



C/G Electrodes LLC

**CONTRACTOR SAFETY &
HEALTH POLICY**

ST. MARYS, PENNSYLVANIA

**EMERGENCY PHONE
NUMBER 781-2300**

**REVISION 0
DECEMBER 2008**

I. C/G Electrodes LLC Contractor Safety Policy –

This handbook has been prepared for the purpose of communicating safe work practices to contractor personnel performing work on C/G property. C/G Electrodes LLC believes that accidents and illnesses are preventable and that an accident-free environment is achievable. The company's concern extends to the safety of employees of all outside contractors and vendors utilized at C/G's facility. Requiring excellent safety and health performance among the contractors working in our facility is consistent with C/G's commitment to safety and health and is also good business. This handbook will assist in communicating the company's expectation of contractors performing work at our facilities. **Contractor supervision must ensure that these safe work practices are communicated and strictly adhered to by all their personnel.**

Norman D. Struble
COO
C/G Electrodes LLC

December 2008.

II. Substance Abuse Program

C/G Electrodes LLC is committed to providing a safe, drug free work place for all employees; therefore, all contractor employees working at C/G shall be subject to drug and alcohol testing.

- A. A urine drug screen and alcohol test shall be administered under the following circumstances:
 - 1. Pre-hire/initial employment drug screening
 - 2. Reasonable Suspicion/Observed behavior
 - 3. Post-Accident/Incident
 - 4. Random testing – Random selection of contractor employees.
- B. Positive test results will lead to immediate removal from the site.
- C. **NO** alcoholic beverages or drug paraphernalia are permitted on C/G property. Possession, control, sale or distribution of these substances will result in immediate removal from the site.
- D. Refusal to participate in a requested drug or alcohol test shall be treated as a positive test result.

III. Accident Prevention Programs

- A. Prior to starting work
 - 1. Contact C/G department personnel.
 - a.) Sign in and complete appropriate forms where required
 - b.) Discuss work to be performed with C/G representatives
 - c.) Ask about any specific hazards such as, but not limited to, lock out, confined space, fall protection, or PPE
 - 2. Contractor supervision shall accompany C/G representatives on a safety and health pre-job walk through the work area.

B. Job Site Inspections

Contractor – The competent person (Supervisor, Engineer, Safety Representative) is required to monitor all work areas daily and to make a formal inspection of all work areas weekly. A written record of the inspection of the work area conducted should note the date of inspection, the time of inspection, and the work area inspected. Contractor supervision will ensure all observed unsafe acts and/or unsafe conditions are corrected immediately.

- C. Contractor – The C/G project manager and the contractor shall conduct regular safety meeting. The date and time of those inspections shall be documented and delivered to the C/G Safety Department.
- D. Contractor supervision is responsible for conducting a thorough investigation for all accidents that occur on C/G Electrodes property.
- E. Near miss incidents that occur to contractor personnel shall be investigated as soon as possible. A full written report is to be hand delivered or faxed (814-781-2295) to the C/G Safety Department Coordinator within 24 hours of the occurrence.
- F. All injury accidents or illnesses are to be reported immediately to the employee's supervisor and the C/G Safety Department at (814-781-2244) or (814-594-2590)
- G. The Plant **EMERGENCY** telephone number is **781-2300**. All emergencies, Fire, injury, explosion, chemical release, etc., are to be reported using this number.

IV. Safety Training

The contractor shall instruct each employee in the recognition and avoidance of unsafe acts/conditions, and regulations applicable to the contractor's work environment. The record of instruction shall be kept on file for at least the duration of the employee's employment with the contractor. The contractor shall permit only those employees qualified by training and experience to operate equipment and machinery, cranes, industrial trucks, and other mobile equipment.

V. Medical/First Aid Procedures

All emergency medical attention for contractor employees shall be initially handled by the C/G Electrodes Health Unit. A contractor employee experiencing any injury or illness requiring medical attention shall contact the C/G emergency contact at

telephone number **781-2300**. All injuries, no matter how slight, shall be reported immediately to the C/G Safety Department and the employee's supervisor.

VI. Housekeeping is the responsibility of each contractor, and housekeeping hazards will not be tolerated. The following rules are enforced:

- A. During the course of construction, alteration, or repair, form and scrap lumber with protruding nails, pieces of pipe, conduit, metal and all other debris shall be kept cleared from the work areas, passageways, stairs, and from around buildings or other structures.
- B. Oxygen and Acetylene hoses, welding leads, cables, water hoses, air lines and electrical extension cords shall not be run in aisles, stairways, or other passageways. They are to be routed by means that present no hazards.
- C. Combustible scrap and debris shall be removed at regular intervals during the course of construction or repairs. Safe means shall be provided to facilitate such removal.
- D. Containers shall be provided for the collection and separation of waste, trash, oily, and used rags and other refuse. Containers used for garbage and other oily, flammable or hazardous wastes such as caustics, acids, harmful dusts, etc., shall be equipped with covers. Garbage and other waste shall be disposed of at frequent and regular intervals.

