the victim's symptoms indicate sunburn, heat rash, heat cramps or heat exhaustion the supervisor should follow first aid procedures.
- If the victim's symptoms indicate heatstroke the supervisor should immediately seek medical attention.
- Procedures for responding to heat illness symptoms:
    - When a victim experiences symptoms of heat illness the supervisor must be immediately notified.
    - Commence first aid treatment and contact emergency services, if needed.
    - Sunburn
        - Symptoms of sunburn usually include redness and pain. In severe cases there may be swelling of skin, blisters, fever, and headaches.
        - Use ointment for mild cases of blisters.

- If the blisters break one should apply dry sterile dressing.
- A physician should be seen for extensive cases.

- Heat Rash

  This form of heat illness is one of the most common problems in hot work environments. Symptoms generally include red clusters of pimples or small blisters on the neck and upper chest.

  - Keep the affected area dry.
  - Avoid using ointments or creams as they may make the condition worsen.

- Heat Cramps
  - The victim will feel muscle pains or spasms, usually in the abdomen, arms, or legs.
  - Stop all activity and sit in an air-conditioned or shaded area.
  - Drink cool water, clear juices, or sports drinks.
  - Seek medical attention if cramps continue.

- Heat Exhaustion
  - Symptoms of heat exhaustion may include heavy sweating and weakness, a fast and weak pulse rate, nausea, fainting or vomiting.
  - Stop all activity and get into an air-conditioned or shaded area.
  - Lie down and loosen clothing.
  - Drink cool, not iced, water or sports drinks.
  - Cool the person by spraying or sponging him or her with cool water and fanning.
  - Monitor the person carefully. Heat exhaustion can quickly become heatstroke. If fever greater than 102 degrees F, fainting, confusion or seizures occur, call for emergency medical assistance.

- Heatstroke or Sunstroke
  - Symptoms of heat stroke may include high body temperature of 106 degrees F or higher, hot and dry skin, unconsciousness or convulsions.
  - Stop all activity and get the victim into an air-conditioned or shaded area.
  - Call for emergency medical assistance.
  - Do not give anything by mouth (even water).
  - Cool the person by spraying or sponging him or her with cool water and fanning.
  - Once the employee has been treated, the supervisor should conduct an emergency refresher on Heat Illness Prevention for all employees on site.
  - The supervisor should have employees fill out a sign-in sheet.
  - The supervisor must attach a summary of what was said along with any handouts that were passed out.

Contacting emergency services

- All supervisors are responsible for filling in all the site-specific information on the Emergency Response Procedures form. Under item one of the Emergency Response Procedures form, supervisors are responsible for filling in the phone number employees must use to contact emergency services. Each job site determines this number.
- Give clear and precise directions.
- Supervisors are responsible for filling in the full address and a contact number for the work site. Employees will be using this information during an emergency, so it is important to be as specific as possible. The supervisor must write down any instructions that emergency services may need to reach the victim or the worksite. It is important that the supervisor gives special instructions that are specific to the work location. If there is a section in item two that does not apply to your workplace, please write N/A in the blank spaces provided.

HEXAVALENT CHROMIUM PROGRAM

A. PURPOSE AND SCOPE

The program provides information and the process to follow to recognize, evaluate, and control employee exposure to Hexavalent chromium (Cr(VI)) at Abbott Electric project locations. Where states OSHA agencies may have more stringent requirements, contact the appropriate Health and Safety Lead to address these specific requirements. This program applies when employees may be exposed to Cr(VI) due to the following activities:

- Performing hot work such as welding on stainless steel or Cr(VI) painted surfaces, traffic painting or paint removal containing Cr(VI), refractory brick restoration, or soil disturbance activities such as drilling or from heavy equipment moving on soils containing Cr(VI) soils.
- Working at project sites or related operations such as electroplating, painting (aerospace and auto body repair), chromate pigment and chemical production, chromium dye and catalyst production, glass manufacturing, or plastic colorant production. (Abbott Electric subcontractor, or third-party contractor employees.)
- Abbott Electric provides oversight of subcontractor's activities where worker exposures to Cr(VI) can occur.

B. RESPONSIBILITIES

- Health and Safety (H&S) Leads are responsible for assisting Project Managers in implementing this program for all projects where there is a potential for worker exposure to Cr(VI). The H&S Lead has the authority to approve deviations from this standard to accommodate additional domestic and international requirements.
- The Project Manager is responsible for implementing this procedure and providing adequate resources (budget and staff) for project-specific implementation of the H&S management process on projects where there is a potential for worker exposure to Cr(VI). The PM has overall H&S management responsibility but may delegate specific tasks to other project staff. The PM retains ultimate H&S responsibility.
- The Manager is responsible for all field operations onsite and is typically the Construction Manager, Site Superintendent, Site Supervisor, or Field Team Leader. The Site Manager is directly responsible for implementing all aspects of the project H&S plan and applicable requirements of this program.
- The Health & Safety Manager is to provide health and safety technical guidance and support to the project. The HSM prepares and/or approves the Abbott Electric project H&S plan, develops the Cr(VI) sampling plan, conducts the personal protective equipment (PPE) evaluation for skin, eye, and respiratory hazards to Cr(VI), reviews subcontractor H&S plans and submittals, conducts project H&S audits, and provides H&S support and guidance to the project.
- The Site Safety Coordinator is either the Site Manager or is someone designated by the Site Manager to implement the project H&S plan. The Site Safety Coordinator ensures that the appropriate elements of this program are implemented.

C. DEFINITIONS

- Action Level
  - The action level for implementation of this program is a concentration of airborne Cr(VI) of 2.5 micrograms per cubic meter (2.5µg/m3) of air calculated as an 8-hour Time-Weighted Average (TWA).
- Chromium VI or Hexavalent Chrome
  - Chromium with a valence of positive six, in any form and in any compound.
- Emergency Release
  - Any activity that results or is likely to result in an uncontrolled release of Cr(VI). If an incidental release of Cr(VI) (measured at or below the PEL) can be controlled at the time of release by workers in the immediate release area, it is not an emergency.
- Worker Exposure
  - The exposure to airborne Cr(VI) that would occur if the worker was not using respiratory protection.
- High-Efficiency Particulate (HEPA) Filter
  - Filter that is at least 99.97 percent (%) efficient in removing mono-dispersed particles of 0.3 micrometers (µg) in diameter or larger.
- Historical Monitoring Data
  - Hexavalent chromium exposure assessment monitoring conducted prior to May 30, 2006, obtained during work operations conducted under workplace conditions closely resembling the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.
- Objective Data
  - Information such as air monitoring data from industry-wide surveys or calculations based on the composition, chemical and physical properties of a substance demonstrating the worker exposure to Cr(VI) associated with a particular product or material or a specific process, operation, or activity. The data must reflect workplace conditions closely resembling the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.
- Permissible Exposure Limit (PEL)
  - The level of worker exposure to an airborne concentration of Cr(VI), without regard to the use of respirators, at 5 micrograms per cubic meter of air (5 µg/m3) calculated as an 8-hour TWA that cannot be exceeded.

D. REQUIREMENTS

The following requirements outline the mandatory criteria that each Abbott Electric employee must comply with when implementing this program using their policies, procedures, processes, training, and contracting documents.

- Subcontractor Management
  - Subcontractor H&S responsibilities are expressly defined through the subcontract terms and conditions. Subcontractors must determine how to conduct their

operations in compliance with applicable H&S regulations and industry standards, and how to correct deficiencies. Abbott Electric employees shall not direct the means and methods of subcontractor operations.

- Subcontractors are responsible and accountable for implementing these requirements and any additional requirements established in their own health and safety procedures as described in Abbott Electric Health & Safety Program, Contracts, Subcontracts, and HSE&Q Practices.
- Subcontractors retain control over their practices, and Abbott Electric oversight does not relieve them of their own responsibility for effective implementation and enforcement of H&S requirements.
- The "Subcontractor Health and Safety Procedure Criteria – Cr(VI)" provides the minimum criteria for these safety procedures. These criteria may be used by the H&S staff to review submitted subcontractor safety procedures when Abbott Electric is performing oversight of subcontractor's operations.

- Exposure Determination
  - Initial exposure monitoring must be conducted to document worker breathing-zone exposures over the course of a full shift. A representative 8-hour TWA sample shall be collected to determine employee exposure for each job classification in each work area.
  - Air monitoring will be performed at the beginning of each job task.
  - Exposure determinations must follow the current accepted sampling and analytical method equivalent to that used by OSHA.
  - Sample media used for Cr(VI) monitoring will be analyzed using an industrial hygiene laboratory accredited by the American Industrial Hygiene Association (AIHA) equivalent laboratory accreditation can be substituted in countries that do not have an AIHA-accredited industrial hygiene laboratory.
  - Periodic monitoring of workers is required at least every 6 months when the initial monitoring indicates TWA results are equal to or greater than the Action Level (AL) but below the PEL.
  - When initial monitoring results are greater than the PEL, additional periodic monitoring, at least quarterly, for each worker involved is required.
  - Periodic monitoring every 6 months or quarterly may be halted when two consecutive samples taken at least 7 days apart are equal to or below the AL.
  - When monitoring results fall below the AL, monitoring may be suspended.
  - Additional monitoring is required when there has been a change in production process, control equipment, personnel, or work practices that may result in new or additional exposures.
  - A performance-oriented option may be used to determine the initial 8-hour TWA exposure for each worker based on any combination of air monitoring data, historical monitoring data, or objective data sufficient to accurately characterize exposure to Cr(VI).
  - Workers shall be informed in writing of exposure monitoring results within 5 working days after receipt of the results.

- When the PEL has been exceeded, notification to the affected worker shall include the control measures utilized to reduce the exposure to below the PEL.
- Demarcation of Regulated Areas Work areas where worker exposure to Cr(VI) is or can reasonably be expected to exceed the OSHA PEL must be demarcated and access limited to only workers authorized to

- Methods of Compliance
  - Engineering and work practice controls must be applied to reduce the Cr(VI) worker exposure level to below the OSHA PEL unless it can be demonstrated that such controls are not feasible. Rotating employees to different jobs shall not be used to achieve compliance with the PEL. Methods of compliance in the hierarchy of controls include the following:
    - Substitution – Gas Tungsten Arc Welding (GTAW) instead of Shielded Metal Arc Welding (SMAW) or Flux Cored Arc Welding (FCAW).
      - Engineering controls – mechanical ventilation to remove fumes from the breathing zone.
      - Administrative controls – safe work practices for the worker on proper positioning to minimize fume trail in their breathing zone, either through positioning upwind in an open area, or in proper alignment with ventilation controls.
      - PPE – use of respiratory protection as the last resort in reducing exposure or as an interim measure until substitution can be applied or engineering controls installed.

- Respiratory Protection
  - Respiratory protection will be provided by the employer and worn by the worker sufficiently to reduce the exposure to below the Cr(VI) action level. Respiratory protection will be used only as a last resort to ensure that worker exposure to Cr(VI) is maintained below the action level, or as an interim measure while applying substitution of materials or processes, implementation of work practice controls, or installation of mechanical ventilation. When employee exposures are above the PEL for no more than 30 days per year (12 consecutive months) from a particular process or task, respiratory protection can be primarily relied upon to ensure employee exposure is maintained below the PEL. The elements of the respiratory protection program must comply with the Abbott Electric Respiratory Protection, and 29 CFR 1910.134, Respiratory Protection. Key elements for an appropriate respiratory protection program include the following:
    - Exposure assessment to determine the appropriate respiratory protection to be selected with the required protection factor and fit factor.
    - Medical surveillance for workers to determine their ability to wear respiratory protection.
    - Fit testing of workers to identify which model and type of respiratory protection can be worn.
    - Training workers on how to wear, use, clean and maintain their respiratory protection equipment.
    - Respirator cartridge change-out guidelines for workers.

        - Periodic evaluation of the respiratory protection program by the assigned H&S representation

- Personal Protective Equipment (PPE) and Work Clothing
    - PPE and work clothing shall be provided to workers where an eye or skin hazard may exist to Cr(VI) at no cost to them. The elements of the PPE and work clothing program must comply with the Abbott Electric Personal Protective Equipment, and 29 CFR 1910.132, General Requirements for Personal Protective Equipment, and 29 CFR 1910.133, Eye and Face Protection. Key elements for an appropriate protective work clothing program include the following:
        - Evaluation by the HSM of work tasks to identify the appropriate type of PPE and work clothing.
        - Providing the appropriate PPE and work clothing in a variety of sizes and styles
        - Training workers on wearing, using, cleaning, and maintaining PPE and work clothing.
        - Ensuring that workers do not remove contaminated PPE or work clothing from the worksite.
        - Providing a service to launder reusable work clothing.
        - Repair or replace as needed.
- Hygiene Areas and Practices
    - Where work clothing is required to be worn in place of street clothing to prevent skin exposure to Cr(VI), changing rooms and washing facilities must be provided. Changing rooms must include separate storage facilities for work clothing and for street clothes. Washing facilities must be readily accessible to workers and must be used by them at the end of the work shift and prior to eating, drinking, smoking, chewing tobacco or gum, applying cosmetics, or using the toilet. An area on the worksite must be designated to be free of Cr(VI) for workers to consume food or beverages.
- General Work Practices and Housekeeping
    - Work areas or project sites where Cr(VI) can potentially expose workers must implement and follow work practices to maintain acceptable housekeeping conditions to minimize contact or exposure. General work practices and housekeeping must include the following:
        - All surfaces must be maintained as clean as practicable to minimize accumulation of Cr(VI) containing substances, dust or particles.
        - All spills and releases of Cr(VI) containing material must be cleaned up promptly.
        - Surfaces contaminated with Cr(VI) must be cleaned with HEPA-filter vacuuming or equivalent methods or practices that minimize the potential for worker exposure.
        - Avoid using compressed-air, dry-shoveling, dry sweeping, or dry brushing, and use only when a HEPA-filter vacuum system or equivalent method has been tried and found to be not effective.

- Collection of waste, scrap, debris, or other materials contaminated or containing Cr(VI) must be in impermeable containers or bags and labeled meeting hazard communication requirements described in Abbott Electric Hazard Communication or 29 CFR 1910.1200, Hazard Communication.
- Waste containing significant amounts of chromium may be subject to hazardous waste regulations and the corresponding generation, treatment and disposal requirements.

- Medical Surveillance
  - Workers who are or will be potentially exposed to airborne Cr(VI) above the action level for at least 30 days per year, without regard to respirator use, will participate in their employer's Cr(VI) medical surveillance program. Further participation in periodic Cr(VI) medical surveillance will be based on exposure conditions (such as an emergency or when a worker shows signs or symptoms of exposure), annually, or within a specified frequency determined by Abbott Electric consulting physician (or equivalent), and at termination of employment. Subcontractors are responsible for their workers receiving medical surveillance for Cr(VI) as required by regulatory requirements, contract, or their own company's requirements.
- Communication of Hazards
  - Information concerning Cr VI hazards will be communicated according to the requirements of the OSHA Hazard Communication Standard and the OSHA Cr VI Standard including, but not limited to, the requirements concerning warning signs and labels, material safety data sheets (MSDSs), and employee information and training. The entrance to regulated areas must be posted with signs that read "CHROMIUM VI REGULATED AREA – AUTHORIZED PERSONNEL ONLY". In addition to the posting requirements, owners, contractors, and other personnel working in the area must be notified. All storage or shipping containers shall be labeled with the following "Danger – Contains Cr VI – Cancer Hazard – Harmful if inhaled or swallowed – Use Only with Adequate Ventilation or Respiratory Protection". A copy of this program and the OSHA Cr VI Standards (General Industry and Construction) will be made available to all affected project workers. Additional communication requirements are described in the training section.

E. TRAINING REQUIREMENTS

Workers who may be exposed to airborne Cr(VI) above the action level or anticipate working on projects where they could be exposed to airborne Cr(VI) above the action level, or to soil that contains elevated levels of Cr(VI), must complete initial Cr(VI) exposure training. This training covers the following information:

- Where Cr(VI) is typically encountered at Abbott Electric projects.
- The regulatory requirements, exposure limits, potential hazards including toxicity and physical characteristics, and medical monitoring requirements.
- For site-specific Cr(VI) hazards, discussion on the location and tasks associated with potential exposure and associated control measures.
- Information contained in the site-specific Health, Safety, and Environmental Protection Plan or Job Hazard Analysis created for the project.

- Quantity, location, manner of use, storage, sources of exposure, and the specific nature of operations that could result in exposure to Cr(VI), as well as any necessary protective steps.
- Purpose, proper use, and limitations of respirators.
- Purpose and a description of the medical surveillance program.
- Engineering controls and work practices associated with the employee's job assignment.
- A review of this program. Each worker must be provided with a copy of the OSHA Chromium Standard (General Industry and/or Construction) and appendices if requested. Subcontractors are responsible for complying with all applicable training requirements relating to Cr(VI) exposure and for providing the training necessary to complete their tasks Abbott Electric will provide initial training prior to or at each initial assignment. Abbott Electric will ensure the training is understandable and ensure each employee can demonstrate knowledge of the health hazards associated with Cr(VI) exposure, location, manner of use, and release of chromium in the workplace; engineering controls and work practice controls; purpose, proper selection, fitting, proper use and limitations of respirators and protective clothing; emergency procedures; measures employees can take to protect themselves from exposure; purpose and description of medical surveillance program; contents of the standard. Abbott Electric will have readily available without cost to all affected employees. Abbott Electric will document all training.

F. RECORDKEEPING

An accurate record of all worker personal air sampling and other air monitoring related to determining Cr(VI) exposure for Abbott Electric employees must be completed and maintained that includes the following:

- Industrial hygiene sampling surveys.
- Specific information on the sample date, worker(s) sampled, job classification, process or task sampled, materials used, PPE worn, sample duration, air sampling, and analytical method for historical monitoring data, an accurate record of the determination must include the following information:
    - Confirmation that the data was collected using acceptable sampling and analytical methods.
    - Description of the process that matches the task, conditions, materials, equipment, and processes for which the exposure is being determined for objective data, an accurate record of information that is relied upon to determine worker exposure must include the following information:
        - The type of chromium-containing material.
        - Description of the process, activity or operation.
        - Other relevant information used to support a comparable exposure assessment.
- Exposure assessment records related to Cr(VI), including worker personal air sampling, historical monitoring data, and objective data must be maintained for a minimum of thirty years. Copies of exposure assessment records for Abbott Electric employees are to be forwarded to Abbott Electric HR Manager. Medical monitoring records related to Cr(VI)

must be maintained for each employee for thirty years beyond their duration of employment. Medical monitoring records will be retained in the employee's medical file and maintained by an Abbott Electric occupational health care provider.

G. Cr(VI) FACT SHEET

- Uses and Occurrences
  - Chromium is a naturally occurring element in rocks, animals, plants, soil, and volcanic gases. Chromium occurs in the environment predominantly in one of two valence states:
    - Trivalent (Cr III), which occurs naturally and is an essential nutrient.
    - Hexavalent chromium (Cr(VI)), which, along with the less common metallic chromium (Cr 0), is most commonly produced in plating processes. The major industrial sources of Cr VI compounds are chromate pigments in dyes, paints, inks, and plastics; chromates added as anti-corrosive agents to paints, primer, and other surface coatings; chrome plating by depositing chromium metal onto an item's surface using a solution of chromic acid; particles released during smelting of ferro-chromium ore; fumes from welding stainless steel or nonferrous chromium alloys; and as an impurity in Portland cement.
  - Physical Characteristics/Appearance: Dark red flakes or powder
  - Odor: None
  - Flammable: Non-combustible, solid, but will accelerate the burning
  - Flash Point: None
  - Flammable Range: None
  - Specific Gravity: 2.7 for Cr
  - Visibility: Stable
  - Incompatibilities: Reducing and oxidizing agents, acetic acid
  - Melting point: 1907°C or 3465°F for Cr
  - Boiling point: 2671°C or 4840°F for Cr combustible materials
- Signs and Symptoms of Exposure
  - Short term (Acute): Coughing, sneezing, chest pain, breathing difficulty, itching.
  - Long term (Chronic): Allergic (asthma like symptoms) respiratory reaction, skin and burning sensation to skin, lungs and eye irritation, nosebleeds, contact dermatitis, allergic like skin reaction, ulceration and perforation of the nasal septum.
- Modes of Exposure
  - Inhalation: Dusts and fume
  - Skin Absorption: Liquid
  - Ingestion: Dusts and liquids

- Exposure Limits
  - Action level: 2.5 micrograms per cubic meter (µg/m3)
  - PEL: 5 µg/m3
  - STEL: None TLV: 5 µg/m3
- PPE
  - Eye: Safety glasses
  - Skin: Chemical protective gloves and body protection
  - Respiratory: Air-purifying respirators and supplied-air respirators, depending on the exposure, and a PAPR if requested by the worker.
- First Aid
  - Inhalation: Move to fresh air; seek medical attention promptly.
  - Skin: Quick drenching with water; wash skin with soap and water.
  - Eyes: Flush with water for 15 minutes, lifting the lower and upper lids.
  - Ingestion: Seek medical attention promptly.

HOUSEKEEPING PROGRAM

A. PURPOSE AND SCOPE

The goal of Abbott Electric housekeeping program is to create and maintain all company site offices and storage trailers, storage areas, fabrication shops and lay down yards and construction work areas in a clean and orderly condition. This will help create a hazard-free work environment. This written program works to create and maintain a safe work environment as required in 29CFR 1926.25.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Develop a plan to maintain good housekeeping at the beginning of the job.
- Ensure this plan is carefully supervised and followed through to the final clean-up.

Supervisor

The Supervisor will:

- Make certain that trash and scrap metal containers are provided and that these containers are emptied as often as needed to maintain an orderly work environment.
- Ensure that garbage and other wastes will be disposed of at frequent and regular intervals.

Employees

Employees will:

- Share the responsibility of maintaining a clean jobsite.
- Pick up their own scrap materials, tools, electrical cords, etc. and place them in the proper places as work progresses.

C. ACTION DETAILS

The housekeeping plan will be developed at the beginning of a job and carefully supervised and followed through until the final jobsite clean-up Individual containers will be provided for the different types of debris and trash that is generated at the jobsite.

- Debris and trash will be removed from the jobsite as often as is necessary to maintain orderliness.
- A rush schedule cannot be used by this company or any subcontractor and will not be allowed as an excuse to allow poor housekeeping habits.
- Housekeeping is a shared responsibility that can’t be ignored. All employees at a jobsite will pick up after themselves and any trash or debris they generate.
- Dirty light fixtures reduce essential light levels. Clean light fixtures can improve lighting efficiency significantly and will be kept in this condition.
- Aisles will be wide enough to accommodate people and vehicles comfortably and safely. Aisle space allows for the movement of people, products and materials.

- Aisles and stairways will be kept clear. They will not be used for temporary “overflow” or “bottleneck” storage. Adequate lighting will be maintained in stairways and aisles.
- Tools require suitable fixtures with marked locations to provide orderly arrangement, both in the tool room and near the work bench. They will be returned promptly after each use to reduce the chance of them being misplaced or lost.
- Employees will regularly inspect, clean and repair all tools and take any damaged or worn tools out of service.
- A regular collection, grading and sorting of scrap will be conducted. Contract Documents will determine who has ownership of any material that is demoed or removed. No employee is allowed to remove or take possession of any material removed during demolition or renovation without expressed written consent of the owner and/or the contractor.
- Scrap containers will be kept near where the waste is produced to encourage orderly waste disposal and make collection easier.

HYDROGEN SULFIDE PROGRAM

A. PURPOSE

Abbott Electric has developed this program to assure that all company employees performing job tasks where a potential Hydrogen Sulfide exposure could occur are protected. Compliance with this program is mandatory and is applicable to all company employees who work in an environment where Hydrogen Sulfide may be present in any amount. Failure to comply will result in disciplinary action and/or is grounds for termination.

