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TRANS-CYCLE INDUSTRIES OF OHIO, LLC

HEALTH & SAFETY PLAN

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TRANS-CYCLE INDUSTRIES OF OHIO, LLC **HEALTH & SAFETY PLAN**

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INTRODUCTION

Personal care for safety and safe conditions will avoid putting you and your fellow employees at risk of injury. The safety of our employees is a serious concern of Trans-Cycle Industries of Ohio, LLC (TCI or Company). Prevention of accidents is an acquired skill which we wish all our employees to master.

The goal of the TCI Health & Safety Plan (Plan) is to identify and implement plans and programs to control accidents and their resultant expense in a cost-effective manner.

In addition to personal safety issues, accidents are costly. Many people falsely believe that the medical expenses resulting from an accident are paid by "the state" or "the insurance company". Nothing is further from reality. Although a payment may come from a state organization or an insurer, TCI pays the bill by fully funding these Plans.

There are many benefits to an effective Health & Safety Plan. For example, safety enhances productivity. There is a direct relationship between safety and productivity. Good housekeeping is critical in all areas. An operation kept in good order is more efficient and there are fewer accidents. A strong Plan can also have positive effects on morale and public relations.

This Plan was developed to heighten our employees' awareness of safety as an everyday issue that impacts everything we do. This Plan will not, by itself, create and maintain a safe work environment. Our operation will be as safe as possible only if all employees give safety their constant attention.

In short, accident prevention makes smart business sense. We want you to always remember to "Work Smart. Be Safe."

SAFETY POLICY

TCI strives to maintain a safe work environment for our employees. To achieve this objective, the Company will comply with all federal, state and local laws regarding safety in the workplace. In addition, the Company will take pro-active steps to promote safe practices by:

1. Communicating this policy to all employees.
2. Creating a heightened awareness among employees regarding safe practices and accident prevention.
3. Training employees to recognize potential and actual unsafe circumstances and how to avoid or correct them.

4. Giving employees the opportunity to notify their managers and the Company of any unsafe condition so that action to correct the hazard can be taken.

The Health & Safety Director (Director) is responsible for the day to day direction of the Health & Safety Plan. In practice, however, safety is everyone's responsibility. Every employee is obligated to maintain a safe work environment by:

1. Performing his or her job safely.
2. Reminding other employees of their obligations to do the same.
3. Immediately stopping or preventing unsafe acts.
4. Immediately correcting unsafe conditions.
5. Notifying management of unsafe conditions with the assurance that no retaliatory action will be taken against them.

A safe work environment ensures that TCI employees can perform their jobs without risk to their well-being. The effectiveness of the Company's effort to create this environment requires cooperation and compliance from all employees.

The Company expects all employees to commit to its safety goals and will, with Company support, take proper action to see that these goals are achieved. Non-compliance will result in disciplinary action and may include termination of employment.

RESPONSIBILITIES

This Health & Safety Plan must be read, understood and practiced in its entirety. Among other responsibilities, specific actions are required as follows.

1. New employees will be given comprehensive training to provide them with a basic understanding of their job assignment duties, as well as, health and safety issues that pertain to that assignment. A check list for the completed orientation training must then be signed by the employee.
2. Plant-Wide Safety meetings are to be conducted at least monthly. All employees are expected to participate.
3. Each employee injury is to be investigated by the Accident Review Committee as soon as possible, but no later than 48 hours after the incident. Both the injured employee (if available) and his/her immediate supervisor will be present at the committee meeting.

4. Whenever an employee is directed to perform a task, the supervisor is to review the Safe Operating Procedure with the employee and remind the employee of the safe and proper techniques to use for any unusual circumstances safely (e.g., ladder use, lifting, over-reaching, etc.).
5. Safety reminders are to be used regularly.
6. Safe practices are to be acknowledged and positively reinforced.

If there is any uncertainty regarding the operation of this Plan, the President or the Director are to be contacted.

PLANT VISITOR GUIDELINES

PLANT ENTRY AND EXIT

Visitors to the plant area must be authorized by TCI supervisory or management personnel.

Before entering the plant area, visitors must read and sign both the TCI Confidentiality Agreement and these Visitor Guidelines (both are available from the receptionist). A temporary identification badge will be issued to visitors. This badge must be worn at all times on the plant site and returned to the receptionist's desk prior to leaving the plant.

Plant visitors, other than contractors, must be accompanied by TCI personnel at all times while in the plant area.

Entry into enclosed spaces (e.g. tanks, vessels, large transformers) is prohibited unless entry permit is obtained from TCI management.

Operation of TCI mobile equipment (e.g. forklift, skid steer loader, etc.) by non-TCI personnel is strictly prohibited.

Firearms, explosives, alcohol, drugs and intoxicants are forbidden on the TCI site. Persons appearing to be under the influence of drugs or alcohol may be permanently denied permission to enter the site.

Cameras, tape recorders, video recorders and other electronic equipment will not be allowed on the site without management approval.

Smoking is allowed only in the patio area outside the employee break room.

Boisterous conduct, fighting, horseplay, running and practical jokes are not allowed on the TCI site.

PLANT EMERGENCY - EVACUATION PROCEDURES

A plant emergency is signaled by an announcement over the plant public address system concerning the location and nature of the emergency.

In the event of severe weather (such as a tornado):

1. Get away from the perimeter of the building and exterior glass.
2. Leave perimeter offices - close doors.
3. Sit down in an interior corridor (employee break room, storage room,) and protect yourself by putting your head as close to your lap as possible, or kneel protecting your head.
4. DO NOT go outside of the building.
5. If you are trapped in a perimeter office, seek protection under a desk.
6. If you are trapped in the plant area, move away from perimeter walls and stacked material. Seek shelter under fixed structures or tables.

Do not leave the plant site without notifying your TCI contact.

In the event of a plant emergency (other than severe weather):

1. Look for a possible gas release, spill, or fire. Visitors inside the plant facility should immediately proceed to the nearest exit door.
2. Once clear of the building, proceed to the parking lot and await further instructions. (EXCEPTION: If the evacuation is due to fire, move upwind of the building after exiting to avoid breathing smoke and vapors).
3. Stand-by. Do not leave the plant site without notifying your TCI contact.

INJURIES / FIRST AID

All injuries, no matter how minor, must be reported to TCI Supervision. An accident report must be filed. For injuries other than minor, contact your TCI contact or if they are unavailable call any of the emergency numbers posted at each of the plant telephones.

BE ALERT TO THESE HAZARDS

- Entry into enclosures and confined spaces - an entry permit is required.
- Flammable or toxic materials
- Hot surfaces
- Electrical shock
- Falls and Impacts
- Noise
- Overhead work

PERSONAL PROTECTIVE EQUIPMENT

Depending on the plant area to be visited, visitors may be required to wear an ANSI certified hard hat. Visitors may use their own hard hat provided it meets this certification requirement.

Safety toe footwear is required in the plant. (This requirement may be waived if a visitor's stay in the plant is less than one day)

Visitors are required to wear ANSI certified safety glasses with side shields while in the plant. Wearing of contact lenses is allowed under most circumstances (Ask your TCI contact).

Hearing protection is required in certain designated areas of the plant. Foam ear canal plugs or ear muffs must be obtained from TCI personnel prior to entering the plant operating areas.

Protective shoe covers, coveralls, and/or gloves may be required in certain areas of the plant.

WORK AT ELEVATIONS

The use of a safety harness and lanyard is required whenever working outside handrail areas, from forklift or manlift baskets, or from any surface where there is a risk of injury from falling. Be alert to the potential for incomplete platforms and railings. The safety lanyard shall be secured whenever the work location is not protected by handrails or a complete platform.

FLAMMABLE OR TOXIC MATERIALS

Information regarding the hazards associated with all materials on the TCI plant site is available from safety data sheets (SDS's) located at various locations throughout the plant or from TCI's Health & Safety Department. This information can be obtained through your TCI contact.

GENERAL SAFETY PLAN

PLAN ADMINISTRATION

The Health & Safety Director (Director) is responsible for Plan administration. The duties include:

1. Oversight of employee training under the Plan.
2. Oversight of training of supervisors concerning their knowledge of health and safety rules, laws and hazard avoidance.
3. Identification and monitoring of workplace hazards, both chemical and physical.
4. Coordination of the development of methods and procedures to reduce and eliminate health and safety hazards.

The ability of the Director to succeed depends on the assistance given by all employees. The Director may assign certain duties to others in the Company under the Plan, and all employees are expected to cooperate fully.

The thrust of the safety Plan is to highlight safety at all times, prevent accidents and ensure that accidents, if they do occur, are not repeated. It is up to TCI employees to set the tone for safety. If everyone "thinks safety", then accidents are less likely to happen.

COMPLIANCE

All employees must abide by this Plan and the Company's general health and safety policies. No employee is exempt. Any violation of this Plan, or of any health and safety policies or procedures, can result in discipline and may include termination at the discretion of the Company. Discipline can be imposed whether the violation is intentional or negligent. Compliance with this Plan will be evaluated by the President and the Director.

COMMUNICATION

The Company will notify employees of health and safety issues as they arise and on a regular basis. TCI will communicate health and safety issues through the following methods:

1. Posting of memos and notices.
2. Distributing the various safety Plans and materials to new employees.
3. Conducting safety training Plans and meetings.
4. Analysis and discussion of accident and incident reports.
5. Disseminated through either of the safety related committees.

The Company encourages employees to direct any questions they may have about the Plan or health and safety issues to their supervisor, Director, or the President. If an employee is aware of a workplace hazard or other unsafe or unhealthy condition at work, the employee must immediately advise their supervisor, whether the hazard is considered minor or serious.

Employees are encouraged to report hazardous conditions to any supervisory personnel, the Director, or the President. The Company will not discipline, terminate or retaliate against any employee for bringing a hazardous or unhealthy condition to the attention of the TCI management, Health & Safety Director, or other Company official.

IDENTIFICATION OF HAZARDS

The Company will identify and evaluate health and safety hazards in the workplace in several ways.

1. Committee investigations: Representatives of the Accident Review committee, will conduct periodic inspections of the work areas. Findings are reviewed. Corrective action plans are decided upon and time tables for corrections are implemented.

Committee Findings and actions are also reviewed by the President. High cost action plans are turned over to President for review prior to implementation.

2. Unannounced inspections will be conducted from time to time, as determined by the Director.
3. The Director will coordinate an inspection of any new substance, process, procedure or equipment introduced into the workplace.
4. An inspection will occur whenever the Company is made aware of a new or previously unrecognized hazard.

All inspections will include documentation of the persons making the inspection, the areas and procedures inspected, any unsafe or unhealthy conditions or practices identified, and/or the proposed action to remedy any unsatisfactory conditions or practices.

INVESTIGATION OF INJURY AND ILLNESS

Work-related injuries or illnesses, must be reported promptly. The Accident Review Committee will meet as soon as possible following notification of the incident (usually within 24 hours). The affected employee (if available), his/her immediate supervisor, and witnesses will be called before the committee to testify to the circumstances surrounding the incident. Action plans will be developed and timetables set for corrective actions. Written documentation of the meeting will be maintained showing who conducted the investigation, when it occurred, what changes, if any, are recommended to avoid similar incidents in the future, and whether changes in Plan inspection procedures are necessary to better anticipate the potential for such incidents to occur.

CORRECTING HAZARDOUS CONDITIONS

Whenever an unsafe or unhealthy condition or procedure is discovered and brought to the Company's attention, appropriate corrective action will be taken at once. The severity of the hazard will be considered in determining how corrective action will occur.

Documentation will be maintained for all hazardous conditions, describing the condition, when it was identified, how it was corrected, who corrected it, when it was corrected and what steps will be taken to avoid future problems.

TRAINING AND INSTRUCTION

An important part of the Plan is the training of all employees in health and safety awareness. The Company will provide training to all employees about any specific hazards they may face in their job positions and on general safety issues.

Training will be provided at various times:

1. All employees will be trained upon implementation of this Plan.
2. New hires will receive safety training as part of their orientation.
3. All employees will receive periodic refresher training on certain topics as determined by regulatory requirements or company guidelines.

4. When an employee receives a new job assignment involving conditions or procedures for which the employee has not received safety training.
5. When new substances, processes, procedures or equipment are introduced into the workplace which constitute a new hazard.
6. When the company is made aware of a new or previously unknown hazard.
7. A discussion of relevant safety issues will be presented during monthly safety meetings.

In addition, management will receive training in the health and safety hazards faced by employees under their supervision and control.

The Director will maintain documentation of the training provided under this Plan, including the persons involved, dates of training and type of training.

SAFETY RULES AND WORK PRACTICES

There are certain safe work practices which each employee must follow to protect themselves and their fellow employees. The following list of practices is not meant to provide an answer to every safety question, nor are they a substitute for good judgment. However, it is expected that every employee will be familiar with them and consistently comply with them. As stated in the TCI Safety Policy, "Every employee is obligated to maintain a safe work environment."

General

- Boisterous conduct, fighting, horseplay, running and practical jokes could result in injury. Such conduct does not reflect a professional attitude and could result in disciplinary action.
- Caution fellow employees should you observe a safety incident developing or stop work if he/she is committing an unsafe act.
- No maintenance work or adjustments to equipment should be carried out without the proper approvals.
- Know and understand the emergency procedures for your work area.
- Never possess or consume alcohol or illegal drugs on the premises or in company vehicles.
- No traveling in company vehicles without using seat belts and shoulder harnesses when provided.
- If you are not sure how to perform a job, please ask your supervisor.
- Report all unsafe conditions to your supervisor immediately.

- Only trained and authorized drivers may operate forklifts, skid steers, or manlifts.
- If you are injured on the job, no matter how minor it may seem, notify your supervisor immediately.
- Always wear your personal protective equipment, as required by your supervisor.
- Please make sure your work area remains neat and clean as possible.
- (Maintenance Personnel) - Lock and tag-out all mechanical equipment prior to beginning maintenance or repair.
- Never attempt to operate machinery that has been locked or tagged out. Never remove tags.

Fire Control

- Smoking on company property is prohibited except in designated areas.
- Report at once to the responsible supervisor any conditions which may cause a fire. If appropriate, take immediate corrective action.
- Flammable paints, solvents, cleaners, etc. should be properly stored in fire resistant cabinets.
- Keep emergency response equipment (fire extinguishers) clear of obstructions at all times.
- Keep emergency exits and exit aisles clear at all times.
- Know the locations of fire extinguishers and emergency exits in your work area.
- Be alert for leaks of flammable or toxic materials. Report any leaks immediately to responsible supervision. If appropriate, take immediate corrective action to stop the leak source.
- If you see a fire, immediately notify employees in the affected area. Contact the emergency coordinator by calling any of the numbers posted next to all plant phones.