VII. Personal Protective Equipment

The contractor is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions. Personal protective equipment is to be provided by the contractor for their employees. The use, maintenance and cleaning of the equipment are also the responsibility of the contractor.

A. Clothing

- 1. Hard-hats meeting **ANSI Z89.1** are required at all times. The hard-hats are to be in good shape. Appropriate identifying stickers will be affixed to the hard hats by the C/G Safety Department which may include mobile equipment training, first aid training, etc.

2. Hard toes shoes complying with **ANSI Z41**, having a 75 Impact/Compression Rating are required to be worn at all times while working in the plant. Boots are required to be 8 inches high for men and 7 inches high for women.
3. Shirts with a minimum of regular short sleeves are required and must be worn at all times.
4. Full length trousers are required while working at C/G. Length must extend at least to the ankles.
5. Loose fitting clothing should be avoided. Clothing should not be torn or ragged so as to avoid being caught on projections or being caught in moving machinery.
6. The use of jewelry should be responsible and modest to avoid dangers of catching on machinery or projections. The Safety Department may direct contractor's employees to remove dangling or large items of jewelry.

B. Eye/Face Protection

1. Industrial safety glasses with permanently affixed side shields meeting **ANSI Z87.1** are required at all times in all areas of the plant except the office. Temporary flexible, slip on side shields are not acceptable.
2. Sun glasses or photo gray lenses are not allowed to be worn inside buildings, other enclosed structures or while working at night.
3. Burning goggles, full face shield, or welding hoods worn in conjunction with the hard hat, are required for all torch cutting and burning work. The correct shaded lens shall be worn according to the type of burning or welding performed.
4. Face shields are required when grinding, chipping, handling molten metals, drilling overhead, and handling corrosive materials and shall be worn in conjunction with approved safety glasses.
5. When welding is being done, the welder must wear the welding hood attached to the hard hat. It is not acceptable to wear the hood without the hardhat.

6. Whole ear coverings or a welder's shroud must be used when overhead burning, welding, and grinding is being performed.

C. Respiratory Protection

All respiratory protective devices worn shall be approved by NIOSH. The contractor shall provide the respirators which are applicable and suitable for the purpose intended. The contractor shall be responsible for the establishment and maintenance of a respiratory protective program. Under no circumstances may supplied air respirators be connected to plant air systems. Plant areas requiring respiratory protection will be discussed on C/G Safe Work Plan prior to beginning each job with your site contact.

D. Hearing Protection

1. Certain areas of the plant require hearing protection. Signs are posted in these areas which read "**CAUTION- Hearing Protection Required Here.**" Hearing protection is also required when using certain equipment which produces noise levels greater than **85 dBA**. All contractors will comply with the C/G Electrodes' Hearing Protection Policy.
2. A Hearing Conservation Program is required when employees are exposed to noise at or above an **85 dBA** average during an 8-hour day or its equivalent. This includes training employees, providing a selection of hearing protectors, ensuring proper fit, audiometric testing, and noise monitoring.

VIII. Tools

A. All hand and power tools shall be maintained in a safe condition.

1. Inspect all tools before using. Never use defective tools.
2. Keep tools subject to impact such as chisels, caulking irons, and star drills, dressed to avoid flying spalls from "mushrooming."
3. Do not force tools beyond their capacity or use "cheaters" to increase their capacity.
4. Do not use tools as pry bars.
5. Do not leave tools on scaffolds, ladders or overhead working spaces.

6. Do not throw tools from one location to another, from one employee to another, or from a higher level to a lower level.
7. All defective hand tools must be taken out of service immediately and tagged.

B. Portable Power Tools.

1. Portable power tools must not be operated unless the employee is trained in their use.
2. Electrical power tools must be double-insulated or shall be of an approved system that contains three wires with the ground. All portable electrical tools must be connected to G.F.C.I.
3. Guards or shields must be installed on all power tools before use.
4. Electrical power tools are not to be used in hazardous locations as defined in the National Electric Code (NEC) unless the tool is approved for service in that environment.
5. Pneumatic powered tools are to be secured to the hose by positive means to prevent the tool from becoming accidentally disconnected. Radiator type hose clamps are not permitted on hoses.
6. Pneumatic hose sections must be wired together at each coupling connection.
7. All defective power tools must be taken out of service immediately and tagged **“Defective-Do Not Use.”**

C. Extension Cords

1. Extension cords must be of three wire type and shall be designed for hard or extra hard usage.
2. Extension cords and cables must be protected from physical damage.
3. Cords must be kept out of walkways, stairways, aisles, and other areas where they present trip hazards.
4. Electrical connections, cables, etc. must be kept away from water or damp surfaces.

