

TABLE OF CONTENTS

SAFETY REGULATIONS	2
SAFETY SHOWERS & EYE WASH STATIONS	2
WAREHOUSE ENTRY REQUIREMENTS	2
ASBESTOS HANDLING	3
BARRIER TAPE	3
CONFINED SPACE PROGRAM	4
GROUND FAULT INTERRUPTERS	6
HOT WORK	7
LOCK-OUT/TAG-OUT	8
SAFETY DATA SHEETS(SDS)	11
MILL ALARM SYSTEMS	11
CHLORINE (CL₂) ALARM	13
HYDROGEN SULFIDE GAS ALARM SYSTEM	13
PROCESS SAFETY MANAGEMENT	14
RESTRICTED ENTRY AREAS	14
BLUE FLAG & DERAILER POLICY	15
SMOKING POLICY	15
EMERGENCY MUSTER map – end of book	
MILL ALARM CODES – outside back cover	

SAFETY REGULATIONS

While at Cascade Pacific Pulp (CPP) contractors must observe our safety and housekeeping rules.

- A. Only authorized employees of contractors performing work for CPP, Halsey, will be allowed on the mill site. All contractors are required to successfully complete our web-based contractor safety orientation prior to beginning work.
- B. Under no circumstances are contractors allowed to enter the Georgia Pacific facility without first obtaining a Georgia Pacific pass.
- C. Prior to bringing substances on the mill site, contractors will ensure there is a Safety Data Sheet on file with CPP and that the substance is approved for use by CPP. If questions arise, contact the Environmental Manager or the Purchasing Manager.
- D. Prior to starting work in any area, contractors will identify and locate emergency exits, first aid cabinets, and eye wash/safety shower stations.
- E. Contractors will comply with all CPP safety policies. Failure to do so could jeopardize opportunities at Halsey for the contractor involved. Particular attention will be given to the policies found in this manual.
- F. All injuries, close calls, damage incidents, environmental issues and/or PSM exposures or releases must be reported to CPP as soon as possible following the incident. Contractor companies will complete an incident investigation form and provide a copy to their CPP contact to be forwarded to HR no later than 24 hours following the incident.
- G. All personal protective equipment will be provided by the contractor. In an emergency where CPP provides the personal protective equipment, contractors will be charged for the equipment.
- H. Hard hats are required throughout the mill unless specific exceptions are made.
- I. Eye protection with side shields is required from the start of the work day to the end of the work day throughout the mill.
- J. Hearing protection is required in all operating areas of the mill and wherever it is posted that noise levels exceed 85 dbA.
- K. Safety-toed shoes are required in all maintenance shops and operating areas.
- L. All contractors will have an escape respirator in their possession at all times.
- M. Other personal protective equipment will be used as required for the job(s).
- N. Contractors will observe all posted mill speed limit and traffic signs.
- O. Contractors are allowed on the man-lift only if their contracting company has verified they have been trained to use a man-lift.
- P. Hot Work permits are required.
- Q. All welding tanks must be securely fastened or be on portable carts. Gauges and other welding equipment must be in good repair.
- R. Flash protection barriers must be used when welding and cutting.
- S. All job sites will be kept clean and free of debris. All materials will be removed and disposed of by the contractor unless otherwise stipulated.
- T. Smoking is not permitted on the mill site except in designated areas.
- U. Persons under the influence of alcohol or drugs are not allowed on the premises nor shall alcohol or drugs be brought on the premises. Violators will be evicted, barred from the premises, and prosecuted.
- V. No firearms, explosive devices, or other weapons are allowed on the premises.
- W. Parking is allowed only in areas designated for contractor parking; contractor vehicles will be appropriately marked when on site.
- X. No over-night camping in any form is allowed on the premises.

SAFETY SHOWERS & EYE WASH STATIONS

Safety showers and emergency eye wash stations are strategically located both indoors and outdoors throughout the mill site; they are painted a fluorescent orange. Contractors and contractor employees should locate the station(s) nearest their work area prior to starting any job.

WAREHOUSE ENTRY REQUIREMENTS

- A. Entry into the Warehouse can only be authorized by a CPP employee.
- B. When authorized, High Visibility clothing or High Visibility vests must be worn in the Warehouse.
- C. Authorized personnel working in the warehouse must check in with a Loader.
- D. Pedestrians in the Warehouse will stay in the walkways.
- E. When clamp truck drivers approach, pedestrians will stop out of the way and make eye contact.
- F. Pedestrians will not cross a dock that is being actively loaded; they will wait out of the way until the clamp truck has left the dock area or stopped.
- G. The Warehouse is not to be used as a short-cut.

- H. Warehouse entry requirements apply at all times including when accessing the restrooms
- I. High visibility vests are available at all entrances for those without high visibility clothing.
 - 1. Vests are to be left when exiting the warehouse.
 - 2. If there are no vests available, contact the Wet End Operator.
 - 3. Do Not Enter the warehouse without either high visibility clothing or a vest.
- J. Warehouse boundaries include:
 - 1. All entrance doors to the warehouse
 - 2. The area south of the unitizer maintenance area to the unitizer pick up conveyor defined by the walkway on the south edge
 - 3. West wall at the blow line covers east to the unitizer line including the area in front of both bale pick up conveyors.

ASBESTOS HANDLING

Any contractor projects which involve the removal of or installation of asbestos insulating materials require prior approval of the CPP Maintenance Superintendent.

BARRIER TAPE

Barricade tape (electrical) or Barricade tape with tags shall be used to limit or prohibit access to areas where a known hazard poses a risk. Three types of barricade tape used on the CPP mill site are listed below.