Safe Tool Use

- Always hold hand tools firmly to prevent slippage and loss of balance.
- Check tools regularly and return defective tools for replacement or repair.

- Do not use punches, chisels or hammers with mushroomed heads.
- Tools should be transported in a tool tray or pouch as provided.
- Carry and store tools with sharp points or edges down and away from the body whenever possible. Use protective covers.
- Do not throw tools.
- Keep tools, cords and hoses out of aisles and walkways.
- Do not place tools in locations where they can fall.
- Use only files equipped with handles.
- Never hammer, strike or pry with a file or screwdriver.
- When using a knife or sharp tool, always cut away from your hands and body.
- Never hammer with any tool except a hammer.
- Never strike a wrench with a hammer unless the wrench is provided with a striking surface.
- When using jacks, block up the object being raised with wooden blocks or jack stands. Do not exceed capacity or travel limit indicated on the jack.
- Remove the jack handle when the jack is not being raised or lowered.
- Never use extensions ("cheaters") on tools to increase leverage.
- All electric-powered tools must be grounded before using. Do not use a portable electric power tool if the ground lug has been removed from either the tool's cord or from any extension cord. Only a double insulated tool can be used with a two-wire cord.
- Check the source of supply before connecting air-powered tools. Ensure the air supply is at the required pressure.
- Keep guards on power tools in place during use.
- Disconnect power tools from their power source before making repairs or adjustments.
- Avoid creating tripping hazards and equipment damage by routing hoses or electric cords overhead or providing protection where people and equipment travel.

- Never use a pedestal grinder without ensuring that the tool rest is 1/8" maximum from the wheel.
- Never grind on the side of a grinding wheel.
- Never grind with a cutting wheel.
- Never grind aluminum, brass, copper, or other soft metals on a pedestal grinder.
- Face shield and safety glasses or goggles are required to be worn when using a grinder or jackhammer.
- Never operate a power impact tool unless the retainer ring or pin is in place and the tool or plunger is against a solid object to prevent it from being thrown out.
- Get instructions on the safe way to use tools with which you are not familiar.

Machinery

- Before starting any machinery, ensure all guards are in place and all persons are clear of moving parts. If you have questions about the proper operation of a safety guard, contact your supervisor immediately.
- Never attempt to clear a jam when equipment is operating.
- Adjust a machine that is in motion only when there is an approved procedure for such activity. Agreement of supervision must be obtained before initiating work.
- **Never** remove or defeat a safety guard on a piece of equipment or tool. **This act will result in your immediate dismissal.**
- Never operate or start equipment unless you are sure all the guards are in place.
- Rotating equipment can be dangerous. If you have long hair, pin it so that your hair is not below your shoulders. Also, be sure sleeves are buttoned up and are not hanging loose.
- Never operate any machine or equipment unless you have been trained and are authorized.

Housekeeping

- Clean up all spills and leaks promptly.
- Keep aisles and emergency exits clear of material.

- Keep all utility hoses and extension cords properly stored when not in use.
- Return all tools to proper storage places when you are finished with them.
- Remove all excess material to maintain an orderly work area as the job progresses.

Material Handling and Storage

- Use mechanical material handling devices whenever practical. They should be operated only by trained personnel.
- Avoid throwing material from elevations.
- Keep your hands and fingers out of the ends of pipe or other tubular material such as small transformer cans.
- When rolling a drum on its side, push with your hands against the side of the drum. Never grasp the ends of the drum or use your feet to push it.
- Use a mechanical aid or assistance when you need to up end a full drum.
- When two or more persons carry a long object, carry from the same side.
- Stack sheet material, such as plywood, flat on a pallet or floor. Do not lean the material against walls or other objects.
- Stack finished bales (aluminum/lead) no more than two high. They should be stacked neat and straight with no tendency to lean. Pallets should be in good condition.
- Stack copper boxes no more than two boxes high. They should be at least double banded. They should be stacked neat and straight with no tendency to lean. Pallets should be in good condition.
- Stack cable reels no more than two high. Do not stack reels that are bent or warped.
- Stored or stacked material should not protrude into aisles.

When lifting a heavy object:

- Look over all loads before lifting them. Tilt the load on its edge. Does it appear too heavy for you to handle alone? **(If the load is too heavy to lift comfortably using one hand, GET HELP!)** Would the object limit your vision or cause loss of

balance? If so, call for additional help or use a mechanical device like a hand truck.

- Check the load for protruding nails, screws, staples, and sharp edges. Always use Kevlar protective gloves and sleeves when handling such items. Pay particular attention when handling porcelain items. Broken porcelain is extremely sharp.
- Keep your back straight and use the strength of your leg and thigh muscles, rather than your back muscles.
- If you use a Back Belt, be sure it is adjusted properly. A Back Belt is only designed to help maintain a straight back posture during normal lifting. DO NOT ATTEMPT TO LIFT MORE WEIGHT THAN YOU WOULD FEEL COMFORTABLE LIFTING WITHOUT THE BELT!
- Know the seven basic steps for lifting an object and follow them always. If you don't know how to lift an object, ask your supervisor to show you.

SEVEN STEPS FOR PROPER LIFTING

1. Face the object and get as close to it as you can.
2. Put one foot in front of the other and balance. Keep your feet slightly apart.
3. Bend your knees and squat, keeping your back as straight as possible;
4. Grip opposite sides of the object with your whole hands, not just with your fingertips.
5. Tighten your stomach muscles and take a deep breath and hold it.
6. Use your leg and thigh muscles to raise yourself to a standing position.
7. To twist or change direction, move your feet; don't ever twist at the waist.

Traffic

Pedestrian:

- Where walkways are marked, use them.
- Never run unless in immediate danger.
- Do not use shortcuts. Try to stay in designated walkways. Never attempt to climb over or around stacked materials that may collapse.
- When going up or down stairways, keep at least one hand on the rail at all times.

Vehicles and mobile equipment:

- **Pedestrians have the right-of-way.**
- Use your warning devices (e.g. lights, backup alarms, horn).

- Slow down and use your horn when approaching blind corners.
- If your equipment is equipped with mirrors or windows, keep them clean for visibility.

Compressed Gases

- Never use oxygen for ventilating or cooling purposes.
- Never use oxygen in place of compressed air.
- The use of utility or compressed air for cleaning floors or other objects is prohibited. The use of utility air or compressed air for cleaning clothes or cleaning your person is also not allowed.
- Breathing air equipment must only be connected to grade D breathing air cylinders.
- Contents of cylinders should not be discharged to the atmosphere at a rapid rate to prevent static generation and resultant ignition.
- Close cylinder valves, not the regulator, when the cylinders are left unattended or when emptied. Valve cap must be secured in place when the cylinder is not in use (This applies to both full and empty cylinders).
- All cylinders (both full and empty) must be properly chained or strapped in an upright position when stored. Cylinders must be stored at least 20 ft. from any highly combustible material. Flammable gases such as acetylene must also be stored at least 20 ft. from oxygen cylinders.
- Keep aisles open to compressed gas cylinders that are in use.
- Store and use cylinders only in well ventilated areas.
- Never leave a gas-burning or welding torch unattended.

Office

- Keep desk and file drawers closed when they are not being used. Never open more than one drawer of a file cabinet at one time.
- Observe good housekeeping practices at all times.
- Never stand on drawers, chairs, desk tops, waste cans or other similar objects.
- Do not place heavy objects on the top shelf of tall cabinets.

- Turn off electric office machines before you clean them.
- Keep electric cords routed out of walking paths.
- Know the location of the nearest emergency escape routes.

Working at Elevations

- Use a ladder to reach elevations when other means are not provided or other methods are not prescribed for the work.
- Use only ladders in good condition and equipped with ladder shoes.
- Notify your supervisor about structurally defective ladders. NEVER USE DEFECTIVE LADDERS!
- Extension ladders should be lashed or held securely to the ground and tied off at the top when in use.
- An extension or straight rail ladder must be placed with its feet approximately 1/4 of the ladder length away from the wall, pipe support, etc.
- When ascending or descending ladders, face the ladder, hold on to the side rails (not the rungs) with both hands and always maintain body position within the side rails of the ladder.
- Do not place a ladder where it can be bumped, such as in front of a door, stairway, vehicle path, etc. unless adequate precautions are taken to protect both the climber and others who may be in the area.
- Never use ladders in a horizontal position for standing or supporting weight.
- Never climb higher than the third rung from the top of an extension or straight rail ladder, nor the second tread from the top of a step ladder.
- An extension or straight rail ladder should extend at least three feet beyond the level of the elevation.
- Always have both hands free for grasping side rails when climbing ladders.
- A safety harness and lanyard shall be worn and attached to the basket when working from an aerial lift.
- Do not remove a handrail and leave it unattended unless the opening is protected from someone accidentally falling through.

Overhead Cranes and Other Lifting Equipment

- Each manual or powered hoist shall be identified with its lifting capacity.
- Each device shall be visually checked prior to each use.
- Slings/chokers and all their components shall be inspected prior to each use.
- Damaged or defective slings/chokers shall be removed from service immediately.
- Slings/chokers shall not be shortened with knots, bolts or other makeshift methods.
- Sling legs shall not be kinked.
- Slings/chokers shall not be loaded in excess of their rated capacities.
- Slings/chokers shall be securely attached to the load.
- Slings/chokers shall be padded or otherwise protected from sharp edges.
- Shock loading is prohibited.
- Slings/chokers shall not be pulled from under a load when the load is at rest on the sling.

PERSONAL PROTECTIVE EQUIPMENT

A number of TCI's safety rules relate to protective equipment. The plant's personal protective equipment Plan is designed to protect employees from injury and/or overexposure to potentially hazardous chemicals during the course of their work. It is TCI's intent to supply personal protective equipment without cost to the employee.

HEAD PROTECTION POLICY

Hard Hats Shall Be Worn:

- by all personnel including visitors and contractors when the overhead crane is in use.
- when any overhead work is under way.
- when there is a danger of falling objects anywhere within the facility.

EYE PROTECTION POLICY

Safety Glasses Shall Be Worn:

- while in the operations area of the facility.

Safety Goggles Shall Be Worn:

- when in the vicinity of operations which could reasonably be expected to result in splashing fluids.

Safety Shields Shall Be Worn:

- when performing abrasive, particle generating operations such as: cutting, grinding, chipping, or sawing.
- when servicing batteries on electric mobile equipment (includes connecting and disconnecting charger cables)

Special Eye Protection Shall Be Worn:

- when welding or torch cutting (welding hoods and goggles respectively).

RESPIRATORY PROTECTION POLICY

Respiratory Protection Shall Be Worn:

- when sweeping the floor in the plant and furnace room using either a hand broom or a powered sweeper (NIOSH approved dust/mist disposable respirator).
- when sweeping or vacuuming in the plant (half-mask w/organic vapor and HEPA cartridges).

(Respiratory training and fit testing are required before you can be issued a full-face respirator. Except for mustaches, employees who are issued respirators are required to remain clean shaven for the duration of employment at TCI. It is imperative that half-mask respirators be maintained in clean working order. They will be checked monthly by the Health & Safety department and unannounced spot checks will be taken periodically. Failure to maintain respirators properly, stealing respirators, or laying/hanging unprotected respirators in contaminated areas will result in disciplinary action.)

HAND/ARM PROTECTION POLICY

Leather Gloves Shall Be Worn at all times while working in the operations area of the facility except:

- when operating any mobile equipment.
- when operating the pressure washer (nitrile rubber gloves are required).

Kevlar Gloves and Sleeves Shall Be Worn Underneath Leather Gloves:

- when tearing down equipment for processing.
- when handling any material where there is an exposure to sharp edges.

15 mil. Nitrile Rubber Gloves Shall Be Worn Underneath Leather Gloves:

- when extended exposure to contaminated oil is likely.

3 mil. Nitrile or Latex Rubber Gloves Shall Be Worn:

- at all times throughout the plant (unless heavier gloves are required due to direct exposure to contaminated oils).
- when incidental exposure to contaminated metals or solids is likely.

PROTECTIVE CLOTHING POLICY

Company Provided Uniforms Shall Be Worn:

- when working within the plant.

{Employees are not allowed to leave the plant site while wearing company uniforms}

Disposable Tyvek Coveralls Shall Be Worn:

- when working anywhere in the plant, except while welding or torch cutting which requires leather protective clothing.

(If any article of protective clothing becomes contaminated by harmful fluids, remove it immediately and bring it to your supervisor who will ensure that it is properly disposed. This includes uniforms. Clothing replacements will then be issued)

PROTECTIVE FOOTWEAR POLICY

Hard Leather Steel Toe Safety Boots Which Offer Ankle Protection Shall Be Worn:

- when working in either unit of the plant.
- when working in the plant yard.

{Boots are to be replaced every 6 months during your employment with TCI (Replacements may occur more often, depending on assigned job duties). New employees must supply their own first pair of boots which become the property of TCI. After 90 days, TCI will reimburse the employee for all additional boot purchases (up to \$50.00).}

Hard Leather Steel Toe Safety Boots Which Offer Ankle and Metatarsal Protection Shall Be Worn:

{Boots are to be replaced every 6 months during your employment with TCI (Replacements may occur more often, depending on assigned job duties). New employees must supply their own first pair of boots which become the property of TCI. After 90 days, TCI will reimburse the employee for all additional metatarsal boot purchases}

Disposable Tyvek Booties Shall Be Worn:

- by management and visitors while in the plant area.

HEARING PROTECTION POLICY

All plant employees are included in TCI's Hearing Conservation Plan due to potential exposure to excessive noise produced by various equipment such as jackhammers. As part of this Plan, hearing protection (foam ear canal plugs and/or ear muffs) is required by employees and visitors in the following areas:

PERSONAL HYGIENE POLICY

Due to the potentially toxic nature of chemicals processed and used at TCI, operations at this site require strict adherence to hygienic practices by all plant employees, contractors and visitors. The following is a list of those items we feel must be strictly enforced to ensure their safety:

- No eating, drinking, or chewing (gum or tobacco products) within the operational units of the plant.
- Smoking is allowed only in the patio area outside the break room.
- When going outside to the break room patio or to your car during breaks, street shoes or leather slippers must be worn (Only personal shoes and clothes may be worn away from the plant site).
- Hands and face must be washed using soap and water before entering restrooms or break areas.

EMERGENCY PROCEDURES PLAN

In case of an emergency, the first priority is the safety and preservation of human life. Only after this is assured should there be any effort to protect Company property. The following are the procedures to take in case of emergencies and procedures to quickly evacuate the building:

GENERAL PROCEDURES

When there is a general emergency, the following steps will apply. Procedures for specific emergencies are outlined in other sections of this Plan.