B. DEFINITIONS

Hydrogen Sulfide

- Most exposures center on the oil and natural gas industries.
- Hydrogen sulfide is an extremely toxic, flammable gas that may be encountered in the production of gas, well gas, high-sulfide, high sulfur content crude oil, crude oil fractioning, associated gases, and waters.
- Hydrogen sulfide is heavier than air and can collect in low places.
- As an employee of Abbott Electric, potential exposure to various forms and amounts of hydrogen sulfide may occur during certain job activities. However, any exposure should be avoided.
- If an exposure cannot be avoided through ventilation, etc., proper PPE must be used.

C. FORMS OF HYDROGEN SULFIDE EXPOSURE

- Hydrogen Sulfide exposures are almost exclusively through inhalation.
- Other exposures such as ingestion should not be overlooked.
- Inhalation at certain concentrations of Hydrogen Sulfide can lead to injury of death.
- The listed IDLH (Immediately Dangerous to Life & Health) level is extremely low (300 PPM).

D. HEALTH EFFECTS OF HYDROGEN SULFIDE OVEREXPOSURE

- If steps are not taken to control exposure, continued inhalation of Hydrogen Sulfide Hydrogen Sulfide could result in:
    - Loss of the sense of smell
    - Death
- Low concentration exposures (under 10 PPM).
    - In low concentrations, Hydrogen Sulfide can be detectable by its odor; however, the smell cannot be relied upon to forewarn of dangerous concentrations, because it rapidly paralyzes the sense of smell. A longer exposure to the lower concentrations may result in the loss of the sense of smell.
    - Symptoms from repeated exposure to low concentrations usually disappear after being removed from the exposure for a period.
- Higher concentration exposures (10 PPM and above).
    - Concentrations that are prolonged or of high concentrations may lead to death.

- It should be well understood that the sense of smell will be rendered ineffective by hydrogen sulfide, which can result in an individual failing to recognize the presence of dangerously high concentrations. Exposure to hydrogen sulfide causes death by poisoning the respiratory system.

E. REPORTING OF PROBLEMS

- Immediately notify your supervisor if you develop potential signs or symptoms associated with Hydrogen Sulfide exposure. You should also notify your supervisor if you have difficulty breathing while wearing a respirator or suspect problems with other PPE.

F. EXPOSURE ASSESSMENT

- The jobsite foreman will determine if employees are exposed to concentrations of hydrogen sulfide. The exposure determination shall be based on the following:
  - Personal exposure monitoring
  - If the initial exposure determination reveals employee exposure to be below the STEL, continuous monitoring will be performed. In addition, continuous ventilation shall be used. Appropriate PPE will be worn by all employees exposed to Hydrogen Sulfide.

G. PREVENTING EXPOSURE

- Proper control of exposure to Hydrogen Sulfide is the responsibility of both the host employer, Abbott Electric, and the employee. All of the control methods discussed below are essential to minimize additional sources of Hydrogen Sulfide absorption from inhalation. Strict compliance with these provisions can virtually eliminate several sources of Hydrogen Sulfide exposure that significantly contribute to excessive Hydrogen Sulfide absorption.
- Review the site-specific safety programs as well as the site emergency action plan.
- Ventilation systems may provide for venting of the Hydrogen Sulfide vapor prior to entrance into the area.
- Confined Space Entry Procedures will greatly reduce the hazards to employees and should be followed whenever entry into a confined space is required.
- Respiratory Protection shall be used in combination with continuous monitoring when warranted by the conditions of the area.
- Exposure to hazardous materials requires special precautions against absorption of toxic compounds.
- While engineering controls (e.g. ventilation systems) are the primary means of controlling materials such as Hydrogen Sulfide vapors, it is often necessary to rely on respiratory protection. The respirator will give you the proper amount of protection based on the nature of the hazard.

LADDER SAFETY PROGRAM

A. PURPOSE AND SCOPE

The goal of the Ladders and Stairways program is to establish safety rules regarding the use, inspection, and maintenance of ladders and stairways. This written program works to create and maintain a safe work environment for Abbott Electric employees as required in 29 CFR Subpart X.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Ensure training is provided to Abbott Electric employees on ladder selection, inspection and maintenance, as well as the recognition of hazards associated with ladder use.
- Ensure training is provided to Abbott Electric employees on stairway construction, use and maintenance, as well as the recognition of hazards associated with stairway use.
- Ensure all ladders used by Abbott Electric employees are safe and in good operating condition.

Supervisor

The Supervisor will:

- Ensure ladders are used safely and as they are designed to be used.
- Ensure that job-made ladders are constructed and used safely.
- Visually inspect ladders periodically.

Employees

Employees will:

- Inspect ladders prior to using them. If the ladder is defective, it will be tagged and removed from service.
- Receive training on the selection, inspection and maintenance of ladders, and the hazards associated with their use.
- Receive training on stairway construction, use and maintenance, and the hazards associated with their use.
- Use ladders safely and as they are designed to be used.

C. ACTION DETAILS

- Ladders that are found to be in any way defective or damaged are immediately tagged and taken out of service. Ladders must be destroyed if they cannot be repaired to manufacturer's specifications. No ladders may be taken home by any employee, defective or otherwise for personal use.
- A stairway or ladder must be provided if there is a break in elevation of 19" or more. Side rails on extension ladders must extend no less than 36 inches above the landing. If this is not practical, grab rails must be installed.
- Extension ladders will be placed at a 4:1 ratio.

- Ladders must not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.
- Metal ladders must not be used for electrical work or where they may contact electrical conductors.
- Abbott Electric employees must always face the ladder when going up or down and maintain three-point contact.
- Self-supporting ladders must generally be rated at least four times the maximum intended load.
- Stairways, such as those going into the job trailer with four or more risers or rising more than 30 inches, will be equipped with at least one handrail and one stair rail system along each unprotected side or edge.
- Treads for temporary service will be made of wood or other solid material and will be installed the full width and depth of the stair. Temporary use of Pan Stairs may only be done if the stairs are filled with wood or solid material at least to the top of the pan.
- Ladder rungs must be uniformly spaced and meet OSHA/ANSI specifications.

LEAD AWARENESS PROGRAM

A. PURPOSE AND SCOPE

The purpose of this procedure is to advise employees in areas where lead is suspected and inform Abbott Electric employees about the properties and dangers of lead by explaining general guidelines and training requirements.

This procedure applies to Abbott Electric operations where employees whose work activities may contact lead containing materials but do not disturb the material during their work activities. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Abbott Electric employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

B. RESPONSIBILITIES

Managers and Supervisors

- In coordination with the Safety Manager, develop and implement annual lead awareness training. In coordination with the Safety Manager complete proper documentation of the Lead training as well as participants.
- Ensure personnel are aware of work that has the potential of exposure to lead.
- Identify possible locations where lead in the workplace may be found.
- Inform the Safety Manager of upcoming work involving known or suspected lead-containing materials, allowing the Safety Manager to provide any necessary monitoring or other required actions.
- Ensure employees comply with the lead awareness requirements.

Safety Manager:

- Coordinate annual lead awareness training activities.

Employees:

- Comply with the lead awareness requirements and direct any questions or concerns to the Safety Manager.
- Attend required annual training.
- Review material safety data sheets or consult with the supervisor to identify any container with lead-containing material

C. HEALTH EFFECTS OF LEAD

Common symptoms of acute lead poisoning are loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty sleeping, fatigue, moodiness, headache, joint or muscle aches, and anemia. Long term (chronic) overexposure to lead may result in severe damage to the blood-forming, nervous, urinary, and reproductive systems.

D. LOCATIONS

- Each worksite shall create a list of possible locations of lead containing materials such as leaded paints, leaded solders, pipes, batteries, circuit boards, cathode ray tubes, leaded glass, and demolition/salvage materials.
- The list is to be provided to the Safety Manager on a quarterly basis and revised as lead containing materials are added or eliminated from the previous list.

E. GENERAL REQUIREMENTS

Abbott Electric employees must abide by any signs/labels/assessment reports indicating the presence of lead containing materials and will not disturb the lead containing material. Appropriate work practices shall be followed to ensure the lead containing materials are not disturbed. Regulated access signs are to demarcate the lead exposure regulated work areas. The signs should read as follows:

- WARNING
- LEAD WORK AREA
- POISON
- NO SMOKING OR EATING

F. GENERAL WORK PRACTICES

When working on multi-contractor worksites Abbott Electric employees shall be protected from exposure. If employees working immediately adjacent to a lead abatement activity are exposed to lead due to the inadequate containment of such job, Abbott Electric shall either remove the employees from the area until the enclosure breach is repaired or perform an initial exposure assessment.

Abbott Electric employees will wash hands and face if lead materials are contacted. Employees' hands and faces shall be washed if lead containing materials are contacted. Any possible contact with lead containing material must be reported immediately to the supervisor or Safety Manager.

- If air is recirculated back into the workplace, the system must be equipped with a HEPA (high efficiency particulate air) and backup filter, and a system to monitor the lead level will be installed.
- When using mechanical means to remove lead-containing paints or coatings, use equipment which is equipped with a HEPA collection system.
- Whenever possible, use a wet system to reduce airborne dust.
- Whenever possible, substitute lead material with non-leaded material.
- Respirators shall be used during the time period required to install or implement control if engineering and work practices are insufficient as well as for emergency use.
- If respirators are required, they will be NIOSH certified and all employees will follow the Respiratory Protection Program.

LOCKOUT/TAGOUT HAZARDOUS ENERGY PROGRAM

A. PURPOSE AND SCOPE

The objective of this procedure is to establish a means of positive control to prevent the accidental starting or activating of machinery or systems while they are being repaired, cleaned, and/or serviced. This program serves to:

- Establish a safe and positive means of shutting down machinery, equipment, and systems.
- Prohibit unauthorized personnel or remote-control systems from starting machinery or equipment while it is being serviced.
- Provide a secondary control system (tagout) when it is impossible to positively lockout the machinery or equipment.
- The tagout system will provide full employee protection.
- Establish responsibility for implementing and controlling lockout/tagout procedures.
- Ensure that only approved locks, standardized tags, and fastening devices provided by Abbott Electric will be utilized in the Lockout/Tagout procedures.

B. RESPONSIBILITIES

- Abbott Electric, Inc. will provide the protective materials and hardware such as locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware for isolating, securing, or blocking of machines or equipment from energy sources.
- The Responsible Person will oversee the verification and implementing the Lockout/Tagout program.
- The Responsible Person will oversee the enforcement of the program and ensure compliance with the procedures in their departments to all their effected employees.
- The Responsible Person will monitor the compliance of this procedure and will conduct the annual inspection and certification of the authorized Abbott Electric employees.
- Authorized Abbott Electric employees are responsible for following established Lockout/Tagout procedures. An Authorized Employee is defined as a person who locks out, tags out, or isolates the machines or equipment to perform servicing or maintenance on that machine or equipment. The lockout and tagout devices shall include the name of the individual that is placing the device and the date that it is being placed. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered in 1910.147, The Control of Hazardous Energy (Lockout/Tagout).
- Affected Abbott Electric employees (all other Abbott Electric employees in the facility) are responsible for insuring that they do not attempt to restart or re-energize machines or equipment that are locked out or tagged out. An affected employee is defined as a person whose job requires him/her to operate or use a machine or equipment on which servicing, or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an isolated area in which such servicing or maintenance is being performed.
- Where an energy isolation device is not capable of being locked out, the Responsible Persons will utilize the tag out system that will provide full employee protection.

- Responsible Persons will enforce the tag out program and ensure compliance with the tag out procedures in their departments to all their effected employees.
- Responsible Persons will ensure that whenever replacement, major repair, renovation, or modification of a machine or equipment is completed, that equipment shall be designed to accept a lockout device.
- Responsible Persons shall ensure full employee protection when a tag out device is used on an emergency isolation device which is not capable of being locked out. The tag out device shall be attached at the same location that the lock out device would be.
- Abbott Electric will demonstrate that the tag out program will provide a level of safety equivalent to that obtained by using the lock out system.

C. PROCEDURES

- The following items are to be observed to ensure both compliance with the OSHA Control of Hazardous Energy Standard and the safety of Abbott Electric employees.
- Preparation for Lockout or Tagout: Abbott Electric employees who are required to utilize the Lockout/Tagout procedure must be knowledgeable of the different energy sources and the proper sequence of shutting off or disconnecting energy means. The four types of energy sources are:
    - Electrical (most common form)
    - Hydraulic or pneumatic
    - Fluids and gases
    - Mechanical (including gravity)
- More than one energy source may be utilized on some equipment and the proper procedure must be followed to identify energy sources and Lockout/Tagout accordingly.
- Shift or Personnel Changes - If a lockout procedure will extend into the following shift, the Authorized Employee who originally placed the lock will remove it and it will immediately be replaced with the lock of the Authorized Employee who is to continue the repair or maintenance on that equipment or machine for the following shift.
- When testing or positioning machines, equipment, or components in situations in which lockout or tagout devices must be temporarily removed, the following sequence of actions shall be followed:
    - Clear the machine or equipment of tools and materials.
    - Remove employees from the machine or equipment area.
    - Remove the lockout or tagout devices.
    - Energize and proceed with testing or positioning.
    - De-energize all systems and reapply energy control measures.

Preparation for Lockout or Tagout

- In preparation for shut down, all affected employees shall be notified that a lockout system is to be utilized and the reason for it before the controls are applied.
- If the machine or equipment is operating, shut it down by the normal stopping procedure (Depress stop button, open toggle switch, etc.)

Electrical

- Shut off the power at machine and disconnect.
- Disconnecting means must be locked or tagged.
- Press the start button to see that the correct systems are locked out and the machine(s) do not operate.
- All controls must be returned to their safest position.

Points to remember:

- If a machine or piece of equipment contains capacitors, they must be drained of stored energy due to the possibility of re-accumulation.
- Possible disconnecting means include the power cord, power panels (look for primary and secondary voltage), breakers, the operator's station, motor circuit, relays, limit switches, and electrical interlocks.
- Some equipment may have a motor isolating shut-off and a control isolating shut-off.
- If the electrical energy is disconnected by simply unplugging the power cord, the cord must be kept under the control of the Authorized Employee, or the plug end of the cord must be locked out or tagged out.

Hydraulic/Pneumatic

- Shut off all energy sources (pumps and compressors). If the pumps and compressors supply energy to more than one piece of equipment, lockout or tagout the valve supplying energy to the piece of equipment being serviced.
- Stored pressure from hydraulic/pneumatic lines shall be drained or bled when release of stored energy could cause injury to Abbott Electric employees.
- Make sure controls are returned to their safest position (off, stop, standby, inch, jog, etc.).

Fluids and Gases

- Identify the type of fluid or gas and the necessary PPE required.
- Close valves to prevent flow and Lockout/Tagout.
- Determine the isolating device, then close and Lockout/Tagout.
- Drain and bleed lines to zero energy state.
- Some systems may have electrically controlled valves. If so, they must be shut off and locked and tagged out.
- Check for zero energy state at the equipment.

Mechanical Energy

Mechanical energy includes gravity activation, energy stored in springs, etc.

- Block out or use die ram safety chain.
- Lockout or tagout safety device.
- Shut off, lockout or tagout electrical system.
- Check for zero energy state.
- Return controls to safest position.
- Release from Lockout/Tagout

Inspection

- Make certain the work is completed and inventory the tools and equipment that were used.
- Clean-up: Remove all towels, rags, work-aids, etc.
- Replace guards: Replace all guards possible. Sometimes a particular guard may have to be left off until the start sequence is over due to possible adjustments. However, all other guards should be put back into place.
- Check controls: All controls should be in their safest position.
- The work area shall be checked to ensure that all personnel and Abbott Electric employees have been safely positioned or removed and notified that the lockout/tagout devices are being removed.
- Remove locks/tags. Remove only your lock or tag.
- Service or Maintenance Involving More than One Person
    - When servicing and/or maintenance is performed by more than one person, each Authorized Employee shall place his own lock or tag on the energy isolating source. This shall be done by utilizing a multiple lock scissors clamp if the equipment is capable of being locked out. If the equipment cannot be locked out, then each Authorized Employee must place his tag on the equipment.
- Removal of an Authorized Employee's Lockout/Tagout by Abbott Electric.
    - Each location must develop written emergency procedures that comply with 1910.147(e) (3) to be utilized at that location.
- Emergency procedures for removing Lockout/Tagout should include the following:
    - Verification by the employer that the Authorized Employee who applied the device is not in the facility.
    - Make reasonable efforts to advise the employee that his/her device has been removed. (This can be done when he/she returns to the facility).
    - Ensure that the Authorized Employee has this knowledge before he/she resumes work at the facility.
    - Shift or Personnel Changes.

- Each facility must develop written procedures based on specific needs and capabilities. Each procedure must specify how the continuity of lockout or tagout protection will be ensured at all times.

Procedures for Outside Personnel/Contractors

- Outside personnel/contractors shall be advised that Abbott Electric has and enforces the use of Lockout/Tagout procedures. They will be informed of the use of locks and tags and notified about the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.
- Abbott Electric will obtain information from the outside personnel/contractor about their Lockout/Tagout procedures and advise affected Abbott Electric employees of this information.
- The outside personnel/contractor will be required to sign a certification. If the outside personnel/contractor has previously signed a certification that is on file, additional signed certification is not necessary.

Training and Communication

- Each Authorized Employee who will be utilizing the Lockout/Tagout procedure will be trained in the recognition of applicable hazardous energy sources, the type and magnitude of energy available in the workplace, and the methods and means necessary for energy isolation and control.
- Each affected employee (all Abbott Electric employees other than authorized Abbott Electric employees utilizing the Lockout/Tagout procedure) shall be instructed in the purpose and use of the Lockout/Tagout procedure, and the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.
- Training will be certified. The certifications will be retained in the employee personnel files.
- Retraining is required when there is a change in job assignments, machines, energy control procedures, or a new hazard is introduced.
- All training and retraining will be documented, signed and certified.

Periodic Inspection

- A periodic inspection (at least annually) will be conducted of each authorized employee under the Lockout/Tagout procedure. This inspection shall be performed by the Safety Director or other Qualified Worker. If the Qualified Worker is also using the energy control procedure being inspected, then the inspection shall be performed by another party.
- The inspection will include a review between the inspector and each Authorized Employee of that employee's responsibilities under the energy control (Lockout/Tagout) procedure. The inspection will also consist of a physical inspection of the Authorized Employee while performing work under the procedures.
- The Safety Director or other Qualified Worker shall certify in writing that the inspection has been performed. The written certification shall be retained in the individual's personnel file.

LOCKOUT TAGOUT PROGRAM

A. PURPOSE AND SCOPE

This procedure shall be used to prevent employee exposure to hazardous electrical energy. It establishes the minimum requirements for Lockout/Tagout of electrical energy sources. It provides procedures for ensuring conductors and circuit parts are disconnected from electrical energy sources and that stored energy sources are controlled. Control includes release of the stored energy as well as the prevention of re-accumulation of energy.

An individual employee control procedure will be used and no Lockout/Tagout will be required under the following circumstances:

- Equipment with exposed conductors and circuit parts are de-energized for minor maintenance, servicing, adjusting, cleaning, inspection, or similar operation.
- Disconnecting means are adjacent to the conductor, circuit parts, and equipment on which the work is performed.
- The disconnecting means is clearly visible to all Abbott Electric employees involved in the work.
- The work does not extend beyond the work shift.

However, all steps in Section C shall be completed to ensure individual employee control is appropriate and all energy sources are identified and controlled.

B. TRAINING AND RESPONSIBILITIES

All Abbott Electric employees shall receive training as prescribed in Section B (2) of this program. All new or transferred Abbott Electric employees and all other persons whose work operations are or might be in the area shall be instructed in the purpose and use of this procedure. A list of these Abbott Electric employees (or job titles of Abbott Electric employees with responsibility) is attached here. Where needed, a separate list will be included in the procedures for a given operation where Lockout/Tagout is used. All persons installing a Lockout/Tagout device shall sign their names and the date on the tag. For a complex Lockout/Tagout, the name of the individual or person in charge will be identified in the plan along with procedures for maintaining contact with that individual.

Training

All Abbott Electric employees engaged in Lockout/Tagout shall receive the following training:

- The importance of Lockout/Tagout and its impact on safety.
- The purpose and procedures set forth in this program as well as any individual Lockout/Tagout plans developed for a specific operation.
- Recognizing Lockout/Tagout devices.
- Installing Lockout/Tagout devices.
- Duty of employer in writing procedures.
- Duty of employee in executing procedures.
- Duty of person-in-charge.
- Authorized and unauthorized removal of locks/tags.

- Enforcing execution of Lockout/Tagout procedures.
- Individual employee control of energy.
- Simple Lockout/Tagout.
- Complex Lockout/Tagout.
- Using single line and diagrammatic drawings to identify sources of energy.
- Use of tags and warning signs.
- Release of stored energy.
- Personnel accounting methods.
- Grounding needs/requirements.
- Safe use of voltage detecting instruments.
- Additional training, if needed, to address specific hazards associated with a given operation.

C. PREPARATION FOR LOCKOUT/TAGOUT

- All disconnecting means shall be identified and located to ensure that energy is interrupted by a physical break and not de-energized by a circuit interlock. This shall be accomplished by reviewing current diagrammatic drawings or other means, tags, labels, and signs.
- A list of disconnecting means to be locked and tagged will be developed and attached to the plan for each Lockout/Tagout operation.
- Each disconnecting means shall be evaluated to determine the adequacy of their interrupting ability. Based on the evaluation, it will be determined if verification of a visible open point is possible, or if other precautions are needed.
- Work activity where any personnel might be exposed to sources of electrical energy hazards will be identified. It will be determined if there are any other energy sources in the area where Abbott Electric employees may be exposed to other types of energy.
- Energy control methods will be established for all hazardous energy sources. A voltage detector rated for voltage to which Abbott Electric employees may be exposed will be selected for the operation.
- A procedure will be established for each operation to determine that the voltage detector is operating properly.
- The possibility of induced voltages or stored electrical energy will be identified. Grounds will be applied as needed before touching conductors or circuit parts.

D. LOCKOUT/TAGOUT STEPS

- The following identifies the basic steps for Lockout/Tagout. In addition to these steps, it shall be determined whether a Simple or Complex Lockout/Tagout can be performed. The Complex Lockout/Tagout plan shall address any additional steps required. A Complex Lockout/Tagout will be performed when any of the following exist:
    - Multiple energy sources (more than one).
    - Multiple crews.

- Multiple crafts.
- Multiple locations.
- Multiple employers.
- Unique disconnecting means.
- Complex or particular switching sequences.
- Continues for more than one shift, that is, new workers.

- Notify Abbott Electric employees a Lockout/Tagout is going to be implemented and the reason. A Qualified Person knowledgeable of hazards associated with electrical energy shall implement the Lockout/Tagout. He/She shall know the location of disconnecting means for all sources of electrical energy and stored energy.
- The Qualified Person shall de-energize and disconnect the electric supply and relieve all stored energy.
- All disconnecting means will be locked and tagged out with Lockout/Tagout devices. Refer to Section H for appropriate devices. Where only a tag is used, one of the following additional safety measures will be used to prevent re-energization:
  - Opening the circuit at: _____
  - Blocking the circuit at: _____
  - Removal of the following circuit element: _____
- To determine that operation is prohibited, the person applying the Lockout/Tagout shall attempt to operate the disconnecting means.
- A voltage-detecting instrument shall be used. Refer to Section H for appropriate devices. Inspect the device and do not proceed if it is damaged. Secure an undamaged device and proceed.
- Verify proper operation of the device and test for absence of voltage.
- Repeat verification of device after testing for absence of voltage.
- Where needed, install grounds on the phase conductors or circuit parts, to eliminate induced voltage or stored energy. Where it has been determined that contact with other exposed energized conductors or circuit parts is possible, apply ground connecting devices rated for the available fault duty.
- Lockout/Tagout Complete.