- A. **Caution Tape (Yellow):** Yellow Caution tape with “CAUTION” written continuously along the tape will be used to warn of a hazard inside the barricaded area.
 - 1. Where there is an alternate route around a barricaded area, then it should be used.
 - 2. If it is necessary to enter or cross through the area, read the barricade tag hanging on the caution tape to understand the hazards inside before entering the barricaded area.
 - 3. A Caution tape tag (yellow) tag must be completed and hung on all caution barricade tape being used.
 - a. The tag should be placed at a location where it is visible to all personnel. More than one tag may be necessary.
 - b. The tag must be completely filled out with name of person putting up barricade tape.
 - 4. Never remove any caution tape or tags without permission from an authorized person from the department.
- B. **Danger Tape (Red):** Red Danger tape with “DANGER” written continuously along the tape will be used only where an immediate hazard exists inside the barricaded area.
 - 1. **Never go into a danger taped area without permission.** No one is allowed to cross through or enter an area barricaded with Danger tape unless given permission by the area supervisor or the project overseer in charge of the work.
 - 2. When it is necessary to enter or cross a danger taped area, before entering read the barricade tag hanging on the danger tape to understand what the hazards are.
 - 3. Never remove any danger tape or tags without the permission of the area supervisor or the project overseer who is responsible for the work being done within the danger taped area.
 - 4. A Danger tape tag (red) must be completed and hung on all danger barricade tape being used.
 - a. The tag should be placed at a location where it is visible to all personnel. More than one tag may be necessary.
 - b. The tag must be completely filled out with the name of the person in charge of the work activities inside the barricade area.
- C. **Electrical Boundary tape (Blue):** Blue Electrical Boundary tape with “ELECTRICAL BOUNDRY” written continuously along the tape will be used when there is an arc flash hazard or shock hazard present as a result of work being performed with exposed live parts. Electricians performing the work may elect to place this barrier tape at the “Limited Approach Boundary” or “Flash Hazard Boundary” whichever is greater to prevent entry by unqualified personnel.
- D. **Barricade Tape removal:** Tape removal should occur as soon as possible after work is complete and/or hazards are removed.
- E. **Stores and Inventory Control:** The CPP Storeroom will only stock three types of barricade tape.
 - 1. Yellow tape labeled “CAUTION”
 - 2. Red tape labeled “DANGER”
 - 3. Blue tape labeled “ELECTRICAL BOUNDARY”.
 - 4. Along with the three types of barricade tape, yellow “Caution” tags, and red “Danger” tags will also be stocked.

CONFINED SPACE PROGRAM

NOTE

It is the contractor's responsibility to provide their own Confined Space Entry Supervisor(s) and Confined Space Attendant(s) or to make arrangements with the Project Manager for a CPP person to fill those roles.

DEFINITIONS

Atmospheric testing - All confined spaces will be tested for potential hazardous atmosphere which include: Oxygen levels (19.5 -23.5); flammability levels (less than 10% LEL); carbon monoxide levels (less than 35 ppm); and hydrogen sulfide levels (less than 10 ppm).

Attendant - Person stationed outside a permit space who monitors authorized entrants. Refer to "Personnel and Duties" for more information.

Authorized entrant - Employee or contractor who is authorized by employer to enter a confined space. Refer to "Personnel and Duties" for more information.

Confined Space - An enclosed space that meets all three of the following conditions:

- Large enough and is so configured that an employee can bodily enter to perform assigned work;
- Limited or restricted means for entry and/or exit; and
- Not designed for continuous human occupancy.

Entry - Entry means the action a person takes to pass through an opening into a confined space. It is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry supervisor - The supervisor most directly responsible for the entrants is responsible for determining if acceptable entry conditions are present prior to entry into a confined space, for authorizing entry and overseeing entry operations, and for terminating entry as required.

(**Note:** An entry supervisor may also serve as an attendant or as an authorized entrant. In addition, duties of entry supervisor may be passed from one individual to another during the course of an entry operation. Refer to "Personnel and Duties" for more information.)

Hazardous Atmosphere - An atmosphere that may expose employees to a risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided), injury, or acute illness due to any atmospheric environment outside the safe parameters defined above in atmospheric testing section.

Permit-Required Confined Space - A confined space which meets one or more of the following conditions:

- Has the potential to contain a hazardous atmosphere. Note that entry into a confined space actually containing a hazardous atmosphere is prohibited
- Contains a material that poses an engulfment hazard
- Has a converging bottom
- Contains any other recognized serious safety or health hazard

Although many of the confined spaces at the mill do not meet the above conditions, all confined spaces must be treated as permit-required and the confined space procedure used for entry.

- A. The Human Resources Department is responsible for:
 1. The overall implementation and maintenance of any written program or any certification concerning the requirements of the Confined Space Entry Program at this facility.
 2. Ensuring that authorized entrants, attendants, entry supervisors, on-site rescue team members, and other authorized employees who may enter the space are properly trained and are provided refresher training.
 3. Ensuring that all equipment needed for safe entry into any confined spaces is available and in proper working order.
- B. The area superintendent is responsible for identifying all confined spaces at this facility.

PERMIT SPACE IDENTIFICATION (INVENTORY)

CPP will conduct an inventory of all known confined spaces within which employees may be required to work. The inventory will record:

- A. Name and location of the confined space
- B. Type of work which might be performed within the permit space
- C. Recognized hazards to which entrants may be exposed while working in the confined space.
- D. The type of entry (side/ top/ bottom and ground level/elevated)
- E. The area superintendent will review the inventory whenever notified of:
 1. Confined space conditions that have changed
 2. Permit space that is not inventoried
 3. Suspected change in configuration or use of a confined space.

- F. Any employee who discovers any of these situations must immediately notify the area superintendent.

PREVENTION OF UNAUTHORIZED ENTRY

- A. It has been determined that:
 - 1. All confined spaces at this facility will be considered to be permitted confined spaces.
 - 2. Workers will not enter permitted confined spaces until the conditions of the entry permit have been satisfied.
- B. The area superintendent will inform workers of confined space locations and their associated hazards. Workers will be informed by the following methods:
 - 1. Initial training
 - 2. Periodic Refresher Training; and
 - 3. Placards affixed on confined space entrances.
- C. When a confined space will be unoccupied and unattended, the attendant will use red “Danger-Do Not Enter” barrier tape and accompanying tag to prevent unauthorized entry.

WRITTEN ENTRY PROCEDURE

- A. A written confined space entry procedure has been developed. This procedure specifies the proper methods and equipment necessary to conduct the entry operation in a safe manner.
- B. Lock-out/Isolation checklists for each confined space have been completed. Checklists are found at P:/Safety/Confined Space Entry/ on mill computers.
- C. Area superintendents are responsible for ensuring that individual lock-out/isolation checklists are up-to-date.
- D. Completed/closed originals are stored in the Human Resources office for one year.