1. Upon discovery of an emergency situation where assistance is required (e.g., police, fire or ambulance), notify your supervisor immediately. If your supervisor is not available, call either of the emergency numbers posted next to each plant telephone. These numbers connect you with the front office. State the nature and location of the emergency and whether anyone has been injured. This information will be passed on to the emergency coordinators and, if need be, an alarm message will be broadcast over the plant intercom system.
2. If evacuation is necessary, an announcement will be broadcast over the plant intercom. Employees should immediately proceed to the nearest exit door. Once clear of the building, all employees should gather at the parking lot and await further instructions. (EXCEPTION: If the evacuation is due to fire, employees should move upwind of the building after exiting to avoid breathing smoke and vapors). The employee's first line supervisor should obtain time cards and proceed to the rally point and count all employees to ensure that all are out of the building. The supervisor will immediately notify the Fire Department Chief and/or Emergency Coordinator if all employees have not been accounted for.
 - a. NOTE: Employees should, as part of their orientation, already know the routes to and locations of emergency exits. It is vital these routes and locations be kept unobstructed and accessible at all times.
3. Ambulances or rescue squads should be called immediately at any point in the emergency if they are needed.
4. If there is time and it is possible, the main power should be shut off.

MEDICAL EMERGENCIES

- *Report all injuries or illnesses* (no matter how minor) to your supervisor immediately!! If he/she is unavailable, contact any management personnel.
- A card for wallet or purse which lists emergency contact telephone numbers is issued to each employee.
- Your supervisor must fill out a *1st Report of Injury or Illness* form for each incident. If he does not fill out this form, contact the Director.

MEDICAL TREATMENT

- Based on the apparent severity of the injury or illness, you will either be transported as soon as possible for evaluation by TCI's company physician or, for medical emergencies, transported to nearest hospital emergency room.

- *After hours/weekends/holidays* - If an injury or illness worsens after normal business hours, you must contact your supervisor or the Director for instructions (See emergency contact card). *Obviously, if the injury or illness has become a medical emergency, go directly to the nearest Emergency Room at once and if possible have the E.R. staff contact someone from the list.*

TORNADOES/SEVERE THUNDERSTORMS

By definition, a tornado warning is an alert by the National Weather Service confirming a tornado sighting and location. The weather service will announce the approximate time of detection and direction of movement. Wind will be 75 mph or greater. Radio stations will be monitored for severe weather warnings for the local area.

If an approaching tornado is sighted, the employees should take the following action:

1. Get away from the perimeter of the building and exterior glass.
2. Leave perimeter offices - close door.
3. Sit down in an interior corridor (locker rooms, interior halls,) and protect yourself by putting your head as close to your lap as possible, or kneel protecting your head.
4. DO NOT go outside of the building.
5. If you are trapped in a perimeter office, seek protection under a desk.
6. If you are trapped in the plant area, move away from perimeter walls and stacked material. Seek shelter under fixed structures or tables.

POWER FAILURES

Utility power failures occur infrequently and usually only last a short time. Patience is required while the local utility company restores power.

In the event of a power failure, employees should remain where they are and wait for an announcement by their supervisor. Avoid moving about unless the area is safely lighted. There is no need to evacuate the area unless instructed by management members to do so. The building is equipped with emergency lighting which illuminates emergency exits.

EVACUATION PLAN

The rapid evacuation of employees is a critical responsibility. The following procedures must be discussed with all employees upon hire and practiced at regular intervals:

RESPONSIBILITIES

The Health and Safety Director (Director) is responsible for arranging annual fire drills and developing the details of the evacuation plan. The Director is also responsible for providing all new employees with the lists of emergency procedures and keeping all employees advised of any emergency plan changes.

PROCEDURES

- Diagrams of the emergency exits, exit routes, and outside meeting locations are posted at various locations throughout the facility. All new hires should familiarize themselves with the information on these diagrams.
- Emergency drills will be held annually. These drills will be planned in advance and are designed to reinforce employees' awareness of the fire exits, evacuation procedures, fire alarm procedures, and outside meeting locations.

BUILDING EVACUATION

If a fire emergency is broadcast over the plant intercom, it must be treated as a building emergency -- and the following actions must be taken:

If a fire or emergency condition requires a building evacuation, proceed immediately to the nearest fire exit.

The pace must not be hasty, but it should be orderly, without delay.

Proceed immediately to your pre-arranged meeting location outside of the building. Your supervisor will make sure all persons have been safely evacuated and will notify the Fire Department if all employees have not been accounted for.

If the alarm proves to be false, an announcement will be issued. With this announcement, the emergency is over.

FIRE SAFETY PLAN

Each year, fire takes a terrifying toll in life and property. The disquieting feature about most industrial fires is that they are caused by things which can be easily controlled by periodic inspection and follow up. Most of the causes are so obvious that you need only to look around regularly to spot them.

An effective fire safety Plan includes:

1. Fire Prevention - The goal is to prevent the fire from happening in the first place. The focus of fire prevention is on good housekeeping, and the control of ignition sources such as careless smoking, the improper use and storage of flammable liquids, welding sparks, and electrical failures caused by poor maintenance.
2. Life Safety - Employees have to get out of the building quickly in the event of a fire. Life safety includes fire exit requirements, planned escape routes, alarms, and emergency drills.

3. Fire Protection - The TCI facility is equipped with an extensive sprinkler system to prevent a fire from getting out of control.
 - a. The fire protection system includes automatic sprinkler systems, fire extinguishers, hose connections, etc. The proper maintenance and testing of this system is critical to the safety of this facility. The following fire safety Plans attend to these needs and are the direct responsibility of the V.P. of Operations. It should be noted that fire safety is everyone's concern, thus, fire safety hazards should be reported to your supervisor immediately. All TCI employees (both hourly and salaried) are provided with yearly portable fire extinguisher training that addresses attack plans for small incipient fires, how to contact emergency authorities, and how to determine when it's time to evacuate the facility.

GENERAL INSPECTIONS

The key to fire prevention, life safety, and fire protection is a sound self-inspection Plan. As part of a general hazard inspection, the Director will make a formal tour of the facility at least once a week to look for housekeeping problems, ignition sources, and anything which can hinder the rapid evacuation of the structure.

Results of this inspection will be presented to the President and supervisors at the weekly staff meeting (Problems which could create an immediate hazard are taken directly to the supervisor for prompt action). Responsibility for correcting problems will be assigned during this meeting. Follow up will occur at the time of the next inspection report. The Director will retain copies of these inspection report forms.

The following items are checked during the weekly inspection:

1. Housekeeping - List all housekeeping problems found during the tours. Be especially alert for storage against electrical control panels, electrical equipment areas, heating equipment, and other places where there are potential ignition sources.
2. Ignition Sources - List all electrical problems, evidence of careless smoking, violations of the company's welding and torch cutting procedures, etc.
3. Flammable Liquids - Note any solvent storage problems and examples of the improper handling of flammable liquids.
4. Fire Exits and Life Safety - Check to make sure that all fire exits are not blocked by storage. Also test the emergency lighting.
5. Sprinkler System - Check to see that the main valve is in the open position, chained, and sealed. Also check to see that air pressure is nominal and the air compressor is plugged in.

MONTHLY FIRE PROTECTION EQUIPMENT CHECKS (Conducted by the Maintenance Department.)

1. Fire Extinguishers

- a. Check that each extinguisher is securely mounted at an accessible location.
- b. Examine the extinguisher for physical damage.
- c. Determine that the nozzle is unobstructed and the discharge hose is in good condition.
- d. Examine the seal and locking pin to verify that the seal is intact and that the pin cannot be removed or the valve operated without breaking the seal.
- e. With stored-pressure type dry chemical, and stored pressure type water extinguishers, check the pressure gauge. Remove extinguisher if low and replace with backup.
- f. Weigh CO2 extinguishers and compare to full weight as stamped on cylinder. Remove if low and replace with backup.

2. Fire Hydrants - Should not be blocked by plant growth or parked cars. Make sure caps are in place. Hydrants should be painted at least bi-annually to maintain a bright contrasting color. Hydrants should be flow tested at least annually.

3. Alarms - Verify that central station alarm contractor is checking and maintaining alarms.

TRAINING

Training is a critical part of an effective Health & Safety Plan because approximately 80 percent of all accidents are caused by unsafe acts. In the process of preparing safety training Plans, there is also an opportunity to reinforce other training objectives.

An important part of the Plan at TCI is the training of all employees in health and safety awareness. The Company will provide training to all employees on any specific hazards they may face in their job positions and on general safety issues.

RESPONSIBILITIES

As a general rule, orientation training will be performed by the Director and the Plant Supervisor prior to the employee beginning work at TCI. This training will cover an overview of the processes and general policies of TCI, plant rules and safety policies, hazardous materials and hazardous waste handling, emergency response procedures, PPE, hearing conservation, and other job specific training as discussed later.

Plant employees, all of whom have routine contact with hazardous chemicals, will receive Hazard Communication Training. Special training is directed toward providing an understanding of specific hazards associated with handling oils, harmful chemicals, and solvents that are commonly used at this facility.

Employees responsible for operating a forklift, skid steer, or articulated boom mobile manlift will receive training and certification from the Plant Supervisor and Health and Safety Director. This training will include viewing a videotape on each type of equipment they hope to operate, hands-on training, and a written examination. A score of 80% is required on the exam in order to qualify as an equipment operator for TCI. After passing the exam, the employee is issued a temporary permit which is good for one month. At the end of the month the employee is evaluated by his supervisor for driving competency and safety. If the supervisor approves, the employee will be issued a 2-year license. However, it is the supervisor's prerogative to "pull" an employee's license for any driving or safety related offense.

The Plant Supervisor is responsible for providing specific job-related training to the new employee. Every effort will be made to integrate safety into the job training. Safety is not an aside to job training - it is simply a part of doing the job right.

PROCEDURES

Training will be provided at various times:

1. All employees will be trained upon implementation of this Plan.
2. New hires will receive safety training as part of their orientation.
3. When an employee receives a new job assignment involving conditions or procedures for which the employee has not received safety training.
4. When new substances, processes, procedures or equipment are introduced into the workplace which constitute a new hazard.
5. When the Company is made aware of a new or previously unknown hazard.
6. Supervisors must include a discussion of relevant safety issues during the regular monthly safety meetings with their employees.

In addition, management will receive training in the health and safety hazards faced by employees under their supervision and control.

The Director will maintain documentation of the training provided under this Plan, including the persons involved, dates of training and type of training.

ACCIDENT/INCIDENT INVESTIGATION

POLICY

All employee accidents/incidents must be investigated promptly and thoroughly in order to determine causes and prevent future occurrences. An accident is defined as any work

related event which results in injury to an employee, requiring medical treatment beyond simple first aid. An incident, for TCI's purposes, is any accident or potential accident that, while not resulting in significant bodily harm or destruction of property, did have the potential to do so. Therefore, both accidents and incidents are treated equally.

RESPONSIBILITIES

The Accident Review Committee will meet as soon as possible following notification of the accident/incident (usually within 24 hours). The affected employee (if available), his/her immediate supervisor, and witnesses will be called before the committee to testify to the circumstances surrounding the incident. Action plans will be developed and timetables set for corrective actions. Written documentation of the meeting will be maintained showing who conducted the investigation, when it occurred, what changes, if any, are recommended to avoid similar incidents in the future, and whether changes in Plan inspection procedures are necessary to better anticipate the potential for such incidents to occur.

Documentation will be maintained for all hazardous conditions, describing the condition, when it was identified, how it was corrected, who corrected it, when it was corrected and what steps will be taken to avoid future problems.

The Director is responsible for determining if an incident is OSHA recordable and, if it is found to be, then recording it on the OSHA 300 log.

REPORT FORM

The "1st Report of Injury and Illness" and the "Supplemental Accident Investigation" forms are used to investigate all incidents. These forms must be completed as soon as possible following the incident, preferably, by the end of the shift.

All relevant facts, circumstances and information relating to the incident are to be included on the forms in order to be sure that the Accident Review Committee has an accurate picture of events and circumstances. If possible, the names of persons who witnessed the incident will be obtained.

The original completed forms will be kept in chronological order in a central file maintained by the TCI Office Manager. Copies of all subsequent medical bills will be attached to the forms.

ACCIDENT/INCIDENT REVIEW AND FOLLOW-UP

At the next scheduled plant safety meeting, the Plant Supervisor and Director will review and discuss with employees each accident/incident which occurred since the last meeting.

The Director will compile incident reports based on types of incident and costs associated with medical treatment. Trends and repetitive problems should then be identified and addressed. For example, if the same type of incident recurs, systems problems which need to be corrected at the plant level can be presented to management.

SAFETY COMMITTEE

The purpose of TCI's Safety Committees is to encourage the involvement of all employees in the Health & Safety Plan and to develop good communication at all levels. The committee organizations are designed to show management's 100% commitment to the safety effort and foster a spirit of cooperation between all employees.

The key to the committees' existence is to train and motivate all employees to keep their eyes open at all times for any safety problems which develop throughout the day. To accomplish this, the following are the general goals and functions of the committee:

- To promote a total commitment to safety awareness.
- To determine training needs through direct observation (plant surveys), input from employees, communications with other committees, or from outside sources.
- To develop action plans to ensure that shortcomings in training are remedied in a timely manner.
- To become directly involved in safety training (either in-house or procurement of outside assistance)
- To review and constructively criticize training Plans to ensure continuous improvement.
- Maintain an active involvement in the Safety Incentive Plan.
- Responsible for health and safety facility audits that address safety and health problems throughout the facility. Committee members are empowered to report any problems directly to management for resolution and action plan development. The committee member will obtain commitment dates for problem resolution and follow-up until the problem is corrected.
- To investigate ergonomic issues through direct observation (plant surveys), input from employees, communications with other committees, or from outside sources.

ACCIDENT REVIEW COMMITTEE

TCI will utilize an Accident Review Committee to review any and all accidents and/or injuries regardless of whether they are OSHA recordable incidents. The responsibility of that committee may include but not be limited to:

- To review all accidents involving medical treatment beyond first aid, as well as, all incidents which have the potential for severe injury.
- To gather all pertinent data surrounding an accident/incident

- To develop an action plan to correct hazardous conditions that may have contributed to the accident/incident.
- To ensure that the circumstances and the action plan are all communicated to all of the employees at TCI.

SELF INSPECTION

Supervisors should constantly be aware of hazards in their areas. Once spotted, immediate action should be taken to mitigate the hazard.

RESPONSIBILITY

The following self inspection safety related items should be included as a supplement to the supervisor's normal daily inspections of the work area:

Floors - Floors should be clean and free of hazards, debris, etc. Aisles used by forklifts should be marked with lines and should not have storage, debris, water or oil spills, etc.