5. All extension cords shall be connected to a G.F.C.I. (Ground Fault Circuit Interrupter)
6. Inspection and testing of cords shall be performed as required by OSHA 1926.404.

IX. Equipment

A. General

1. Each contractor shall inspect equipment before use. Defective equipment shall be tagged with a **“Defective-Do not use”** tag and removed from service. Removal of a **“Defective-Do not use”** tag, allowing a piece of defective equipment to be used is grounds for immediate dismissal from C/G Electrodes property.

B. Ladders and Scaffolds

1. General

- a) Metal, including aluminum, portable ladders are not permitted at the C/G Electrodes facility. Exceptions require prior to use approval by your site contact and the Safety Department.
- b) All ladders must be inspected prior to use by the user. Do not use ladders with missing or broken rungs or split side rails. Defective ladders must be tagged and removed from the job site immediately.

2. Straight/Extension Ladders

- a) For every four feet of erected ladder height, the base will be placed one foot from the vertical.
- b) When in position a ladder must be securely tied at the top to prevent slipping or secured at the base by a fellow employee.
- c) When portable ladders are used for access to an upper landing surface the ladder side rails shall extend at least **36 inches** above the upper landing surface.
- d) Ladders shall be equipped with safety feet.

- e) Ladders shall never be used in a horizontal position as a platform or a scaffold.

3. Step Ladders

- a) Step ladders in the folded position may not be used as a straight ladder. Open the legs and secure the locking mechanism.
- b) Do not stand on the top two steps of a step ladder.
- c) Ladders shall not be placed in any location where they could be struck such as, but not limited to, passageways, aisles, elevator walkways, doorways, or driveways.

4. Scaffolds

- a) The contractor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedure to control those hazards.
- b) The contractor shall have each employee who is involved in erecting, disassembling, moving, operation, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question. The training shall include, but not be limited to, the following topics:
 - 1) The nature of scaffold hazards.
 - 2) The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting and maintaining the type of scaffolding in question.
 - 3) The design criteria, maximum intended load carrying capacity and intended use of scaffold.
 - 4) The nature of any electrical hazards, fall hazards and falling object hazards in the work area.
 - 5) The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling object protection systems being used.

- 6) The proper use of the scaffold and proper handling of materials on the scaffold.
- 7) The maximum intended load and the load carrying capacities of scaffolds used.
- 8) Scaffolding greater than ten feet in height must be equipped with handrails, midrails, toeboards, and be tightly planked.
- 9) Scaffold planks shall extend a minimum of (6) six inches and a maximum of (12) twelve inches over the end support. All scaffold boards are to be cleated on each end and be of scaffold grade lumber.
- 10) All scaffolds shall have an access ladder equivalent. Climbing the side of scaffolding is not permitted.
- 11) A safety harness shall be worn and properly tied off on any scaffold platform greater than 10 feet in height and not equipped with standard hand rails, midrails, or decks.
- 12) Scaffolds must be tied off horizontally every 30 feet of elevation.
- 13) All scaffolding must be tagged appropriately (See Section XI A, 4, for additional information).

C. Signs, Signals, and Barricades

1. All contractor equipment left unattended at night, adjacent to a roadway in normal use, or adjacent to a construction area where work is in progress, shall have appropriate lights, reflectors or barricades to identify the location of the equipment. Barricades shall be kept back 6 feet from the edge of excavations, holes, platforms and roofs.
2. At locations where potential hazards exist, contractors shall be responsible for posting, installing, and maintaining signs, signals, and barricades to detour the passage of persons or vehicles.
3. Appropriate barricades are to be used in situations where entry is prohibited or requires special permission.

D. Rigging

1. Inspect hooks, shackles, beam clamps, and chokers before each use and have a safety latch on all hooks.
2. Do not leave unsecured or unattended suspended loads.

3. Inspect wire rope slings for frays, kinks, and worn spots before each use. Do not exceed safe working capacity.
4. Inspect fiber rope slings for broken fibers, wear and deteriorated inner and outer strands prior to use. Do not use fiber rope slings where fumes, vapors, sprays, mist or corrosive chemicals are present.
5. Remove from service and destroy damaged slings immediately.

E. Compressed Air

1. Hoses and couplings must be checked before use. All hose couplings must be provided with a positive locking device.
2. Compressed air used for cleaning purposes must not exceed 30 psi and is NOT to be used for blowing materials off of yourself or others.

F. Motor Vehicles and Power-Operated Equipment

1. Trucks and Automobiles
 - a) All speed limits and other regulatory signs must be obeyed
 - b) All vehicles must be inspected before use. (at least daily).
 - c) Pedestrians **DO NOT** have the right of way in the plant.
 - d) Seatbelts must be worn at all times when riding in a vehicle equipped with seatbelts.
 - e) Riding on the side, in the bed, or on the tailgate of a pickup is prohibited.
 - f) All vehicles used during a project for contract activities must have reverse signal alarms.
 - g) Spotters or ground guides must be provided for cranes and vehicles in congested areas.
2. Cranes
 - a) Cranes are to be operated within the design limits specified by the manufacturer.