PERSONNEL AND DUTIES

Attendants - General responsibilities of the attendant are as follows:

- A. Attendant must be posted at the confined space entrance at all times when someone is inside.
- B. Aware of the nature of work being performed.
- C. Trained in and familiar with the hazards of confined spaces and aware of behavioral effects of potential exposures.
- D. Maintain an accurate list of entrants
- E. Communicate with entrants as necessary to monitor their status and order their exit if necessary.
- F. Perform non-entry rescue procedures.
- G. Equipped with a two-way radio and be able to summon assistance.
- H. Prevent unauthorized entry.
- I. Monitor conditions in/around the space.
- J. Record any problems that occur during the entry (communication, unauthorized entry, attempted entry, etc.)
- K. Attendants are not to perform other activities that will interfere with their primary duty to monitor and protect the safety of authorized entrants and are not to leave their assigned station until relieved or the entry is complete.

Attendants are not to enter the confined space to attempt a rescue.

Entrants - General responsibilities of the entrant are:

- A. Be trained in and familiar with the hazards of confined spaces and aware of behavioral effects of potential exposures.
- B. Be familiar with the lockout/tagout and hot work permit procedures.
- C. Know how to properly use needed equipment.
- D. Communicate with the Attendant as necessary to enable the Attendant to monitor their status and alert them of the need to evacuate.
- E. Immediately notify the Attendant of any deviation from the permit entry conditions and must evacuate the space in an emergency.

Entry Supervisor - General responsibilities of the entry supervisor are:

- A. Be trained in and familiar with the hazards of confined spaces and aware of behavioral effects of potential exposures.
- B. Notify appropriate operating departments of planned entry.
- C. Verify that the confined space has been flushed and locked out in accordance with the Lockout/Tagout Procedure.
- D. Obtain any Hot Work Permit required.
- E. Complete and sign the Confined Space Entry Permit, verifying that all hazards have been identified and controlled, safety and rescue equipment is available and calibrated, atmospheric testing has been conducted, rescue resources are available, and all involved personnel are trained.
- F. Periodically review the confined space to ensure that entry conditions are still being met.
- G. Cancel or close the entry at the completion or interruption of work. The entry supervisor will also remove the entry permit and forward it to the responsible department superintendent who will then forward to HR.

CPP'S RESPONSIBILITIES WITH CONTRACTORS

- A. When contractors are involved in confined space entry work at our mill, the manager responsible for the work will coordinate entry operations with and will inform them:

1. Of the location of the confined spaces at our facility
 2. That entry into these spaces is only allowed through a permit space program
 3. Why the space was listed
 4. Precautions we have taken to protect people working in or near the space
- B. The manager responsible for the work will debrief the contractor at the completion of the entry operation.

CONTRACTOR'S RESPONSIBILITY WITH CPP

Contractors hired to perform work in a confined space will obtain the following information from CPP and ensure the following tasks are performed:

- A. Obtain information on the hazards of the confined space and information from previous entry operations from Cascade Pacific Pulp.
- B. Determine if Cascade Pacific Pulp employees will be working in or near the space.
- C. If Cascade Pacific Pulp employees are working in or near the space during entry operations, the contractor will coordinate entry operations with the manager responsible for the work.
- D. Inform Cascade Pacific Pulp of the confined space to be entered.
- E. Hold a debriefing conference at the completion of the entry operations, or during the entry operation (if needed), to inform Cascade Pacific Pulp of any hazards encountered or created.

RESCUE & EMERGENCY SERVICE

- A. The Halsey Mill Emergency Response Plan addresses rescue and emergency action plans.
- B. CPP has decided to use on-site rescue services (including non-entry and entry rescue procedures).
- C. The Human Resources Department will ensure:
 1. Each member of Cascade Pacific Pulp's rescue team is appropriately trained.
 2. Each member of the rescue team receives basic first aid and cardiopulmonary resuscitation (CPR).
 3. At least one member must hold a current certification in first aid and CPR.
 4. Rescue team members practice rescue techniques at least annually from actual or similarly configured spaces.
- D. The Human Resources Department has made arrangements with Halsey-Shedd Rural Fire Department to provide emergency services and informed them of the hazards they may encounter if they are summoned.
- E. The Human Resources Department has provided the on-site rescue service access to confined spaces to develop and practice appropriate rescue plans.
- F. In accordance with CPP's Emergency Plan, procedures for summoning rescue and emergency services for our workplace are:
 1. Security Officer will be notified via phone or two-way radio that an emergency exists.
 2. Security Officer will activate the Emergency Response Team.
 3. Upon assessing the extent and nature of the emergency, the responding Incident Commander may request assistance from a designated outside agency by notifying the Security Officer.
 4. In accordance with standing orders, the Security Officer will activate outside resources to respond.

TRAINING

- A. Training shall be provided so that all employees involved in confined space entry acquire the knowledge, understanding, and skills necessary for the safe performance of the assigned duties.
- B. The frequency of training shall be:
 1. Before the employee is first assigned duties
 2. Before a change in assigned duties
 3. Whenever there is a change in procedures that could create a hazard about which the employee has not been trained.
 4. Whenever there is reason to believe the space entry procedures are not being followed.

GROUND FAULT INTERRUPTERS

The following procedure outlines the use of Ground Fault Circuit Interrupters (GFCI) by employees and contractors at the Halsey Mill.

- A. The use of GFCI's is a requirement.
- B. GFCI's are required on all portable tools, including trouble lights and double insulated tools.
- C. GFCI's will be plugged in at the source of the power supply, not at the end of an extension cord
- D. Anyone using a GFCI will test for current operation before each use, as follows:
 1. Press *Test* button
 2. Red LED light should go out
 3. Press *Reset* button
 4. Red LED light should come on
 5. If this does not happen, get a new GFCI

- E. Never leave a disconnected cord plugged in.
- F. Contractors must supply their own GFCI units.

HOT WORK

For the purposes of this guideline, “hot work” is defined as any flame or spark-producing activity on the work site which is deliberate and planned in advance. Examples of hot work are: Gas welding, cutting, or brazing; electric welding or cutting; grinding; and any other spark or flame producing activity.