Elevated walkways and platforms over four feet high must be protected by railings, including an intermediate rail. A kick or toe board should also be installed if someone could walk below the elevated walkway or platform.

Electrical - No bare wires and spliced or frayed cords. All plugs should be in proper receptacles (i.e. no octopus arrangement). All electrical apparatuses should be grounded except minor office equipment such as clocks, typewriters, lights, etc. All outlets and junction boxes must have the cover plate installed.

Controls and Electrical Panels - These should be labeled unless their position makes their function obvious. Switches in an electrical panel or remote switches should be labeled. Access to panels and switches should not be blocked by storage, etc.

Fire Exits - These must be marked, and aisles to fire exits must be kept clear of storage, etc. Fire exits cannot be locked.

Fire Extinguishers - There should be an extinguisher within 75 feet of walking distance from every point in the building. Extinguishers should be multipurpose dry chemical.

Extinguishers must be wall mounted, and the top of the extinguisher can be no more than five feet from the floor. They must be checked monthly and serviced yearly. (There will be a tag on the extinguisher listing the date of the annual service.) Extinguishers are to be readily accessible and should not be blocked by storage, etc.

Battery Storage and Handling Acids - Areas where batteries are charged or acid is handled must have a functioning eye wash station. Eye shields and proper gloves must be provided and used. No smoking. Make sure the area is well ventilated.

Compressed Gas Cylinders - Must be chained even when empty. When not in use, cylinders must have a safety cap over the valve. Oxygen and acetylene cylinders may not be stored together even when empty. They should be separated by twenty feet.

Machine Guarding - Pinch points, pulleys, blades, chain drives, and gears must be guarded. Common hazards include:

- A. Exposed belts, pulleys, chain drives, and gears.
- B. Saws/Grinders - Only working part of the blade may be exposed. All other parts of the blade must be fully enclosed.
- C. Fans - If the blades are under seven feet from the floor or an elevated walking platform, the fan guard openings may be no more than one-half inch.
- D. Bench Grinders - Must have a tool rest (maximum opening between the tool rest and the grinding wheel is one-eighth inch), side guard, and a see-through front shield. (Goggles or a face shield must be provided and used.) The floor area around the grinder should be clear of tripping hazards.
- E. Balers/Drum Crushers - There should be a constant pressure or dead man control. Doors must be interlocked.

Housekeeping

- A. Pallets may not be left leaning on end, against walls, doors, etc. They should be stacked on the floor (out of aisles).
- B. Empty pallet stacks should not be any higher than six feet (eight feet in sprinklered areas).
- C. Baled and boxed processed materials should not be stacked more than two high.
- D. Cable spools should never be stacked more than three high.
- E. No excessive, unorganized, or loose storage on top of storage cabinets.
- F. No unorganized storage, trash, etc.
- G. Paint and other flammable liquids should be stored only in approved metal cabinets.
- H. All combustible materials and wastes should be cleaned up and removed.

Welding

All combustible material and storage should be removed from the area. A second person (fire watch) should observe where the sparks go. The fire watch must remain in the area for one-half hour after the job is finished (smoldering sparks) and must have an extinguisher handy.

FORK LIFT / SKID STEER / MANLIFT SAFETY

Fork lifts, skid steer loaders and articulated boom mobile manlifts are all important equipment to TCI's operations. It is essential that this equipment be properly maintained and kept in good working order at all times. Only trained operators are authorized to use this equipment. Authorization will be denoted by color coded authorization badges to be worn at all times while operating any of this equipment. Any employee found operating such equipment without proper authorization will be subject to disciplinary action.

RESPONSIBILITIES

The Plant Supervisor is responsible for training operators to use motorized material handling equipment within their respective units. Employees must be trained and authorized to use each model of equipment. Each employee will be given both videotape and hands on training. Following the training sessions, a written examination will be given. To be certified, a score of 80 or above must be made on the exam. The Director of Health and Safety will file the document in the employee's personnel file and issue the certificates and badges.

The Director will maintain a list of all employees trained to operate each model of equipment and the date(s) of training.

PROCEDURES AND RULES

Operator Selection

An employee assigned to operate a lift truck, skid steer or manlift will meet the minimum requirements in the following areas:

1. Eyesight 20/40 vision, correctable if necessary.
2. Effective use of limbs and good eye-hand-foot coordination.
3. Good hearing ability
4. Ability to understand signs, labels, and instructions.

Training

The Plant Supervisor will provide or arrange for employee training prior to assignment as an operator. A videotape and written training materials will be used in conjunction with the training Plan. Training will be provided for each type of equipment which the employee is assigned to operate. The training will include:

1. Capabilities and limitations of the equipment and attachments.
2. Purpose, use, and limitations of controls.
3. How to make daily inspection checks and completion of the daily inspection checklist form.
4. Safety standards.
5. Hands-on vehicle operation using simulated working conditions.

Maintenance

The Plant Supervisor is responsible for preventive maintenance on the equipment in accordance with the manufacturer's instructions. Equipment operators will complete and sign the daily inspection checklist before taking the equipment at the start of the shift. All defects will be brought immediately to the attention of the Maintenance Supervisor or Plant Supervisor, and will be described on the inspection checklist.

If the vehicle is deemed to be unsafe to operate, the keys are to be turned over immediately to either the Plant Supervisor or the Maintenance Supervisor and it is to be removed from service until the maintenance department returns the vehicle and keys to Operations.

Operations

Lift trucks and skid steer loaders are some of the most hazardous pieces of equipment in use at our facility. ONLY TRAINED OPERATORS ARE ALLOWED TO USE A FORKLIFT OR SKID STEER LOADER.

Operation rules include:

- A. Never allow anyone to walk under a raised load. Employees should stand back whenever a load is off the floor.
- B. Only one person is allowed on the truck.
- C. Seatbelts must be worn.
- D. Never lift personnel up with the forks to change lights, access truck trailers, etc.
- E. Head lights are to be on at all times.
- F. Backup alarms and warning lights are not to be tampered with.

LOCK-OUT/ TAG-OUT PLAN

SCOPE

A high percentage of serious employee accidents occur during maintenance and cleaning operations when someone inadvertently turns on the machine, opens a valve, or in some other way releases stored energy. This procedure establishes a Plan to protect employees while working on equipment during its shutdown for repair, adjustment, cleaning, etc.

RESPONSIBILITY

All TCI management and employees are responsible for adherence to these procedures. Each new employee and other employees whose work operations are or may be in the area shall be instructed on the purpose and use of the lock-out and tag-out procedure. This Plan shall be administered by the Director.

TRAINING

Training is directed toward two primary groups of employees:

- (1) Authorized employees (maintenance personnel or Plant Supervisors) who will be responsible for locking and tagging out equipment. Their training covers the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- (2) Affected employees who may come in contact with the locks and tags need only a general understanding of the lock-out/ tag-out procedures and to understand that locks and tags are to be left undisturbed. Separate training will be presented to each group.

PERIODIC INSPECTION

At least yearly, the Director will conduct a certified inspection of the lock-out tag-out procedure at TCI to ensure that the procedure and the requirements of this standard are being followed.

The inspection will be documented and will cover a review of an actual procedure. The equipment, control procedures, employees involved, the date of the inspection and the individual conducting the inspection will be included.

The inspection must also include a review, between the inspector and the authorized employee, of that employee's responsibilities under TCI's lock-out/tag-out Plan.

GENERAL REQUIREMENTS FOR LOCKOUT/TAGOUT

- A. All equipment must be properly locked out prior to maintenance or servicing regardless of the number of energy sources or potential energy sources that may be associated with the equipment.
- B. Authorized employees must inform all affected employees that equipment will be down and locked out.
- C. Authorized employees will notify affected employees when equipment is to be returned to operation.
- D. Only after all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, the authorized employee can remove the tag and lock-out device to restore energy to the machine or equipment.
- E. No one is allowed to place a **"Do Not Operate"** tag unless the piece of equipment has been locked out.
- F. The lock-out procedure will still be followed even if the motor leads to electric motors have been disconnected.
- G. Only the supervisor of the maintenance employee who installed a lock may authorize its removal.
- H. Any person who removes a lock-out device or a warning tag without authorization is subject to dismissal.

- I. Personnel removing locks and tags are also responsible for reinstalling any machine guards before the equipment is restarted.

PROCEDURES FOR WHEN MORE THAN ONE AUTHORIZED EMPLOYEE IS INVOLVED

If more than one employee is required to lockout or tagout equipment, each shall place his own personal lock-out or tag-out device on the energy isolating device(s). When an energy isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device may be used. Each authorized employee can then use his/her own lock to secure it. As each employee no longer needs to maintain his lockout protection, that person will remove his lock from the lockout device.

PROCEDURES FOR MAINTAINING CONTINUITY OF LOCKOUT ACROSS SHIFTS

For LO/TO operations that extend beyond a single shift, any outgoing authorized employee must ensure that the incoming employee has attached his lock to the lockout device. At that point, the outgoing employee may remove his own lock and leave the area. All incoming affected employees should be notified of the LO/TO operation in progress.

CONTRACTORS

All contractors shall follow this standard. They will be allowed to use their own lock or they may obtain one from the Director.

MACHINE PROCEDURES

The following procedures establish the minimum requirements for the lock-out or tag-out of energy isolating devices on machinery or equipment that contain hazardous energy sources that must be controlled. They shall be used to ensure that the machine or equipment is isolated from all hazardous energy and locked out or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, start-up, or release of hazardous energy could cause injury. This includes locking and tagging out electrical sources to equipment; draining of compressed air/steam; draining or locking hydraulic systems; locking and tagging supply valves; releasing stored potential mechanical energy such as springs, elevated machine parts, rotating flywheels; isolating heat energy sources; etc.

1. Identification - The authorized employee(s) must prepare a list of all equipment which could potentially cause a serious accident in the event it is inadvertently turned on during maintenance or cleaning operations. All isolating devices must be located and identified to be certain which switch(es), valve(s), or other energy isolating devices apply to the equipment to be locked or tagged out. This list should be reviewed with the department supervisor and Director to ensure all proper isolating devices have been identified.

2. Locks and Lock-out Tags - Each department affected by this procedure should be supplied with an adequate supply of lock out devices and tags. Lock-out devices include both key locks, multi-lock holders, and lock-out devices designed to adapt to valves, breakers, switches, etc.

CONFINED SPACE ENTRY PLAN

SCOPE

This Plan includes all site wide employee confined space activities which could result in accidental entrapment, engulfment, asphyxiation, exposure to mechanical injury, exposure to temperature extremes, or exposure to hazardous chemicals.

DEFINITIONS

(A) Confined Space - a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
- (3) Is not designed for continuous employee occupancy.

(B) Permit-Required Confined Space - a confined space that requires a permit for authorized entry (permit space) as defined by the Occupational Safety and Health Administration (OSHA). Their definition for a permit-required confined space includes the following descriptions:

- (1) Contains or has a potential to contain a hazardous atmosphere;
 - (2) Contains a material that has the potential for engulfing an entrant;
 - (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
 - (4) Contains any other recognized serious safety or health hazard.
- "Permit-required confined space Plan (permit space Plan)" means the employer's overall Plan for controlling and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

At TCI, the shredder, all fixed storage tanks, and nitrogen blanketed transformer tanks are always to be treated as potential permit-required confined spaces.

- (C) Permit-Required Confined Space Entry - as soon as any part of the entrant's body breaks the plane of any opening into the confined space, and for all ensuing activities in that space.
- (D) Confined Space Entry Permit - the written TCI permit which authorizes trained TCI employees to enter a permitted space. The permit will define the conditions under which the confined space may be entered.
- (E) Hazardous Atmosphere - an atmosphere which exposes an employee to a risk of death, incapacitation, injury or acute illness. Pertaining to the confined spaces at TCI, one or more of the following characterize a hazardous atmosphere:
- an atmospheric oxygen concentration below 19.5% or above 23.5%
 - an atmospheric flammable gas, vapor or most concentration in excess of 10% of its lower flammable limit (LFL).
 - an atmospheric concentration of any substance which could expose an employee in excess of the OSHA permissible exposure limit (PEL). If the substance does not have a PEL, the American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) or recommendations on the Safety Data Sheet (SDS) may be used.
 - any atmospheric condition that is immediately dangerous to life or health (IDLH).
- (F) Immediately Dangerous to Life and Health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible health effects or that would interfere with an individual's ability to escape unaided from a permit space.

DESIGNATION OF PERMIT SPACES

A. Identification

All areas that meet the definition of permit-required confined space above shall be identified by the TCI employee who is in charge of the confined space entry Plan as noted on the entry permit.

B. Posting Signs

Signs shall be posted on each confined space in which entry will be required. The signs shall notify employees of the hazards within the confined space and that the space may only be entered by authorized entrants. Signs shall read:

DANGER

CONFINED SPACE - ENTRY BY PERMIT ONLY

TRAINING AND DUTIES OF AUTHORIZED EMPLOYEES

A. General

Only those employees who have been trained and authorized may enter or attend permit confined spaces.

B. Authorized Entrants

Training - All TCI employees who will be authorized to enter permit confined spaces will take part in a training session that will provide information for entry. The training will include information on:

- The hazards that may be present
- The signs and symptoms of exposure to the hazards
- Consequences of exposure to the hazards
- Any personal protective equipment that is required to be used in the confined space
- Emergency procedures

Duties - In addition to performing the work specified in the permit, the authorized entrant shall:

- Maintain continuous contact with the attendant
- Properly use personal protective equipment provided
- Exit the confined space when the attendant orders evacuation, when automatic monitoring alarms sound, or when they perceive they are in danger
- Not introduce foreign substances, such as unspecified cleaning solvents, nor perform unauthorized activities within the confined space.

C. Authorized Attendants

Training - all authorized attendants who will be stationed outside the confined space will take part in a training session that will provide information on:

- The hazards that may be present in the confined space
- Recognition of the signs and symptoms of exposure to the hazards
- Procedures for monitoring the atmosphere in the confined space
- Recognition of external hazards that may endanger the entrant(s)
- The prohibition of the attendant entering the confined space to rescue the entrant(s)

- Any rescue procedures they must perform while not entering the confined space, such as initiating additional ventilation of the space or notification of the plant emergency coordinator or North Union County Fire and Rescue.

(All employees who act as attendants are required to be currently certified in CPR, First aid, and have received training in Bloodborne Pathogens including universal precautions)

Duties - the attendant's primary function is to remain outside the confined space at all times while performing the following functions:

- Maintain continuous and effective contact with the entrants. this can be achieved by continuous visual contact, and/or a voice activated communication system.
- Order entrants to evacuate the confined space immediately when:
 1. Conditions arise that are not allowed in the entry permit.
 2. Behavioral effects of the entrant(s) from exposure to the hazards are observed.
- A hazard originating from outside the confined space may threaten the entrants.
- Any uncontrolled hazard arises.
- The attendant must leave the work station.
 - Summon emergency coordinator and/or rescue services for the entrant(s).
 - Warn unauthorized personnel that they are not permitted to enter the permit space.
 - Properly perform rescue functions while remaining outside of the permit space.
 - Perform atmospheric testing if designated to do so.
 - Sign in and out the entrants on the entry permit.