E. REMOVAL OF LOTO

- Visually verifies work is complete.
- Clean up and remove all tools, equipment, and unused materials.
- Remove all grounds.
- Notify all personnel involved that the Lockout/Tagout is complete, electrical energy will be restored, and to remain clear of equipment and electrical energy.
- Perform quality control checks.
- Remove lockout/tagout devices. This must be done by the person(s) who installed them.

- Notify the owner that the equipment and/or electrical supply is ready to be returned to normal operation.
- Return the disconnecting means to their normal conditions.

F. SPECIAL PROCEDURES

- Each person shall install his/her own personal lockout/tagout device for all simple Lockout/Tagout operations where more than one person is involved.
- When the lockout/tagout extends for more than one day, the lockout or tagout shall be verified to be still in place at the beginning of the next day. Where the Lockout/Tagout is continued on successive shifts, the Lockout/Tagout is a complex Lockout/Tagout.

G. DISCIPLINE

Any violation of the procedures in this program including operating a disconnecting means that has been locked out or tagged out will result in disciplinary action deemed appropriate by the Safety Director and Upper Management.

H. EQUIPMENT

- Lockout devices must indicate the identity and department of the employee who attaches the device.
- Lockout Tags will be used as a communication tool. Tags cannot stand alone as a lockout device, except when applying a lock at the isolation point has no value in securing a lockout condition.
- Examples: locks on blocks, wedges, pipe blanks or skillets cannot help to secure these isolation points. Tags should be attached to those locations to identify the "lockout" condition, the date, and person working on that equipment.
- Locks will be locked and keyed differently.
- Tags will be designed to alert the equipment is locked out with the name of the individual WHO LOCKED IT OUT and the date it was locked out.

I. AUDIT

- An audit of this program and procedures shall be conducted annually.

NFPA 70E Program

A. PURPOSE AND SCOPE

The purpose of this program is to set forth procedures for Abbott Electric as to the safe use of electrical equipment, tools, and to comply with NFPA 70E requirements. This program applies to all Abbott Electric employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Abbott Electric employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

- Abbott Electric shall advise the host employer of:
    - Any unique hazards presented by the contract employer's work.
    - Any unanticipated hazards found during work by Abbott Electric that the host employer did not mention.
    - The measures Abbott Electric took to correct any hazards reported by the host employer to prevent such hazards from recurring in the future.

B. RESPONSIBILITIES

- Managers/Supervisor
    - The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.
- Operations Managers and Supervisors
    - Responsible for ensuring that only qualified employees and contractors perform electrical repairs or installations. Unqualified persons shall not be permitted to enter spaces that are required to be accessible to qualified employees only, unless the electric conductors and equipment involved are in an electrically safe work condition.
- Operations Managers and Supervisors
    - Ensure a documented job briefing is held before starting each job and will include all employees involved. The briefing will cover hazards associated with the job, work procedures involved, special precautions, energy source controls, and PPE requirements.
    - Ensure an audit of fieldwork is completed on an annual basis.
- Operations Managers
    - Responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.
- Employees
    - Responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so, and to report unsafe conditions to their supervisor immediately.
- Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees should be familiar with the use of special

precautionary techniques, PPE, insulating and shielding materials, and insulated tools. Only qualified employees may complete tasks such as testing, troubleshooting, and voltage measuring on electrical equipment.

- Arc flash risk assessment shall be completed.
- Safe Work Practices: Prior to any work being done within the Limited Approach Boundary a hazard risk analysis shall be performed. The analysis should contain event severity, frequency, probability, and avoidance to determine the level of safe practices employed. Alerting Techniques will be defined to warn employees of potential hazards.
- Safe Work Practices for working within the Limited Approach Boundary: The limited approach boundary is the distance from an exposed live part within which a shock hazard exists. The restricted approach boundary is the closest distance to exposed live parts a qualified person can approach with without proper PPE and tools. Inside this boundary, accidental movement can put a part of the body or conductive tools in contact with live parts or inside the prohibited approach boundary.
- To cross the restricted approach boundary, the qualified person must:
    - Have an energized work permit that is approved by the supervisor or manager responsible for the safety plan.
    - Use PPE suitable for working near exposed lived parts and rated for the voltage and energy level involved.
    - Be certain that no part of the body enters the prohibited space.
    - Minimize the risk from unintended movement by keeping as much of the body as possible out of the restricted space; body parts in the restricted space should be protected.
- The prohibited approach boundary is the minimum approach distance to exposed live parts to prevent flashover or arcing. Approaching any closer is comparable to making direct contact with a live part. To cross the prohibited approach boundary, the qualified person must:
    - Have specified training requirements for qualified persons who are allowed to work within the Limited Approach Boundary and to work on exposed live parts.
    - Have a permit with proper written work procedures and justifying the need to work that close.
    - Do a risk analysis.
    - Have (2) and (3) approved by the appropriate supervisor.
    - Use PPE appropriate for working near exposed live parts and rated for the voltage and energy level involved. The Flash Protection Boundary is the approach limit at a distance from exposed live parts within which a person could receive a second degree burn if an electrical arc flash were to occur.
    - For systems of 600 volts and less, the flash protection boundary is 4 feet, based on an available bolted fault current of 50 kA and a clearing time of 6 cycles for the circuit breaker to act, or any combination of fault currents and clearing times not exceeding 300 kA cycles.
    - When working on de-energized parts and inside the flash protection boundary for nearby live exposed parts: If the parts cannot be de-energized, use barriers

such as insulted blankets to protect against accidental contact or wear proper PPE.

- Arc Flash Hazard Analysis:
  - Collect data on the facility's power distribution system.
  - Arrangement of components on a one-line drawing with nameplate specifications of every device.
  - Lengths and cross-section area of all cables.
  - Contact the electric utility for information including the minimum and maximum fault currents that can be expected at the entrance to the facility.
  - Conduct a short circuit analysis followed by a coordination study.
  - Feed the resultant data into the NFPA 70E equations.
    - These equations produce the necessary flash protection boundary distances and incident energy to determine the minimum PPE requirement.
  - The flash protection boundary is the distance at which PPE is needed to prevent incurable burns (2nd degree or worse) if an arc flash occurs. It is still possible to suffer 1st or 2nd degree burns.
  - For systems of 600 volts and less, the flash protection boundary is 4 feet, based on an available bolted fault current of 50 kA (kiloamps) and a clearing time of 6 cycles (0.1 seconds) for the circuit breaker to act, or any combination of fault currents and clearing times not exceeding 300 kA cycles (5000 ampere seconds).
- When working on de-energized the parts, but still inside the flash protection boundary for nearby live exposed parts:
  - If the parts cannot be de-energized, barriers such as insulated blankets must be used to protect against accidental contact, or PPE must be worn.
  - Employees should not reach blindly into areas that might contain exposed live parts.
  - Employees must not enter spaces containing live parts unless illumination is provided that allows the work to be performed safely.
  - Conductive articles of jewelry and clothing (such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear, or metal frame glasses) must not be worn where they present an electrical contact hazard with exposed live parts.
  - Conductive materials, tools, and equipment that are in contact with any part of an employee's body should be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include, but is not limited to, long conductive objects such as ducts, pipes, tubes, conductive hose and rope, metal-lined rules and scales, steel tapes, pulling lines, metal scaffold parts, structural members, and chains.
  - When an employee works in a confined space or enclosed spaces such as a manhole or vault that contains exposed live parts, the employee should use protective shields, barriers, or insulating materials as necessary to avoid contact

with these parts. Doors, hinged panels, and the like should be secured to prevent them from swinging into employees. Refer to the confined space entry program.

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter must be used with all portable hand tools, electric extension cords, drop lights, and 110-volt equipment.
- Faulty equipment, tools, or appliances must be removed from service immediately and tagged “Out of Service”, dated, and signed by the employee applying the tag.

Equipment

- Test instruments, equipment, and their accessories should meet the requirements of ANSI/ISA-61010-1-Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1 General Requirements, for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems 1000 Volts and below. When test instruments are used to test for the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument should be verified before and after an absence of voltage test is performed.
- Personal Protective Equipment
    - All insulating PPE must be inspected before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. PPE must comply with all applicable laws and regulations. Insulating gloves shall be given an air test, along with the inspection.
    - Maximum test intervals for rubber insulating PPE should include:
        - Blankets before the first issue and every 12 months thereafter.
        - Gloves before the first issue and every 6 months.
        - Sleevers before the first issue and every 12 months.
        - Covers and line hose shall be testing if insulating value is suspect.
- Energized Electrical Work Permit
    - Work on energized electrical conductors or circuit parts that are not placed in an electrically safe working condition should be considered energized electrical work and must be performed by written permit only.

Lighting

- Employees should not enter spaces containing electrical hazards unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed, employees should not perform any task within the Limited Approach Boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.

- Extension Cords
    - Use only three-wire, grounded extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
    - Only commercial or industrial-rated grounded extension cords may be used in shops and outdoors.
    - Cords for use other than indoor appliances must have a rating of at least 14 amps.
    - Cords must have suitable strain relief provisions at the plug the receptacle ends.
    - Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
    - Adapters that allow three wire, grounded prongs connected to two wire non-grounded outlets are strictly prohibited.
    - Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
    - Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings or floors, run through holes in walls, or anywhere where they can become a tripping hazard.
    - High current equipment or appliances should be plugged directly into a wall outlet whenever possible.
    - All extension cords shall be plugged into one of the following:
        - A GFCI outlet.
        - A GFCI built into the cord.
        - A GFCI adapter used between the wall outlet and cord plug.
    - All extension cords and/or electrical cords should be inspected daily or before each use for breaks, plug condition, and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be removed from service and repaired or replaced.
    - Extension cords should not be used on a compressor skid to operate heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment should be hard wired per applicable electrical codes.
- Outlets
    - Outlets connected to circuits with different voltages must use a design stating that the attachment plugs on the circuits are not interchangeable.
- Multiple Outlet Boxes
    - Multiple outlet boxes must be plugged into a wall receptacle.
    - Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.
- Double Insulated Tools
    - Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three-wire grounded supply cord connection.

  - Double insulated tools must not be altered in any way which would void the factory rating.

- Switches, circuit breakers, and disconnects.
  - All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
  - Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.
  - Each breaker within a breaker panel must be labeled for the service it provides.
  - Disconnect switches providing power for individual equipment must be labeled accordingly.
- Ladders
  - Only approved, non-conductive ladders may be used when working near or with electrical equipment, which includes changing light bulbs.
  - Ladders must be either constructed of wood, fiberglass, or have non-conductive side rails.
  - Wood ladders should not be painted which can hide defects, except with clear lacquer.
  - When using ladders, they should be free from any moisture, oils, and grease.
- Energized and Overhead High Voltage Power Lines & Equipment
  - A minimum clearance of 10 feet from high voltage lines must be maintained when operating vehicular and mechanical equipment such as forklifts, cranes, winch trucks, and other similar equipment.
  - When possible, power lines should be de-energized and grounded or other protective measures should be provided before work is started.
  - The minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
  - Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current).
- Confined or Enclosed Workspaces
  - When an employee works in a confined or enclosed space that contains exposed energized parts, the employee should isolate and turn off the energy source and then lock and tag it out. Remember: Only qualified electricians can work on an exposed energy source.
  - Protective shields, barriers, or insulating materials as necessary will be provided.
- Enclosures, Breaker Panels, and Distribution Rooms
  - A clear working space must be maintained in the front, back, on each side of all electrical enclosures, and around electrical equipment for a safe operation and to permit access for maintenance and alteration.

- A minimum 2-foot working floor space in front of panels and enclosures should be painted yellow.
- Employees may not enter spaces containing exposed energized parts unless there is sufficient illumination provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have “Danger: High Voltage – Authorized Personnel Only” posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)

- Lock Out/Tag Out
  - No work shall be performed on (or near enough to them for employees to be exposed due to the dangers of tools or other equipment contacting with the live parts) live parts and the hazards they present.
  - If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been de-energized, the circuits energizing the parts should be locked out, tagged, or both.
  - Conductors and parts of electrical equipment that have been de-energized but not locked or tagged out should be treated as live parts.
  - Per Abbott Electric policy, all electrical will be outsourced and performed only by qualified and licensed electrical contractors who are familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools. Any equipment being made ready for maintenance will be locked out using Abbott Electric Control of Hazardous Energy – Lock Out/Tag Out Program. Lockouts are performed by the HSE Manager, Shop Foreman, or Branch Manager. Designated employees in some branches may be trained by local management to lock out equipment. If live sources are to be worked, it will only be performed with the knowledge of local management. Only certified electricians may work on electric circuit parts or equipment.
  - Only authorized personnel may perform LOTO work on electrical equipment and will follow Abbott Electric Control of Hazardous Energy – Lock out/Tagout Program.
  - Authorized personnel will be trained in lock out/tag out procedures.
  - Affected personnel will be notified when lock out/tag out activities are being performed in their work area.
- Contractors
  - Only approved, certified electrical contractors may perform construction and service work on Abbott Electric or client property.
  - It is the Manager/Supervisors responsibility to verify the contractor’s certification.

- Fire Extinguishers
    - Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
    - Water type extinguishers should not be located closer than 50 feet from electrical equipment.
- Electric Shock-CPR:
    - If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
    - When it is safe to contact the victim, begin CPR if the person's heart has stopped or they are not breathing.
    - Call for help immediately.
- Electric Welders
    - A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
    - A switch or circuit breaker should be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.
- Equipment Grounding
    - All gas compressors, air compressors, separators, vessels, etc. should be grounded by means of using a lug and ground strap, nominal in size to a ½" bolt or larger, attached to a ground rod six feet or longer.
    - Equipment for bonding jumpers must be of copper or other corrosion-resistance material.
    - The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less should have a ground strap from the container and attached to the skid or a ground rod placed in the ground.
- Training
    - Employees are trained to understand the specific hazards associated with electrical energy. Employees shall be trained in safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with their respective jobs.
    - Employees should be trained to identify and understand the relationship between electrical hazards and possible injury. Employees will be trained in the skills and techniques to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment, to determine the nominal voltage of exposed energized electrical conductors and circuit parts, the approach distances specified in Table 130.2 (below), and the decision-making process

necessary to determine the degree and extent of the hazard and the PPE and job planning necessary to perform the task safely.

- Employees shall be trained in safety-related work practices that pertain to their respective job assignments.
- Safe work practices must be employed to prevent electric shock or other injuries resulting for either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.
- Training will be documented and maintained for the duration of the employee's employment.
- Documentation will be made when the employee demonstrates proficiency, be maintained for the duration of the employee's employment, and contain each employee's name and date of training.
- Retraining will be conducted when the employee is not complying with safety related work practices or when workplace changes necessitate the use of safety-related work practices that are different from those that the employee would normally use.
- Retraining shall be received every 3 years.
- All training and retraining of employees will be documented and kept on file.

NOISE EXPOSURE HEARING CONSERVATION PROGRAM

A. PURPOSE AND SCOPE

This program is developed to comply with 29 CF 1910.95 and 29 CFR 1926.52 Occupational Noise Exposure to ensure the protection of Abbott Electric employees from hearing loss. The extent to which the elements of this program will be implemented depends on the noise levels present. Whenever employee noise exposure equals or exceeds the 8-hour TWA noise level of 85 decibels, A scale – slow response, i.e., the action level, this program will be implemented in its entirety. When noise does not exceed these levels, hearing protectors are provided for comfort responsibilities and actions will be limited to training, selection, and the safe use of the protectors.

B. RESPONSIBILITES

- If necessary, personal monitoring will be conducted.
- If necessary, audiometric testing will be provided.
- Train Abbott Electric employees in the proper selection, use, care, cleaning, storage, and limitations of the hearing protection.
- Make a copy of the standard and all records related to the standard available to all Abbott Electric employees upon request and as needed.

Supervisor

The Supervisor will:

- Ensure that Abbott Electric employees who are exposed to hearing hazards have and use the appropriate hearing protection.
- Ensure that a copy of the standard is posted as needed.

Employees

Employees will:

- Be trained to recognize workplace environmental noise hazards and the appropriate measures to protect themselves including, but not limited to, hearing protection.
- Use hearing protection when conditions warrant its use.

C. ACTION DETAILS

Safety Director

The Safety Director will:

- Conduct noise monitoring as needed but may rely on noise exposure data from the host employer and arrange for a proper hazard assessment to determine the proper type of hearing protection to be used.
- Train Abbott Electric employees to recognize potential workplace environmental noise hazards.
- A copy of the standard and all records related to the standard are available to the Abbott Electric employees upon request from:_____
- The standard will be posted.

- The exposure measurements and audiometric tests shall be kept on file.

Monitoring

- Personal monitoring will be conducted whenever there is insufficient information from a host employer and noise levels indicate there is a need (i.e. Abbott Electric employees have difficulty hearing each other due to noise levels for an extended period of time.)
- If monitoring is needed, the provider used for noise monitoring will be given special notice to the mobile nature of Abbott Electric employees and the variable noise levels experienced throughout an employee's workday.
- All Abbott Electric employees exposed to noise levels above 90 decibels (TWA) will be given a copy of the results.

Audiometric Testing Program

- If testing is needed, the provider of the audiometric testing program will be given a copy of the OSHA standard to ensure that the testing procedures meet OSHA requirements.
- The testing program will include baseline and annual audiograms.
- The annual audiogram will be reviewed against the baseline by a competent medical professional.
- An audiologist, otolaryngologist, or physician shall review problem audiograms to determine if there is a need for further evaluation.
- All noise monitoring, audiometric testing, and employee notification will be performed as required by the standard.
- Abbott Electric will establish a baseline audiogram for each exposed employee within 6 months of first exposure after 14 hours without exposure.
- If a standard threshold shift has occurred, the employee will be notified in writing within 21 days of determination.
- Determined steps will be taken when a standard threshold shift occurs.
    - Hearing protection shall be re-evaluated and/or refitted and if necessary, a medical evaluation may be required.

Hearing Protectors and Attenuation

- Appropriate hearing protectors will be supplied to all affected Abbott Electric employees.
- Attenuation requirements will be reevaluated when noise exposure changes.

D. TRAINING

- Each employee exposed to noise levels of concern will participate in training that includes:
    - The effects of elevated noise levels on Abbott Electric employees hearing.
    - The types of hearing protection that are appropriate to be used by Abbott Electric employees.
    - How to properly insert and/or wear the various types of hearing protectors.
    - The use, care, cleaning and disinfecting, and limitations of the various types of hearing protectors that are being used.

- The purpose of audiometric testing.
- Employees will be provided with training at least on an annual basis and will be updated to be consistent with changes in the PPE and work processes.

E. RECORDKEEPING

- Where noise measurements or audiometric testing are performed, these measurements will be kept on file. Noise measurement records will be kept for two years. Audiometric tests shall be kept for the duration of the employee's employment.
- Records of the noise level test rooms shall be provided by the health center and kept on file with other noise exposure records.
- If necessary, these records will be transferred to new owners. All records are available upon request to Abbott Electric employees, former Abbott Electric employees, representatives designated by the individual employee, and the Assistant Secretary. See the provisions of 29 CFR 1910.1020 – Access to employee exposure and medical records or 1926.33 - Access to employee exposure and medical records.

PANDEMIC PREPAREDNESS PROGRAM

A. PURPOSE AND SCOPE

This plan was developed by Abbott Electric. Its purpose is to outline the steps that Abbott Electric and the employees can take to reduce the risk of exposure to viruses. The plan describes how to prevent worker exposure during a pandemic, protective measures to be taken on the jobsite, PPE, work practice controls to be used, cleaning and disinfecting procedures, and what to do if a worker becomes sick.

Abbott Electric takes the health and safety of our employees very seriously. With the spread of a Pandemic Virus, we all must remain vigilant in mitigating the outbreak. This is particularly true for the construction industry, which may be deemed "essential" during a Declared National Emergency. In order to be safe and maintain operations, we have developed this Exposure Prevention, Preparedness, and Response Plan to be implemented throughout Abbott Electric and at all our jobsites. We have also identified a team of employees to monitor available U.S. Center for Disease Control and Prevention ("CDC") and Occupational Safety and Health Administration ("OSHA") guidance on the virus.

This Plan is based on currently available information from the CDC and OSHA and is subject to change based on further information provided by the CDC, OSHA, and other public officials. Abbott Electric may also amend this Plan based on operational needs. This plan is and will continue to be reviewed and tested. Abbott Electric will meet throughout and after this Pandemic to discuss lessons learned and add them to this plan.

B. RESPONSIBILITES

We are asking every one of our employees to help with our prevention efforts while at work. In order to minimize the spread of viruses at our jobsites, we all must play our part. As set forth below, Abbott Electric has instituted various housekeeping, social distancing, and other best practices at our jobsites. All employees must follow these. In addition, employees are expected to report to their managers or supervisors if they are experiencing signs or symptoms of a virus, as described below. If you have a specific question about this plan, please ask your manager or supervisor.

OSHA and the CDC have provided the following control and preventative guidance to all workers, regardless of exposure risk:

- Employees will go through annual training on illness prevention, how to avoid the spread of disease, and company policies concerning illness.
- Employees are encouraged to obtain appropriate immunizations.
- Frequently wash your hands with soap and water for at least 20 seconds. When soap and running water are unavailable, use an alcohol-based hand rub with at least 60% alcohol.
- Avoid touching your eyes, nose, or mouth with unwashed hands.
- Follow appropriate respiratory etiquette, which includes covering for coughs and sneezes.
- Avoid close contact with people who are sick.

In addition, employees must familiarize themselves with the symptoms of the virus:

- Coughing
- Fever
- Shortness of breath, difficulty breathing
- Early symptoms such as chills, body aches, sore throat, headache, diarrhea, nausea/vomiting, and runny nose.

If you develop a fever and symptoms of respiratory illness, such as cough or shortness of breath, DO NOT GO TO WORK and call your healthcare provider right away. Likewise, if you come into close contact with someone showing these symptoms, call your healthcare provider right away.

C. Job Site Protective Measures

Abbott Electric has instituted the following protective measures at all jobsites.

General Safety Policies and Rules

- Any employee/contractor/visitor showing symptoms will be asked to leave the jobsite and return home.
- Safety meetings will be by telephone, if possible. If safety meetings are conducted in-person, attendance will be collected verbally, and the foreman/superintendent will sign-in each attendee. Attendance will not be tracked through passed-around sign-in sheets or mobile devices. During any in-person safety meetings, avoid gathering in groups of more than 10 people and participants must remain at least 6 feet apart.
- Employees must avoid physical contact with others and direct employees/contractors/visitors to increase personal space to at least 6 feet, where possible. Where work trailers are used, only necessary employees should enter the trailers and all employees should maintain social distancing while inside the trailers.
- All internal communication or in-person meetings will be limited. To the extent possible, meetings will be conducted by telephone.
- All External Communication typically will include email, mailed brochures, and other forms of multimedia to conduct profitable business.
- Employees will be encouraged to stagger breaks and lunches, if practicable, to reduce the size of any group at any one time to less than 10 people.
- Abbott Electric understands that due to the nature of our work, access to running water for hand washing may be impracticable. In these situations, Abbott Electric will provide alcohol-based hand sanitizers and/or wipes.
- Employees should limit the use of co-workers' tools and equipment. To the extent tools must be shared, Abbott Electric will provide alcohol-based wipes to clean tools before and after use. When cleaning tools and equipment, consult manufacturing recommendations for proper cleaning techniques and restrictions.
- Employees are encouraged to limit the need for N95 respirator use, by using engineering and work practice controls to minimize dust. Such controls include the use of water delivery and dust collection systems, as well as limiting exposure time.

- Abbott Electric will divide crews/staff into 2 groups where possible so that projects can continue working effectively if one of the divided teams is required to quarantine.
- As part of the division of crews/staff, Abbott Electric will designate employees into dedicated shifts, at which point, employees will remain with their dedicated shift for the remainder of the project. If there is a legitimate reason for an employee to change shifts, Abbott Electric will have sole discretion in making that alteration.
- Employees are encouraged to minimize ride sharing. While in the vehicle, employees must ensure adequate ventilation.
- If practicable, employees should use/drive the same truck or piece of equipment every shift.
- In lieu of using a common source of drinking water, such as a cooler, employees should use individual water bottles.