- b) Mechanical parts of the crane must be inspected by the operator prior to each shift.
- c) The rated load capacity of the crane is NEVER to be exceeded.
- d) Rated load capacities, recommended operating speeds and special hazard warnings or instructions shall be posted conspicuously on all equipment.
- e) All accessible areas within the radius of the counterweight swing must be barricaded to limit access.
- f) Required clearance must be maintained between the crane and energized power lines.
- g) Personnel are prohibited from riding on the hood, the “headache” ball, or load.
- h) All OSHA requirements must be followed when using personnel baskets.
- i) Outriggers must be fully extended and on firm ground.
- j) Crane inspections must be conducted on equipment per the OSHA standards.

3. Powered Industrial Trucks

- a) Only authorized and trained personnel are permitted to operate a powered industrial truck.
- b) Powered Industrial truck drivers must operate according to safety rules.
- c) NEVER exceed the rated load capacity of a powered industrial truck.
- d) Powered Industrial trucks must be equipped with seat belts, horns, and backup alarms.

X. Fire Protection/Emergencies

A. Alarm/Notification Systems

1. Prior to work, discuss with the appropriate departmental representative the proper way of responding to any Emergency.
2. Report any Emergency, Fire, Explosion, Serious Injury, Chemical Release..etc., immediately through the facility emergency notification system (**ext. 781-2300**)
3. Ensure that all personnel are familiar with facility’s emergency exit routes and assembly points for a head count. Familiarize personnel with audible alarm signals.

B. Smoking Regulations

1. Smoking is permitted in approved smoking areas only.
2. Smoking is not permitted within **50 feet** of any flammable liquid or gas storage area.

C. Flammable/Combustible Liquids

1. Flammable liquids to be stored in a building must be stored in an approved cabinet remote from general access to traffic. The storage area must be properly identified. No smoking, matches, open flames and other ignition sources are permitted within **50 feet** of storage area.
2. Flammable liquids used by contractors and stored inside a building must be in an approved flammable-liquid storage cabinet supplied by the contractor.
3. Flammable liquids shall be covered and stored in their original container or in safety cans with proper OSHA required labeling.
4. Drum dispensing installations must be provided with grounding and bonding safeguards. A self-closing valve must be used during dispensing.
5. A fire extinguisher must be readily accessible in an area where flammable and combustible liquids are stored or handled.
6. Trash, rags, and other materials contaminated with flammable liquids are to be disposed of daily in a separate metal container with a lid.
7. Flammable liquids shall be dispensed from approved safety cans only.
8. Safety can shall mean an approved container, of not more than five gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

XI. Job Site Procedures/Requirements

A. Permits, Tags, and Inspections

Current, properly authorized, written permits, tags and/ or inspections are required before beginning specific work activities on the job site. The following are required while performing service on C/G Electrodes LLC property:

1. **Hot Work Permit**
A hot work permit, signed by department management is required prior to hot work in most designated areas. (See Appendix Is) The permit must list precautions, fire watch, and approval signatures. Follow C/G permit requirements.
2. **Confined Space Entry Permit**
A confined space entry permit, approved and signed by department management, is required prior to entering any permit required confined space. (See Appendix II for a list of permit required confined spaces) This permit ensures that the space has been properly prepared for safe human occupancy. Follow C/G procedures as detailed on the specific permit.
3. **Crane Suspended Personnel Platform Inspection**
A competent person must ensure the suspended personnel platform meets with the requirements of 29CFR 1926.550 Paragraph G, in its entirety.
4. **Scaffold Tags**
A scaffold tag, signed by a competent person, is required prior to allowing personnel to work on scaffolds. The tag certifies proper construction and that safety features are in place.

B. Hot Work Procedures

1. A hot work permit is required before starting hot work in designated areas of the facility. (See Appendix I for a list of Hot Work Permit locations) The hot work operations must not start until all precautionary measures have been taken to ensure that the area is fire safe.
2. The hot work permit must be signed by at least a designated department employee, the contractor supervisor and the contractor employee(s) conducting the actual hot work.
3. The permit must be posted in the area when the work is being performed.
4. The permit is valid for one shift only and remains valid only if the safe conditions under which it was approved do not change.
5. A fire watch, knowledgeable of fire protection equipment and procedures, must be present with a fire extinguisher and/or charged fire hose when required by the Hot Work Permit.

6. The fire watch must remain in the area for at least **30 minutes** after all burning and welding has been completed.
7. Copies of the burning and welding permit can be obtained from the C/G Maintenance Department.
8. Cylinders must be secured in a vertical position with valve caps in place.