Employee Authorizing Entry

Training - The employee who authorizes entry into confined spaces shall be designated as such in writing on the entry permit. The person shall be capable, by education, experience, or training, of anticipating, recognizing, and evaluating employee exposure to hazardous conditions, and shall be capable of specifying necessary control measures to insure entrant safety.

If the employee who authorizes entries into permit spaces also acts as an entrant or an attendant, the person must receive the training described above.

Duties - The primary responsibility of the person who authorizes entry into a permit space, is the issuance of the written entry permit. To issue the permit, the individual must:

- Assure that the permit contains all the pertinent information for the particular permitted entry
- Assure that all measures have been taken for safe entry to occur
- Assure that all conditions for the permit remain in affect
- Cancel the entry permit if entry conditions are not acceptable
- Cancel the permit after the work in the permit space has been completed
- Remove all unauthorized personnel from within or near the permit space

Rescue

General - Due to the nearby location of its facility, TCI will use the services of the North Union County Fire Department in the event of an emergency situation involving any confined space entries. Phone numbers for quickly accessing the rescue service will be included on the entry permit.

Atmospheric Testing on Permit Spaces

General - Entry into permit spaces by any employee shall be prohibited until monitoring of the internal atmosphere of each permit space has been conducted to determine if a hazardous atmosphere exists. The monitoring shall determine what, if any, additional measures must be taken to attempt to render the atmosphere non-hazardous.

Frequency of Testing - Before an employee enters each permit required confined space, the internal atmosphere shall be tested, from outside the permit space, using direct-reading instruments equipped with a remote sampling probe. Monitoring of the permit space atmosphere must be conducted so that an accurate representation of the atmosphere is achieved. Particular emphasis shall be placed on monitoring the atmosphere in all locations in which the entrants may enter. Care shall be taken to monitor the atmosphere representing the breathing zone of the entrants.

Testing Equipment - All equipment used for testing shall be explosion proof and equipped with an audible alarm or danger signaling device that will alert employees when a hazardous condition develops. All testing equipment shall be properly calibrated in accordance with the manufacturer's guidelines. The calibration of each testing device shall be checked prior to each use.

Testing Procedures - the sequence of testing of the permit space atmosphere shall be as follows:

- Oxygen Concentration
- Flammable Gases and Vapors
- Toxic Contaminants, if applicable

Testing for Toxic Contaminants - (Transformers) It is TCI's policy to receive transformers that are not "pre-cleaned", or had foreign substances placed within

by prior owners or handlers of the transformers. In addition, no TCI employee shall place a foreign substance in a transformer, such as an organic solvent for cleaning, that have not been specified by TCI for the transformer reclamation process. However, to guard against exposure to foreign substances that may have unknowingly or inadvertently been added to the transformers, the following measures shall be taken:

- The person authorizing entry into the transformer shall perform or verify performance of a visual inspection of the transformer, from outside the transformer, to determine if there are obvious signs of a foreign substance. The presence of possible unusual odors is one indication.
- If a foreign substance is noted, entry into the transformer shall be prohibited until the substance is identified by testing and/or consulting with previous owners and handlers.
- Air monitoring shall be conducted for the substance to determine the airborne concentration for comparison to the OSHA PEL or applicable exposure limit.

Permitted Confined Space Entry Procedures

General - Upon acquisition of large transformers for disassembly, the tops are removed prior to core removal. The tops must often be removed by using a flame/plasma torch or reciprocating saw. To prevent an internal fire during this procedure, the transformer is first purged with nitrogen ("blanketed"). After the top is removed, entry into the unit to unbolt the core would be considered a permit required confined space entry if done immediately after removing the top before the low oxygen environment has a chance to dissipate.

Prior to entry into tanks, the supervisor must confirm that all connecting lines (both solvent and steam) are bled down and double blocked, all associated pumps are properly shut down and locked out (see TCI Lockout/Tagout Plan), and all forms of stored mechanical energy are relieved and locked out. This should be documented on the entry permit.

Notification - Prior to entry into a permit space, notification shall be made by the supervisor in charge of the work that will require entry into the permit space to the individual who is in charge of issuing the entry permit ("Designated Personnel" on entry permit). The supervisor shall describe the work required inside the permit space and shall give a list of entrants.

Procedures for Individual Issuing Permit

- Secure a complete list of names of the entrants. Record on the permit.
 - If Contractors must enter the permit space, provide all information contained on the permit and any additional information on the hazards associated with the permit space to the Contractor. The Contractor

is required to have his own Confined Space Entry Plan for his employees. However, TCI shall provide information on the specific permit space so that the Contractor may include this information in his Plan.

- Assign an authorized attendant to the permit space. Record on the permit.
- Verify that the entrants and attendant have received proper training and are authorized to enter or attend the permit space.
- Verify that procedures to prepare the permit space for occupancy have been completed. Record on permit.
- Perform and verify performance of atmospheric testing inside permit space. Record on permit.

If initial atmospheric testing reveals that a hazardous atmosphere does not exist, and that there is a low likelihood that a hazardous atmosphere will arise:

- Forced ventilation of the space by mechanical means is not required unless the work performed inside the space may generate a hazard.
- Testing of the permit space shall be conducted at regular intervals using the remote sampling probe to ensure that a hazardous atmosphere does not develop.
- If initial testing reveals that a hazardous atmosphere exists:
 - **Prohibit Entry**
 - Notify the entrants and attendant.
 - Initiate forced ventilation of the permit space by using a mechanical blower. Care shall be taken to prevent channeling, or tunneling of air so that all areas inside of the permit space are adequately ventilated. In addition, the air supply for the forced ventilation shall be from a clean source and may not increase the hazards inside the space.
 - Retest the permit space atmosphere.
- If the hazard has been abated:
 - Continue forced ventilation to prevent the recurrence of the hazard.
 - Continuous testing of the atmosphere shall be conducted by the use of direct-reading, personal sampling devices with audible alarms.

- If the hazard has not been completely abated (but is below IDLH levels) and cannot be abated using other feasible measures:
 - Require entrants to be equipped with personal protective equipment which shall properly protect them from the hazards (as determined by the Health & Safety Director). Record on permit.
 - Continuous testing of the atmosphere shall be conducted.
- Notify emergency coordinator(s) when the entry will be made and include the duration of the entry. Record on permit.
- Obtain supervisor of work signature on the permit after the supervisor has read the permit and determined that applicable information is accurate.
- Sign the entry permit and give to the attendant or post in a conspicuous location near the permit space entrance.
- Verify that all conditions of the permit are met throughout the entry.
 - If an emergency or non-permit condition arises, void the permit and issue a new permit when acceptable conditions are achieved.
 - Issue a new permit once the acceptable conditions have been achieved.
- Cancel the entry permit once the required work inside the permit space has been completed and all entrants have signed out on the entry permit.

Procedures for Authorized Entrants

- Determine the type of work to be performed, such as mechanical repair, unbolting cores (transformers), cleaning, etc.
- Become familiar with the hazards of the permit space and the signs, symptoms, and consequences of exposure to the hazards (contact the Director).
- Review the Confined Space Entry Permit to become familiar with the methods of preparation and control of hazards. Verify for yourself that the preparations and controls as listed in the permit are satisfactory and the hazards have been contained.
- Review personal protective equipment which has been determined to be required to be worn and verify that respiratory protection training and medical surveillance has been obtained. Make sure that your PPE is worn correctly.
- Assure that name is included on the list of authorized entrants.
- Obtain the name(s) of authorized attendant.
- Sign in on permit.

- Verify that communication system with the authorized attendant(s) is operating properly where required. Upon entry into the permit space, maintain continuous contact with the authorized attendant.
- Follow all requirements of the permits.
- Immediately evacuate the permit space when necessary. Notify authorized attendant when evacuation is occurring.
- Sign out on permit following exit from the permit space.

Periodic Permit Space Plan Review

At least yearly, the Director will conduct a written review of TCI's permit required confined space entry Plan or when there is reason to believe that the measures taken under the permit space Plan may not protect employees.

Note: Examples of circumstances requiring the review of the permit space Plan are: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near-miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the Plan.

The review will utilize the canceled permits from the previous 12 month period. The review will look for any shortcomings in the permit system that would expose employees participating in entry operations to permit space hazards.

HEARING CONSERVATION PLAN

SCOPE

The Hearing Conservation Plan provides guidelines for eliminating and/or monitoring noise exposure in the work environment. Harmful effects of noise are usually not known until years after the exposure. TCI believes the best way to protect its employees and the environment from this hazard is through proper planning, as well as, through developing, training and enforcing company policies.

This Plan is outlined as follows:

- Engineering / Administrative Controls
- Monitoring
- Hearing Protection
- Annual Testing of Employee Hearing
- Training

Engineering / Administrative Controls

The first step in addressing the hazard of noise exposure is planning how to eliminate it from the work environment. This should be done by using engineering controls. Where such controls are not deemed feasible, administrative measures may be taken to reduce the time and/or degree of exposure. The goal at TCI is to bring employee exposure to below 85 decibels (dBA) for an average 8-hour day. Examples of engineering controls include:

- Using acoustic curtain walls between work areas
- Substituting with quieter machinery and tools where possible
- Placing all noisy machinery in isolated areas
- Ensuring equipment is well maintained
- Limiting employee time around high noise exposures

The ultimate goal at TCI is to use engineering controls to eliminate the need for personal hearing protection. However, at present, such controls may not be possible or feasible for certain TCI work environments. All job categories within the plant may involve movement from one area to another. Therefore, all plant employees have potential for over-exposure and are thus included in the Hearing Conservation Plan. By following company the guidelines set forth in this Plan and by properly wearing the personal protective equipment provided, the employees' exposure should be minimized.

Monitoring

TCI periodically conducts noise surveys consisting of both area noise levels (e.g. core pile work, shearing, etc.) and personnel average exposures (dosimetry). This is done to determine the effects of added work environment modifications (machinery or control additions or removals) and to ensure that employee hearing protection is adequate.

Results of these surveys are maintained on file in the Health & Safety Department and are readily accessible to the employees at all times. Following the surveys, the results are discussed with the employees to ensure that they are made fully aware of their noise exposure at the plant.

Hearing Protection

Where engineering controls cannot eliminate or reduce noise exposure to a safe level, employees are required to wear appropriate hearing protection.

TCI provides its' employees with both foam ear canal plugs and ear muffs. Custom made plugs are available for those employees who have difficulty wearing either of the standard protective devices.

Through dosimetry surveys, TCI ensures that the hearing protection provided to employees is sufficient to lower noise exposure to below 90 dBA as required by OSHA.

All visitors and contractors at TCI will be provided with appropriate protection while in designated high noise areas.

Annual Employee Audiometric Exam

TCI contracts annual audiometric exams for all employees who participate in the Hearing Conservation Plan. TCI maintains copies of all audiograms and audiometer calibration records obtained from the contracted health care provider.

The audiogram consists of bilateral pure tone air conductance discrimination of a standard frequency matrix from 250 to 8000 hertz.

A baseline audiogram is conducted as part of an employee's pre-employment physical. If a Standard Threshold Shift (STS) (an average 10 dB discrimination shift from baseline across the 2, 3 and 4000 hertz frequencies in either ear) is noted on an employee's annual audiogram, the test will be repeated within 30 days. If the retest agrees with the initial shift, the employee is notified in writing and given a work modification in an effort to reduce the employee's exposure. They are also refit with hearing protection and retrained in its proper use and care. Should an STS of 25 dB occur, this would be considered an OSHA recordable illness and the employee would be referred to a physician for further evaluation.

Training

Employees must receive annual training on TCI's Hearing Conservation Plan. The training is documented and includes the following:

- Instruction on proper selection, fitting, use and care of hearing protection devices
- Explanation of the effects of noise on hearing
- Description of the disadvantages/advantages of each type of hearing protection device

This training is provided by the Health & Safety Director and is presented through a combination of lecture, hands-on demonstration, videotapes, written training module and comprehensive test.

Following training in the Hearing Conservation Plan, the employee will be able to:

- Explain the effect of noise on hearing
- Explain the purpose of hearing protection
- Choose proper hearing protection
- Explain the purpose of audiometric testing

TCI will maintain records indicating you received this annual safety training for the duration of your employment.

Adherence to this guideline is mandatory for all personnel.

Certain mechanical tasks or activities occurring within the plant produce noise levels greater than 85 dBA and therefore require the use of hearing protection. The following is a partial list of tasks and activities that require hearing protection:

Using of the following tools:

- (a) Pneumatic impact chisel
- (b) Pneumatic impact wrench
- (c) Pneumatic or electric circular saw
- (d) Disk grinder
- (e) Table saw
- (f) Electric reciprocating saw

If you are involved in an activity not included here, but it is one in which you feel the noise exposure may be excessive, notify your supervisor and wear your hearing protection.

TCI provides employees and contractors with personal hearing protection devices and through Plant design modifications are ongoing in an effort to reduce noise levels throughout the plant. Warning signs are posted at high noise areas throughout the plant.

Hearing protective devices muffle the sound waves as they enter the ear. The hearing protection devices approved for use at TCI are of two basic types, those worn over the ear, commonly referred to as ear muffs. Those worn inside the ear are moldable (Foam plug) to fit each wearer and are disposable to provide clean, safe hearing protection.

Foam plug hearing protective devices are readily available in the storeroom and at the entrance to the plant. Ear muffs are also available in the storeroom. Please request them from your supervisor.

LEAD EXPOSURE CONTROL PLAN

SCOPE

This Plan includes all site wide employee activities on equipment owned or operated at TCI, which could potentially result in employee exposure to inorganic lead. It provides the methods and procedures that are followed to meet the requirements of the OSHA General Industry Standard, "Lead", 29CFR 1910.1025, "HazCom" 29CFR 1910.1200, "Respiratory Protection" 29CFR 1910.134, "Personal Protective Equipment" 29CFR 1910.132,133,134

An assessment of our operations and mechanical tasks in other affiliated facilities indicates that the OSHA PEL of 50 $\mu\text{g}/\text{m}^3$ or "action level" of 30 $\mu\text{g}/\text{m}^3$ for lead could potentially be exceeded in excess of 30 days per year for employees. This Plan outlines our efforts to systematically evaluate and institute controls to reduce the employee's exposure potential during this operation. Also, previous monitoring data has confirmed that employees who use cutting torches to remove transformer lids are potentially exposed to lead fumes coming from the lead based paints which were commonly used on older transformers. Although this operation is seldom performed now (10-15 times per year, 1-4 hours per occurrence), controls have been established to ensure employee exposure remains below the action level. These controls will also be addressed in this Plan.