Workers Entering Occupied Building and Homes

- When employees perform construction and maintenance activities within occupied homes, office buildings, and other establishments, these work locations present unique hazards with regards to exposures. All such workers should evaluate the specific hazards when determining best practices related to the virus.

- During this work, employees must sanitize the work areas upon arrival, throughout the workday, and immediately before departure. Abbott Electric will provide alcohol-based wipes for this purpose.

- Employees should ask other occupants to keep a personal distance of 6 feet at a minimum. Workers should wash or sanitize their hands immediately before starting and after completing the work.

Job Site Visitors

- The number of visitors to the job site, including the trailer or office, will be limited to only those necessary for the work.
- All visitors will be screened in advance of arriving on the job site. If the visitor answers “yes” to any of the following questions, he/she should not be permitted to access the jobsite:
    - Have you been confirmed positive for the virus?
    - Are you currently experiencing, or recently experienced, any acute respiratory illness symptoms such as fever, cough, or shortness of breath?
    - Have you been in close contact with any persons who has been confirmed positive?
    - Have you been in close contact with any persons who have traveled and are also exhibiting acute respiratory illness symptoms?
- Site deliveries will be permitted but should be properly coordinated in line with the employer’s minimal contact and cleaning protocols. Delivery personnel should remain in their vehicles if at all possible.

Personal Protective Equipment and Work Practice Controls

- In addition to regular PPE for workers engaged in various tasks (fall protection, hard hats, hearing protection), employers will also provide:
    - Gloves: Gloves should always be worn while on-site. The type of glove worn should be appropriate to the task. If gloves are not typically required for the task, then any type of glove is acceptable, including latex gloves. Employees should avoid sharing gloves.
    - Eye protection: Eye protection should always be worn while on-site.
- NOTE: The CDC is currently not recommending that healthy people wear N95 respirators to prevent the spread. Employees should wear N95 respirators if required by the work and if available.
- Due to the current shortage of N95 respirators, the following Work Practice Controls should be followed:
    - Keep dust down by using engineering and work practice controls, specifically by using water delivery and dust collection systems.
    - Limit exposure time to the extent practicable.
    - Isolate workers in dusty operations by using a containment structure or distance to limit dust exposure to those employees who are conducting the tasks, thereby protecting nonessential workers and bystanders.
- Institute a rigorous housekeeping program to reduce dust levels on the jobsite.

D. Job Site Cleaning and Disinfecting

Abbott Electric has instituted regular housekeeping practices, which includes cleaning and disinfecting frequently used tools and equipment, and other elements of the work environment, where possible. Employees should regularly do the same in their assigned work areas.

- Jobsite trailers and break/lunchroom areas will be cleaned at least once per day. Employees performing cleaning will be issued proper PPE, such as nitrile, latex, or vinyl gloves and gowns, as recommended by the CDC.
- Any trash collected from the jobsite must be changed frequently by someone wearing nitrile, latex, or vinyl gloves.
- Any portable jobsite toilets should be cleaned by the leasing company at least twice per week and disinfected on the inside. Abbott Electric will ensure that hand sanitizer dispensers are always filled. Frequently touched items (i.e. door pulls and toilet seats) will be disinfected frequently.
- Vehicles and equipment/tools should be cleaned at least once per day, and before changing operator or rider.
- If an employee has tested positive for the virus of a pandemic, OSHA has indicated that there is typically no need to perform special cleaning or decontamination of work environments, unless those environments are visibly contaminated with blood or other bodily fluids. Notwithstanding this, Abbott Electric will clean those areas of the jobsite

that a confirmed-positive individual may have encountered before employees can access that workspace again.

- Abbott Electric will ensure that any disinfection shall be conducted using one of the following:
    - Common EPA-registered household disinfectant.
    - Alcohol solution with at least 60% alcohol.
    - Diluted household bleach solutions (these can be used if appropriate for the surface).
- Abbott Electric will maintain Safety Data Sheets of all disinfectants used on site.

E. Job Site Exposure Situations

- Employee Exhibiting Pandemic Virus Symptoms
    - If an employee exhibits symptoms, the employee must remain at home until he or she is symptom free for 72 hours (3 full days) without the use of fever-reducing or other symptom-altering medicines (e.g., cough suppressants). Abbott Electric will similarly require an employee that reports to work with symptoms to return home until they are symptom free for 72 hours (3 full days). To the extent practical, employees are required to obtain a doctor's note clearing them to return to work.
- Employee Tests Positive Pandemic Virus
    - An employee that tests positive will be directed to self-quarantine away from work. Employees that test positive and are symptom free may return to work when at least seven days have passed since the date of his or her first positive test and have not had a subsequent illness. Employees that test positive and are directed to care for themselves at home may return to work when at least 72 hours (3 full days) have passed since recovery and at least seven days have passed since symptoms first appeared. Employees that test positive and have been hospitalized may return to work when directed to do so by their medical care provider. Abbott Electric will require an employee to provide documentation clearing their return to work.
- Employee Has Close Contact with a Tested Positive Individual
    - Employees that have come into close contact with a confirmed-positive co-worker (or otherwise) will be directed to self-quarantine for 14 days from the last date of close contact with the carrier. Close contact is defined as six feet over a prolonged period.
- If Abbott Electric learns that an employee has tested positive, Abbott Electric will investigate co-workers that may have had close contact with the confirmed-positive employee in the prior 14 days and direct those individuals that have had close contact with the confirmed-positive employee to self-quarantine for 14 days from the last date of close contact with the carrier. If an employee learns that he or she has come into close contact with a confirmed-positive individual outside of the workplace, he/she must alert a manager or supervisor of the close contact and self-quarantine for 14 days from the last date of close contact with the carrier.

F. OSHA Recordkeeping

If a confirmed case is reported, Abbott Electric will determine if it meets the criteria for recordability and reportability under OSHA's recordkeeping rule. OSHA requires employers in the construction industry to record work-related injuries and illnesses that meet certain severity criteria on the OSHA 300 Log, as well as complete the OSHA Form 301 (or equivalent) upon the occurrence of these injuries. OSHA also requires employers to report to OSHA any work-related illness that results in a fatality or in the in-patient hospitalization of one or more employees. "In-patient" hospitalization is defined as a formal admission to the in-patient service of a hospital or clinic for care or treatment.

OSHA has determined that Pandemic Viruses should not be excluded from coverage of the rule – like the common cold or the seasonal flu – and, thus, OSHA is considering it an "illness." However, OSHA has stated that only confirmed cases should be considered an illness under the rule. Thus, if an employee simply comes to work with symptoms consistent with the virus, but not a confirmed diagnosis, the recordability analysis would not necessarily be triggered at that time.

If an employee has a confirmed case, Abbott Electric will assess any workplace exposures to determine if the case is work-related. Work-relatedness is presumed to be for illnesses that result from events or exposures in the work environment, unless it meets certain exceptions. One of those exceptions is that the illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside of the work environment. If an employee develops the pandemic virus solely from exposure outside of the work environment, it would not be work-related, and thus not recordable.

Abbott Electric's assessment will consider the work environment itself, the type of work performed, risk of person-to-person transmission given the work environment, and other factors such as community spread. Furthermore, if an employee has a confirmed case that is considered work-related, Abbott Electric will report the case to OSHA if it results in a fatality within 30 days or an in-patient hospitalization within 24-hours of the exposure incident occurring.

G. "Essential" Industry

Several States and localities are issuing orders that prohibit work and travel, except for essential businesses. In general, construction work has been deemed essential and Abbott Electric is committed to continuing operations safely. If upon your travel to and from the worksite, you are stopped by State or local authorities, you will be provided a letter that you can show the authorities indicating that you are employed in an "essential" industry and are commuting to and from work.

In planning for a possible pandemic, we expect that up to 40 percent of the workforce will be absent at the peak of each wave. We anticipate that all sectors will be disrupted, especially responders and healthcare providers.

To ensure the continuation of routine community response during a pandemic Abbott Electric will:

- Prepare surge plans for sector-specific response.
- Coordinate with other sectors, as necessary.
- Be creative about alternative staffing and deployment strategies.

H. Confidentiality/Privacy

Except for circumstances in which Abbott Electric is legally required to report workplace occurrences of communicable disease, the confidentiality of all medical conditions will be maintained in accordance with applicable law and to the extent practical under the circumstances. When it is required, the number of persons who will be informed of an employee's condition will be kept at the minimum needed, not only to comply with legally required reporting, but also to assure proper care of the employee and to detect situations where the potential for transmission may increase. A sample notice for employees is attached to this Plan. Abbott Electric reserves the right to inform other employees that a co-worker (without disclosing the person's name) has been diagnosed if the other employees might have been exposed to the disease, so the employees may take measures to protect their own health.

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

A. PURPOSE AND SCOPE

The goal of the Personal Protective Equipment (PPE) program is to protect all Abbott Electric employees exposed to various workplace hazards. This can be accomplished through pre-planning and careful implementation of all applicable federal, state, and local safety and health regulations/standards. This written program works to create and maintain a safe work environment as required by 29 CFR 1910 Subpart E and 29 CFR 1926 Subpart E.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Conduct a Certified Jobsite Hazard Assessment to select the appropriate PPE for hazards that are present. This process may rely on information from the host employer on what hazards have been identified, their magnitude and the methods used to control them.
- Ensure the Certified Hazard Assessment is documented.
    - Verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace was evaluated. Documentation shall include the person certifying the evaluation, date(s) of the hazard assessment, which identifies the document as a certification of hazard assessment.
- Select and have each affected employee use the types of PPE that will protect the affected employee from any hazards identified in the hazard assessment.
    - Select PPE that properly fits each affected employee.
- Strive to eliminate worksite hazards (safety, health, or environmental) through modifications to work practices and procedures, or by working with the host employer to implement engineering revisions.
    - Determine what PPE will be used for the hazards that could not be otherwise eliminated.
- Communicate selection decisions to each affected employee.
- Ensure that Abbott Electric employees are trained in the use, care, storage, maintenance, and limitations of the PPE to be used at each jobsite.

Supervisor

The Supervisor will:

- Ensure that the provided Abbott Electric or employee-owned protective equipment is appropriate for the task and is properly cleaned, maintained, and stored.
- Ensure that Abbott Electric employees, who are required to use PPE, use it correctly and consistently.
- Ensure that employee-owned protective equipment meets OSHA standards.

Employees

Employees will:

- Be trained in the proper use, cleaning, storage in a sanitary place, maintenance, and limitations of any protective equipment that will be used at each jobsite.
- Use the appropriate PPE whenever a jobsite hazard is present.

C. ACTION DETAILS

Electrical PPE

- See Electrical Program for PPE assessment and equipment related to electrical hazards.

Respiratory PPE

- See Respiratory Program Section for PPE assessment and equipment related to respiratory hazards.

Hearing PPE

- See Hearing Protection Program Section for PPE assessment and equipment related to noise level hazards.

General PPE

- All Abbott Electric employees while on the jobsite will wear safety helmets/hard hats, safety glasses with side shields, heavy duty work boots, and proper work clothing.
- Specialized PPE will be provided as needed by the Abbott Electric for their employees at no cost. This may include, but is not limited to:
  - Head protection
  - Hearing protection devices
  - Fall protection devices
  - Hand protection equipment
  - Lifelines and harnesses
  - Respirators
  - Specialty footwear
  - Specialty illumination equipment
  - Any other specialty equipment or devices required to be safe on the jobsite
  - Rubber insulating gloves and protectors
  - Rubber insulating blankets
  - Rubber insulating line hose
  - Rubber insulating hoods
  - Insulating shields and/or barriers
  - Rubber insulating sleeves, if required
  - Rubber matting for use around an electrical apparatus

- PPE that has been modified in a way that is not supported by the manufacturer, or that reduces its effectiveness, will be repossessed, repaired or destroyed.
- Any PPE that has been previously worn or used will not be reissued to another employee until it has been inspected, repaired if necessary, according to manufacturer's recommendations, cleaned, sterilized, and repackaged.

Employee Compliance and Enforcement

- The Supervisor will conduct daily field inspections to ensure Abbott Electric employees are wearing all necessary PPE.
- All PPE will meet or exceed the applicable requirements of NIOSH, OSHA, ANSI and/or any other applicable agency or standard.
- PPE equipment found to be defective will not be used.

Employee Safe Work Practices

Employees will follow these safety rules:

- An appropriate hard hat will be worn when there is danger of impact, falling or flying objects, or electrical shock.
- Impact-resistant safety glasses with side shields will be worn when there is danger of materials striking the eye.
- Non-vented safety goggles will be worn if working with materials or chemicals that could damage the eyes.
- Face shields will be worn, as needed, to protect the face from flying objects.
- Proper shoes or boots will be worn to protect against foot injuries.
- Protective clothing with the proper fitting and sizing, appropriate for the task at hand, will be worn where specified in the job briefing document.

D. TRAINING

Employee training will include, but not be limited to:

- Recognizing hazards on the jobsite that require PPE.
- How to determine the appropriate PPE to avoid potential injuries.
- The correct way to inspect, put on, remove, use, care, store, clean, and maintain each piece of PPE as needed, and how to document it.
- The limitations of the PPE Abbott Electric employees are required to use.
- Employees will be re-trained in the correct way to inspect, put on, remove, use, care, store, clean and maintain each piece of PPE as needed, or if the employee is displaying a lack of knowledge on the subject.

RADIO FREQUENCY PROGRAM

A. PURPOSE AND SCOPE

The purpose of this program is to provide employees and site users with the basic information for assuring a safe and healthy workplace, free from recognized radio frequency hazards, which may cause injury or illness. Each employee is expected to follow the guideline provided within this program. The information in this program applies to all employees and site users working on or near, 470 MHz AND ABOVE towers or antennas and associated equipment.

Electromagnetic radiation consists of waves of electric and magnetic energy moving together (i.e., radiating) through space at the speed of light. Taken together, all forms of electromagnetic energy are referred to as the electromagnetic "spectrum." Radio waves and microwaves emitted by transmitting antennas are one form of electromagnetic energy. They are collectively referred to as "Radiofrequency" (RF) energy or radiation. Often the term "electromagnetic field" or "radiofrequency field" may be used to indicate the presence of electromagnetic or RF energy.

Different forms of electromagnetic energy are categorized by their wavelengths and frequencies. The RF part of the electromagnetic spectrum is generally defined as that part of the spectrum where electromagnetic waves have frequencies in the range of about 3 kilohertz (3 kHz) to 300 gigahertz (300 GHz). Microwaves are a specific category of radio waves that can be defined as radiofrequency energy where frequencies range from several hundred MHz to several GHz.

The energy levels associated with RF and microwave radiation are not great enough to cause the ionization of atoms and molecules. Other types of nonionizing radiation include visible light, infrared radiation, and other forms of electromagnetic radiation, which also have relatively low frequencies. Often the term "radiation" is used to apply to ionizing radiation such as that associated with nuclear power plants. Ionizing radiation should not be confused with the lower-energy, non-ionizing, radiation with respect to possible biological effects, since the mechanisms of action are quite different.

"Ionization" is a process by which electrons are stripped from atoms and molecules. This process can produce molecular changes that can lead to damage in biological tissue, including effects on DNA, the genetic material. This process requires interaction with high levels of electromagnetic energy. The types of electromagnetic radiation with enough energy to ionize biological material include X-radiation and gamma radiation. Therefore, X-rays and gamma rays are examples of ionizing radiation.

Radio frequencies constitute part of the overall electromagnetic spectrum. Cellular radio services transmit using frequencies between 800 and 900 megahertz (MHz). It should be noted that the radio towers operate at 470 MHz and above, and all are gated and locked and have proper signage attached.

Certain behavior characteristics of Electromagnetic (EM) fields dominate at one distance from the radiating antenna, while a completely different behavior can dominate at another location. Electrical engineers define boundary regions to categorize behavior characteristics of electromagnetic fields as a function of distance from the radiating source. These regions are the "Near-Field," "Transition Zone," and "Far-Field". The regional boundaries are usually measured as a function of the wavelength.

B. RESPONSIBILITIES

Supervisors

- Are responsible for initiating disciplinary action against employees who do not follow the guidelines within this program.
- Are responsible for the implementation and enforcement of all aspects of the program. Duties are as follows:
    - Initially evaluating RF sources
    - Maintaining RF source inventory
    - Evaluating safety procedures
    - Evaluating existing RF safety program documentation
    - Disseminating RF safety policy
    - Providing authoritative advice
    - Reviewing/authorizing RF surveys and control measures
    - Authorizing designated RF safety personnel
    - Coordinating RF safety awareness
    - Conducting/arranging regular site audits
    - Conducting annual RF hazard survey policies and procedures review
    - Managing policy and procedures breaches, including accidental over-exposure incidents
    - Developing/approving RF hazard assessment
    - Arranging for regular survey/monitoring equipment calibration
    - Ensuring proper documentation control and central archiving

Medical Surveillance

- Medical exams are appropriate for “accidental” exposures, defined as an exposure above trigger levels identified in Tables 1 & 2.
- Symptoms of accidental exposure can be described as, but not limited to, an immediate sensation of intense heating of the parts of the body in the electromagnetic field, followed by a variety of symptoms and signs, including pain, headache, numbness, and paresthesia, malaise, diarrhea, and skin erythema.
- Medical surveillance will consist of an annual medical evaluation by a licensed healthcare professional and it must contain a means to report the occurrence of RF burns, implanted medical devices (e.g., copper IUD), or the sensation of non-routine heating as a means of identifying potential problem areas.

C. TRAINING

All affected employees and site users-managers will be trained in radio frequency safety upon initial assignment and refresher training on a periodic basis. The training will consist of the information contained within this procedure. RF safety and health training will be conducted to ensure that all employees understand the RF hazard to which they are exposed and how the hazard can be controlled. Retraining and/or a periodic refresher will be conducted when

warranted by an incident or other evidence of the employee's lack of understanding or compliance with the program.

- General Awareness Training
    - Awareness Training is for "all persons" with access to areas where RF exposure may exceed applicable limits (commensurate with exposure situation). All employees/contractors are required to go through awareness training.
- Training Program Elements
    - Introduction to RF sources and RF Safety (RF generation, propagation, transmission, antennas, etc.)
    - Discussion of biological effects/hazards
    - Explanation of standards/regulations and basis for them
    - Information about potential excessive exposure situations and their controls
    - RF safety program elements
    - Instruction on how to respond to over-exposure incidents
    - Information about potential RF susceptibility of medical devices/implants
    - Additional information sources
    - Personal monitoring vs. area monitoring
    - Lock out tag out
- Fully Aware Training
    - Fully Aware Training is for "all persons" working on or in proximity to areas where RF exposure may exceed applicable limits (i.e. roof-mounted antennas) or commensurate with exposure situation (See Table 1). Trainees will receive written and verbal information on how to control or mitigate radiation exposure.
- Training Program Elements
    - Introduction to RF sources licensed and un-licensed and RF Safety (RF generation, propagation, transmission, antennas, etc.)
    - Discussion of biological effects/hazards
    - Explanation of standards/regulations and the basis for them
    - Information about potential excessive exposure situations and their controls
    - RF safety program elements
    - Instruction on how to respond to over-exposure incidents
    - Information about potential RF susceptibility of medical devices/implants
    - PPE training – donning, doffing, inspection
    - How to use administrative and engineering controls to reduce exposure levels

D. EXPOSURE/EFFECT

Biological effects can result from animal or human exposure to RF energy. Biological effects that result from heating of tissue by RF energy are often referred to as "thermal" effects.

- Effects
    - It has been known for many years that exposure to very high levels of RF radiation can be harmful due to the ability of RF energy to heat biological tissue rapidly. This is the principle by which microwave ovens cook food.
    - Exposure to very high RF intensities can result in heating of biological tissue and an increase in body temperature. Tissue damage in humans could occur during exposure to high RF levels because of the body's inability to cope with or dissipate the excessive heat that could be generated.
    - Two areas of the body, the eyes and the testes, are particularly vulnerable to RF heating because of the relative lack of available blood flow to dissipate the excessive heat load.
    - At relatively low levels of exposure to RF radiation, (i.e. levels lower than those that would produce significant heating) the evidence for production of harmful biological effects is ambiguous and unproven.
- Exposure
    - The exposure limits used by the FCC are expressed in terms of Specific Absorption Rate (SAR), electric and magnetic field strength, and power density for transmitters operating at frequencies from 300 kHz to 100 GHz.
    - SAR is the rate of energy absorption in tissue, measured in watts per kilogram of tissue. Limits incorporate a safety factor of 10 (Most Western Limits are 0.4 W/kg).
    - The exposure limits used by OSHA 1926.54(I) are as follows: Employees must not be exposed to microwave power densities more than 10 milliwatts per square centimeter.
    - A controlled environment for RF purposes is an area where human activity is subject to control and accountability as established by a written RF Safety Program.
    - Occupational limits apply to persons who are exposed due to their employment. Those persons have been made fully aware of the potential for exposure and can exercise control over their exposure, designated as RF safety trained.
- Ancillary Hazards – It should be noted that these additional hazards may exist at these locations: electric shock, ionizing radiation, mechanical, eye hazards, falls from heights and/or through openings, confined space, trip hazards, welding/cutting operations, heat stress, toxic chemicals/gases, cooling refrigerants, and optical radiation sources.

(A) Limits for Occupational/Controlled exposure				
Frequency Range (MHz)	Electric Field Strength (v/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging time (min)
0.3-3.0	614	1.63	$(100)^*$	6
3.0-30	1842/f	4.89/f	$(900/f^2)^*$	6
30-300	61.4	0.163	1.0	6
300-1500	----	----	f/300	6
1500-100,000	----	----	5	6
f = frequency in MHz		* = Plane-wave equivalent power density		

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (v/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging time (min)
0.3-1.34	614	1.63	$(100)^*$	30
1.34-30	824/f	2.19/f	$(180/f^2)$	30
30-300	27.5	0.073	0.2	30
300-1500	----	----	f/1500	30
1500-100,000	----	----	1.0	30
f = frequency in MHz		* = Plane-wave equivalent power density		

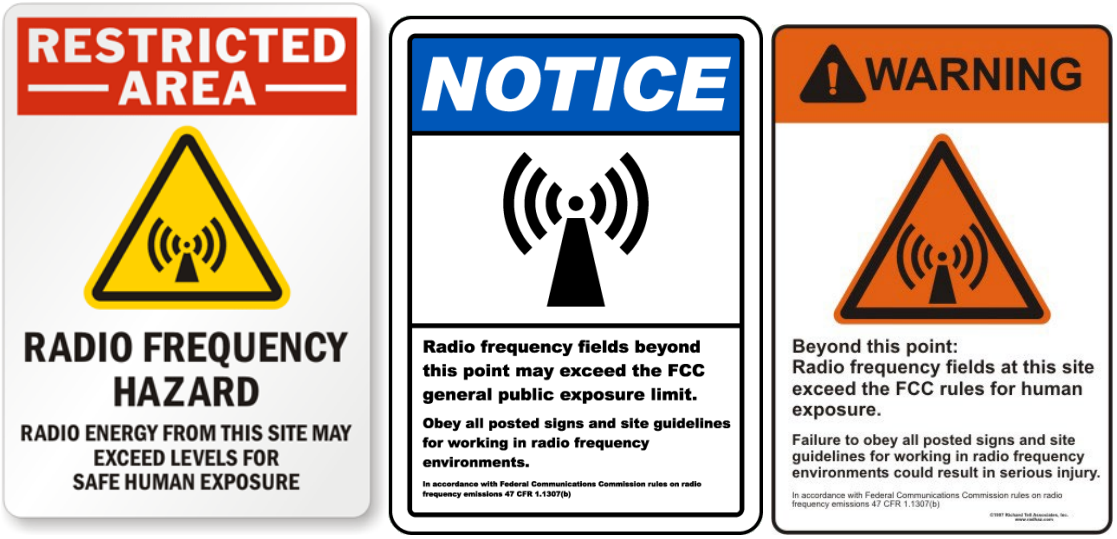
E. PROGRAM ELEMENTS

- Elements
  - Identification and inventory of exposure sources
  - Potential hazards
  - Characterization of sources
  - Ancillary hazards consideration/evaluation
  - Suitable control application
  - Training for potentially exposed individuals, as well as for the RF Safety Officer

Signs

Per OSHA, “the RF hazard areas shall be clearly marked with appropriate signs, barricades, etc. such that any worker who has access to the facility will be alerted not to occupy the hazardous location. These signs shall be:

- Of standard design and shape meeting ANSI C95.1 .
- Of sufficient size to be recognizable and readable from not less than 25 feet away.
- Placed where there is potential that exposure might exceed occupational limits.
- Placed anywhere exposure limits might exceed public limits.
- Placed anywhere equipment is in use and under normal operation and maintenance and where there are no public or occupational exposure issues.