C. Confined Space Entry Procedures

1. A confined-space entry permit must be obtained from the department management before personnel can enter tanks, vessels, sewers or any other confined space. (See Appendix II for a list of permit-required Confined Spaces)
2. Before a permit is issued, the following precautions must be taken:
 - a) The confined space must be emptied and cleaned.
 - b) All equipment must be in a state of zero energy. The equipment must be locked, and a lock or locks placed on the energy control device.
 - c) Isolation of the confined space must be discussed with department management prior to entry. Contractors must be knowledgeable of C/G Electrodes non-permit and full entry permit confined space entry procedures.
 - d) Atmospheric testing must be performed at least every 30 minutes for the duration of the work with a minimum of a 4 gas meter. (Carbon Monoxide, Sulfur Dioxide, Lower Explosive Limit, Oxygen)
 - e) The confined space must be ventilated where applicable.
3. The confined space must be analyzed for hazards; atmospheric, entrapment, engulfment or other serious safety and health hazards.
4. An attendant must be stationed at the permit required confined space entrance during the period that personnel are in the confined space. This individual is to maintain communications

with personnel in the confined space and summon help if an emergency occurs. The attendant must not attempt a rescue until help arrives.

5. The permit must be posted at the confined space entrance. Any special precautions or protective equipment requirements will be specified on the permit. After conclusion of the Confined Space Entry job a copy of the permit form shall be delivered to the C/G Safety Department.
6. Electrically powered tools and lighting used in confined spaces must be connected to a ground-fault circuit interrupter (GFCI) and meet UL requirements.
7. It is the responsibility of the contractor supervisor to obtain and follow the confined space entry permit.

D. Respiratory Protection

Respirators are to be worn when working with or exposed to gases, fumes, vapors, or dust above OSHA-permissible exposure limit (PEL). A Self-Contained Breathing Apparatus/ Inline Supplied Air must be worn when working in oxygen deficient atmosphere.

1. Respirator users must be trained in use, selection, maintenance, storage and inspection prior to use. It is the responsibility of the contractor management to train its employees.
2. Respirator users must have a fit test conducted prior to wearing respirators. It is the responsibility of the contractor to have conducted the test.
3. Respirators must be cleaned and stored properly.
4. Do not wear a respirator when anything comes between the face seal and the user's face, such as facial hair, head cover protruding under the seal or temple pieces on the glasses.
5. Contractors must have a written respiratory program whenever work requires the use of respiratory protection.

E. Hazard Communication Program

1. Contractor management must contact their appropriate C/G Electrodes representative regarding the availability of Material Safety Data Sheets (MSDS), details of in-plant labeling systems and protective measures that can be taken while performing on-site work. This must be conducted prior to starting any project.

2. Contractor management must inform C/G of any hazardous conditions resulting from the on-site contractor operations conducted at the facility.
3. Contractor management is required to submit MSDS on chemicals brought into the facility showing any hazards associated with the chemicals and their use. The integrity of labels on containers used on the work site must be maintained by contractor personnel.
4. Contractor management is required to attend training sessions given by C/G Electrodes to cover hazards their employees may be exposed to and steps personnel can take to protect themselves.
5. Contractor management is required to train their employees on material presented by C/G Electrodes. The training must be documented to include names of attendees and made available for facility personnel review.
6. Contractor employees must be knowledgeable of appropriate work practices, emergency procedures and personal protective equipment when working with hazardous chemicals.
7. Contractor employees must be familiar with C/G Electrodes emergency evacuation plans.
8. Construction materials containing lead and/or asbestos are not permitted to be used on C/G Electrodes property without prior approval.

F. Excavations

1. Excavations and trenches must be properly barricaded to protect pedestrians and vehicles. All excavated material piled at least three feet back from the edge of the excavation.
2. All walls and faces of trenches that are greater than **4 feet** deep must be shored or sloped to eliminate the hazard of cave-in.
3. A means of access and egress must be provided. An employee working in the trench must not have to walk more than 25 feet to egress from the trench.
4. The air in the trench is to be tested prior to entrance when the possible presence of harmful gases or a state of oxygen deficiency exists. Continuous monitoring of the air in the trench may be necessary depending upon the project area.
5. Employees are not permitted to work beneath suspended loads or loads of moving earth during the excavation.

G. Fall Protection

All contractors/subcontractors will utilize the following equipment at a minimum for fall protection systems while working over **6 feet** from the ground at C/G Electrodes.