- A. Hot work which can be moved should be moved to an area free from combustibles.
- B. Hot work which must be performed in the field **adjacent to covered processes (Chlorine Dioxide Generator, Chlorine Dioxide storage, Chlorine Dioxide pumps & piping, and the Chlorine system at the Water Treatment Plant) or where combustibles are present,** must take the following precautions prior to beginning work:
 1. Floors must be swept clean of combustibles for a radius of 35 feet around the work area.
 2. Other combustibles within the 35-foot radius must be relocated when practical.
 3. When relocation is impractical, the combustibles will be shielded with flameproof covers.
 4. Wall or floor openings within 35 feet of the work must be covered. If this is not practical, combustibles on the floor(s) below or on the opposite side must be removed or protected.
 5. Suitable fire suppression equipment will be made available in the area where the hot work is to be performed.
- C. A fire watch is required to observe the hot work and monitor conditions to ensure that a fire or explosion does not occur as a result of the work performed. The fire watch is authorized to stop any unsafe operation or activity.

Specific duties of a fire watch

 1. Watch for fires, smoldering material or other signs of combustion.
 2. Be aware of the inherent hazards of the work site and of the hot work.
 3. Ensure that safe conditions are maintained during hot work operations and stop the hot work operations if unsafe conditions develop.
 4. Have fire extinguishing equipment readily available and be trained in its use.
 5. Extinguish fires when the fires are obviously within the capacity of the equipment available. If the fire is beyond the capacity of the equipment, the fire watch is to pull the closest fire alarm or report the fire to 444 to muster the ERT.
 6. Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
 7. A fire watch shall be maintained for 30 minutes after the conclusion of hot work to detect and extinguish smoldering fires.
 8. The fire watch cannot leave the area for any reason including breaks or lunch until a 30-minute observation has occurred. (The 30 minutes starts at the end of the hot work being performed).
- D. If hot work will be performed on used containers (drums, barrels, tanks, etc.), they will be cleaned so as to make absolutely certain no flammable materials are present or any substances (greases, tars, acids) or other materials which when subjected to heat, might produce flammable or toxic vapors.
- E. Welding arc shields must be used to minimize the exposure of Chlorine Dioxide-containing equipment to UV light.
- F. A Hot Work Permit will be required for any hot work performed on or adjacent to the following areas or equipment/systems:
 1. Non-condensable gas system (piping)
 2. Bunker C fuel oil storage tanks and/or piping
 3. Natural gas system
 4. Propane tanks or piping
 5. Wood Yard, truck dumps, conveyor and blower systems
 6. Inside or on the exterior surface of the Flakt Dryer (dryer section)
 7. Vessels and piping containing oxygen
 8. Hydraulic skids, hoses and piping.
 9. Methanol storage
- G. Authorization to perform hot work can only be granted by the Cascade Pacific Pulp Management person responsible for overseeing the work. This could include any of the following: Maintenance Supervisors, Project Manager, or a Maintenance Superintendent.
 1. Before Hot Work can be permitted, the area will be inspected by the authorizing manager to ensure compliance with this guideline.
 2. Once the authorizing manager has inspected the site and is satisfied that appropriate precautions have been taken, he/she shall complete the permit form securing the appropriate signatures from an operating department supervisor or superintendent.
 3. The individual performing the hot work must place the Hot Work Permit near the work area so that it is clearly visible and available for inspection. Once the hot work is complete, the permit must be returned to the authorizing manager. Completed Hot Work Permits will be sent to Human Resources.

- H. Hot work shall NOT be permitted in the following situations:
 - 1. In areas not authorized by management
 - 2. In sprinklered buildings while such protection is impaired
 - 3. In the presence of explosive atmospheres
 - 4. In areas near the storage of large quantities of exposed, readily ignitable materials such as baled pulp. We have eliminated Hot work in these areas to minimize our risk for burrowing fires and the need for extended fire watch requirements
- I. Special precaution areas:
 - 1. For hot work at areas with large amounts of combustibles (i.e. chip dump area, chip conveyor system, pulp warehouse, etc.):
 - a. Water will be applied to the area prior to the hot work at the chip yard;
 - b. The shift supervisor or designated fire watch will conduct hourly inspections of the area for a minimum of 3 hours after the hot work has ended;
 - c. In areas without access to a water hose, the fire truck or water trailer will remain on stand-by during the 3-hour inspection period.

LOCK-OUT/TAG-OUT

- A. No combination locks are to be used.
- B. Contractors will be expected to furnish their own locks.
- C. Do not rely on interlocks or a stop button for an electrical interlock.
- D. Designated employees are issued appropriate locks and keys at company expense. No other keys for those locks will be available.
- E. All locks must be identified with either the owner's name on the lock or a tag attached to the lock.
- F. Completed Maintenance Safety Cards for electrical lock-outs must be sent to the Mill Electrical Supervisor for record keeping. Completed Maintenance Safety Cards for process piping lock-outs will be sent to Human Resources for record keeping.

ELECTRICAL LOCK-OUT

- A. Before working on a piece of equipment, Operations must be notified to ensure the equipment is ready to be locked-out.
- B. If working on a piece of equipment could involve contact with process materials or if the process materials could mechanically affect the equipment being worked on, the equipment will also require process piping lock-out as defined below.
- C. All individuals working on the equipment must attach their identified lock before starting any work.
- D. On electrical equipment which has no local disconnect, the individual who is performing the work will secure a qualified electrician to open the breaker for that piece of equipment in the Motor Control Center (MCC).
- E. The "Ordered Safe By" line on the Maintenance Safety Card must be signed and dated by the first individual attaching a lock. This must be done in the presence of a qualified electrician. All lock-out locks must be attached with the use of a multiple lock mechanism leaving room for additional locks or multiple lock mechanisms. The electrician opening the breaker will sign and date the "Made Safe By" line on the Maintenance Safety Card.
- F. After the lock is in place and before work begins, the person performing the work will have a knowledgeable operator try to start the equipment to ensure the correct electrical source was locked-out.
- G. Begin and complete the necessary work.
- H. The individual removing the last lock must sign and date the "Ordered Ready to Run" line on the Maintenance Safety Card. This must be done in the presence of a qualified electrician if the lock-out is in a MCC (not including local disconnects). The electrician present will then sign and date the "Made Ready to Run" line.
- I. Any personnel not finding a lock and/or no signature on the "Ordered Ready to Run" line on the Maintenance Safety Card will not put the equipment back in service until the Area Supervisor and/or Maintenance Supervisor has made a visual inspection of the equipment and signs the "Ordered Ready to Run" line on the Maintenance Safety Card. If the lock-out is within a MCC, the signing must be done in the presence of an electrician.