F. ANNUAL PROGRAM REVIEW

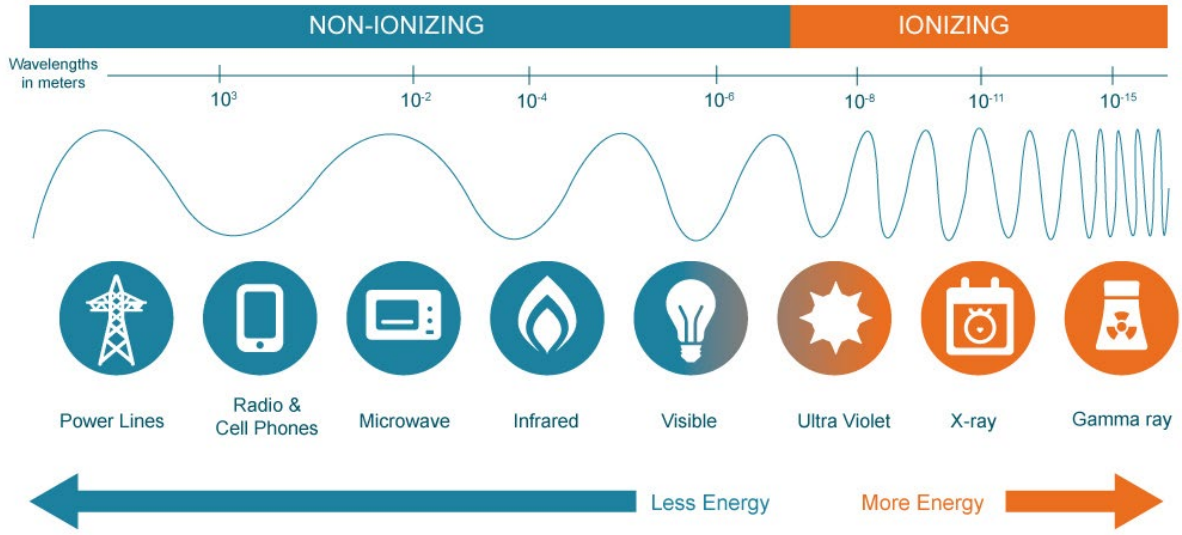
An annual check of all RF facilities must be completed to ensure changes have not occurred over the past year. Periodic RF screening measurements are not necessary at the present time due to the configuration of the RF sources.

In cases where changes have occurred, screening measurements must be conducted by a certified contractor to ensure compliance and that no employees are being overexposed.

G. REFERENCES

There are numerous safety references which pertain to radio frequency including, but not limited to:

- American National Standards Institute (ANSI) Standards, ANSI/IEEE C95.1-1992, Evaluating Effects of Radio Frequency Radiation on the Environment
- Occupational Safety and Health Administration (OSHA) Standards
- OSHA 29 CFR 1910.147, Lockout/Tagout
- Occupational Safety and Health Administration (OSHA) 1910.97 - Nonionizing Radiation
- Federal Communications Commission (FCC) Office of Engineering and Technology (OET) Bulletin – 65: Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields Guidance Document


NON-IONIZING
IONIZING
Wavelengths in meters
10^3
10^-2
10^-4
10^-6
10^-8
10^-11
10^-15
Power Lines
Radio & Cell Phones
Microwave
Infrared
Visible
Ultra Violet
X-ray
Gamma ray
Less Energy
More Energy

RESPIRATORY PROTECTION PROGRAM

A. PURPOSE AND SCOPE

This program is developed to comply with 29 CFR 1910.134 and 1926.103 - Respiratory Protection to ensure the safety of Abbott Electric employees while using respiratory protection. This program is designed for jobsites where respirators are used on a voluntary basis. If a hazard assessment or information from the host employer indicates that respirator use is required, this program is not adequate.

B. RESPONSIBILITIES

Program Administrator or Safety Director:

Medical Evaluator's Phone Number:

Program Administrator or Safety Director

The Program Administrator or Safety Director will:

- Implement and operate a periodic evaluation of the Respiratory Protection Program.
- Determine when voluntary use of respirators or filtering face pieces (dust masks) can be used.
- Supply respirators and/or dust masks at the request of Abbott Electric employees when respirator use is not required, if their use will not create a hazard.
- Be responsible for determining the potential need for respirators at each work location. Abbott Electric employees will rely mainly on hazard assessment information provided by the Host Employer regarding the potential need for respirators.
- Conduct fit tests before voluntary respirator use. Retesting will be done annually or if there is a physical change that could affect respirator use. Respiratory equipment will be provided to all employees that may be exposed to harmful vapors and oxygen deficient atmospheres.
- Train Abbott Electric employees to recognize hazards that require respirator use and maintenance of respirators.

Supervisor

The Supervisor will:

- Ensure that Abbott Electric employees who use respirators voluntarily are medically fit to do so, as determined by a medical evaluation.

Employees

Employees will:

- Use and maintain respirators according to their training.
- Immediately report any medical signs or conditions related to respirator use.
- Be trained in the use, care, and maintenance of respirators.

C. ACTION DETAILS

- Voluntary use of Respirators and/or filtering face pieces (dust masks).
- Workers may wear respirators to avoid exposure to hazards or to provide an additional level of comfort and protection, even if the amount of hazardous substance does not exceed the limits set by OSHA standards.
- Respiratory equipment is provided by Abbott Electric to all affected employees at no cost.
- When the voluntary use of respirators or filtering face pieces (dust masks) is allowed, Abbott Electric employee will read and comply with the following requirements:
    - Read and follow all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
    - Note: If a respirator is used improperly or not kept clean, the respirator itself can become a hazard to you.
    - Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and the level of protection it provides.
    - Not wear respirators in atmospheres containing contaminants for which the respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect against gases, vapors, or very small solid particles of fumes or smoke.
    - Keep track of the assigned respirator so that you do not mistakenly use someone else's respirator.
    - Be medically evaluated prior to respirator use.
    - Be responsible for properly cleaning, storing, and maintaining their respirators.

Medical Evaluations

Medical evaluations will be given to determine the employee's ability to wear a respirator. This evaluation is confidential and will not be seen by other Abbott Electric employees. The evaluation includes a medical questionnaire to be completed by the employee and returned to the Medical Evaluator. The Medical Evaluator will contact the employee if a medical exam is required. Medical exams will be necessary if an employee responds "yes" to Questions 1 through 8 on the questionnaire or:

- The employee reports medical signs or conditions related to respirator use.
- At the request of a supervisor, Physician or Licensed HealthCare professional (PLHCP) or a respirator program administrator.
- When observations or information indicate a need for an evaluation.
- When a change in the workplace conditions increase the physiological burden on an employee.

- Exception: This does not apply to an employee whose only use of respirators involves the voluntary use of filtering face pieces (dust masks).
- Medical evaluations will be kept on file in personnel records and by the medical evaluator.

Respirator Selection

- Respirators will be selected based on the Hazard Assessment that is NIOSH–certified and used in accordance with the conditions of certification. A representative number of respirator models and sizes will be available to ensure that Abbott Electric employees will be able to select a comfortable, properly fitted respirator.

Fit Testing

Note: This is an option that can be selected by Abbott Electric employees.

- All Abbott Electric employees wearing a tight fitting facepiece respirator must pass a Qualitative or Quantitative fit test.
- The fit test will be given after the medical evaluation is completed and before respirator use is permitted. Re-testing will be done annually or when there is a change in physical condition that could affect the respirator fit.

Respirator Use

- No employee will be allowed to wear a tight-fitting facepiece respirator with a beard or when any facial hair interferes with the face to facepiece seal of the respirator or with the valve function.
- Any other PPE must be worn so it doesn't interfere with the face-to-face piece seal. An employee must perform a user seal check every time a respirator is put on.
- Vapor or gas cartridges or filters will be replaced based on the end of service life indicator. If no indicator is provided the Abbott Electric employees will change them as scheduled.

General Maintenance

- Respirator maintenance will be done in accordance with the manufacturer's recommendations.
- Abbott Electric employees will be responsible for the cleaning, disinfecting, inspection and storage of respirators and will be given time to do so.
- Respirators will be inspected before each use and during routine cleaning.
- All respirators found to be defective must be brought to the attention of the Supervisor or the Safety Director and will be removed from service and discarded or tagged as defective.

D. TRAINING

- Before wearing a respirator in the workplace, Abbott Electric employees will receive training on the respiratory hazards to which they are exposed, the proper use, care, and maintenance of respirators, and the limitations of the respirator.
- Each employee must be able to demonstrate a working knowledge of:
  - Respirator function and usefulness.

- The effects of improper fit, usage, and maintenance on a respirator's effectiveness.
- Limitations and capabilities of the respirator.
- The correct way to inspect, put on, remove, use, and check the seals of the respirator.
- Proper respirator cleaning, maintenance, and storage, as appropriate.
- Proper training will be done initially. Retraining will be done at least annually or when:
    - There are changes in the workplace or the type of respirator being used.
    - Employee use indicates a lack of knowledge of the proper use.

E. PROGRAM EVALUATION

- A checklist will be used to evaluate the effectiveness and implementation of the Respiratory Protection Program.
- The program will be modified, and additional training added whenever there is an indication there is improper use or lack of knowledge or respiratory protection.
- Abbott Electric employees will provide feedback on the program's effectiveness by contacting the Safety Director as needed.

F. RECORDKEEPING

The following records will be kept on file, as required:

- Fit tests
- Respirator training
- Medical recommendation for respirator use
- All other documents that support the written program
- Example: Any air monitoring records and information on hazard assessments provided by host employers.

RIGGING MATERIAL HANDLING PROGRAM

A. PURPOSE AND SCOPE

The goal of the Rigging/Material Handling Program is to reduce the number of material handling injuries and to increase efficiency. This can be accomplished by minimizing material handling by combining or eliminating operations. This written program works to create and maintain a safe work environment for Abbott Electric employees as required by 29 CFR 1926 Subparts H, O, and CC.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Determine mechanical means for moving materials, when possible, to avoid injuries such as muscle pulls, strains, and sprains.
- Have cranes, derricks, hoists, powered industrial trucks, and conveyors handle loads too heavy or bulky to handle manually.
- Ensure required inspections are performed and documentation maintained for all cranes and derricks.
- Ensure that cranes and derricks are operated by competent persons.
- Ensure protection is made available from falling hazards.
- Ensure employee training is provided in the selection, inspection, use, and maintenance of material handling equipment.
- Ensure that before assigning Abbott Electric employees to jobs that require heavy and/or frequent lifting, they have been cleared as physically able to perform these tasks.

Supervisor

The Supervisor will:

- Plan for the receipt, shipment, and/or storage of materials.
- Ensure materials are kept at a proper distance from hoist-ways, inside floor openings, and exterior walls.
- Ensure materials are stacked according to load limits, passageways are kept clear, and arranged to prevent sliding, falling, or collapse.
- Ensure that when using any manual handling equipment Abbott Electric employees will follow all manufacturers' instructions.

Employees

Employees will:

- Be trained in the selection, inspection, use, and maintenance of material handling equipment.
- Use mechanical means to move material whenever possible.
- Follow manufacturers' instructions when using manual material handling equipment.
- Be trained to recognize hazards and to protect themselves and prevent accidents.

- Recognize and respond to signs, signals, barricades, and other forms of warning found at the jobsite.

C. MATERIAL HANDLING ACTIONS

Handling and Storage

- If a load is too large for one employee, two are to be assigned to the task or material handling equipment supplied.
- PPE such as gloves, hand leathers, or other hand protectors are to be used to prevent hand injuries.
- Maximum safe floor loads are to be posted and never exceeded.
- Materials are to be kept clear of passageways, properly sorted, and prevented from sliding, falling, or collapsing.
- Nails are to be bent or removed before stacking lumber for disposal.
- Metal banding or packaging is not to be removed until the material is ready to be used.
- Lumber piles will not exceed 20 feet in height (or 16 feet for manually handled lumber).

Slings

- Rigging is to be inspected prior to use on each shift and as needed during a shift.
- Defective rigging and slings will be removed from service, tagged, and disposed of.
- The rigging's load capacity is never to be exceeded. When selecting a sling, consider the size and type of load, as well as environmental conditions.

Safe Lifting Practices

- The weight and balance of the load must be correctly determined before lifting.
- Before lifting make certain the sling is properly secured and that the load is not lagged, clamped, or bolted to the floor.
- The angle of the sling should be kept as close to 90º (vertical) as possible.
- Never allow the load to drag along the ground.
- Always watch a load while it is in motion.
- Never allow more than one person to control the lift or to give signals, except to warn of hazards.
- Once the lift is completed, the sling should be cleaned, inspected for damage, and stored in a clean, dry place (hung on walls or racks).

Back Safety When Lifting

To help prevent back injuries that occur from lifting, the proper lift technique involves the following steps:

- Get close to the object. Place one foot along-side the object in the direction you will be carrying the object. Place the other foot behind the object. Feet should be securely planted with the object between your knees.
- Bend at the knees to go down to the object.

- Keep your back straight. If you maintain your pelvis in a level stance this will help to keep your back straight and prevent twisting.
- Get a secure grip on the object.
- Contract or tighten your diaphragm and stomach muscles. Maintain this position during the lift.
- Lift the object in a steady motion with your legs keeping the object close to your body. Try not to jerk when you lift.

D. TRAINING

Employee training will include, but is not limited to, the following:

- Proper lifting techniques to help minimize muscle, back, and hernia injuries.
- How to recognize hazards to protect themselves and prevent accidents.
- Selection, inspection, use, and maintenance of material handling equipment.
- How to properly position and stack materials.
- Recognition of and response to signs, signals, barricades, and other forms of warning found at a jobsite.

SCAFFOLDS PROGRAM

A. PURPOSE AND SCOPE

Falls are the leading cause of fatalities in the construction industry and represent a major hazard in all industries. This program is in accordance with OSHA's Scaffold Standard 29 CFR 1926 Subpart L which includes platform and suspended scaffolds as well as aerial lifts. It establishes those responsibilities and is a basic component of Abbott Electric's safety and health program.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Ensure that equipment is provided for safe erection, dismantling, and use of scaffolds, including fall protection systems as needed.
- Ensure scaffolds are erected in accordance with Subpart L of 29 CFR 1926, OSHA Scaffold Standard.
- Make certain that scaffolds which are beyond the scope of the conditions described in 29 CFR 1926 Subpart L will be designed by a registered, professional engineer.
- Provide a competent person to perform inspections and ensure compliance with Subpart L, OS- HA's Scaffold Standard.

Supervisor

The Supervisor will:

- Ensure that damaged or unsafe scaffolds and/or components will be clearly tagged "DO NOT USE" and removed from service.
- Ensure that scaffolds constructed by other trades which Abbott Electric employees are instructed to use are inspected and approved by a competent person before Abbott Electric employees are allowed to use them.
- Make certain all Abbott Electric employees are trained in the safe erection, dismantling, and use of scaffolds.
- Ensure that current operating and safety manuals are placed in each lift to be used by lift operators.

Employees

Employees will:

- Participate in all training programs associated with the erection, dismantling, and use of scaffolds.
- Obey the rules for the safe erection, dismantling, and use of scaffolds as identified in Subpart L, OSHA Scaffold Standard.
- Check with Abbott Electric's competent person each day before using a scaffold to ensure it has been inspected and approved.
- NOT USE scaffolds erected by other trades unless approved by Abbott Electric's designated competent person.

- Report all hazards immediately to their supervisor.
- Inspect and operate lifts according to the manufacturers' operating and safety manuals.
- Receive training in recognizing the hazards associated with the operation of aerial and scissor lifts and working in proximity to them.

C. AERIAL LIFTS

- Aerial lifts include boom-supported aerial platforms, such as cherry pickers or bucket trucks. The major causes of fatalities are falls, electrocutions, and collapses or tip overs. To avoid these potential fatalities, the following safe work practices will be observed:
    - Elevating work platforms will be maintained and operated in accordance with the manufacturer's instructions.
    - Hydraulic, mechanical, or electrical safety devices will not be overridden.
    - Equipment will not be moved with workers in an elevated platform, unless this is permitted by the manufacturer.
    - Workers will not be allowed to position themselves between overhead hazards, such as joists and beams, and the rails of the basket. Movement of the lift could crush the worker(s).
    - A minimum clearance of at least 10 feet, or 3 meters, will be maintained away from the nearest overhead lines.
    - Power lines, wires, and other conductors will always be treated as energized, even if they are de-energized, covered, or appear to be insulated.
    - A body harness or restraining belt with a lanyard attached to the boom or basket will be used to prevent the workers from being ejected or pulled from the basket.
    - Brakes will be set, and wheel chocks used when on an incline.
    - Outriggers will be used, if provided.
    - The load limits of the equipment will not be exceeded. The combined weight of the worker, tools, and materials will be considered in all calculations.

D. SCAFFOLDS

- When scaffolds are not erected or used properly, fall hazards can occur. To avoid these potential accidents, the following safe work practices will be observed:
    - Scaffolds will be sound, rigid, and sufficient to carry their own weight plus four times the maximum intended load without settling or displacement. It will be erected on solid footing.
    - Unstable objects, such as barrels, boxes, loose bricks, or concrete blocks will not be used to support scaffolds or planks.
    - Scaffolds will not be erected, moved, dismantled, or altered except under the supervision of a competent person.
    - Scaffolds will be equipped with guardrails, mid-rails, and toe boards.
    - Scaffold accessories, such as braces, brackets, trusses, screw legs, or ladders that are damaged or weakened from any cause will be immediately repaired or replaced.

- Scaffolds platforms will be fully planked with no more than a one-inch gap between planks. The planking will be scaffolding plank grade material or equivalent.
- A “competent person” will inspect the scaffolding and, at designated intervals, re-inspect it.
- Abbott Electric employees will be instructed about the hazards of using diagonal braces as fall protection.
- Scaffolds can be accessed by using ladders and stairwells.
- Scaffolds will always be placed at least 10 feet from electric power lines.

E. TRAINING

- Abbott Electric employees that will perform work while on a scaffold will receive training conducted by a qualified person. The training program will cover, at a minimum, the following elements:
  - The ability to recognize the hazards associated with the type of scaffold in use.
  - Identification of procedures to control or minimize hazards of scaffold use.
  - Proper use of the scaffold and handling of materials on the scaffold.
  - The importance of observing the maximum intended load and the load-carrying capacities of the scaffold in use.
  - The ability to recognize the hazards associated with the type of aerial lift in use.
  - Identification of procedures to control or minimize hazards associated with aerial lift use.

SILICA EXPOSURE PROGRAM

A. PURPOSE AND SCOPE

Abbott Electric has a duty to protect our workers from overexposure to crystalline silica during a variety of oil and gas related activities. Silica exposure is ranked as an extreme risk in industry work sites. It is identified as a risk requiring special controls, including seeking the advice of experts. Studies show that a variety of oil and gas activities generate airborne contaminants more than occupational exposure limits. Effective controls are available to protect workers from harmful exposure.

A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control methods available, and to ensure that the best practices, as described in this Exposure Control Plan (ECP), are followed at our work sites.

The work procedures we establish will not only protect our workers, but also any other workers onsite who are not involved in these operations.

This ECP applies to the site prime contractor, at-risk service providers such as the driller, the hydraulic fracturing company, the trucking company, and their employees, as well as any other third-party companies and their employees when at risk as determined by a risk assessment.

B. RESPONSIBILITIES

All employees involved in activities that could potentially create silica dust will take specific actions to ensure that a hazard is not created.

All Abbott Electric Employee Responsibilities:

- Read, understand, and adhere to the controls set out in this exposure control plan when at risk. A copy of this plan, or a similar one, must be present on every oil and gas site where at-risk activities are underway.
- Use the assigned protective equipment in an effective and safe manner. For example, workers must be clean-shaven where a respirator seal is in contact with the worker's face.
- Follow established work procedures as directed by the supervisor.
- Report any unsafe conditions or acts to the supervisor.
- Report any exposure incidents or any signs or symptoms of illness from silica exposure to the employer.
- The workers will acknowledge that they understand the Written Safety Program's requirements prior to commencing their work activities.

Supervisor Responsibilities:

- Provide adequate instruction to workers on the hazards of silica exposure associated with their respective oil and gas activity.
- Select and implement the appropriate control measures.
- Ensure that workers using respirators have been properly trained and fit-tested, and that the results are recorded.

- Make sure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring workers use appropriate engineering controls as well as administrative controls; they should only wear the necessary PPE as the last line of defense.
- Site supervisors are responsible for making sure that workers have been trained in this exposure control plan. They must ensure that workers understand the plan's expectations, as well as enforce it on the work site.

Employee Responsibilities:

- Ensure that, at a minimum, the Written Safety Program meets or exceeds the prime contractor's Written Safety Program and provincial regulatory requirements.
- Ensure that the materials and other resources to fully implement and maintain this Written Safety Program are readily available.
- It is Abbott Electric's responsibility to provide the required materials and documentation to comply with other applicable health and safety legislation (i.e. safety data sheets).
- Ensure supervisors and workers are educated and trained in the hazards of silica exposure and to work safely with silica.
- Maintain written records of training: proper use of respirators, fit-test results, crew talks, and inspections of equipment, PPE, work methods, and practices.
- Conduct an annual review, or more often if conditions change, of the Written Safety Program's effectiveness. This includes a review of the available control technologies to ensure they are selected and used when practical.
- Coordinate work with other employers to ensure a safe work environment.

Abbott Electric contractors and their site personnel need to make sure an exposure control plan is present on site and enforces compliance. Contractors need to select a service provider based on which available control strategies, like engineering controls, it employs to minimize exposures.

C. Material Assessment:

Any time there is a potential for silica containing materials to be involved in a project, sources of silica must be assessed prior to disturbing. Crystalline silica occurs naturally in the earth's crust and is a basic component of sand, concrete, brick, asphalt, granite, and some blasting grit and wall spackling materials. Employees can be exposed to silica when conducting activities such as:

- Abrasive blasting
- Jack hammering
- Concrete crushing
- Hoe ramming
- Rock drilling
- Mixing of concrete or grout
- Concrete drilling
- Sawing concrete or bricks

- Chipping or scarifying concrete
- Rock crushing
- Moving or dumping piles of concrete, rock, or sand
- Demolition of concrete or brick
- Using coatings containing silica
- Removing coatings containing silica

If airborne silica is expected to be generated during the project, all safety precautions are followed to minimize exposure to airborne silica dust.

D. EXPOSURE LIMITS

When silica containing materials are agitated, disturbed, moved, or otherwise handled, silica exposure can occur. Worker exposure is primarily limited to inhalation. The presence of silica dust on skin, hair, clothing, and PPE represents the possibility of this dust being circulated into the air, and subsequently inhaled by the worker or other workers. Silica may also present a mechanical abrasion hazard to the eye when concentrations are very elevated.

In general, inhalation exposure to silica can occur in three ways as a function of:

- the work location
- the activity or task
- the occurrence of unplanned events

Silica dust is not ordinary dust! Very small particles can penetrate deep into the lung. Different types and sources of silica may have different size ranges. For example, dust generated from hydraulic fracturing may be comprised almost entirely of respirable particles. In contrast, silica dust generated while cutting concrete generally has a wider range of particle sizes.