1. Full body harness with shock absorbing lanyard. Body belts are not permitted at any time while working at C/G Electrodes.
2. Guardrail system to consist of top rail between 36 inches to 42 inches high to meet 200 lb. weight restraint, midrail 150 lb. weight restraint. The midrail shall be installed at a height approximately midway between the top edge of the guardrail system and the platform.
3. Perimeter cable to be ½” at a minimum, shall be taut, and secured with 3 cable clamps at each end and will consist of a top and mid cable.
4. Lifeline shall be a minimum of 1/2” wire rope, capable of supporting 5,000 lbs. of dead weight, secured with three cable clamps at each end and shall be installed as required to provide adequate tie-off capabilities in accordance with this policy.
5. Floor and wall openings not normally exposed shall be covered or properly barricaded at all times.
6. Vertical lifelines with rope guards shall be used on all fixed ladders in excess of 24 feet in height.
7. Retractable lanyards, netting, planking, and other fall protection systems shall be utilized as required.

H. Painting

1. Appropriate respiratory protection is required for painters during spraying operations.
2. Lead based paints are prohibited.
3. If burning, welding, or grinding is to be done on a painted surface, the surface must be tested for lead. If lead is found, it must be abated before activity begins.
4. Fall protection must be worn when paint operations are **6 feet** above the ground and the individuals are not protected by standard handrails.
5. Smoking is prohibited within **50 feet** of any paint spraying operation.
6. All paints, solvents, and other flammable liquids associated with painting are to be stored and handled in accordance with the flammable liquids part of this manual.
7. Spray painting equipment shall be cleaned in an open, well-ventilated area at least 50 feet from any ignition source.

XII. Lockout/Tryout Procedure

Scope- Covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment or release of stored energy could cause injury to employees.

A. Written Lockout/Tryout Procedures

Written lockout/tryout procedures shall be developed and maintained. These procedures will cover the steps to make sure equipment is being serviced is isolated and secured from ALL energy sources that could injure personnel working on the equipment.

B. Formal Employee Training/Retraining

Training will cover three classes of employees:

1. **Authorized Employees-** Those who are allowed to perform energy control procedures. Training will include company approved energy control procedures, recognition of energy sources, and methods for isolation and energy control.
2. **Affected Employees-** Those employees that operate the equipment on which work is being performed. Training will include the purpose and use of the energy control procedures.
3. **Other Employees-** All other employees that may work in an area where energy control procedures may be used. Training will include instruction on the energy control procedures and the prohibition about attempting to restart or re-energize equipment that is locked out.

C. Employee retraining is required annually and:

1. Whenever there is a change in the location of an employee's job assignment.
2. Whenever a new hazard is introduced due to a change in machines, equipment, or process.
3. Whenever there is a change in energy control procedures.
4. Whenever a periodic inspection reveals inadequacies in the company procedures or in the knowledge of an employee.

D. Inspections & Reviews

Periodic audits of the energy control program will be conducted. The inspections and review will be designed to identify deviations or inadequacies in the energy control program. At least annually, all written procedures will be reviewed by designated employees to insure that the procedures are current and comprehensive.

E. Responsibility of Lock & Lock Removal

1. The individual placing the lock on the energy isolation device is responsible for removing the lock. If the repair work has not been completed when the time comes for the individual to leave

the job area or change turns, that individual must remove their lock or locks. The incoming individual continuing the work must make certain that all energy sources are secured and properly locked out.

2. When a contractor employee who put a lock on is not available to remove it, the lock may be cut off only upon the approval of the C/G Safety Department. A reasonable effort will be made to assure that the employee is not at the work site. Reasonable effort consists of attempting to make phone contact, a physical inspection of the work site, and a check of the work schedule.
3. The first thing an employee must be told before they resume work is that their lock was cut off.

F. Multiple Lock Devices & Locked Key Boxes

1. When more than one person is working on machinery or equipment, a multiple lock device shall be installed and used.
2. In some cases it may be practical to use locked key boxes rather than multiple individual locks. When a locked key box is used instead of individual locks the following is required:
 - a) As the locked key boxes are utilized, plans must provide for individual lock and key integrity with all energy sources.
 - b) The authorized employee shall assure that the equipment lockout has been verified by having the equipment operated or by other means such as testing. Copies of all LOTO procedures covered by the locked key box must be available to employees performing covered work. During shift change the new authorized employee shall assure that the locked key box is still in effect.

G. Start Up of Equipment

A thorough inspection must be conducted to assure all persons affected by the start-up of the equipment are made aware that the equipment is to be started and that they are in a safe position. The start up must be done under the written lockout/tryout procedure for that equipment.

H. Unique Safety Lock Identification

1. A safety lock permanently marked "Safety Lock" with a distinguishing and uniform color shall be used for locking out. The contractor shall specify the safety lock distinguishing characteristics for his/her company during the Pre-Job Site Safety Orientation and recorded on the form. Only these locks

and tags shall be used to secure hazardous energy sources. These locks shall not be used for any other purpose. No second keys or master keys are allowed. Contractor lockout locks shall be uniform and subject to use approval by the Maintenance, Engineering, and the Safety Department.

2. Individually owned locks shall be further identified by the individual's name, company name and phone number. Contractor company locks shall have the company name, phone number, and a sequential number.