ELECTRICAL DEPARTMENT LOCKS

As an additional layer of electrical safety to protect from electrical shock hazards, the following section complements the existing electrical lockout procedures.

- A. Department locks will be used when electrical equipment maintenance extends over several shifts or days which may involve different individuals at various times.
- B. Electricians are responsible to notify their supervisor of any work which will extend beyond their shift and an Electrical Department lock must be applied.

- C. The electrician assigned to the job will apply the department lock onto the appropriate lock out point (Breaker, Disconnect, etc.) but not on the Lock Boxes.
- D. An orange tag will be attached to the lock which will have the following information:
 - 1. Date
 - 2. Name of person locking out
 - 3. Equipment number
 - 4. Brief description as to why the equipment is locked out
- E. The Electrician will then fill out the Electrical Department Lock out Log book located in the electrical shop.
- F. Upon completion of electrical maintenance work the department lock will be removed and the Electrical log book will be filled out indicating the lock removal date and name of person removing the lock.
- G. Remember personal locks are for your personal safety only! They should be removed at the end of your shift and if the job is not complete the above procedure must be followed.

PROCESS PIPING LOCK-OUT

- A. Before working on a piece of equipment, Operations must be notified to ensure the equipment is ready for isolation and lock-out.
- B. If working on a piece of equipment involves electrical components, the activation of which could result in injury, the equipment will also require an electrical lock-out defined above.
- C. Individuals working on the equipment must attach their identified lock before starting any work.
- D. On equipment which has process connections, the individual performing the work will secure a knowledgeable operator to isolate the equipment for lock-out; this could include draining, flushing, gas testing, etc.
- E. A Maintenance Safety Card must be attached to each lock-out point using a multiple lock mechanism (gang hasp).
- F. Process lock-out points under the lock box system do not require a maintenance safety card (see Lock Box System).
- G. The “Ordered Safe By” line on the Maintenance Safety Card must be signed and dated by the first individual attaching a lock. This must be done in the presence of a knowledgeable operator. The knowledgeable operator isolating the system will sign and date the “Made Safe By” line on the Maintenance Safety Card.
- H. Proper process lockouts for lock application include:
 - 1. Hand valves which do not leak
 - 2. Blanks or blind flanges
 - 3. Automatic on/off valves which can be locked in place to prevent movement
 - 4. Control valves that can be locked in place or otherwise assured they will not change position
 - 5. Process lock-outs other than 1 through 4 above must be made using a Safety Work Order signed by both the Operations and the Maintenance Supervisor.
- I. Begin and complete the necessary work.
- J. The individual removing the last lock must sign and date the “Ordered Ready to Run” line on the Maintenance Safety Card. This must be done in the presence of an operator knowledgeable of equipment. The knowledgeable operator present will then sign and date the “Made Ready to Run” line on the Maintenance Safety Card.
- K. Any personnel not finding a lock and/or no signature on the “Ordered Ready to Run” line on the Maintenance Safety Card will not put the equipment back in service until the Area Supervisor and/or Maintenance Supervisor has made a visual inspection of the equipment and signs the “Ordered Ready to Run” line on the Maintenance Safety Card. If the lock-out is on equipment which has process connections, the signing must be done in the presence of a knowledgeable operator.

SUPERVISOR LOCK-OUT

A supervisor lock-out will be used whenever equipment down time extends over several shifts or days and could involve different individuals at various times. Personnel are responsible for notifying their supervisor of any work that will extend beyond their shift. A CPP supervisor must apply a supervisor’s lock.

UNATTENDED LOCK REMOVAL

If the person who locked out a piece of equipment (as identified by the lock or tag) is not available to remove the lock, take the following steps:

- A. Make a reasonable effort to locate or contact the person. If unable to reach him/her or if the person when contacted authorizes the lock removal, then contact his/her supervisor.
- B. Fill out a pink Safety Work Order (SWO)
- C. When A and B are complete, the responsible department manager/supervisor, an electrician (if lock-out is in MCC), and a knowledgeable operator will inspect the equipment.
 - 1. If the equipment is clear of personnel and ready to operate, the lock and tag will be removed; and all individuals involved in (C) will sign the SWO.

- D. A copy of the SWO will be turned in to Human Resources within 48 hours.

LOCK BOX SYSTEM

The lock box system may be used on any vessel or process system where its use will make identification of multiple lock-out points clearer and securing complex systems more efficient.

In using the lock-box system the following conditions will be incorporated into the Company's lock-out procedure:

- A. A Project Overseer will be assigned each time a lock-box is used. The Project Overseer is the person responsible for the use of the lock-box and could be a CPP employee or contractor.
- B. One authorized person, thoroughly knowledgeable with the equipment and/or system to be locked-out, will be assigned to work with the Project Overseer.
- C. The authorized person will place a primary lock and primary lock tag identifying the lock as a primary lock on each of the lock-out points of the system in accordance with the "Lock-Out Procedure" of this policy. A checklist of specific lock-out points developed by the operating department management for the system must be used for the lock-out. A copy of the lock-out checklist will be attached to the outside of the lock box.
- D. The authorized person will either be accompanied by the Project Overseer when locking out the system or the Project Overseer will review the lock-out points prior to completing the lock-out. The lock-box procedure must always be completed by at least these two individuals.
- E. After completion of the primary system lock-out, the authorized person and Project Overseer will sign the lock-box checklist verifying that all equipment and process piping has been made safe and proven inoperable.
- F. Once the system has been proven inoperable, the key or keys used for the primary locks will be placed in the lock-box along with the completed, signed lock-box checklist. The Project Overseer will place their own lock on the lock-box (secondary locks). This lock will also be the last lock removed.
- G. The lock-box procedure allows any employee or contractor to check any of the primary lock-out points and/or place their own locks at any of the primary lock-out points for verification of their security. Any individual working on the protected system will place their identified lock on the lock-box (known as a secondary lock).
- H. Any individual's secondary lock will remain on the lock-box until their work is complete. In the case of a shift change, the outgoing workers will remove their locks until they return to work and the incoming workers will attach their locks. A shift change could also include a lock change by the Project Overseer.
- I. After the secondary locks of everyone working on the system have been removed, the authorized person who is thoroughly knowledgeable with the system that has been locked out will inspect the equipment or system to verify it is clear and ready for start-up. The Project Overseer will remove his/her secondary lock from the lock-box allowing access to the keys for the primary locks. The authorized person will remove all primary locks that were placed on the system as needed.
- J. The shift supervisor will be notified by the authorized person that the equipment is ready for normal operation.
- K. The primary locks used for a lock-box system will be unique for that lock-box, be identified for that use, and have a single key. Extra keys will be destroyed.