The Occupational Health & Safety Regulation (OHSR) lists an Occupational Exposure Limit (OEL) for respirable crystalline silica (including quartz) of 0.025 milligrams per cubic meter hours (mg/m^3). This is a concentration to which nearly all workers could be exposed for eight hours a day, five days a week, without adverse health effects. However, as a suspected carcinogen, crystalline silica is also an ALARA substance, and exposures must be reduced to levels “As Low As Reasonably Achievable” below the OEL.

The following factors impact the degree of exposure risk on site:

- Time – How long is the duration of the exposure? Cumulative exposure is a better predictor of silica disease. Exposure levels are full-shift Time-Weighted Average (TWA) like 8-hour Exposure Levels (EL). Some task-based exposures may last only minutes, while others may last the entire work shift.
- Proximity – How close are you to the emission source? The closer you are to the emission source, the higher the airborne silica concentration is likely to be. As a rule of thumb, keep sources of exposure at least an arm’s reach away.
- Relative Dustiness – How dusty is the material or process? The dustier the material is, the more airborne dust is likely to be generated. It is important to recognize that the way the material is disturbed can impact the dustiness.

- Energy – Is energy being imparted into the silica-containing material? The more energy, the greater the airborne concentration of silica.
- Quantity in use – How much is being used?
- Percentage Silica – What is the bulk silica percentage? Higher silica concentrations generally result in more risk, especially for pure products.
- Ventilation – Can silica build up in the air? The amount of ventilation can make a significant difference to exposures. Exposures in well-ventilated environments, like wide-open windy outdoor locations, may be less significant than exposures in poorly ventilated indoor environments.

E. RISK ASSESSMENT

Abbott Electric will use a variety of methods to assist with the assessment of possible and actual silica exposures.

These methods will include, but may not necessarily be limited to:

- Reviewing data/reports available in the public domain (i.e. Information available through regulatory agencies and industries.)
- Regularly consulting with the Safety Resources/Safety Managers from firms who perform similar work.
- Implementing a suitable respirable silica exposure monitoring program.

This program will ensure that over time Abbott Electric has quantifiable silica exposure data available that is representative of all regularly occurring, as well as reasonably foreseeable work activities. Exposure monitoring will generally be conducted in-house.

F. CONTROL METHODS

When determining measures to reduce or eliminate worker exposure to silica dust, Abbott Electric will generally select a combination of controls, listed in order of preference:

- Elimination and Substitution
- Engineering
- Administrative
- Personnel Protection Equipment (PPE)

Substitution and Elimination:

Whenever possible, Abbott Electric will substitute products containing silica with products that do not contain, or contain a lower percentage of, crystalline silica. While there have historically been few “substitution” options available, Abbott Electric recognizes the importance of planning work to minimize the amount of silica dust generated. During the planning phases of a project, Abbott Electric will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces.

Engineering Controls:

Engineering controls are those controls which aim to control or otherwise minimize the release of crystalline silica. Two engineering control options are available to Abbott Electric in many

circumstances. These include the Local Exhaust Ventilation (LEV) and Wet Dust Suppression (WDS) systems.

LEV Systems:

Tools/appliance specific LEV systems are available on some tools/appliances. Such LEV systems are generally comprised of a shroud assembly, a hose attachment, and a vacuum system. Dust-laden air is collected within the shroud, drawn into the hose attachment, and conveyed to the vacuum, where it is filtered and discharged. Large scale LEV systems, such those available on some vacuum trucks and mobile sweepers, may also be employed at times on Abbott Electric projects.

When/if LEV systems are used, Abbott Electric will employ the following systems and safe work practices:

- Vacuum attachment systems that capture and control dust at its source whenever possible.
- Dust control systems will be maintained in optimal working conditions.
- Grinding wheels will be operated at the manufacturer's recommended RPM (operating higher than this can generate significantly elevated airborne dust levels).
- HEPA or good quality, multi-stage vacuum units that are approved for use with silica dust will be used in accordance with the manufacturer's instructions.
- Whenever possible, concrete grinding will be completed while the concrete is still wet, as the dust will be significantly reduced.

WDS Systems:

Unlike LEV systems, many tools/appliances at Abbott Electric are equipped with WDS systems (i.e. on the Milling equipment, sweeper equipped Bobcats, as well as attachments on various handheld/portable, abrasive/cutting equipment). When WDS Systems are not available, similar effects can also be achieved by manually wetting the surface.

When WDS systems are used, Abbott Electric will employ the following systems and safe work practices:

- If water is not readily available on the specific Abbott Electric project, the project supervisor will arrange to have a water tank delivered to the site for use.
- Pneumatic or fuel powered equipment will generally be used instead of electrically powered equipment if water is the method of dust control, unless the electrical equipment is specifically designed to be used in such circumstances.
- Pressure and flow rate will be controlled in accordance with the tool manufacturer's specifications.
- When sawing concrete, tools that provide water directly to the blade will be used if possible.
- Wet slurries will be cleaned from work surfaces when the work is complete, if/when necessary.
- Whenever it is possible, employees will substitute products containing silica with products that do not contain silica or contain a lower percentage of crystalline silica.

Administrative Controls:

Controls that aim to control or otherwise minimize the release of silica using work procedures and methods, rather than by affecting the actual physical work. Common examples of administrative controls include, but are not limited to:

- Posting warning signs.
- Rescheduling of work to avoid the activities of others.
- Relocating unprotected workers away from dusty areas.

When administrative controls are used, Abbott Electric, Inc. will employ the following systems and safe work practices:

- In conjunction with the Owner/Prime Contractor, suitable exposure control strategies (both within and outside Abbott Electric, Inc's capabilities/responsibilities) will be discussed and determined. As necessary, supplemental project and task specific Exposure Control Plans will be developed.
- Suitable housekeeping, restricted work area, hygiene practices, training, and supervision procedures/standards will be determined and implemented on Abbott Electric projects.
- As appropriate, barriers will be erected around known silica dust generating activities and/or warning signs will be posted.
- As able, work activities will be scheduled to minimize the silica related effect on and from others.

Personal Protective Controls:

When used in conjunction with the other (i.e. Engineering and Administrative) controls, PPE and clothing can help further reduce our employees' exposure to silica dust.

An air purifying respirator fitted with HEPA cartridges is the most common piece of PPE that would be used by Abbott Electric employees to minimize exposure to silica dust. Dependent on the effectiveness of the other (i.e. engineering) control measures employed, either a "full-face piece" or "1/2 facepiece" respirator would be used by personnel. In most situations a 1⁄2 face respirator will be used. When working indoors or in other areas with poor ventilation, a full-face respirator may be required. Both respirators are "seal dependent" and the users must be "fit tested" and clean shaven where the respirator seals to the face.

In addition to respiratory PPE, protective clothing (i.e. disposable/washable coveralls) may be used and/or required to help prevent the contamination of the worker's personal clothing.

These respirators are provided to Abbott Electric employees by Abbott Electric when exposed to respirable crystalline silica.

G. EDUCATION AND TRAINING

Prior to performing activities or working on project sites where personnel could be exposed to silica dust. Abbott Electric employees will ensure that personnel receive suitable education and training. As necessary, personnel will be trained to a level at which they can demonstrate competency. Refresher training will be given on an as-needed basis. Education and training may include:

- The hazards and risks associated with exposure to silica dust.

- The signs and symptoms of silica related diseases.
- General and specific silica exposure reduction methods/strategies.
- The use of specific pieces of equipment and control systems.
- The use and care of respirators and other PPE.
- How to seek first aid.
- How to report items of concern relating to silica dust.

The education and training detailed will be delivered to Abbott Electric's employees through a variety of forums, including but not necessarily limited to:

- New Employee Orientations
- Project/Site Orientations
- Equipment/task specific training
- Start of shift safety talks
- Notifications and Bulletins

H. Medical Surveillance:

Employees exposed to silica levels above the Permissible Exposure Limit (50 µg/m3), or any employee working with silica who develops signs/symptoms of excessive exposure, should be enrolled in the Medical Surveillance Program.

All medical surveillance will be performed by a licensed medical professional and results must be provided to the affected employee and their supervisor within 15 days of the assessment.

The medical surveillance program consists of baseline examination and chest X-ray.

Employees enrolled in the medical surveillance program should be examined annually to track any changes resulting from exposure to silica dust.

SILICA PROGRAM

A. PURPOSE AND SCOPE

Abbott Electric provides a safe and healthy workplace for employees. Health hazards come from breathing in the dust. If crystalline silica becomes airborne through industrial activities, exposures to fine crystalline silica dust can lead to a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but the symptoms of the diseases may not appear for many years. This program ensures that precautions are taken to protect employees and others from the adverse health effects associated with exposure to silica.

B. RESPONSIBILITIES

All employees involved in activities that could potentially create silica dust will take specific actions to ensure that, as much as practicable, a hazard is not created.

Management is responsible for:

- Regularly evaluating new equipment and technologies that become available, as able/appropriate, purchasing the "best available" equipment/technologies (within Abbott Electric' capabilities). Equipment/technologies with (silica) dust suppression and/or capture technologies will generally be given preference over equipment/technologies that lack such.
- Implementing a silica exposure monitoring program, or otherwise ensuring representative exposure monitoring results are available. The purpose of the program will ensure that Abbott Electric has quantifiable silica exposure data available for all regularly occurring, as well as reasonably foreseeable, work activities.
- Ensuring project and/or task specific Exposure Control Plans (ECPs) are developed communicated and effectively implemented as appropriate.
- Ensuring that all employees (i.e. Managers, Supervisors and Workers) receive the necessary education and training related to this Policy, as well as project/task specific ECPs.
- Maintaining applicable records (i.e. exposure sampling, inspections, respirator fit tests, training records, etc.) in accordance Abbott Electric record retention procedures/practices.

Abbott Electric will conduct a review of this Policy annually.

Supervisors are responsible for:

- Obtaining a copy of the project/task specific ECPs(and/or other similar such information) and ensuring such are made available at each work site.
- Ensuring that all the tools, equipment, PPE and materials (including water) necessary to implement the ECP are available (and in good working order) prior to allowing work activities to commence.
- Ensuring that all workers (under the supervisor's direction and control) have received the necessary education and training. As appropriate, each supervisor must ensure that workers are available to "demonstrate competency" for identified tasks.

- Ensuring that workers adhere to the project/task specific ECP, including PPE and personal hygiene (i.e. including be clean shaven where the respirator seals to the user's face) requirements.
- Coordinating work activities with the Owner/Prime Contractor as required, and/or otherwise implementing the controls necessary to protect others (i.e. erecting of barricades and signage) who could be adversely affected by Abbott Electric

Employees are responsible for:

- Knowing the hazards of silica dust exposure.
- Using the assigned protective equipment in an effective and safe manner.
- Working in accordance with the project/task specific ECP.
- Reporting (immediately) to their supervisor, any hazards (i.e. unsafe conditions, unsafe acts, improperly operating equipment, etc.).

C. EXPOSURE LIMITS

The Occupational Health & Safety Regulation lists an Occupational Exposure Limit (OEL) for crystalline silica of 0.025 milligrams per cubic meter (mg/m3).

- This is a concentration to which nearly all workers could be exposed for eight hours a day, five days a week, without adverse health effects.
- However, as a suspected carcinogen, crystalline silica is also an ALARA substance, and exposures must be reduced to levels as low as reasonably achievable below the OEL.

D. RISK IDENTIFICATION

The health hazards of silica come from breathing in the dust. In addition to identifying the specific activities/areas where personnel could be exposed to silica dust, the "amount" of exposure and "duration" of exposure must also be considered.

With consideration to these three factors, activities performed by Abbott Electric employees as well as members of the public and other workers to the dust include, but are not necessarily limited to:

- Surface preparation activities
    - Use of Blow-Packs
    - Use of Bobcats with "sweeper" attachments
    - Use of Sweeper trucks
    - Hand sweeping.
- Jack-hammering
- Saw-cutting
- Drilling
- Granular Surface Preparation activities
- Operation and use of milling equipment or machinery
-

E. RISK ASSESSMENT

Abbott Electric' employees use a variety of methods to assist with the assessment of possible and actual silica exposures. These methods will include, but may not necessarily be limited to:

- Reviewing data/reports available in the public domain and industry associations.
- Regularly consulting with the Safety Resources/Safety Managers from companies who perform similar work.
- Implementing a silica exposure monitoring program. This program will ensure that over time Abbott Electric will have quantifiable silica exposure data available that is representative of all regularly occurring, as well as reasonably foreseeable work activities.
- Exposure monitoring will be conducted in-house, although may be obtained through outside consultants**.**

F. CONTROL METHODS

When determining measures to reduce or eliminate worker exposure to silica dust, Abbott Electric employees will generally select a combination of controls, listed in order of preference:

- Elimination and Substitution.
- Engineering
- Administrative
- Personnel Protection Equipment (PPE).

G. SUBSTATION AND ELIMINATION

Whenever it is possible, employees will substitute products containing silica with products that do not contain silica or contain a lower percentage of crystalline silica.

H. ENGINEERING CONTROLS

Engineering controls are those controls which aim to control or otherwise minimize the release of crystalline silica. Two engineering control options are available to Abbott Electric employees in many circumstances. These include the Local Exhaust Ventilation (LEV) and Wet Dust Suppression (WDS) systems.

- LEV Systems: Tools/appliance specific LEV systems are available on some tools/appliances. Such LEV systems are generally comprised of a shroud assembly, a hose attachment, and a vacuum system. Dust-laden air is collected within the shroud, drawn into the hose attachment, and conveyed to the vacuum, where it is filtered and discharged. Large scale LEV systems, such those available on some vacuum trucks and mobile sweepers, may also be used.
- If LEV systems are used, employees will follow these safe work practices:
    - Vacuum attachment systems that capture and control dust at its source whenever possible.
    - Dust control systems will be maintained in optimal working conditions.

- Grinding wheels will be operated at the manufacturer's recommended RPM operating higher than this can generate significantly elevated airborne dust levels.
- HEPA or good quality, multi-stage vacuum units that are approved for use with silica dust will be used in accordance with the manufacturer's instructions.
- Whenever possible, concrete grinding will be completed while the concrete is wet, as dust release will be significantly reduced.

- WDS Systems: When WDS systems are used employees will follow these safe work practices:
  - If water is not readily available on the specific project, the project supervisor will arrange to have a water tank delivered to the site for use.
  - Pneumatic or fuel such as gasoline powered equipment will generally be used instead of electrically powered equipment if water is the method of dust control, unless the electrical equipment is specifically designed to be used in such circumstances.
  - Pressure and flow rate will be controlled in accordance with the tool manufacturer's specifications.
  - When sawing concrete, tools that provide water directly to the blade will be used if possible.
  - Wet slurries will be cleaned from work surfaces when the work is complete when necessary.

I. ADMINISTRATIVE CONTROLS:

Common examples of administrative controls include, but are not limited to:

- Posting warning signs.
- Rescheduling of work to avoid the activities of others.
- Relocating unprotected workers away from dusty areas.

When administrative controls are used, Abbott Electric employees will employ the following systems and safe work practices:

- Suitable exposure control will be discussed and determined. As necessary/appropriate, supplemental project and task specific Exposure Control Plans will be developed.
- Suitable housekeeping, restricted work area, hygiene practices, training, and supervision procedures/standards will be determined and implemented on projects.
- As appropriate, barriers will be erected around known silica dust generating activities, and/or warning signs will be posted.
- As able, work activities will be scheduled to minimize the silica related effect on, and from, others.

J. PERSONAL PROTECTIVE EQUIPMENT CONTROLS

When used in conjunction with the other controls, PPE, and clothing can help further reduce our employee's exposure to silica dust.

- An air purifying respirator fitted with HEPA cartridges is the most common piece of PPE that would be used by employees to minimize exposure to silica dust.
- Dependent on the effectiveness of the other control measures employed, either a full-face piece or 1/2 facepiece respirator would be used by personnel.
- Both respirators are seal dependent and thus the users must be fit tested and clean shaven where the respirator seals to the face.
- In addition to respiratory PPE, protective clothing may be used and or required to help prevent the contamination of the worker's personnel clothing.

K. EDUCATION AND TRAINING

Prior to performing activities or working on project sites where personnel could be exposed to silica dust. Abbott Electric employees will ensure that personnel receive suitable education and training. As necessary, personnel will be trained to a level at which they can demonstrate competency. Refresher training will be given on an as needed basis. Education and training may include:

- The hazards and risks associated with exposure to silica dust.
- The signs and symptoms of silica related diseases.
- General and specific silica exposure reduction methods/strategies.
- The use of specific pieces of equipment and control systems.
- The use and care of respiratory and other PPE.
- How to seek first aid.
- How to report items of concern relating to silica dust.

The education and training detailed will be delivered to Abbott Electric employees through a variety of forums, including but not necessarily limited to:

- New Employee Orientations
- Project/Site Orientations
- Equipment/task specific training
- Start of shift safety talks
- Notifications and Bulletins

SPILL PREVENTION PROGRAM

A. PURPOSE AND SCOPE

This spill plan is designed for Abbott Electric employees to handle the requirements hazardous substances. The spill plan should be updated if the hazardous substance inventory changes.

B. SPILL PREVENTION

The following are general requirements for any hazardous substances stored or used at this facility. Listed below are the good housekeeping and management practices to prevent spills.

- Ensure all hazardous substances are properly labeled.
- Store, dispense, and/or use hazardous substances in a way that prevents releases.
- Provide secondary containment when storing hazardous substances in bulk quantities (~55 g).
- Maintain good housekeeping practices for all chemical materials at the facility.
- Routine/Daily checks in the hazardous substance storage area are to be performed.
- Monthly inspections of the hazardous substance storage area, secondary containment, and annular space (interior cavity of double wall tank) on any Above-ground Storage Tanks (AST) or Underground Storage Tanks (UST) need to be logged in this plan.
- Facility Specific Requirements.

C. SPILL CONTAMINENT

The general spill response procedure at this facility is to stop the source of the spill, contain any spilled material, and clean it up in a timely manner to prevent accidental injury or other damage.

- Small spills will be contained by site personnel if they are able to do so without risking injury.
- Spill kits are provided and are adequate for anticipated spills. Kits contain appropriate supplies for materials within the facility that spill. These supplies are easily accessible for personnel.
- Personnel will properly characterize spill cleanup materials before disposal.

For questions about disposal call the STGPD program at (253)798-3589 or the Local Hazardous Waste Program at (253)798-7672.

D. EMERGENCY RESPONSE

Proper communication measures are in place. Immediately call 911 in the event of injury, fire or potential fire, release of materials, or spill of a hazardous substance that gives rise to an emergency. In the event of a large spill, a properly trained employee should:

- Assess the area for any immediate dangers to health or safety (i.e. a wrecked car on fire). If any dangers are present, move away from the area and call 911.
- Notify the primary and/or secondary contact from the list above and then continue your spill response. The primary contact should assess additional notification requirements.
- Retrieve the spill kit from the closest location.

- Assess the size of the leak and any immediate threat of the spill reaching the floor/storm drains or permeable surfaces in the area. If there is an immediate threat and there are no safety concerns, then attempt to block the spill from meeting the floor/storm drain or permeable surface. If no drain covers are available, then try to use absorbent and/or sock booms or rags to stop the spill from getting into the drains or to any permeable surfaces.
- If the spill can be contained with absorbent booms, deploy them around the spill. Use the booms to direct the spill away from any immediate hazards (i.e. a wrecked car).
- If there is no immediate threat to the floor/storm drains or permeable surfaces, or after controlling the spill, try to plug or stop the leak, if possible. If applicable, put on protective gear (gloves, goggles, protective clothing, etc.) and plug the leak.
- Once the spill has been contained and any immediate threat to storm drains or permeable surfaces has been minimized, contact the spill cleanup contractor and dispatch them to clean up the spill or commence spill cleanup procedures.

E. SPILL REPORTING

If a hazardous substance spill exceeds 25 gallons or if any amount has been released into the soil, surface water, or storm drains, notify the National Response Center (NRC) by calling (800)424-8802.

F. PLAN MANAGEMENT

The primary contact or designee shall administer this plan and will be responsible for updating and including any required documentation.

G. TRAINING

All personnel who may respond to any spill need to be trained in the contents and procedures of this plan. Trained personnel will add their names and dates of training to the training log. Only persons trained on this plan shall respond to a spill.

H. SPILL TRACKING

Any spills must be entered into the spill log. If a large catastrophic spill occurs, attach additional pages to describe the event. Include known or possible causes, areas affected, and the effectiveness of the cleanup. Include a review of the cleanup contractor and their procedures. For small spills, it is sufficient to fill out the spill log and to take measures to prevent a repeat occurrence.

- Facility Inspections

  Routine inspections will be conducted daily during regular business hours. Daily inspections will include, at a minimum, a visual inspection of the hazardous substance containers and the area immediately adjacent to it for signs of a spill or leak. These inspections do not need to be logged unless a spill or leak is detected. Ideally, these inspections will be conducted by a manager or by regular employees.

- Full-site inspections will be conducted monthly by the primary contact or designee. If all items are deemed acceptable, it is sufficient for the inspector to log only the inspection and the results in the inspection log.

SUBCONTRACTOR MANAGEMENT PROGRAM

A. PURPOSE AND SCOPE

This program has been developed to ensure that our subcontractors perform all work safely and in accordance with the requirements established by Abbott Electric, OSHA, the general contractor and host employer. Subcontractors used on our projects will be prequalified, assessed while performing work, and required to follow the Subcontractor Management Program.

B. PREQUALIFICATION

- All subcontractors used on Abbott Electric projects will be prequalified to ensure they meet the minimum requirements established by Abbott Electric, the general contractor and host employer.
- The prequalification of subcontractors will be supervised by a qualified Abbott Electric representative or designated third party.
- The prequalification of all subcontractors will be documented. Prequalification documents will be made available upon request to Abbott Electric, OSHA, the general contractor and host employer.
- Subcontractors will be prequalified through a process that includes:
    - A review of OSHA 300 logs over the past four years or from the business start date if less than four.
    - A review of OSHA inspections and citations issued over the past four years or from the business start.
    - A review of all written safety programs, policies, and procedures required by Abbott Electric.
    - A review of the procedures established for incident reporting and emergency response.
    - A review of worker's compensation insurance EMR (Experience Modification Rating) information. Proof of insurance documented by a current certificate of insurance from an insurance agency.
    - The documentation of all safety training for supervisors, competent persons, and employees is required.
    - The documentation of Operator Qualification (OQ), certifications or licenses required by Abbott Electric, years; date if less than four years; general contractor and host employer for the work to be performed; accident/incident investigation; by Abbott Electric, OSHA, the general contractor, and host employer for the work to be performed.

C. JOBSITE ASSESSMENTS

- All subcontractors will be required to perform workplace assessments, such as inspections and observations, to ensure that all work is performed safely and in accordance with the requirements established by Abbott Electric, OSHA, the general contractor and host employer.

- Assessments performed by subcontractors will be documented and made available upon request to Abbott Electric, the general contractor, and host employer.

Subcontractor Management 1

- Hazards discovered through assessments must be immediately abated. Hazards that cannot be abated by the subcontractor must be immediately reported to Abbott Electric. Subcontractors must help to ensure that jobsite personnel are not exposed to hazardous acts or conditions.
- Subcontractors are required to participate in and cooperate with Safety Assessments, Job Hazard Analysis (JHA), Job Safety Analysis (JSA) and Job Safety Observations (JSO) as performed by Abbott Electric, the general contractor, and host employer.