I. Written Program

Contractors working within C/G Electrodes plant will be required to have and present to C/G a written lockout/tryout program. If no plan exists, the contractor will conform to C/G Electrodes Lockout/Tryout Procedure.

J. Responsibility for Hazardous Energy Control

Although it is the responsibility of the contractor company to comply with the various provisions of federal, state, and local regulations, the ultimate responsibility to recognize, secure, test and verify all hazardous energy sources lies with each person who might be required to apply or abide by the provisions of this program.

XIII. Working On or About Railroad Track Areas

- A. Look both ways and obey all signs before crossing railroad tracks when walking or driving –THE RAILROAD HAS THE RIGHT-OF-WAY. A burning fuse is to be treated the same as a Stop sign at railroad crossing points. Cross tracks inside or outside of buildings at the regular crossing points. Do not step or stand on rails when crossing.
- B. When loading or unloading trucks on or close to railroad tracks, you must take the responsibility for safeguarding yourself against being struck by railroad equipment by using positive protective devices.
- C. Do not remove a working crew's protective devices unless you placed it. Crews placing the protective devices shall remove them when the work is completed and the protection is no longer required.
- D. When piling materials near the track, allow at least eight feet from the centerline of the track. Do not otherwise obstruct the view of train crews.
- E. Unauthorized persons are not allowed to ride engines, or railroad cars.
- F. When passing ends of railroad cars, engines or locomotive cranes, maintain a distance of at least **20 feet** from the cars. If a railroad crew is present, obey their instructions.
- G. Only authorized persons are permitted to move cars. Never release brakes or remove blocking unless this is part of your regular job. A car on a hill or slope will run away if it is not properly blocked.

APPENDIX I

AREAS/EQUIPMENT REQUIRING PERMIT

1. Plant III - Mill, Mix, Extrusion and Material Handling Areas
2. Enclosed Material Handling Systems (mixers, tar tanks, silos, chutes, etc.)
3. Boiler House
4. Compressed Gas Cylinder Storage Area
5. Building 701 - P.I.
6. New Bake Control Room
7. Building 703 - Graph Control Room
8. Building 706 - Carbottom Loading and Unloading
9. Carbottom Kiln Control Room
10. Liquid Pitch Systems (on or near)
11. Ventilation Systems
12. Rectifiers, transformers and capacitors
13. Mobile Equipment - not in Mobile Equipment Maintenance Area designated for hot work.
14. Any time work is to be done near flammable or combustible materials that cannot be removed. (Where special considerations have to be taken into account.)

APPENDIX II

PERMIT REQUIRED CONFINED SPACES

This list is not inclusive and can be changed after further evaluation.

LOCATION

CLASSIFICATION

Plant 3

Dust Collection Tanks (Outside Mill Area)	Permit Required
Outside Raymond Mill	Permit Required
Inside Raymond Mill	Permit Required
Elevator Pits for Raymond Mills (2)	Entry Allowed
Plant 3 Central Air Tank	Entry not Allowed
Waste Dust Collector (left)	Entry Allowed
Re-sale Dust Collector (right)	Entry Allowed
Graphite Storage Silo	Entry not Allowed
Coke Unloading Pit	Permit Required
Coke Conveyor	Entry Allowed
Coke Silos (Vertical Entry) (9)	Permit Required
Coke Unloading Dust Collector	Entry Allowed
48" Press Pit	No Permit
25" Press Pit	Permit Required
25" Press Die Cavity	Entry not Allowed
25" Mixers	Permit Required
25" Press oil sump pit	Entry not Allowed
Material holding bins (9)	Entry not Allowed
25" Press Plate Conveyor	Entry not Allowed
Elevator Pits (Mill Area)	No Permit
48" Press Tub Pits	No Permit
48" Press Hydraulic Tank	Entry not Allowed
48" Dust Collector	Permit Required
48" Mud Cylinder	Permit Required
25" Cooler	Permit Required
2 Coal Tar Pitch Tanks	Permit Required
Pitch Holding tank	Permit Required
Coal Dust Holding Bins (2)	Entry not Allowed
Sand Tanks	Permit Required
Green Scrap Crusher Pit	No Permit
Green Scrap Dust Collector	Permit Required
Green Scrap Crusher Elevator	Entry Allowed
Screening System Pit	No Permit
Big Blue	
Z-Elevator	Permit Required