REMOTE LOCK-BOX

CPP may authorize the use of a remote lock-box for a specific, identified project as follows:

- A. Request must be made by the Engineering Manager to the Department Superintendent or his/her designee prior to authorizing use of the remote lock box by a contractor
- B. The Department Superintendent or his/her designee will notify the CPP Safety Specialist after approval.
- C. The remote lock-box will only be used in conjunction with a primary lock box
- D. The remote lock-box lock will meet the following requirements:
 - 1. An orange lock with a bright yellow tag to set it apart from other CPP locks
 - 2. A brightly colored tag identifying it as a remote lock box lock
 - 3. The tag will also include the location of the remote lock box and the name of the contractor supervisor
- E. The remote lock-box will be set up in the area of the contractor's job trailer.
- F. After the primary lock box has been established, the department superintendent or designee will lock the primary lock box.
- G. The remote lock box lock will be placed on the primary lock box.
- H. The remote lock box key will be placed in the remote lock box and secured by the department superintendent's personal lock.
- I. Contractor employees will put their locks on the remote box.
- J. When work has been completed and locks removed from both lock boxes, the department superintendent will remove the personal lock from the remote lock box, remove the remote lock box key then remove the remote lock from the primary lock box to allow for locks to be removed from the system so it can be made ready for service.
- K. Remote locks are subject to additional audits.

SAFETY DATA SHEETS(SDS)

- A. Complete copies of SDSs for all hazardous chemicals employees of this Mill may be exposed are kept in Technical Services Lab.
- B. SDS summary sheets specific to an employee's work area are located as follows:
 - 1. Pulp Mill Lab
 - 2. Recovery Control Room
 - 3. Reconst Control Room
 - 4. Flakt Dryer Lab
 - 5. Filter Plant Control Room
 - 6. Paint Room
 - 7. Maintenance Shop
 - 8. ERT Aid Station

If SDS's are not available or new chemicals do not have an SDS, immediately contact the Purchasing Manager or the Environmental Manager.

MILL ALARM SYSTEMS

This section outlines the primary means of communication and alarms used at the Halsey facility.

FIRE ALARM SYSTEM

- A. Employees are alerted to an emergency incident by way of the fire alarm horn blast system; codes are as follows:
 - All Clear 1-1
 - Mill Muster 1-2
 - Mill Evacuation 1-3
 - ERT Muster 3-3
 - Pulp Mill 4-1
 - Recovery 4-2
 - Kiln-Filter Plant 4-3
 - IGIC 5-3
 - Chip Yard 6-1
 - Silo 6-2
 - Flakt Dryer 6-3
 - Paint Shop 6-4
 - Service Building 6-5
- B. Other codes may be heard not listed above; these apply to the facility next door.
- C. When the 1-2 Alarm sounds, contractors are to immediately stop work and report to the nearest muster point – see map on inside back cover of this manual
 - 1. Contractors are to remain at the muster area until released by the Incident Commander or until 1-1 All Clear sounds.
- D. In case of a full mill evacuation (1-3 alarm), contractors are to exit per instructions given by the Incident Commander or the area muster captain and muster at an off-site location.
 - 1. Contractors are required to muster and remain at the off-site location until released by the Incident Commander or a muster captain.
- E. **Fire Alarm activation** – a hand-pull station that is activated results in a local alarm and a signal being received in the guard office. The guard will then ensure ERT response by notifying the Incident Commander by radio of the incident location.
- F. **Sprinklers and hoses** – When an automatic sprinkler head activates or a fire hose is used an area alarm will activate for the area where the sprinkler or hose is located.

ClO₂ ALARM SYSTEM

- A. The Chlorine Dioxide Alarm Systems are comprised of a series of alarms that alert personnel working in the Pulp Mill and ClO₂ Generator Buildings of the presence of ambient ClO₂ gas. The alarms consist of a series of warning lights (Amber and Red) and audible horns.
- B. There are two separate systems, one for the Pulp Mill Building and the other for the ClO₂ Generator Building and surrounding area.
- C. **The Pulp Mill System** includes alarm lights located on each floor of the Pulp Mill Building and an alarm panel located inside the Pulp Mill Control Room.