D. ACCIDENT INVESTIGATION AND REPORTS

- Subcontractors must immediately report all OSHA recordable accidents to Abbott Electric. They must also comply with the reporting/recording requirements established by OSHA, the general contractor, and host employer.
- In the case of a fatality or hospitalization of three or more employees, subcontractors will notify the local OSHA office or contact 1-800-321-OSHA to report the accident within 8 hours of receiving notice.
- Subcontractors must immediately take appropriate corrective action to ensure the prevention of recurring accidents.
- Subcontractors must conduct a comprehensive investigation of all OSHA recordable accidents and ensure that additional corrective action, if required, is taken. All accident investigations must be documented and provided upon request to Abbott Electric, the general contractor, and host employer.

E. COMMUNICATION AND TRAINING

- Subcontractors will attend and participate in all meetings, orientations, training, initiatives, and activities required by Abbott Electric, the general contractor, and host employer in preparation for working safely at the project location.
- Subcontractors are required to track and document safety training. The documentation must include:
  - Safety Orientation Training
  - New and newly assigned workers will participate in a safety orientation training session.
- Participants will be instructed in all elements of Abbott Electric safety program and will complete all required safety training.
- Required Training
  - Subcontractors will be included in tailgate safety meetings, job safety analysis or hazard assessments, and on the job safety inspections.
  - Subcontractors will be included in pre-job meetings or kick-off meetings, and safety orientations.
  - No employee will be allowed to perform a job or task unless they have received training on the hazards present and the precautions necessary to perform the job

safely. Subcontractors will ensure all training required by Abbott Electric, OSHA, the general contractor, and host employer has been completed.

- Refresher Training
  - Subcontractors will ensure that on-going refresher training is provided, as needed or as required, by Abbott Electric, OSHA, the general contractor, or host employer.
- Site Specific Training
  - Before beginning a new job, a review of the hazards will be performed. Training will be provided for any new hazards introduced to the workers. This may include the introduction of new substances, equipment, tools, processes, procedures, or jobsite/environmental hazards, an outline of training required by the organization, the training provided to a specific worker, and a current training agenda. Training documents must be provided to Abbott Electric, the general contractor, and host employer upon request.

Subcontractor Management 2

- Job Briefings are required before each job. They must be conducted by the person in charge and documented. Job briefings must address the hazards associated with the work, procedures to be used, any special precautions, control of energy sources, and personal protective equipment (PPE) required. The documentation of Job Briefings must be made available upon request to Abbott Electric, the general contractor, and host employer.

F. MULTI-EMPLOYER WORKSITE POLICY

Subcontractors will ensure that all safety procedures are reviewed with Abbott Electric, the general contractor, host employer, and affected contractors before a job begins. Specific written policies and procedures will be shared. This review will include materials safety data sheets, emergency action plans, and the interpretation of signs and tags. All relevant information will be communicated to supervisors and workers.

G. POST PROJECT PERFORMANCE REVIEW

Upon conclusion of the project, Abbott Electric will conduct a post-job safety performance review. This information will be used in evaluating the subcontractor's suitability for future projects. The results of the post project performance review will be made available to our subcontractors, the general contractor, and host employer upon request.

TRENCHING, SHORING, AND EXCAVATION

A. PURPOSE AND SCOPE

The goal of the Trenching, Shoring, and Excavation Program is to protect all Abbott Electric employees exposed to excavation or trenching operations. This can be accomplished through pre-planning and careful implementation of all applicable state and federal safety standards. This written program works to create and maintain a safe work environment as required by 29CFR 1926 Subpart P.

B. RESPONSIBILITIES

Safety Director

The Safety Director or Qualified Worker will:

- Prepare a safety checklist prior to the start of digging.
- Check the proximity of utilities, buildings, and vibration sources.
- Contact the owners of affected utilities prior to digging and arrange for shutdown or relocation of facilities, if necessary.
- Provide daily jobsite excavation permission.
- Check the adequacy and availability of all equipment including PPE, shoring materials, signs, barricades, and machinery.
- Ensure Abbott Electric employees are trained to recognize hazards associated with a trench or excavation.

Supervisors

Supervisors will:

- Ensure proper placement of equipment and materials storage.
- Determine the layout of the jobsite.
- Establish a vehicle traffic control plan and ensure the installation of traffic zone safeguards.
- Ensure that the trench or excavation is safe for employee occupation.

Employees

Employees will:

- Prepare a safety checklist prior to the start of digging.
- Check the proximity of utilities, buildings, and vibration sources.
- Contact the owners of affected utilities prior to digging and arrange for shutdown or relocation of facilities, if necessary.
- Provide daily jobsite excavation permission.
- Check the adequacy and availability of all equipment including PPE, shoring materials, signs, barricades and machinery.
- Ensure Abbott Electric employees are trained to recognize hazards associated with a trench or excavation.

C. ACTION DETAILS

- A copy of 29 CFR 1926 - Subpart “P” will be made available on the jobsite. A competent person with a comprehensive knowledge of OSHA’s Excavation Standards and the safe practices necessary to ensure employee safety will remain on-site while work is being performed in trenches or excavations.
- A pre-job site review will be conducted to develop a job plan that ensures a safe, efficient job process and evaluate difficult sloping and shoring problems (i.e. manholes, etc.) prior to commencing the work.
- All trenches will be properly classified, sloped, or shored in accordance with the appendices of 29 CFR 1926 - Subpart “P”, or in accordance with manufacturer's tabulated data (i.e. Excavations 5 feet (1.52 m) or greater in depth or any depth where a competent person determines that there is a potential for cave-in. The competent person will consult with a Registered Professional Engineer (RPE) for trenches over 20’.)
- Inspections of equipment and trench conditions will be performed by the competent person at the start of each shift or as needed by changing conditions.
- Sufficient means for exiting excavations 4 feet deep or more will be provided and are within 25 feet of lateral travel for Abbott Electric employees.
- Soil conditions will be determined by visual and manual tests to determine stability of soil and surrounding trench conditions.

NOTE: If visual and manual tests are not performed, soils should be classified as type “C”.

- Ramps and walkways will be provided for employee use in accordance with OSHA standards.
- Abbott Electric employees will not be permitted to work in excavations where water has accumulated or is accumulating unless adequate precautions have been taken. Diversion ditches, dikes, or other means should be used to prevent surface water from entering an excavation and to provide drainage to the adjacent area.
- Tests will be performed for the presence of oxygen and air quality in excavations as needed. The competent persons on site will be qualified in identifying confined/ hazardous spaces due to the presence of flammable/combustible gases, toxins, oxygen deficiency, and oxygen-enriched environments.
- While the excavation is open, underground installations should be protected, supported, or removed as necessary to safeguard Abbott Electric employees. Adjacent structures should be supported to prevent possible collapse.
- Abbott Electric employees will not be permitted under loads that are handled by lifting or digging equipment. Abbott Electric employees will not be allowed to work near the excavation above other Abbott Electric employees unless the lower-level Abbott Electric employees are adequately protected.
- Records for the protection systems used will be maintained on-site.
- Appropriate emergency rescue equipment will be available to meet existing or potential conditions.

D. SLOPING

- Where sloping is used to protect Abbott Electric employees from cave-ins the angle of incline will be determined using the following: soil type, environmental conditions of exposure, and application of surcharge loads. Where soil type is the predominant factor, the following angles will be observed:
  - Soil or Rock Type Maximum Allowable Slopes (H:V) For Excavations Less Than 20 Feet Deep Stable Rock Vertical (90°)
  - Type A¾:1 (53°)
  - Type B 1:1 (45°)
  - Type C 1½:1 (34°)

E. SOIL CLASSIFICATIONS

The following describes the types of soils our company may work on.

Type A

- Cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater.
- Examples of cohesive soils are clay, silty clay, sandy clay, clay loam, and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A.
- However, no soil is Type A if:
  - The soil is fissured.
  - The soil is subject to vibration from heavy traffic, pile driving, or similar effects.
  - The soil has been previously disturbed.
  - The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater.
  - The material is subject to other factors that would require it to be classified as a less stable material.

Type B

- Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa), but less than 1.5 tsf (144 kPa).
- Granular cohesion-less soils including angular gravel (similar to crushed rock), silt, silt loam, sandy loam, and in some cases, silty clay loam and sandy clay loam.
- Previously disturbed soils except those which would otherwise be classed as Type C soil.
- Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration, dry rock that is not stable, OR material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H: 1V), but only if the material would otherwise be classified as Type B.

Type C

- Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less, granular soils including gravel, sand, and loamy sand or submerged soil, or soil from which water is freely seeping or submerged rock that is not stable.
- Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H: 1V) or steeper.

F. EMERGENCY RESPONSE

- In the event an employee becomes entrapped in a cave in, rescuers must proceed with caution. The following procedures shall be followed:
  - A protective system must be in place before rescuers are allowed to enter the excavation.
  - Call 911 and the Safety Director.
  - Request a police escort for rescue equipment (i.e. shoring equipment, etc.).
  - Only dig by hand or use hand digging tools in the area where the victim is believed to be located.
  - When rescue equipment arrives on scene, employ a protective system or vacuum the soil around the victim as much as feasibly possible.
  - Continually analyze and implement new tactics that best rescue the victim.
  - Allow higher-trained emergency response personnel to complete tasks as needed.

G. TRAINING

- Employee training will include, but not be limited to, the following:
  - Recognition of hazards that could affect the safety of a trench or excavation.
  - Correct methods of access and egress of a trench or excavation.
  - The appropriate forms of PPE that is necessary while working in and around a trench or excavation.
  - The correct placement of materials and excavation materials to the edge of the trench or excavation.
  - The correct protective system to be used and its correct installation.

VEHICLE SAFETY POLICY PROGRAM

A. PURPOSE AND SCOPE

The goal of this program is to ensure that Abbott Electric operations involving the use of vehicles are conducted so that accidents which may injure people or cause damage to property and/or the environment will be avoided. The motor vehicle procedures identified address the requirements as identified in 29 CFR 1926.601 Motor Vehicles and Section 5(a)1, General Duty Clause of the OSH Act of 1970 and the DOT Federal Motor Carrier Safety Regulations Parts 40,325, 355-379, 381-399.

B. RESPONSIBILITIES

Safety Director

The Safety Director will:

- Ensure that all company vehicles are safe, in good working order, and inspected according to any federal and/or state regulations.
- Ensure that all employees whose job includes operation of a motor vehicle are trained in the recognition of hazards associated with, and the safe operation of, the motor vehicle.

Employees

Employees will:

- Participate in training to recognize hazards associated with motor vehicle operations, if their job includes operating a motor vehicle.
- Sign and abide by the Vehicle Safety Policy, which includes the mandatory use of a seat belt/safety harness while operating or riding in a motor vehicle.
- Perform a pre-trip and post-trip inspection of company vehicles.

C. VEHICLE SAFETY ACTIONS

All employees operating company vehicles or operating personal vehicles on company business are subject to the following:

- Authorized to operate only the vehicle assigned to them by their supervisor. Vehicles should be used only for conducting the necessary company business as assigned. Supervisors must approve all tasks requiring the use of company vehicles before they are performed.
- Must be in possession of a valid driver's license and have the correct license endorsements needed for the vehicle assigned. The supervisor must be notified when there are changes to license status. No vehicles may be operated without a proper license.
- No one may operate a vehicle unless training has been received in the inspection, operation, and maintenance of the vehicle assigned.
- Inspection of assigned vehicles will be done before and after each trip following the established company procedure. A vehicle may never be used that does not pass. Inspection results will be documented on the appropriate form and provided to the supervisor.

- All necessary documentation (driver's license, owner card, insurance card, medical card, logbooks, manifests, etc.) must be in the vehicle before it is used.
- Seat belts and shoulder harnesses, if installed, must always be worn by drivers and passengers. Vehicle may not be operated unless all are wearing safety belts and shoulder harnesses.
- No one other than the individual assigned to a vehicle may operate it, nor are any passengers other than those authorized by a supervisor allowed in the vehicle.
- Supervisors will be notified immediately of any legal citations received while operating a vehicle on or off the job.
- All accidents will be reported following established company procedures.
- The Abbott Electric Substance Abuse Policy must always be observed. Vehicles will not be used while under the influence of alcohol, illegal drugs, or hazardous prescription medication. Employees will not ride with anyone under the influence of alcohol, illegal drugs, or hazardous prescription medication.
- All traffic laws will be obeyed, and vehicles must always be operated in a safe and courteous manner.
- If personal vehicles are used on company business, employees should ensure that their vehicles meet all standards established for company vehicles.

D. TRAINING

All Abbott Electric employees that will use company vehicles will receive training conducted by a qualified person. The training program will cover, at a minimum, the following elements:

- Pre-trip and post-trip inspections on all vehicles they are assigned to operate.
- Hazards of driving while impaired.
- Use of protective equipment, emergency equipment, and vehicle safety systems.
- Hazards associated with vehicle operation and the appropriate action to take in the event of an emergency.
- Checking the weight of vehicles to prevent overloading.
- Distributing and securing loads properly.
- Special training for drivers who haul hazardous substances.
- Establish a plan to monitor the vehicle safety program.

WELDING AND HOT WORK PROGRAM

A. PURPOSE AND SCOPE

Abbott Electric has developed this Welding and Hot Work Program to ensure that all employees receive adequate information relevant to the possible hazards that may be involved with welding and hot work. For the purposes of this program, “Hot Work” is defined as welding, cutting, soldering, brazing, grinding, and other forms of torch operations that will introduce sparks or open flame to a work area. Potential safety and health hazards can result from the gases and vapors, dusts and fumes, sparks, hot metal, and radiant energy produced during hot work operations.

This Hot Work Program is intended to:

- Preserve the safety and health of Abbott Electric employees performing work near hot work operations.
- Ensure the safety of all occupants that may be present during hot work operations.
- Limit losses from accidental ignition of materials in the vicinity of hot work operations.
- Prevent accidental activation of the premise fire detection system, if present.

The following program outlines how this objective will be accomplished. This policy covers all potential workplace exposures involving hot work as defined by federal (29 CFR 1910.252 – Welding, Cutting, and Brazing and 1926.352 – Fire Prevention), state and local regulations, and NFPA 51B – Fire Prevention in Use of Cutting and Welding Processes.

B. RESPONSIBILITES

Safety Director

The Safety Director will:

- Monitor this Welding and Hot Work Program.
- Coordinate any hot work activities performed by or near Abbott Electric employees with the Host Employer. Hot work performed by others has the potential to affect Abbott Electric employees.
- Review requests submitted by supervisors for hot work and issue a Hot Work Permit where needed.

Supervisors

The Supervisors will:

- Identify jobs where hot work will be performed and ensure a hot work permit is secured for the job.
- Consult with the host employer and review the jobsite for hazards associated with hot work. Provide this information to the Safety Director.
- Control hazards as directed on the permit provided by the Safety Director.

Employees

The Employees will:

- Follow all safety and health procedures described in this program.
- Consult Safety Data Sheets (SDSs) as needed, for additional safety and health precautions associated with hazardous materials used in hot work.
- Report all safety and health issues associated with hot work operations at the jobsite. All questions should be referred to the Safety Director or Supervisor.
- Be aware that if the object to be welded or cut cannot readily be moved, all movable fire hazards should be removed.

C. HAZARD DETERMINATION

Abbott Electric does not intend to evaluate any of the hazardous substances associated with hot work activities but has chosen to rely upon the evaluation performed by the suppliers or by the manufacturers of the substances to begin to identify specific hazards associated with any hot work. Abbott Electric will also rely on any hazard assessment information that can be provided by the Host Employer.

- If all fire hazards cannot be removed, then guards shall be used to confine the heat, sparks and slag, and to protect the immovable fire hazards.
- If welding/cutting cannot be completed safely, it should not be performed.

Non-permissible Areas

Hot work shall not be allowed in the following areas:

- In areas not authorized by management.
- In sprinklered buildings when such protection is impaired.
- In the presence of explosive atmospheres, that is, where mixtures of flammable gases, vapors, liquids, or dusts with air exist.
- In explosive atmospheres that can develop inside unclean or improperly prepared drums, tanks, or other containers and equipment that have previously contained such materials.
- In explosive atmospheres that can develop in areas with an accumulation of combustible dusts.
- In areas where hazardous fumes, gases, or dust are possible.

D. FIRE WATCH

- A fire watch shall be required when hot work is performed in a location where other than a minor fire might develop, or where the following conditions exist:
    - Combustible materials in building construction or contents are closer than 35 ft (11 m) to the point of operation.
    - Combustible materials are more than 35 ft (11m) away but are easily ignited by sparks.

- Wall or floor openings within a 35 ft (11m) radius expose combustible materials in adjacent areas, including concealed spaces in walls or floors.
- Combustible materials are adjacent to the opposite side of partitions, walls, ceilings, or roofs and are likely to be ignited.

- A fire watch shall be maintained for at least thirty minutes after completion of hot work operations to detect and extinguish smoldering fires. More than one fire watch shall be required if combustible materials that could be ignited by the hot work operation cannot be directly observed by the initial fire watch.

E. HOT WORK PERMIT AREAS

- Hot work areas will be inspected before hot work begins and/or during hot work activities. The fire alarm systems or devices may be disabled as directed by the Host Employer. Restrictions on the duration of any hot work are usually at the discretion of the Host Employer. Most hot work permits are:
  - Specific to a hot work activity.
  - In the designated area.
  - For the designated time frame.
- Where hot work activities are to be performed, the Safety Director or his/her designee will meet with the Host Employer to discuss any additional precautions that may have to be implemented to protect the safety and health of Abbott Electric employees who may be working in the vicinity of the hot work activities. This could include using barrier tape to designate the area(s).
- It is required to wear special clothing or personal protective equipment to work within the designated area. If it is decided that special precautions are necessary to protect Abbott Electric employees, the affected employees will be notified and given an opportunity to discuss their concerns during the job briefing.

Hot Work Operator

- The hot work operator must handle the equipment safely and use it as follows so as not to endanger lives and property.
- The operator should have approval before starting hot work operations.
- The operator should cease hot work operations if unsafe conditions develop and notify management for reassessment of the situation.

F. TRAINING

- All Abbott Electric employees working in the vicinity of hot work activities will be informed of the:
  - Health and safety hazards of an employee associated with the type of hot work that may occur.
  - Proper selection of protective clothing and personal protective equipment that may be required to work in the vicinity of hot work activities.
  - Elements of this Hot Work Guidance Program.
  - Method to identify the causes of workplace fires.

- Procedures for workplace inspections to eliminate or control fire hazards.
- Identification and description of the three classes of fires and the fire extinguishers that should be selected to fight each class.
- Actions that should be taken when responding to a fire victim.
- Process to use of a portable fire extinguisher and show competence.

- Everyone performing hot work such as welding or cutting should be trained in:
  - Proper equipment operation, handling and storage of welding materials, compressed gas safety, and chemical hazards.
  - Working procedures, including the written hot work permit.
  - Additional training may also be necessary in the proper selection and use of personal protective equipment. Training in confined space entry is necessary before working in such areas.

G. FIRE EXTINGUISHER SYSTEMS

General Rules

- Only fire extinguishers meeting recognized standards and approved by a nationally recognized testing laboratory should be used.
- The correct type of fire extinguisher should be provided for each type of class of fire that may occur.
- The extinguisher should be of a sufficient size.
- Fire extinguishers should be mounted where they will be readily accessible for immediate use.
- Fire extinguishers should be regularly inspected and properly maintained.
- Employees should know the location of the extinguisher and fire alarm boxes in their areas.
- Employees will be trained in the steps to take during an emergency.

DRUG FREE WORKPLACE PROGRAM

IBEW Local Union #540/ NECA North Central Ohio Chapter

DRUG & ALCOHOL POLICY

I. Policy Statement:

The Parties recognize the problems created by drug and alcohol abuse and the need to develop prevention and treatment programs. IBEW Local Union # 540/ NECA North Central Ohio Chapter has a commitment to protect people and property, and to provide a safe working environment. The purpose of the following program is to establish and maintain a drug free, alcohol free, safe, healthy work environment for all of its employees. All tests are for the sole purpose of drug and alcohol screening and cannot be used for any other screening or identifying medical information about the employee. Therefore, to promote a safe, healthy and productive work environment, IBEW Local Union # 540/ NECA North Central Ohio Chapter is implementing the following substance abuse policy, effective March 2008.

II. Prohibitions:

IBEW Local Union # 540/ NECA North Central Ohio Chapter employees are prohibited from:

A). Possessing, using, buying, selling or transferring illegal drugs while working, while on company property or while operating company equipment;

B). Possessing, consuming, selling, transferring or transporting alcoholic beverages while working, while on company property or while operating company equipment;

C). Working or reporting to work, under the influence of drugs and/or alcohol.

III. Definitions:

a.) Accident- Any event resulting in injury to a person or property to which an employee, or contractor/contractor's employees, contributed as a direct or indirect cause.

b.) Adulterated Specimen- A urine screening, which has been tampered with to cover the true results.

c.) Collection Facility/Site- Approved location where participants can provide a specimen for testing.

d.) Company Premises- The term "Company Premises" as used in this policy includes all property, facilities, land, building structures, automobiles, trucks, and other vehicles owned, leased or used by the company. Job sites for which the company has responsibility are included.

e.) Computer Generated Selection Testing (CGST) - Third party administrator will select participant to be tested monthly through a computer generated selection process.

f.) Testing Pool- All participating members that will be subject to random testing.

g.) Diluted Samples- The substance abuse program will follow the guidelines for diluted samples set by the Federal Government.

h.) Eligible- Status referring to an employee who is validated as a participant in the program.

i.) Employee- Individuals, who perform work for employers' signatory with IBEW Local Union # 540/ NECA North Central Ohio Chapter, including, but not limited to, management, supervision, engineering, craft workers and clerical personnel.

j.) Employee Assistance Program / Member Assistance Program- These programs are intended to prevent or address substance abuse problems as well as assist employees/ union members and their eligible family members with interpersonal conflicts, family problems, workplace crises, eldercare stresses, psychological problems, and financial management. The assistance program is able to provide voluntary and confidential counseling services.

k.) Gas Chromatography/ Mass Spectrometry (GC/MS) - A state of the art test used to confirm the presence and amount of an identified drug/ metabolite in a urine specimen.

l.) Incident- An event, which has all the attributes of an accident, except that no harm was caused to person or property.

m.) Ineligible- Status referring to an employee who is not validated as a participant in the consortium program.

n.) Medical Review Officer (MRO)- A licensed physician responsible for receiving laboratory results and determining if there is a medical explanation for the presence of drugs/ metabolites in the donor's urine. This physician must have knowledge of substance use disorders and appropriate medical training to interpret an individual's confirmed positive test result, together with his/her medical history and any other relevant medical information.

o.) Negative Drug Test- A test acceptable for employment.

p.) Positive Drug Test- A test, which exceeds the cut-off, limits within the established guidelines developed by the U.S. Department of Health and Human Services. Or a test that has been tampered with in any way (adulterated specimen).

q.) Prohibited Substances- Prohibited substances include illegal drugs (including controlled substances, look-alike drugs and designer drugs) and alcoholic beverages

r.) Reasonable Cause- Reasonable cause shall be defined as a person appearing to be in an impaired state or unable to work safely; odor of intoxicants; excessive violations of company policies.

s.) Re-analysis- A challenge of a positive test can be requested. Split sample of the original test can be examined by a certified laboratory of the employee's choice. If the re-analysis confirms a positive test the employee must pay for the analysis. If the re-analysis reverses the result, the program will absorb the cost.

t.) Return to Duty Test- Testing required to reinstate eligibility in the program after positive test. The Return to Duty Test is taken at the expense of the employee.

u.) Split Sample- Sample taken at the collection site will be separated into two samples. Both samples will be appropriately marked with the employee's identification.

v.) Substance Abuse and Mental Health Services Administration- SAMHSA

w.) Substance Abuse Professional (SAP) - A professional who is qualified by the federal government to perform DOT/ FMCSA-required alcohol/drug assessments. Qualified professionals include licensed physicians, licensed/certified psychologists, social workers, employee assistance professionals and clinical experience in the diagnosis and treatment of alcohol/ drug-related disorders.

x.) Third Party Administrator (TPA) - An independent entity that administers the collections, analysis, reporting, maintenance of records and all confidential information for each participating group.

y.) Under the Influence of a Prohibited Substance- "Under the influence of a prohibited substance" as used by this policy, means the following:

1. Alcohol- Blood or Breath alcohol level or .04 or as determined by the customer.
2. Other Prohibited Substances- Positive Results based on the following thresholds for urine split sample testing.
3. Levels for other prohibited substances shall be in accord with accepted GC/MS quantitative procedures as recommended by the Federal Government Standards.