5 Roll Mill	Entry not Allowed
Coke Scales (4)	Entry not Allowed
Coarse Coke holding bin	Entry not Allowed
Hot Mix Belt (housing)	Permit Required
Crusher Feed Bins (2)	Entry not Allowed
Fines Elevator	Entry not Allowed
Green Scrap Elevator	Entry not Allowed
Mill Feed Bin	Entry not Allowed
Primary Elevator	Entry not Allowed
Scrubber	Permit Required
Storage Bins (16)	Entry not Allowed
Feeder Table	Permit Required
Flour Mill Dust Collector (cartridge)	Entry not Possible
Mixer #1 and #2	Permit Required
Floor sweeping Scrap Chute	Entry not Allowed
Iron Oxide holding Bin	Entry not Allowed
Process water holding Tank	Entry not Allowed
Green Scrap from bins #8 and #9	Entry not Allowed
Green Scrap Scale from bins #10 and #11	Entry not Allowed
Holding Tank for 5 Roll Mill	Entry not Allowed
Access panel Air Duct	Entry not Allowed
Dust Collector (cartridge) 7 th floor	Permit Required
Small Pre-Heater	Entry not Allowed
Green Scrap Bins #8 #9 #10 and #11	Entry not Allowed
Pre-Heater (large)	Permit Required
Check Scale 8 th Floor	Entry not Allowed
Z Elevator top section	Permit Required
RTO Incinerator	Permit Required
Steric Acid Tank	Entry not Allowed

Sand House

Elevator Pi - Not in service	No Permit
Sand Tank – Not in service	Permit Required

KVS Crusher

Crusher	No Permit
Dust Collector KVS	Permit Required
Elevator Housing (2)	Entry Allowed
Holding Tanks	Permit Required

PERMIT REQUIRED CONFINED SPACES

LOCATION	CLASSIFICATION
Pitch Impregnation	
Pitch Melters	Permit Required
Preheaters (6)	Permit Required
Cooling Tanks	Entry not Allowed
Autoclaves	Permit Required
Soybean Oil Tank (clean & dirty)	Permit Required
Liquid Pitch Tank	Permit Required
Basket Burner	No Permit
Basket Burner Incinerator	Permit Required
Air Cooling Stand	Not a confined space
Cooling Tank (square stock)	Entry not Allowed
Hot Oil Heater	Entry not Possible
EFB unit	Entry not Allowed
#3 Side Pit	No Permit
Central Cleaning Area	
Wheelabrator Cabinet	No Permit
Wheelabrator Pit	No Permit
Dust Collector	No Permit
Shot Storage Bin	Entry not Possible
Clean out Pit	Entry Allowed
Shot Elevator	Entry Allowed
New Bake	
Catalytic Units	Permit Required
Mass Kilns	No Permit
Sagger Kilns	No Permit
B Elevator East end of NB	Entry Allowed
Sand Elevator Housing	Entry Allowed
Sand Loading Hopper Mass	Entry Allowed
Wheelabrator Shot blast Cabinet	No Permit
Shot blast Pit	No Permit
Sump Pit (By Office)	No Permit
Mass Sand Conveyor Pit	No Permit
Mass Sand Tanks	Permit Required
Sagger Conveyor Pit	No Permit

Sagger Sand Tanks	Entry not Allowed
Can Cleaner Pit	No Permit
Can Cleaner Elevator Housing	Entry not Allowed
Can Cleaner Cabinet (left and right)	Entry Allowed
Dust Collectors	No Permit
Boiler (not in use)	Permit Required

LOCATION PERMIT REQUIRED CONFINED SPACES

Carbottom

Carbottom Control Room Sump Pit	Permit Required
Sulfur Dioxide (SO ₂) Scrubber	Permit Required
Scrubber Stack	Entry not Allowed
Filter Press water holding tank	Entry not Allowed
Incinerator Stack	Permit Required
Lime Silo	Entry not Allowed
Carbottom Incineration Cabinet	Permit Required
Carbottom Duct	Permit Required

LOCATION

CLASSIFICATION

Acheson Graph

Crushing/Screening Pits	No Permit
Dust Collectors	No Permit
Electrical Manholes	Permit Required
Silos	Entry not Allowed
Air Make-Up System	No Permit

Long Graph

Dust Collectors	No Permit
Silo 1	Permit Required
Silos 2, 3, 4, 5	Permit Required
Saw Pits	No Permit
Sludge Tank	Out of Service
Coke Dryer System	Out of Service
Coke Screening Pit	Entry Allowed
Fume Tunnel (Underground)	Permit Required
Coke Storage Tank Gulper(s)	Permit Required
Dust Tanks Gulper(s)	Entry not Allowed
Elevator Coke Screening	Entry not Allowed
Fines Silo	Entry not Allowed
Pump House Pond	Permit Required

Long Graph Stack
Stack Fan Duct Work
Transformer Housings

Permit Required
Permit Required
Permit Required

Plant wide

Manholes - Sanitary
Manholes - Storm
Manholes/Pits - Electrical

Permit Required
Permit Required
Permit Required

Boilers

Boilers (not in service)

Out of Service

Building 607

Dust Collectors
Dust Tanks bagging room
Air Duct in bagging room
Material bucket elevator
Graphite Bins (2)

No Permit
Entry not possible
Permit Required
Entry not allowed