General Information – Lead

Lead may also be found in varying percentages in coatings that have been applied to the electrical equipment processed by TCI. When sufficient heat is applied to these coatings, such as during flame torch cutting, lead fumes may be generated.

Lead is a hazardous material. Exposure to lead can occur from inhaling airborne lead fumes, dust, and mist or from ingesting lead through hand-to-mouth contact with lead contaminated materials. Lead is a potent poison that serves no known useful purpose once absorbed by the body. It adversely affects numerous body systems and causes health impairment and disease which arise after periods of exposure as short as days or as long as several years. Exposure to lead may result in damage to the nervous, gastrointestinal, renal, cardiovascular, skeletal, reproductive, and blood forming systems.

Torch Cutting - Approximately 10 to 15 times per year, it is necessary to use a cutting torch to remove the tops from large transformers. This usually involves one employee operating from the top of the transformer or from a platform, either of which puts his breathing zone above and near the torch. Another employee is usually standing on the ground acting as fire watch. Monitoring has indicated lead exposures in excess of 150 $\mu\text{g}/\text{m}^3$ during this operation.

Personal Protective Equipment

- PPE must be worn at all times while cutting tops off lead coated transformers.
 - full-face respirator w/organic vapor and HEPA cartridges
 - disposable Tyvek coveralls w/hood
 - steel toed leather boots
 - polyethylene booties
 - leather gloves
 - 4 mil. nitrile gloves
 - Kevlar gloves

All Tyvek articles must remain intact throughout the shift. Any articles that are torn or saturated by oil are to be replaced immediately.

TCI requires that all employees who must wear respirators be clean shaven in facial areas that will have contact with the sealing surfaces of full face respirators (Only mustaches are allowed). This will be checked by the supervisor at the start of each shift before the employees are allowed to work.

Respirators are required to be kept as clean as possible at all times. Employees are instructed to inspect the face seals and valves of their respirators at least twice a day and to wash, wipe and disinfect the face piece at the end of each shift using detergent and alcohol swabs. They are instructed to replace HEPA filter cartridges whenever breathing becomes labored. They are also instructed to replace organic vapor cartridges whenever an odor is detected while wearing the respirator and the respirator passes the negative and positive fit checks. Replacement cartridges are available from the supervisor.

MEDICAL MONITORING AND REMOVAL

As part of TCI's Medical Monitoring Plan, all employees are tested at least annually for blood lead concentration. Those employees whose exposures are shown through quarterly air sampling to possibly exceed the OSHA action level of $30 \mu\text{g}/\text{m}^3$ are given tests for blood lead and zinc protoporphyrin every 6 months. If an employee's blood lead ever exceeds $40 \mu\text{g}/\text{dL}$, it is TCI's policy to immediately transfer them to another job in which the airborne concentration is below $30 \mu\text{g}/\text{m}^3$ and to increase the blood lead analysis for that employee to every 2 months until the level returns below $30 \mu\text{g}/\text{dL}$.

Employees who may be exposed to airborne lead levels greater than $30 \mu\text{g}/\text{m}^3$ also receive yearly a thorough physician's exam and additional laboratory tests including: Complete Blood Count (CBC), Blood Urea Nitrogen (BUN), Serum Creatinine, and Urinalysis.

EMPLOYEE TRAINING

All employees at TCI are given orientation training prior to job assignment and yearly thereafter if assigned to a job where (1) the OSHA action level for airborne lead exposure is expected to be exceeded or (2) where the OSHA permissible exposure level (PEL) or excursion limit (EL) is expected to be exceeded. The training consists of a review of:

- The contents of the written TCI Lead Exposure Control Plan and the OSHA general industry standards for lead (29 CFR 1910.1025, including appendices A and B).
- The health effects associated with lead overexposure, including its effects on reproductive systems of both males and females.
- The purpose and a description of a Medical Surveillance Plan, and the Medical Removal Protection Plan.

- The engineering controls and proper work practices associated with the job assignment.
- The purpose of and the proper use, care, and maintenance of personal protective equipment to be used as part of job assignment. This includes the limitations of such equipment.
- The purpose of chelating agents and why they are not to be routinely used to remove lead from their bodies and should not be used at all except under the direction of a physician.

RESPIRATORY TRAINING

All employees at TCI who are assigned to a job where the OSHA action level for airborne lead exposure is expected to be exceeded more than 30 days out of the year or above the OSHA permissible exposure level (PEL) or the OSHA excursion level (EL) are given respiratory protection training by TCI's Health & Safety Director as per TCI's Respiratory Protection Plan and OSHA 1910.134 which includes:

- The contents of the written Plan and OSHA general industry standard for respiratory protection.
- A review of the proper selection, fitting, use, care, and storage of the respirators they were assigned. This includes how to and how often to clean and disinfect the respirators.
- How to conduct a field lead check.
- How to determine when a respirator is not functioning properly and what actions to take should this occur.
- How to obtain replacement parts for the respirators.

As part of the respiratory training, a thorough qualitative fit test is given to these employees prior to job assignment and every 6 months thereafter if, after a physician's review, he/she is found to be fit to wear a negative pressure respirator.

RECORD KEEPING

Records to be kept at TCI include the following:

- Exposure monitoring
 - date, number, duration, location, and results of each of the samples taken
 - the operations involved
 - description of the sampling and analytical methods used and evidence of their accuracy
 - the type of respiratory protective devices worn, if any
 - name, social security number and job classification of the employee monitored and of all other employees whose exposure the measurement is tended to represent
 - the environmental variables that could affect the measurement of employee exposure

(These records shall be maintained for a period of at least 40 years or for the duration of employment plus 20 years, whichever is longer.)

- Medical surveillance
 - name, social security number, and description of the duties of the employee

- a copy of the physician's written opinions
 - the results of any airborne exposure monitoring done for that employee and the representative exposure levels supplied to the physician
 - any employee medical complaints related to exposure to lead or asbestos
 - a copy of the medical examination results including medical and work history
 - a description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information (to be maintained by the physician)
 - a copy of the results of biological monitoring
- (These records shall be maintained by TCI or the physician for a period of at least 40 years, or for the duration of employment plus 20 years, whichever is longer.)*

- Medical Removals for Lead

- name and social security number of the employee
 - the date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his/her former job status
 - a brief explanation of how each removal was or is being accomplished
 - a statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.
- (These records shall be maintained by TCI for at least the duration of an employee's employment.)*

- Training Records

(These records will be maintained by TCI for at least one year beyond the date of employment.)

BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

SCOPE

The text of OSHA 1910.1030, "Bloodborne Pathogens", is an extensive document which places employers under an exacting burden to protect its employees from exposure to infectious bloodborne diseases such as HIV ("AIDS") and Hepatitis B while in the work place. Compliance with this rule will require TCI, as an employer, to take extensive measures to protect employees who are expected to perform certain services as part of their job descriptions.

The OSHA code is divided into seven major sections, six of which will apply to TCI in meeting compliance with the code. These sections are titled **Exposure Control, Methods of Compliance, Hepatitis B Vaccination and Post-exposure Follow-up, Communication of Hazards, and Recordkeeping**. The section which is not expected to apply to TCI is titled **HIV and HBV Research Laboratories and Production facilities**. Major subsections of the code specify requirements for assessing exposure potential to

various employees, defining procedures and specific equipment to eliminate or minimize exposure hazards, training and medical assessments. It is readily apparent that such activities require competencies which are most generally associated with the field of medicine.

The code itself refers in several subject areas to persons knowledgeable in the areas of epidemiology and symptoms of bloodborne diseases, medical assessments and to licensed health care professionals (see definitions section). Such code words and terms suggest that a bloodborne pathogens exposure control plan is best managed by an employee with extensive competency in medicine, epidemiology or an Director. TCI's Exposure Control Plan will be administered by the Health & Safety Director in coordination with the Company Physician as designated.

PURPOSE

This plan is intended to reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) and other bloodborne pathogens that TCI employees may encounter in their work place.

This Exposure Control Plan for Occupational Bloodborne Pathogen (BBP) Exposure has been developed for TCI in compliance with the CDC guidelines and the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030 as adopted and enforced by the State of Ohio.

TCI believes that there are a number of "good general principles" that should be followed when potentially working with bloodborne pathogens. These include:

1. It is prudent to minimize all exposure to bloodborne pathogens.
2. Risk of exposure to bloodborne pathogens should never be underestimated.
3. Our facility should institute as many work practice and engineering controls as possible to eliminate or minimize employee exposure to bloodborne pathogens.

We have implemented the Exposure Control Plan to meet the letter and intent of the OSHA Bloodborne Pathogens Standard. The objective of this plan is twofold:

1. To protect our employees from the health hazards associated with bloodborne pathogens.
2. To provide appropriate treatment and counseling should an employee be exposed to bloodborne pathogens

DEFINITIONS

Bloodborne Pathogens: Microorganisms that are present in human blood and can cause disease in humans. These pathogens include Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

Exposure Incident: When an employee has contact with blood or other potentially infectious materials as a result of his or duties. This contact includes specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact.

Non-Intact Skin: Skin that has cuts, abrasions or other openings through which bloodborne pathogens could enter the bloodstream.

Occupational Exposure: Reasonably anticipated employee contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. This includes skin, eye, mucous membrane or parenteral contact.

Other Potentially Infectious Materials: This means human body fluids: semen, pericardial fluid, peritoneal fluid, amniotic fluid, saliva, body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

Source Individual: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

Universal Precautions: An approach to infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV and other bloodborne pathogens.

RESPONSIBILITIES

Director – Michelle Botter-Lee, Health & Safety Director

This person is responsible for:

- Issuing and administering this plan and making sure that the plan satisfies the requirements of all applicable federal, state or local bloodborne pathogen regulations
- Working with management and other employees to develop and administer any additional bloodborne pathogens related policies and practices needed to support the effective implementation of this plan
- Identifying which employees are likely to be exposed to bloodborne pathogens
- Developing procedures for post-exposure incidents
- Maintaining medical records of exposure incidents, training records and hepatitis B vaccination records
- Completing exposure incident reports and notifying affected individuals
- Evaluating and updating the Plan annually (by Dec. 31st) or whenever new or modified tasks and procedures are implemented which affect occupational exposure of TCI employees
- Training employees annually

Current First Aid/ CPR Providers (as of 11/17)

Name and Titles

Michelle Botter-Lee– Safety Director
Angie Masters– EHS Coordinator
Frank Jackson – Company President

These people are responsible for:

- Knowing what tasks they perform that have occupational exposure
- Using universal precautions in all situations that involve exposure to blood and other potentially infectious materials
- Developing good personal hygiene habits
- Informing the Director of all exposure incidents
- Attending the bloodborne pathogens training sessions

Determination of Exposure

OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious material. The exposure determination is made without regard to the use of personal protective equipment. The determination is derived from the following:

1. Job classifications in which all employees have occupational exposure to bloodborne pathogens and the tasks in which occupational exposure to bloodborne pathogens occur
2. Job classifications in which some employees have occupational exposure to bloodborne pathogens and the tasks in which occupational exposure to bloodborne pathogens occur

Job classification in which all employees have potential exposure to bloodborne pathogens and the tasks in which occupational exposure to bloodborne pathogens occur

NONE AT THIS TIME

Compliance Methods

Universal precautions will be observed at TCI in order to prevent contact with blood or other potentially infectious material. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

Engineering and Work Practice Controls

Such controls will be utilized to eliminate or minimize exposure to employees at this facility. Where occupational exposure remains after institution of these controls, personal

protective equipment shall also be utilized. At TCI, the following engineering controls will be used:

1. Bio-Hazard Debris Containers (polyethylene bags), Pre-Labeled, Predominantly Red
2. Gloves, Latex or Nitrile Disposable, Non-Sterile
3. Eyewear, Safety Glasses with Side Shields
4. Disinfectant Cleanup Solution - Sodium Hypochlorite 5.25% Solution, Dilute 1:10 Clorox, or Commercial Quaternary ammonium or active chlorine cleaning and absorbent products rated for HIV/HBV disinfected efficacy
5. Towelettes, Antiseptic Hand Wipe
6. Pocket Mask, CPR, with One-way valve anti-emesis

The above controls will be examined and maintained on a regular schedule. These items are located in designate areas inside the facility and the office. Also, employees who expend personal protective or other response material under this plan shall inform their supervisor in a timely manner to assure adequate inventories are maintained. Any employee performing a response action or other duties under this plan who feels he or she may have been exposed in the course of that duty shall immediately report same to the Director. In such cases, the Director shall assist the employee in completing an Exposure Determination form.

Hand washing facilities are available to employees who incur exposure to blood or other potentially infectious materials. Designated responders under this plan shall wash with antiseptic cleaner or towelettes (when soap and water is not immediately available) after an exposure incident, further washing with soap and water as soon as practicable thereafter. In cases where there was potential exposure to broken skin, face, eyes or mucous membranes (such as nasal passage or mouth), employees shall ensure exposed areas have been flushed with water as soon as practicable following contact.

Personal Protective Equipment

- Employees will be provided with personal protective equipment at no cost
- Protective equipment will be removed before leaving the work area or after a garment becomes contaminated
- Used protective equipment will be placed in designated containers
- Gloves will be worn when the employee may have contact with blood or other potentially infectious materials
- Appropriate face and eye protection will be worn when splashes, sprays, spatters or droplets of blood or other potentially infectious materials pose a hazard to the eye, nose or mouth

- Appropriate protective body covering will be worn when occupational exposure is anticipated

Housekeeping

- All equipment and work surfaces that have been contaminated with blood or other potentially infectious materials will be cleaned and decontaminated with an appropriated disinfectant
- All infectious waste will be placed in red colored plastic bags for disposal.
- All regulated waste will be discarded according to Federal, State and Local regulations.

Labeling

- All infectious waste containers will be labeled with a bio-hazard symbol and the word "bio-hazard"

HBV Pre-Exposure Plan

Affected employees within TCI's facility recognize that even with good adherence to all of our exposure prevention practices, exposure incidents can occur. As a result, we have implemented a Hepatitis B Vaccination Plan.