IV. Initial Test:

The initial test shall use an immunoassay, which meets the requirements of the Food and Drug Administration for commercial distribution. The following initial cutoff levels shall be used when screening specimens to determine whether they are negative for these ten (10) drugs or classes of drugs:

Initial Test Level (ng/ml):

Amphetamines	1,000 ng/ml
Barbiturates	300 ng/ml
Benzodiazepines	300 ng/ml
Cocaine	300 ng/ml
Opiates	2,000 ng/ml
Phencyclidine (PCP)	25 ng/ml
Marijuana (THC)	50 ng/ml
Methadone	300 ng/ml
Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml

Confirmatory Test:

All specimens identified as positive on the initial test shall be confirmed using gas chromatography mass spectrometry (GC-MS) techniques at the cutoff values listed below for each drug. All confirmations shall be by quantitative analysis. Concentrations, which exceed the linear region of the standard curve, shall be documented in the laboratory record as "greater than highest standard curve value".

Confirmatory Test Level (ng/ml):

Amphetamines	500 ng/ml
Barbiturates	300 ng/ml
Benzodiazepines	300 ng/ml
Cocaine	150 ng/ml
Opiates	2,000 ng/ml
Phencyclidine (PCP)	25 ng/ml
Marijuana (THC)	15 ng/ml
Methadone	300 ng/ml
Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml

IBEW Local Union #540/ NECA North Central Ohio Chapter will use this as a guidance to ensure the greatest possible accuracy for all parties involved. We believe this information has been the most thoroughly researched to date 03/2008.

V. Departments and Employees Affected:

All employees of IBEW Local Union #540/ NECA North Central Ohio Chapter are covered by this policy.

VI. Accident:

For the purpose of this policy, an accident is considered to be an unplanned or unintended event that occurs on company property, during the conduct of company's business, or during scheduled work hours, or which involves company supplied motor vehicles that are used in conducting business, or is within the scope of employment, and which results in any of the six (6) situations:

1. A fatality of anyone involved in the accident;
2. Bodily injury to the employee and/or another person that requires medical attention away from the company's designated place of employment/worksite;
3. Any accident in which the driver is cited and there is disabling damage to the vehicle(s) requiring tow-away;
4. Any accident in which the driver is cited and medical attention is required;
5. Vehicular damage in apparent excess of $1,500.00;
6. Non-vehicular damage to any company (i.e.-tools, materials, etc.) in apparent excess of ~~$750.00~~ $1,000.00

VII. Selection of Employees for Drug and/or Alcohol Testing:

Employees are required to cooperate in urine drug testing or breath alcohol testing. Employees who refuse to be tested are subject to immediate termination.
Drug and alcohol testing performed as a result of this policy will be performed in a manner and frequency as determined by the company, and at its sole discretion. The company will perform tests under the following circumstances:

A. Post-Accident Testing:

The company requires all employees involved in a work-related accident to be tested for drugs and/or alcohol within eight (8) hours of the accident. An accident is defined as an occurrence requiring medical care away from the scene of the accident. Any fatal accident will require testing. All major parties involved in the accident will be required to submit for testing. Post-Accident testing could be at the discretion of the company and may be required in any accident situation.

B. Reasonable Suspicion Testing:

The company will require testing of any employee who is reasonably suspected to be under the influence of drugs and/or alcohol. Supervisors will receive professional training on recognizing the symptoms of substance abuse in the workplace. Signs and symptoms will be documented by the supervisor, utilizing attached worksheet (see exhibit A), prior to testing.

C. New Hire Testing:

Employees will be tested for drug and/or alcohol use within ninety (90) days of employment with IBEW Local Union #540/ NECA North Central Ohio Chapter, If the test is positive or if the employee refuses to be tested, employment will be terminated immediately. Applicants who demonstrate that they are undergoing treatment for drug abuse, or present a valid, pre-dated prescription for the substance for which they test positive, will be considered on a case-by-case basis. IBEW Local Union #540/ NECA North Central Ohio Chapter will select a clinic or doctor to do the employment related testing.

D. Random Testing:

IBEW Local Union #540/ NECA North Central Ohio Chapter will perform random selections from the affected employee population in percentages and frequencies as noted below:

1. 25% Annual Random Testing per year or more often upon customer request.

E. Follow Up Testing:

Should an employee test positive for the use of drugs and/or alcohol or openly admit to the use of drugs and/or alcohol while at the workplace, employees will be required to submit to testing at the discretion of the IBEW Local Union #540/ NECA North Central Ohio Chapter up to four (4) times, within the twelve (12) month period following the completion of an approved drug and alcohol treatment program and the return of the employee to the worksite, and as outlined under Section XV of this program. This testing is in addition to any Post-Accident, Reasonable Cause or Random Testing that the employee may still be required to take. Follow up testing is also done at the sole discretion of IBEW Local Union #540/ NECA North Central Ohio Chapter and can be performed as frequently as they feel necessary.

F. Adulterated Testing:

Testing shall be performed according to the procedures, if adulteration or substation occurs the sample shall be treated as a positive test. If a sample is found to be diluted, employees will have the option of having one additional test within 72 hours. A second diluted sample may require another type of test; this will be at the employee's expense unless a valid medical reason for the dilute samples is provided.

VIII. Testing Procedures:

Each employee to be tested will be required to sign a consent form and a chain of custody form, assuring proper documentation and accuracy.

Drug testing will be conducted by an Independent Substance Abuse and Mental Health Services Administration (SAMHSA) certified laboratory, which is jointly selected by the third party administrator and by the IBEW Local Union #540/ NECA North Central Ohio Chapter. The testing may consist of blood, breath, or urine test, as required. In the case of a positive test result by having an appropriate portion of the split sample retested at a SAMHSA certified laboratory selected by the employee.

IBEW Local Union #540/ NECA North Central Ohio Chapter require all employees to comply with the provision of this policy. Employees will be requested or otherwise required by this policy to be present and cooperate with testing. Employees are required to carry with them their driver's license for identification purposes. If the employee does not possess a valid driver's license, then alternative photo identification must be carried. Employees are required to cooperate with the testing personnel and will be required to sign consent prior to testing.

Employees are required to provide their requested specimen for testing. When the testing agency is unable to perform a complete analysis of the specimen or signs of adulteration of the sample are present, the employee may be required to resubmit another sample under controlled conditions, which the testing agency may deem appropriate. Failure to cooperate or comply with the above requirement may result in the determination of a positive test for administration and regulatory purposes.

All samples for testing will be taken by appropriately qualified personnel. Urine specimens taken will be split into two samples. Each sample will be appropriately marked with the employee's identification.

Reports shall be made in writing and sent to the single person designated by the employer and designated by the union. In the case of urine testing, only those specimens who show positive results on both the initial screening and the confirmatory test shall be reported as positive pending MRO review and verification. The completed chain of custody form shall accompany any positive report, and copies of analytical reports shall be available to the employee, the employer and the designated union representative.

Samples shall be properly stored at all times, all reported, as positives will be stored frozen for at least 365 days. If the employer or employee requests, the sample should be stored for a longer period.

IX. Testing Technology:

At the time of the writing of this policy, the company identifies the following testing technologies as the method of choice. Should regulated testing require alternative methods or preferred methods become available for the company to utilize; such changes may occur without notice or required amendment to this policy.

Drug testing will be performed by urinalysis. The specimen provided by the employee will be screened utilizing an enzyme immune assay test (EMIT). If the presence of drugs is identified, the sample will be retested utilizing gas chromatography mass spectrometry (GC-MS). The findings of the GC-MS test results will be final.

Alcohol testing will be performed by evidentiary breath alcohol testing. When an employee is unable to provide adequate volume of breath to complete the test, the employee may alternatively provide a blood sample for testing. Urine specimen testing is available at the employee's request and expense.

X. Testing Laboratories:

All testing will be conducted by DHHS/ SAMHSA certified laboratories. The testing laboratory will be selected by the facility providing the specimen collection. Upon request, verification of the laboratories' credentials will be made available. The collection facility will bear responsibility for ensuring the certification of the testing laboratory.

XI. Report of Results:

All test results will be reported to the MRO prior to the results being issued to IBEW Local Union #540/ NECA North Central Ohio Chapter. The MRO will receive from the DHHS/ SAMHSA testing laboratory a detailed report o the findings of the specimen. Each drug tested for will be listed along with the results of the testing. IBEW Local Union #540/ NECA North Central Ohio Chapter will receive a summary report and this report will indicate that the employee was either positive or negative for drug and/or alcohol use.

XII. Medical Review Officer Role and Responsibilities:

In the event that an employee tests positive for any drugs or alcohol as prohibited in this policy, the employee will be given an opportunity to explain the findings to the Medical Review Officer (MRO) prior to the issuance of a report of a positive test result to IBEW Local Union #540/ NECA North Central Ohio Chapter.

Accordingly, upon receipt of a confirmed positive finding from the laboratory, the MRO shall contact, or attempt to contact, the employee by telephone or in person. If contact is made by the MRO, the MRO shall inform the employee of the positive findings and give the employee an opportunity to rebut or explain the findings.

The MRO can request information on recent medical history and on medication taken within the last thirty (30) days by the employee. In the event that the MRO finds support within the explanation offered by the employee, the employee may be asked to provide documentary evidence to support the employee's position; (for example: the name(s) of treating physicians and/or the names of pharmacies where prescription may have been filled, etc.) Failure on the part of the employee to provide such documentary evidence will result in the issuance of a positive report by the MRO to IBEW Local Union #540/ NECA North Central Ohio Chapter.

If the employee fails to contact the MRO within five (5) days of having been instructed to do so, the MRO will issue a positive report to IBEW Local Union #540/ NECA North Central Ohio Chapter because, contact was not established by the employee and no medical explanation was provided. The employee, therefore, shall forego the right to offer defense to the positive testing finding.

XIII. Rehabilitation Program Administrator & Employee Assistance Program:

Employees are encouraged to seek help for a drug or alcohol problem before it requires corrective action. All parties to this policy and program have only the interests of the employees in mind and therefore encourage any employee with a substance abuse problem to come forward and voluntarily accept our assistance in dealing with this illness. The Company/ Union will assist you in locating a suitable Employee Assistance program for treatment and will counsel the employee regarding medical benefits available under the company or union health insurance program if needed. An Employee Assistance Program will provide guidance and direction for you during your recovery period.

If treatment necessitates time away from work, the company shall provide the employee an unpaid leave of absence for purposes of participation in an agreed upon treatment program. An employee who successfully completes a rehabilitation program with documented evidence of prescribed treatment and sessions attended and provides a negative substance abuse test shall be reinstated to his/her former employment status, if work for which he/she is qualified is available.

XIV. Employee Consequences of a Violation:

Violation of this policy will result in disciplinary action up to and including termination, at the sole discretion of the IBEW Local Union #540/ NECA North Central Ohio Chapter. The consequences for testing positive for illegal drugs, substances and/or alcohol are as follows:

A. When the company has reasonable cause to believe an employee is under the influence of an intoxicant or a prohibited substance, for reasons of safety, the employee may be suspended until test results are available and negative. If there are no test results after (3) three working days, the employee, if available, shall be returned to work with back pay. If the test results prove negative, the employee shall be reinstated with back pay.

B. Prior to returning to work the employee must submit to and pass another urine drug and/or breath alcohol test. Upon receipt of a "negative" test result, employee will be re-instated with the company.

C. Employee must also agree to "Follow Up" testing for a twelve (12) month period of time. This testing will be done at the sole discretion of TPA with or without cause. Employee understands that a "positive" test result within this probationary time will result in immediate termination.

XV. The following stages of corrective action shall be imposed:

1. On the first violation of this policy, the employee will be ineligible to work under this program. To be eligible to return to work the employee must participate in a Substance Abuse Education/ Treatment Program and provide a negative return to duty test. The SAP must provide written authorization for the return to duty test. The employee will be subject to CGST testing up to four (4) times over the one-year period as a condition of further employment.

2. On the second violation of this policy, the employee will be suspended by the employer for thirty (30) days without pay. To be eligible to return to work the employee must complete a Substance Abuse Education/ Treatment Program and provide a negative return to duty test. The employee will be subject to CGST testing up to four times over one year period as a condition of further employment.

3. On the third and subsequent violations of this policy, the employer will terminate the employee. The employee shall be suspended from the program for one year. To be eligible to return to work the employee must complete a Substance Abuse Education/ Treatment Program and provide a negative return to duty test. The employee will be subject to CGST testing up to four (4) times over a one-year period as a condition of further employment. After the one-year period the employee can be considered for employment by participating employers.

4. Sale and distribution- Any sales and/or distribution of a prohibited substance on Company premises are grounds for immediate termination.

5. The Corrective Action Procedure will revert back to "first violation" described in this policy, following three consecutive years of negative tests providing the employee continually participated in the program.

6. All aspects of this policy and program will be subject to the grievance procedure of the applicable collective bargaining agreements.

XVI. Confidentiality:

All actions taken under this policy and program will be confidential and disclosed only to those in a "need to know" position. The program will be in compliance with all federal, state and local laws or regulations. An employee's violation under the DFWP Policy shall not be reported to law enforcement officials unless required by a regulatory body or by criminal law provision. Law enforcement authorities may be contacted and requested to come onto IBEW Local Union #540/ NECA North Central Ohio Chapter premises, when appropriate, in conjunction with a referral for criminal prosecution.

The handling and transportation of each specimen will be properly documented through strict chain of custody procedures and only those tests confirmed as positive will **be** reported as such, otherwise test shall be deemed

negative and reported as such. To protect the confidentiality of the employee, all records of drug and alcohol testing will be stored separate and apart from the employee's general personnel documents. Access to these records shall be limited to designated IBEW Local Union #540/ NECA North Central Ohio Chapter officials. The information contained in these files shall be utilized only to properly administer this policy and to provide auditing or certifying agencies for review as may be required. Those designated IBEW Local Union #540/ NECA North Central Ohio Chapter officials that shall have access to these records are charged with the responsibility of maintaining confidentiality of these records. Any breach of confidentiality with regard to said records may be a terminable offense. Any employee tested under this policy has the right to review and/or receive a copy of their test results.

XVII. Training and Education:

IBEW Local Union #540/ NECA North Central Ohio Chapter recognizes the pervasive nature of substance abuse in today's society and desires to provide its employees with information pertaining to this problem. As such, all employees will be required to participate in company sponsored education programs. These programs will be provided for all employees and attendance shall be mandatory. Training will be conducted by appropriately credentialed educators who will cover program, policy and practice considerations of the Ohio Bureau of Workers' Compensation. In addition, as it may become available, IBEW Local Union #540/ NECA North Central Ohio Chapter will provide additional education materials to employees.

A. Supervisor Training: (4 hour annual training)

Training Program Goals: At the end of the training sessions, participants should:

1. Report the current drug and alcohol abuse trends as they pertain to the construction industry.

2. Delineate policies and procedures applicable to covered employers and associated collective bargaining agreements.

3. Identify the classes of drugs of abuse and provide information about the physical and/or behavior signs of an individual under the influence.

4. List the appropriate steps for a supervisor to follow if suspicious of a worker being under the influence of drugs and/or alcohol.

5. Identify at least two resources that the employers can refer to for assistance in resolving a substance abuse problem

Training Program Outline:

1. The importance of Substance Abuse Training for Job Site Supervisors
2. DFWP Supervisory Responsibilities
3. Facts about Alcohol and Other Drugs
4. Worksite Drug and Alcohol testing
5. Taking Action
6. Referral to Assistance

B. Employee Training: (2 hour annual training)

Training Program Goals: At the end of the training sessions, participants should:

1. Report circumstances under which a worker may be subject to drug/ alcohol testing under this policy.
2. Identify conduct prohibited under this policy.
3. Explain the difference between tolerance, psychological dependence, and physical dependence (addiction).
4. Identify the classes of drugs of abuse and provide a general description of the impact and health effects of each.
5. Identify at least two resources available to workers to resolve a substance abuse program.

Training Program Outline:

1. Review the state of Ohio Drug Free Workplace initiatives.
2. Disease Model for Alcohol and Drugs (Affects of Abuse).
3. Signs and symptoms of use/misuse and effects on the job.
4. Provide assistance resources (including counseling and rehabilitation resources provided through union and/or management).

Employer will pay the employee for his/her attendance ~~of~~ at any training at the appropriate rate of pay.

DRUG TESTING POLICY SUMMARY

Pursuant to its commitment for a safe and productive workplace, IBEW Local Union #540/ NECA North Central Ohio Chapter will enforce the following drug policy.

1. Employees will be subject to Initial, Post-Accident, Reasonable Cause, new hire, Random and Follow Up drug and/or alcohol testing.

2. Employees will be escorted to an approved medical facility and required to provide urine and/or breath specimens to be tested for evidence of illegal drug and/or alcohol use if:

   A. A supervisor has cause to believe that their drug and/or alcohol use may have caused a workplace injury;

   B. A supervisor has cause to believe that they are working under the influence of drugs and/or alcohol;

   C. They have been injured on the job and require outside medical treatment.

3. Employees will be required to report to an approved medical facility and provide urine and/or breath specimens, on a random basis, to be tested for evidence of illegal drug and/or alcohol use if:

   A. They are randomly selected through the random testing program implemented under this policy.

   B. They are currently working under the terms and conditions of the "Second Chance Agreement" and management requests them to be tested on that day.

4. Employees who do not cooperate will be disciplined as if they had tested positive.

5. Employees who test positive will be:

   A. Required to agree to the terms and condition of this policy and those specifications listed in Section XV Employee Consequences of a Violation section and agree to work under those terms and conditions.

ACKNOWLEDGEMENT

I hereby acknowledge that I have received a copy of the new Drug Free Workplace Policy implemented by IBEW Local Union #540/ NECA North Central Ohio Chapter and will comply with the contents of this policy and its consequences should I be in violation of any part of the policy.

Signature: _____

Name: _____

Union Identification Number: _____

Date: _____

If you do not have an union identification number please use the last 4 digits of your social security number

*Please maintain this copy for personal records.

.....

ACKNOWLEDGEMENT

I hereby acknowledge that I have received a copy of the new Drug Free Workplace Policy implemented by IBEW Local Union #540/ NECA North Central Ohio Chapter and will comply with the contents of this policy and its consequences should I be in violation of any part of the policy.

Signature: _____

Name: _____

Union Identification Number: _____

Date: _____

If you do not have an union identification number please use the last 4 digits of your social security number

*Please sign and turn into designated representative.

CONSENT FORM TO PARTICIPATE IN THE AULTWORKS DRUG POLICY AND PROGRAM

I, _____, hereby consent and agree to give specimens of my body fluids* at a medical facility designated by IBEW Local Union #540/ NECA North Central Ohio Chapter for transmittal and testing by an approved testing laboratory.

It is my understanding that body fluids specimens will be tested to detect the presence of alcohol and/or drugs in my body.

I agree and consent to provide specimens of my body fluid* (as listed below) for testing to discover the presence of alcohol and/or drugs.

- Initial Testing
- Consortium/ Random Testing
- New Hire testing
- Reasonable cause
- Workplace Accident
- Follow up/Rehabilitation

It is agreed that upon request I will be furnished results of the tests performed on my body fluid* specimen by the testing laboratory. The testing laboratory is only authorized to confirm, to the appropriate designated representative of IBEW Local Union #540/ NECA North Central Ohio Chapter.

*Body fluids test will normally utilize urine specimens, breath and blood samples. Tests, which entail the withdrawal of blood by a qualified medical person, may be exercised in situations involving an injury accident where I am rendered unconscious and unable to provide a urine specimen, and I agree and consent to such a test under those circumstances.

I acknowledge that I have read, understand and have received a copy of the IBEW Local Union #540/ NECA North Central Ohio Chapter Policy. Furthermore, I understand that refusal to submit to the alcohol and drug-screening test will constitute voluntary withdrawal of my application for employment; if employed, refusal to submit to such testing will be considered a positive test and will result in the appropriate level of corrective action as specified by the policy.

_____ _____

Witness Signature Signature

_____ _____

Date Union Identification Number

Frequently Asked Questions

Q1. **Who bears the cost of the random testing?**

A1. Under this policy, IBEW Local Union #540/ NECA North Central Ohio Chapter will bear the costs of testing done as Initial, Random, New Hire, Post Accident, and or Reasonable Cause testing procedures except that the employee will pay the cost of any re-analysis requested by the employee. The employee is responsible for the cost of the Return-to-duty test, as well as any Follow Up testing.

Q2. **Who may initiate a reasonable cause test?**

A2. Testing because the company/employer has reasonable cause to believe an employee is under the influence of an intoxicant or a prohibited substance may only be initiated by a trained supervisor. A trained supervisor is one who has completed training approved by IBEW Local Union #540/ NECA North Central Ohio Chapter.

Q3. **Are all of the thresholds described in Section IV identical to those set by the Federal Government?**
A3. No, the Federal Government currently has standards for marijuana, PCP, opiates, amphetamines, and cocaine. The other standards are set by the IBEW Local Union #540/ NECA North Central Ohio Chapter.

Q4. **What happens if an employee fails to cooperate in the testing process as required by Section XV?**

A4. A failure to cooperate includes, but not limited to, refusing to test, using an adulterated sample, using a substituted sample or otherwise tampering with the test. Failure to cooperate may result in corrective action, including termination. In such instances, there will be a finding of refusal to test or test tampering without a finding that was a positive or a negative.

Q5. **There are a lot of abbreviations in this program, for example what does GC/MS really mean?**

A5. As stated, GC/MS is an abbreviation for Gas Chromatography/ Mass Spectrometry. This is a confirmation test considered to be the most scientifically accurate means of ascertaining the identity of a drug in the urine testing process.

Q6. **Will an employee assistance program actually provide treatment?**

A6. Technically no, Employee assistance programs provide a short-term counseling and referrals to community resources for treatment.

Q7. **When are split samples maintained and used in the testing process?**

A7. Under this policy, Split Samples are used in urine testing and employees have the opportunity to contest the result of a positive urine test by having appropriate portion of the split sample retested at a SAMHSA certified laboratory selected by the employee.

Q8. I am unclear about Section XV, which seems to say that I can be suspended from consideration for a period of two months or longer before going through the corrective action stages explained?

A8. Some property owners/customers require testing of all site workers under the owners/customers own policies. This is permitted under this policy. If a worker tests positive on these other tests, he/she may be suspended from consideration at that owner/customer's site for two months (or any other interval set by owner/customer), with consideration for employment upon re-application if he/she can demonstrate meaningful participation in a rehabilitation program. Corrective Action for violations of the Program is provided in Section XV.

Q9. Will my social security number appear on the IBEW Local Union #540/ NECA North Central Ohio Chapter/ Aultworks drug free card?

A9. As of January 1, 2008, all newly issued cards will only display the last four digits of your social security number. However, your social security number will still be required for tracking purposes.

SEPARABILITY CLAUSE

Should any provision of this Policy be declared illegal by any court of competent jurisdiction, such provisions shall immediately become null and void, leaving the remainder of the Policy in full force and effect and the parties shall, thereupon, seek to negotiate substitute provisions which are in conformity with the applicable laws.

GENDER LANGUAGE

Whenever the male gender is used in this Agreement, the female gender is also intended.

SIGNED:
THE CANTON DIVISION, NORTH CENTRAL OHIO CHAPTER, NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION

BY _____
Jason Walden

TITLE: Chapter Manager

DATE: 3/14/19

SIGNED:
LOCAL UNION 540, IBEW®

BY: _____
Aaron M. Brown

TITLE: Business Manager

DATE: 3/14/19