1. All the **AMBER** alarm lights in the building and the appropriate alarm light(s) on the control room alarm panel are automatically activated when any of the sensors in the Pulp Mill detect a Chlorine Dioxide at a concentration of 0.3 ppm or greater. **When the AMBER alarm lights are flashing, all non-pulp mill-operating personnel must leave the building.** They may not return to the Pulp Mill until they have been authorized to do so by an essential employee. Those employees remaining must wear a full-face respirator or SCBA while in the affected area.
 2. The appropriate **RED** alarm light(s) on the control room alarm panel are automatically activated when any of the sensors in the Pulp Mill detect a Chlorine Dioxide at a concentration of 3.0 ppm or greater. At this point, the Lead Pulp Operator or designee will investigate the source and size of the leak. If it is determined that conditions warrant, a Pulp Mill evacuation will be initiated by the operator activating one of the evacuation push buttons. A Pulp Mill evacuation will activate all of the red alarm lights in the Pulp Mill as well as the Pulp Mill evacuation horn. **When the RED alarm lights are flashing, all non-essential Pulp Mill personnel must immediately don escape respirators, evacuate the Pulp Mill and proceed to the Pulp Mill evacuation muster point (located at the Flakt Dryer parking lot) to await further instructions.**
- D. **The ClO₂ Generator System** includes alarm lights located on each floor of the ClO₂ Generator building and an alarm panel located inside the Pulp Mill Control Room.
1. All the **AMBER** lights in and around the ClO₂ Generator Building and the appropriate alarm light(s) on the control room alarm panel are automatically activated when any of the sensors in the ClO₂ generator area detect a Chlorine Dioxide at a concentration of 0.3 ppm or greater. **When the AMBER alarm lights are flashing, all non-pulp mill-operating personnel must leave the building.** They may not return to the area until they have been authorized to do so by an essential Pulp Mill employee. Those employees remaining must wear a full-face respirator or SCBA while in the affected area.
 2. All the **RED** alarm lights in and around the Generator Building, the ClO₂ generator evacuation horn and the appropriate alarm light(s) on the control alarm panel are automatically activated when any of the sensors in the ClO₂ generator area detect a Chlorine Dioxide at a concentration of 3.0 ppm or greater. **When the RED alarm lights are flashing, All Non-Essential Pulp Mill personnel must immediately don escape respirators, evacuate the Generator area and report to the Pulp Mill Control Room.**
- E. The manlift and elevator are not to be used while any of the ClO₂ alarm lights in the Pulp Mill are flashing.
- F. The Chlorine Dioxide sensors are calibrated regularly, but failures can occur. Should the presence of Chlorine Dioxide be detected and the lights are not flashing, activate the appropriate warning light (amber or red) by pushing one of the manual alarm/evacuation buttons and leave the area.
- G. Prior to performing work on a ClO₂ alarm system, including calibrating a sensor, the person performing the work should alert the Lead Pulp Operator and Bleach Operator of the work being done and the potential response of the alarm system (i.e. initiating the AMBER lights).

PULP MILL / GENERATOR BUILDING ClO₂ SENSORS

There are sixteen (16) Chlorine Dioxide sensors in the Pulp Mill/Generator Building area. The purpose of these sensors is to detect Chlorine Dioxide, sound an alarm in the Control Room, and activate lights. The locations of these alarm sensors are:

Pulp Mill

- A. Ground floor southeast of #1 HD
- B. Ground floor east of #4 Bleach Tower
- C. 2nd floor northeast corner by ClO₂ heater
- D. 2nd floor southeast by #1 ClO₂ mixer
- E. 3rd floor south wall by #3 Bleach Tower
- F. 4th floor southeast corner by lab
- G. Roof SE corner by top of 1st stage Bleach Tower
- H. Roof southwest corner by Bleach Plant Scrubber
- I. 4th Floor W Stage Washer

Generator Building

- A. Generator Building, 1st floor
- B. Generator Building, 2nd floor
- C. Generator Building, 3rd floor
- D. Generator Building, 4th floor
- E. ClO₂ Storage Tanks, west
- F. ClO₂ Storage Tanks, north

STAND ALONE SENSORS

Effluent Area

One sensor is north of the Clarifier at the Mix Trough.

Power House

One sensor is on the south wall outside the Recovery Building.

Pulp Dryer

There are three sensors in the Dryer Building:

- A. Between the roll-up door and man-door on southwest warehouse wall.
- B. North of the man-door on the southwest side in the Dryer building.
- C. Dry End repulper

CHLORINE (Cl₂) ALARM

Cl₂ ALARM SYSTEM

Filter Plant

- A. The chlorine alarm system is comprised of alarms to alert personnel in the filter plant of the presence of ambient Cl₂ gas. The alarm consists of a series of lights (Amber and Red).
- B. The chlorine sensor is located in the chlorine room at the filter plant.
- C. The AMBER alarm light is activated when the sensor detectors Cl₂ gas at 1 ppm or greater. Audible alarms will activate in the filter plant control room, recaust control room and powerhouse control room.
- D. When the AMBER alarm light is flashing, all non-utilities operating personnel must leave the area. They may not return until after the amber light is not flashing. The personnel remaining must wear a full-face respirator or SCBA while in the affected area. The Outside Operator and/or the Power & Recovery Lead Operator will investigate the leak.
- E. The RED alarm light is activated when the sensor detectors Cl₂ gas at 8 ppm or greater. Only utilities operating personnel and/or ERT personnel with SCBA can remain in the area.
- F. Prior to performing work on the Cl₂ alarm system, including calibrating the sensor, the person performing the work will alert the Outside Operator, the Caustic Kiln Operator, and the Power & Recovery Lead Operator of the work being conducted and the potential response to the alarm system.

HYDROGEN SULFIDE GAS ALARM SYSTEM

There are eleven (11) localized HYDROGEN SULFIDE GAS alarms in the plant. Each location alarms at 5ppm with a red flashing light and audio alarm that says *Hydrogen Sulfide gas present. Evacuate immediately! Contact the control room for further information.*

- A. The alarms are located at the following places:
 1. Ground floor North of the 7390 tank for the Hot Well. (Alarms locally and in the Power House Control Room.)
 2. 2nd floor of the Recovery building on the South wall for valving out of NCGs to Recovery. (Alarms locally and in the Power House Control Room.)
 3. Ground floor under the West Precipitator screw for Evaporator waste. (Alarms locally and in the Power House Control Room.)
 4. Ground floor in walkway North of the Recovery Building for Recovery area waste. (Alarms locally and in the Power House Control Room.)
 5. 3rd floor by #1 Power Boiler (Alarms locally and in Power House Control Room.)
 6. On the lime kiln firing deck. (Alarms locally and in the Recaust Control Room.)
 7. Water Treatment, outside east door
 8. Water Treatment, inside east door by pumps.
 9. Recaust area, by the Formic Acid tank.
 10. Recaust area, by process sewer under kiln.
 11. Mix Trough (alarms locally)
 12. Flakt Dryer, dry end repulper
 13. Flakt Dryer, north of air intake
- B. When any of these alarms sounds, all contractors, contractor employees, visitors, vendors and Maintenance employees are to leave the area and must check with the respective Control Room to ensure that it is safe before re-entering.
- C. Prior to performing work on the H₂S alarm system, including calibrating the sensor, the person performing the work will alert the Outside Operator and the Power & Recovery Lead Operator of the work being conducted and the

potential response to the alarm system. For alarms in the Recaust area, the person performing work will also alert the Caustic Kiln Operator.