- The hepatitis B vaccine and vaccination series will be offered within 10 working days of initial assignment to employees who have potential occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons. The series consists of three inoculations over a six-month period. As part of their bloodborne pathogen training, our employees have received information regarding Hepatitis vaccination, including its safety and effectiveness.
- Vaccinations are performed under the supervision of a licensed physician or other health care professional
- The vaccine and vaccinations, as well as all medical evaluations and follow-up will be made available to TCI employees at no cost.
- Vaccinations will be administered according to current recommendations of the U.S. Public Health Service
- All laboratory tests shall be conducted by an accredited laboratory at no cost to the employee
- Employees who decline the vaccination will sign a declination form
- The vaccination will be made available to the employee at a later date and at no cost if he/she continues to have the potential for exposure

Post-Exposure Evaluation and Follow-Up

All exposure incidents shall be reported, investigated and documented. When the employee incurs an exposure incident, it shall be reported to his/her supervisor who shall report same to the Director.

Note: For OSHA 300 Recordkeeping, an occupational bloodborne pathogens exposure incident shall be classified as an injury and shall be recorded if:

1. The incident is a work-related injury that involves loss of consciousness, transfer to another job or restriction of work or motion, or
2. The incident results in the recommendation of medical treatment beyond first aid, or
3. The incident results in a diagnosis of seroconversion: serological status of the employee not to be recorded on the OSHA 300

Source: OSHA enforcement document: CPL 2-2.44C

Following a report of an exposure incident (see definition), the exposed employee shall immediately receive a confidential medical evaluation and HBV vaccine will be offered within 24 hours of the incident. The Director will investigate every exposure incident that occurs in our facility. This investigation will be initiated within 24 hours after the incident occurs and will consists of the following components:

1. When the incident occurred - date and time
2. Where the incident occurred
3. What potentially infectious materials were involved in the incident - blood, saliva, etc.
4. Source of material
5. Under what circumstances the incident occurred - type of work being performed
6. How the incident was caused
7. Personal protective equipment being used at the time of the incident
8. Actions taken as a result of the incident - employee decontamination, cleanup, notifications made, etc.

This information will be reviewed via TCI's Accident Review Committee where recommendations will be made and action plans will be developed to help prevent future reoccurrences of similar incidents.

Additional exposure incident procedures will be followed in order to make sure that our employees receive the best and most timely treatment if an exposure to bloodborne pathogens should occur. These additional procedures consist of the following:

- The routes of exposure and how exposure occurred will be documented
- The source individual will be identified and documented (unless infeasible or prohibited by law)
- If consent is given, the source individual's blood will be tested and documented as soon as possible to determine HIV and HBV infectivity
- The exposed employee will be provided with the source individual's test results and information about applicable laws and regulations concerning source identity
- After consent is given, the exposed employee's blood will be tested for HBV and HIV serological status

- If the employee does not give consent for HIV serological testing, the baseline blood sample will be preserved for at least 90 days
- Recommendations by the U.S. Public Health Service will be followed
- The health care provider who is responsible for administering the vaccine and post-exposure evaluation will be given a copy of the OSHA Standard (29 CFR 1910.1030)
- After an exposure incident occurs, the health care provider will receive a description of the exposed employee's job duties relevant to the exposure incident, documentation of the route of exposure, circumstances of exposure, results of the source individual's blood tests and all relevant employee medical records, including vaccination status
- The employee will be provided with a copy of the health care provider's written opinion within 15 days after the evaluation. In keeping with this process' emphasis on confidentiality, the written opinion will contain only the following information:
 - Whether Hepatitis B Vaccination is indicated for the employee
 - Whether the employee has received the Hepatitis B Vaccination
 - Confirmation that the employee has been informed of the results of the evaluation
 - Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment

All other findings or diagnoses will remain confidential and will not be included in the written opinion.

- The health care provider who will complete the post-exposure evaluations:

Marion Occupational Health, Marion, Ohio

Information and Training

Having well informed and educated employees is extremely important when attempting to eliminate or minimize our employees' exposure to bloodborne pathogens. Because of this, all employees at TCI who have the potential for exposure to bloodborne pathogens are provided comprehensive training at the time of initial assignment to tasks where occupational exposure may occur. Refresher training shall be presented to these designated personnel annually.

Training must be presented by a health care or other professional medically competent to understand and interpret bloodborne infections, including routes of entry, epidemiology and prophylaxis. Training shall be interactive and cover the following:

1. Copy of the standard and an explanation of its contents;
2. A discussion of the epidemiology and symptoms of bloodborne diseases;
3. An explanation of the modes of transmission of bloodborne pathogens;

4. An explanation of TCI's Bloodborne Pathogen Exposure Control Plan (this plan) and a method for obtaining a copy;
5. The recognition of tasks that may involve exposure;
6. An explanation of the use and limitations of methods to reduce exposure, for example engineering controls, work practices and personal protective equipment (PPE);
7. Information on the types, use, location, removal, handling, decontamination, and disposal of PPE's;
8. An explanation of the basis for selection of PPE's;
9. Information on the Hepatitis B vaccination, including efficacy, safety, method of administration, benefits, and that it will be offered free of charge;
10. Information on the appropriate actions to take and, for those employees not designated by this plan, persons to contact in an emergency involving blood or other potentially infectious materials;
11. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up;
12. Information on the evaluation and follow-up required after an employee exposure incident;
13. An explanation of the signs, labels and color coding systems

Medical Records

All medical records are maintained in secure, confidential files in TCI's Administrative office.

Medical records shall be maintained in accordance with OSHA Standard 29 CFR 1910.1020. These records shall be kept confidential, and must be maintained for at least the duration of employment plus 30 years. The records shall include the following:

1. The name and social security number of the employee
2. A copy of the employee's HBV vaccination status including the dates of vaccination
3. A copy of all results of examinations, medical testing, and follow-up procedures
4. A copy of the information provided to the health care professional, including a description of the employee's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure

Training Records

TCI's Health & Safety Director is responsible for maintaining the following training records.

Training records shall be maintained for three years from the date of training. The following information shall be documented:

1. The dates of the training sessions
2. An outline describing the material presented
3. The names and qualifications of persons conducting the training

4. The names and job titles of all persons attending the training sessions

Hepatitis B Vaccination Statement of Declination

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature

Date

Employee Name Printed

Employer Representative Signature

TCI Exposure Determination Form I

Write the job titles and names of employees who have the potential of becoming exposed to blood or body fluids as a routine part of their assigned job at TCI (i.e. plant nurse, emergency first responders)

Note: People in this group are likely to have one or more exposures to blood or body fluids per month.

Job Title	Employee Name

TCI Exposure Determination Form II

Write the job titles and names of employees who have the potential of becoming exposed to blood or body fluids because of specific tasks they may perform at TCI (i.e. Custodian/Laundry Technician whose specific task is to clean contaminated surfaces, Confined Space Entry Attendants whose specific task is to provide 1st Aid and CPR until professional help arrives)

Job Title	Specific Task	Employee Name

TCI Exposure Incident Report

Part I. Exposed Individual

Name _____
Address _____
Social Security Number _____

1. Using the list below, check off the parts of the body that were exposed.

Eye
Mouth
Mucous membrane
Non-intact skin
Puncture

2. What was the employee exposed to?

Blood Vomit Urine Feces Other (explain) _____

3. Describe the exposure incident.

What work was being done? _____
What caused the incident? _____
What personal protective equipment was worn? _____
What actions were taken immediately following the accident? _____

Part II. Source Individual

Name _____

Address _____

- | | | | |
|--|-----|----|---------|
| 1. Does your state have a confidentiality requirement? | yes | no | unknown |
| 2. Is the source individual infected with HBV or HIV? | yes | no | unknown |
| 3. Has the source individual consented to blood testing? | yes | no | |

TCI Exposure Incident Report

Part III. Medical Examination Checklist

Provide the following information to the health care provider who performs the follow-up medical evaluation on the exposed employee.

Initial and date when each step is complete.

- | | |
|--|---------------------------|
| 1. Copy of the Bloodborne Pathogens Standard | Initials _____ Date _____ |
| 2. Copy of this Exposure Incident Report | Initials _____ Date _____ |
| 3. Results of the Source Individual's blood tests | Initials _____ Date _____ |
| 4. Copy of the exposed employee's medical records relevant to the exposure | Initials _____ Date _____ |

Signature of person completing this form _____

Print Name _____ Date _____

Attach source individual's blood test results and signed consent form or refusal form.

TCI Exposure Incident Checklist

Initial and date when each step is completed.

1. Exposure incident report completed.	Initials _____ Date _____
2. Source individual's medical release/refusal obtained	Initials _____ Date _____
3. The following information has been provided to the health care provider performing the follow-up evaluation:	
a. Cover letter requesting the evaluation	Initials _____ Date _____
b. A copy of the OSHA Standard	Initials _____ Date _____
c. All information available on the source individual	Initials _____ Date _____
d. A copy of the exposed employee's medical records relevant to the exposure	Initials _____ Date _____
4. Employee notification by the health care provider concerning the results of the follow-up evaluation.	Initials _____ Date _____

TCI Exposed Employee Medical Release Form

I hereby affirm the information found in the Exposure Incident Report is a true and correct account of my exposure incident. I further authorize my employer to release all relevant medical records to the health care provider who will be performing the medical evaluation and follow-up for this exposure incident. I understand that all information collected during this evaluation and the contents of this report will remain confidential.

Employee Signature _____ Date _____

Source Individual Medical Release/Refusal Form

Source Individual Name _____
Address _____

You have been involved in an incident that has exposed the following employee(s) to your blood or body fluids:

Permission For Source Individual's Medical Release

I hereby grant permission to have my blood drawn and tested to determine if I am a carrier of a bloodborne disease. I also grant permission to have the test results released to the individuals listed above, and to the health care providers performing the follow-up evaluations.

Source Individual's Signature _____ Date _____

Refusal For Source Individual's Medical Release

I have had the exposure evaluation process explained to me and I hereby refuse to consent to blood testing to determine my infectious status with regard to bloodborne pathogens, including but not limited to Hepatitis B Virus (HBV) or Human Immunodeficiency Virus (HIV). I understand that by refusing to do so, those individuals who were exposed to my blood or body fluids will have limited information to determine their potential for contracting these diseases.

Source Individual's Signature _____ Date _____

Dear Dr. TBD

Based upon the attached Exposure Incident Report, the following employee sustained an occupational exposure to bloodborne pathogens. Under the Occupational Safety and Health Administration Bloodborne Pathogen Standard 29 CFR 1910.1030, Trans-Cycle Industries is obligated to request a medical evaluation and follow-up for this employee.

You are being provided with the following information:

1. A copy of the OSHA Standard.
2. A copy of the Exposure Incident Report.
3. Information on the source individual.
4. A copy of the exposed employee's medical records relevant to this exposure and his/her HBV vaccine status.

Please verify, within 15 days, that the exposed employee has been informed of the following:

1. The results of the evaluation.
2. Any medical condition resulting from exposure.

3. Any further evaluation or treatment needed.

Please send the verification letter to my attention. If you have any questions, please contact me.

Sincerely,

Health & Safety Director

Bloodborne Pathogens Equipment List

Instructions: List all available equipment to be used for the bloodborne pathogens Plan, where it is stored and who is responsible for the equipment.

Personal Protective Equipment

Equipment Type	Storage Location	Person Responsible

Decontamination and Disposal Materials

Equipment Type	Storage Location	Person Responsible

Bloodborne Pathogens Plan Evaluation Record

Please Print

<u>Evaluation Date</u>	Plan Evaluator	List any changes made to the Plan	Annual Completion Date	Training	Comments

HAZARD COMMUNICATION PROGRAM

The TCI Hazard Communication Plan is an integral part of our policy to provide a healthful and safe working environment for employees. TCI feels that it is essential for its employees to be knowledgeable of the hazards to which they may be exposed, to recognize deleterious effects that may occur from such exposure, and to be familiar with work practices and the methods for controlling exposures.

In order to conduct our business, certain materials must be used that require specific precautions to protect our employees' health. Therefore, it will be the policy of TCI to communicate any hazards employed with handling hazardous materials to those employees involved.

It is the responsibility of the Health & Safety Director, as the designated Hazard Communication Plan Coordinator and all managers/supervisors to ensure proper information is obtained and disseminated to the appropriate employees.

It is each employee's responsibility to follow safe working practices as outlined in our operating procedures and in the Safety Data Sheets.

The effectiveness of this Hazard Communication Plan depends on the active support and involvement of all personnel.

INTRODUCTION

General

The purpose of this written Plan is to assure that information is available on hazards of chemicals present at our site that employees are aware of hazards of chemicals with which they work, and that training is provided in procedures and practices necessary to control exposures to these hazardous materials. The Plan applies to chemicals known to be present in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

Regulatory Requirements

The regulatory requirements for this Plan are set forth in the Hazard Communication Standard (HSC) promulgated by the Occupational Safety and Health Administration (OSHA). This standard is contained in OSHA's General Industry Standards, 29 CFR 1910.1200.

The success of this Plan requires commitment from management and employees, each of whom bears a responsibility for assuring the goals of the Plan are met. Management is responsible for providing these sources necessary to assure that employees receive accurate and complete information on hazardous chemicals in this workplace. Employees are responsible for using this information to protect themselves and their fellow workers against hazardous chemicals.

Hazard Communication Plan Overview

The sections that follow describe the basic elements of the TCI Hazard Communication Plan (HCP). These elements include labels and other forms of warning, material safety data sheets (SDS's), and employee information and training Plans. Also included are sections on informing employees of the hazards of non-routine tasks and of the hazards associated with chemicals contained in unlabeled pipes. A section is included on informing Contractors with employees who may be in this facility of the hazardous chemicals their employees may be exposed to while in our facility. Finally, there is a list of the hazardous chemicals known to be present in this facility.

Plan Administration

Supervisors are assigned for carrying out various tasks under this Plan. These tasks and the assigned responsibilities are described in each section. Overall responsibility for implementation of the TCI HCP is assigned to Frank Jackson, President, and Michelle Botter-Lee, Health & Safety Director (Director), who acts as the HCP Program Administrator. The responsibilities of the Director include:

- Assuring that the basic elements of the Plan are implemented and that the Plan is kept current;
- Identifying department managers, supervisors, and their attendant responsibilities for carrying out the requirements of the Plan; and
- Coordinating the efforts of managers, supervisors, and their attendants who are assigned responsibilities in support of this Plan.
- Identifying hazardous chemicals used in the facility and listing those chemicals on the inventory form.
- Obtaining SDS's from all hazardous material suppliers and keeping an up-to-date file of all SDS's.
- Ensuring that no employee is allowed to work with a hazardous chemical unless training has been provided.
- Providing training to employees in safe handling of hazardous materials, which are used in the course of their assignments.
- Ensure the chemical training record is placed in the personnel file of each employee who has received hazard communication training.
- Ensure proper labeling practices are being followed.
- Enforce health and safety rules.

LABELS AND OTHER FORMS OF WARNING

Incoming Containers

The Supervisor insures that labels on incoming containers of hazardous chemicals are present and complete with the following information:

- Identity of the chemical;
- Presence of hazard warning(s); and
- Name and address of the chemical manufacturer, importer, or other responsible party.