PROCESS SAFETY MANAGEMENT

- A. Contractors performing repairs or new construction on or adjacent to Pulp Mill Chlorine Dioxide System or Chlorine System at Water Treatment Plant, must be evaluated for prior safety performance and program compliance to be approved as a CPP contractor.
- B. Contractors are also required to take the following actions prior to beginning work:
 1. Meet with the CPP Project Manger, CPP Process Safety Management (PSM) coordinator, and the appropriate CPP Department Superintendent to plan the work and gain understanding of our PSM requirements for working on said systems.
 - a. Prepare written plan of work to be performed with a description of how contractor will comply with our requirements.
 - b. Present written plan to three mentioned in (1) above and gain final approval for work. Final approval means all three must sign plan approval document.
 - c. Modifications to the plan after initial approval has been secured must be reviewed and approved before implementation.
 2. Successful completion of the Contractor Safety Orientation will document understanding.

RESTRICTED ENTRY AREAS

ClO₂ GENERATOR SIGN-IN

The Chlorine Dioxide Generator Building is off-limits to all visitors unless prior approval has been granted by the Operations Manager or Pulp Mill Superintendent.

Everyone except area personnel entering the ClO₂ Generator Building are required to contact the Pulp Mill Control Room prior to entry and again on exiting. The Bleach Plant Operator will maintain a log of personnel entering the area.

FILTER PLANT SIGN-IN

The Filter Plant building is off limits to all visitors unless prior approval has been granted by the Operations Manager, the Recovery Superintendent, or their designees.

Notification must be made to the Powerhouse by radio or phone (x.1177) by everyone except area personnel that will be entering the Filter Plant. A sign-in sheet will be kept in the Powerhouse by the Control Room Operator. All transitory personnel (shifters, mail person, lab testers, etc.) will contact the Control Room prior to entry. When leaving the area another contact with the Powerhouse is needed to sign-out of the area.

PULP MILL SIGN-IN

The Pulp Mill and ClO₂ generator buildings are off limits to all visitors unless prior approval has been granted by the Operations Manager or the Pulp Mill Superintendent.

Everyone except area personnel entering these areas must sign in at one of the following locations:

- Pulp Mill control room
- Pulp Mill 3rd floor offices

Transitory personnel (mail person, lab testers, etc) are not required to sign in, but must contact the Pulp Mill control room prior to entering the building.

Non-operating personnel entering the Pulp Mill or ClO₂ buildings are not required to sign-in during a scheduled maintenance shutdown, water wash, or annual shut down.

RECOVERY AREA SIGN-IN

The Recovery Building is off limits to all visitors unless prior approval has been granted by the mill manager or Recovery Superintendent.

A sign-in sheet must be filled out by everyone except area personnel that will be in the Recovery area. The sign-in sheet will be kept in the Control Room. If the Recovery Boiler is down (maintenance outage, annual shutdown, etc.) sign-in is not required by contractors or mill maintenance.

In case of Emergency Shutdown Procedure (ESP) or Hydrogen Sulfide Gas evacuation while in the Recovery Building, everyone except area personnel will proceed to the marked emergency exits - Northwest corner of the Recovery Building leading to the outside stairway. Do not use the elevator or manlift. Proceed to the North/South roadway on the West side

of the Recovery Building. Muster at this point so the sign-in sheet can be checked to account for visitors and non-operating personnel.

BLUE FLAG & DERAILER POLICY

In order to load and unload Rail Cars, Mill Operators must be on, in, or around the rail car to complete their tasks. In addition, Maintenance or Contract Workers may have jobs that are on or around the rail tracks. An engine on the same tracks where work is being done has the potential to result in the unexpected movement of rail cars leading to personal injury or death.

In recognition of this danger, the railroads have adopted blue flag/blue signal protection rules to give employees the confidence to put themselves in vulnerable situations while working on the rails with the knowledge that an Engine will not interfere with their workspace. It is the policy of CPP for employees or contractors to set in place Blue Flags and Derails when jobs are occurring on or in close proximity to the Mill rail spurs. A Shift Supervisor lock will be applied before work begins.

TYPES OF BLUE FLAGS AND PLACEMENT

Blue flag protection consists of blue-painted metal signs and Derailers at both the Pulp Mill and Warehouse rail spurs and a flashing blue light at the Warehouse rail spur. To protect a stretch of track, flags are placed at right angles to the track, and a Derailer laid across the track.

Pulp Mill Spur: This spur is for Chlorate Unloading and is controlled by the Pulp Mill. Any employee or contractor that is not a Pulp Mill Employee must get approval from the Shift Supervisor prior to moving the Blue Flag/Derail. The Shift Supervisor will make the Pulp Mill aware of the change in Blue Flag status.

The Blue Flags and the Derails are located on the CPP side of the road. The flags must be up and the derails set on each rail line to work on the mill side the track.

Warehouse Spur: This spur is for Loading Pulp and is controlled by the Flakt Dryer. Any employee or contractor that is not a Flakt Dryer Employee must get approval from the Shift Supervisor prior to moving the Blue Flag/Derail. The Shift Supervisor will make the Flakt Dryer aware of the change in Blue Flag status.

The Flag is located just inside the rail gate east of the Service Building. The flag must be up and the derail set on the rail to work on the mill side of the track.

WHAT BLUE FLAGS SIGNAL TO THE RAILROAD

A blue flag or signal located between the rails signifies that no rail cars or rail equipment may move past that point.

SMOKING POLICY

Smoking is not allowed anywhere on the Halsey Mill Site except in a Designated Smoking Area.

Department superintendents have designated the following *outside* smoking area(s) which are equipped with an appropriate receptacle. Smoking is not allowed within the confines of any buildings or within 10 feet of any doorway, window, or ventilation intake:

- Recovery
 - East side door on ground floor
 - West Side of Recovery Building
- Filter Plant
 - East side door of Filter plant
- Recaust
 - W. door of Recast control room
- Pulp Mill
 - E. entry to Pulp Mill ground floor
 - 4th floor mezzanine, 10' from door
- Flakt Dryer
 - West entry of lab
 - West side door by 49er
 - West side of Dryer building
 - Wet end catwalk
- Chip Yard
 - South side of chip shack at bottom of stairs
- Service Bldg
 - West entrance and east entrance

During the mill maintenance shut-down, contractors may designate outside smoking areas for their employees by providing an appropriate receptacle at least 10 feet away from all doorways, windows and/or ventilation intakes.