If the label is absent or incomplete according to the above criteria, the Supervisor notifies the vendor and requests the appropriate information or label.

The Director assumes responsibility for determining the adequacy of the available vendor's label. If the label is not adequate according to the requirements of the standard with special attention to hazard warnings, the Director shall notify the vendor and request additional information, and pending acquisition of suitable information, place the material on hold.

In-Plant Containers

Portable Containers

Portable containers into which hazardous chemicals are transferred are labeled with the following information:

- Identity of the hazardous chemical; and
- Appropriate hazard warnings.

The supervisor is responsible for insuring the labeling of the portable container with the labels supplied by the Director.

Fixed Containers

Fixed containers of hazardous chemicals are labeled with the following information:

- Identity of the hazardous chemical; and
- Appropriate hazard warnings.

The Supervisor is responsible for assuring the labeling is correct.

Waste Materials

Labels for waste items in process and waste containers generated by TCI identify the hazardous chemicals present and provide the appropriate warnings per federal EPA Resource Conservation Recovery Act (RCRA) and the Toxic Substance Control Act (TSCA) regulations.

The following subsections identify the persons responsible for assuring the adequacy of SDSs and the tasks for which they are responsible.

Review Process

The Supervisor determines the availability of SDS's for incoming materials. If an SDS is not available from the vendor, the Supervisor notifies the Director who will request the appropriate SDS. If an SDS is available from the vendor, the Director conducts a preliminary review of the SDS to determine if the basic information as required by the regulations is presented. If the basic information is complete, the Director determines if the available technical information is adequate according to the regulatory criteria. If not, the Director requests additional information from the vendor. Once pertinent information is obtained, the Director researches the hazard of the material according to the regulatory criteria.

Availability of SDSs

The Director maintains a master list of SDS's for hazardous chemicals present at TCI, which is located in the Director's office. Another list specifically for the plant and office workers is located at the "Right to Know" station in the facility breakroom. Also, a list specifically for laboratory

chemicals is located in the laboratory. They are readily accessible during each work shift to employees when they are in the work area. For off-site workers, applicable SDS's are included as part of site specific health and safety plans and they are kept in the Site Supervisor's vehicle. Additional SDS's are always readily available via the Internet by contacting the Director.

Process Materials

Due to the nature of the process materials (scrapped out electrical equipment) and the source (end users of the equipment, not manufacturers), SDS's are usually not available for transfer to us. However, the Supervisor will ensure that any SDS obtained from any supplier of waste material for processing will pass through to downstream metals brokers, incinerators, oil recyclers, and smelters.

EMPLOYEE INFORMATION AND TRAINING

Initial Training

Employees exposed or potentially exposed to hazardous chemicals are trained upon initial hire and job assignment by the Director prior to the use of or potential exposure to the hazardous chemicals.

TCI uses a classroom type forum for training of employees. It consists of lecture by the Director including a hands on thorough review on the use of SDS's. Videos supplement the lecture to ensure complete coverage of all information on Right-to-Know and the Hazard Communication Standard.

The initial training provides employees the following information:

- overview of the OSHA Hazard Communication Standard and employees' rights under it,
- operations in their work areas where hazardous chemicals are present,
- location and availability of this written Plan, including the list of hazardous chemicals,
- location of the SDSs for hazardous chemicals in their work area, and an explanation of reading and interpreting SDSs,
- an explanation of reading and interpreting information on hazardous chemical labels,
- physical and health hazards of the chemicals in use in their work areas,
- measures they can take to protect themselves from hazardous chemicals, including procedures implemented to protect from exposure to hazardous chemicals such as safe work practices, engineering controls, and the use of personal protective equipment if necessary,
- proper procedures for responding to emergencies and for dealing with unusual operations,
- methods and observations they may use to detect the presence or release of a hazardous chemical in their workplace, including air monitoring, visual appearance or odor of hazardous chemicals when being released, and

changes in operational parameters.

The overall effectiveness of the Hazard Communication Plan relies on active participation by employees in all aspects of the Plan. Training especially requires participation and feedback as to scope and depth. Employees are encouraged to bring to the attention of the Director and/or their supervisors problems or questions concerning hazardous chemicals.

Periodic Training

Periodic training will be provided to potentially exposed employees whenever a new hazardous chemical is introduced into their work area and whenever new, significant information is received about hazardous chemicals already in their work area. This training will be provided by the Director.

Recordkeeping

The Director maintains a record of all training provided to employees under the hazard communication Plan.

MISCELLANEOUS

Non-Routine Tasks

Employees who may perform non-routine tasks such as confined space entries are trained beforehand by the Director. Training includes discussion of the health and physical hazards which may be encountered and procedures for measuring, if appropriate, and protecting against those hazards, including use of monitoring instruments, engineering controls, work practices, and personal protective equipment. Much of this information comes from the SDS's of any hazardous chemicals that may be encountered during the tasks.

Unlabeled Piping Systems

At TCI's facility, there are no unlabeled piping systems of hazardous chemicals.

Outside Contractors

It is the responsibility of the Supervisor in coordination with the Director, to ensure that outside contractors are provided with the following information before starting work on our site:

- hazardous chemicals to which their employees may be exposed while working in our facility, and
- precautions their employees must take to reduce the possibility of exposure to those hazardous chemicals.

LIST OF HAZARDOUS CHEMICALS

A list of known hazardous chemicals present at TCI are included in the SDS Binders located in the Director's office and the Employee Breakroom.

SUBSTANCE ABUSE PLAN

SUBSTANCE ABUSE POLICY STATEMENT

TCI is committed to providing a safe work environment and to fostering the well-being and health of its employees. That commitment is jeopardized when any TCI employee illegally uses drugs on the job, comes to work under the influence, possesses, distributes or sells drugs in the workplace, or abuses alcohol on the job. Therefore, TCI has established the following policy:

- (1) It is a violation of company policy for any employee to use, possess, sell, trade, offer for sale, or offer to buy illegal drugs or otherwise engage in the illegal use of drugs on the job.
- (2) It is a violation of company policy for anyone to report to work under the influence of illegal drugs or alcohol.
- (3) It is a violation of the company policy for anyone to use prescription drugs illegally. (However, nothing in the policy precludes the appropriate use of legally prescribed medications.)
- (4) Violations of this policy are subject to disciplinary action up to and including termination.
- (5) Refusal to submit to a substance abuse test and/or alcohol test upon a finding/confirmation of reasonable suspicion will be a presumption that the legal limits have been exceeded and the employee will be subject to discipline up to and including termination.

As a condition of employment, employees must abide by the terms of this policy and must notify EAC in writing of any conviction of a violation of a criminal drug statute no later than five (5) calendar days after such conviction.

Pre-Employment Drug Testing

All job applicants at TCI (including those applying through temporary agencies) will undergo testing for the presence of illegal drugs as a condition of employment. Any applicant with a confirmed positive test will be denied employment.

Applicants will be required to submit voluntarily to a urinalysis test at a laboratory chosen by TCI, and sign a consent agreement releasing TCI from liability.

If the physician, official or lab personnel has reasonable suspicion to believe that the job-applicant has tampered with the specimen, the applicant will not be considered for employment.

TCI will not discriminate against applicants for employment because of a past history of drug abuse. It is the current abuse of drugs, preventing employees from performing their jobs properly, that TCI will not tolerate.

Individuals who have failed a pre-employment test may initiate another inquiry with TCI after a period of not shorter than six (6) months; but they must present themselves drug-free as demonstrated by urinalysis or other test selected by TCI.

Employee Testing

TCI has adopted testing practices to identify employees who use illegal drugs on or off the job. It shall be a condition of employment for all employees to submit to drug testing under the following circumstances:

When there is reasonable suspicion to believe that an employee is using illegal drugs. The following circumstances could cause reasonable suspicion:

1. Observed drug abuse.
2. Apparent physical state of impairment.
3. Incoherent mental state.
4. Marked changes in personal behavior that are otherwise unexplainable.
5. Deteriorating work performance that is not attributable to other factors.
6. Accidents or other actions that provide reasonable cause to believe the employee may be under the influence of drugs.
7. When employees are involved in on-the-job accidents where personal injury or damage to company property occurs.

General Procedures

An employee reporting to work visibly impaired will be deemed unable to properly perform required duties and will not be allowed to work. If possible, the employee's supervisor will first seek another supervisor's opinion to confirm the employee's status. Next the supervisor will consult privately with the employee to determine the cause of the observation, including whether substance abuse has occurred. If, in the opinion of the supervisor, the employee is considered impaired, the employee will be referred to the Employee Assistance Coordinator (EAC) for further action. A drug test may be in order. An impaired employee will not be allowed to drive. If an employee, upon a finding of "reasonable suspicion" insists on driving, local authorities will be notified. TCI will provide transportation to the testing facility.

Employees with a confirmed positive test result may, at their option and expense, have a second confirmation test made on the same specimen. An employee will not be allowed to submit another specimen for testing. If the physician, official, or lab personnel has reason to believe that the employee has tampered with the specimen, the employee is subject to disciplinary action up to and including termination.

Test results will be reviewed by a Medical Review Officer (MRO) and the results will be communicated directly to the employee. In the case of positive results, the employee will

be given an opportunity to explain the results prior to their being reported to TCI's EAC. The EAC will then discuss the results with the employee and the employee's supervisor to determine what actions will be taken. All results will be kept otherwise confidential and will not be made part of the employee's personnel file.

Drug Substances Screened

The following drug families, cutoff limits and confirmation test levels will be tested by TCI:

Typical Cutoff Limits

	<u>SCREEN</u>
Amphetamines	1,000 ng/ml
Cannabinoid	50 ng/ml
Cocaine	300 ng/ml
Opiates	300 ng/ml
Phencyclidine	25 ng/ml

Confirmation of Positive Results

Because initial drug test results may be misleading, decisions about employees or applicants must not be based solely upon positive urine samples from a screening method like enzyme immunoassay or radioimmunoassay. Such positive results must be confirmed by gas chromatography/mass spectrometry (GC/MS) which is a well-documented reference method.

Confirmation Test Level

Amphetamines	500 ng/ml
Cannabinoids	15 ng/ml
Cocaine	150 ng/ml
Opiates	300 ng/ml
Phencyclidine	25 ng/ml/ml

Alcohol Abuse

An employee who is under the influence of alcoholic beverages at any time while traveling on TCI business, whether engaged in TCI business at the time or not, shall be guilty of misconduct and is subject to discipline up to and including termination. An employee who is under the influence of alcoholic beverage while on TCI property, whether on duty or not, shall be guilty of misconduct and is subject to discipline up to and including termination.

An employee shall be determined to be under the influence of alcohol if . . .

1. the employee's normal faculties are impaired due to the consumption of alcohol, or

2. the employee has a blood alcohol level of .04 or higher for safety sensitive functions or .08 or higher for non-safety sensitive functions.

All employees currently employed at TCI's facility are considered to be performing safety-sensitive functions.

Employee Assistance Plan (EAP)

The company offers an Employee Assistance Plan (EAP) for employees. The EAP is conducted by an Employee Assistance Coordinator (EAC). The current EAC is TBD. The EAP provides confidential assessment, referral and short-term counseling for employee's who need or request it. If an EAP referral to a treatment provider outside the EAP is necessary, costs may be covered by the employee's medical insurance, but the cost of such outside services are the employee's responsibility.

Participation in the EAP will not affect an employee's career advancement or employment, nor will it protect an employee from disciplinary action. The EAP is a process used in conjunction with discipline, not a substitute for discipline.

The EAP can be accessed by an employee through self-referral or through referral by a supervisor.

TCI offers resource information on various means of employee assistance in our community including but not limited to drug and alcohol abuse Plans. Employees are encouraged to use this resource file, which is located with the EAC. In addition, the EAC will distribute this information to employees for their confidential use.

Documentation

Applicants and employees will be asked to sign a Consent Form (Attachments I & II). All employees will be asked to sign an "Employee Certificate of Agreement" and return to their supervisor prior to starting work at TCI (Attachment III).

ATTACHMENT I
PRE-EMPLOYMENT DRUG AND ALCOHOL TESTING
CONSENT AND RELEASE FORM

I hereby consent to submit to urinalysis and/or other tests as shall be determined by TCI for the purpose of determining the drug content thereof.

I agree that Marion Occupational Health may collect these specimens for these tests and may test them or forward them to a testing laboratory designated by the company for analysis.

I further agree to and hereby authorize the release of the results of said tests to the company.

I understand that it is the current use of illegal drugs that prohibits me from being employed at TCI.

I further agree to hold harmless the Company and its agents (including the above named physician or clinic) from any liability arising in whole or part out of the collection of specimens, testing, and use of the information from said testings in connection with the Company's disciplinary action, if applicable.

I further agree that a reproduced copy of this pre-employment consent and release form shall have the same force and effect as the original.

I have carefully read the foregoing and fully understand its contents. I acknowledge that my signing of this consent and release form is a voluntary act on my part and that I have not been coerced into signing this document by anyone.

Applicant:
Print Name _____
S.S. #: _____

Applicant:
Signature _____
Date: _____

Witness Printed Name: _____

Witness Signature: _____

ATTACHMENT II
DRUG AND ALCOHOL TESTING
CONSENT AND RELEASE FORM

I hereby consent to submit to urinalysis and/or other tests as shall be determined by TCI for the purpose of determining the drug content thereof.

I agree that Marion Occupational Health and/or local hospital emergency room may collect these specimens for these tests and may test them or forward them to a testing laboratory designated by the company for analysis.

I further agree to and hereby authorize the release of the results of said tests to the company.

I understand that it is the current use of illegal drugs and abuse of alcohol that may result in disciplinary action taken against me up to and including termination.

I further agree to hold harmless the Company from any liability arising in whole or part out of the collection of specimens, testing, and use of the information from said testings in connection with the Company's disciplinary action, if applicable.

I further agree that a reproduced copy of this consent and release form shall have the same force and effect as the original.

I have carefully read the foregoing and fully understand its contents. I acknowledge that my signing of this consent and release form is a voluntary act on my part and that I have not been coerced into signing this document by anyone.

Applicant:
Print Name _____
S.S. #: _____

Applicant: Signature _____
Date: _____

Witness Printed
Name: _____

Witness
Signature: _____

ATTACHMENT III
EMPLOYEE CERTIFICATE OF AGREEMENT

I do hereby certify that I have received and read the TCI Substance Abuse Policy Statement and understand the aspects of said policy. I understand that if my performance indicates it is necessary, I will submit to a drug and/or alcohol test. I also understand that failure to comply with a testing request or a positive result may lead to termination of employment.

Name (please print)

Signature

Date

END OF DOCUMENT