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I. PURPOSE

The purpose of this policy is to eliminate hazards at their source to protect employees' health and safety during permit-required Confined Space Entry. This policy contains requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces, and to comply with OSHA Standard 29 CFR 1910.146 on Permit-Required Confined Spaces.

II. SCOPE

This policy applies to all entries into Resolute FP confined spaces by any person.

III. DEFINITIONS

A. Confined Space (CS) means a space that is completely or partially enclosed which has all the following inherent conditions:

1. Is large enough and so configured that a person can bodily enter and perform assigned work; and
2. Has limited or restricted means for entry or exit. The following are considered as restricted access: ladder, hoist, crawling or difficult emergency evacuation (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 human occupancy ; and
4. Which can represent a risk for the health and safety of anyone who enters, owing to any one of the following factors:
 - a) its design, construction or location such as internal configuration, entrapment, inwardly converging walls, floor which slopes downward, tapers to a smaller cross-section;
 - b) the quality of its atmosphere;
 - c) the materials or substances that it contains;
 - d) or any other recognized safety or health hazard such as: falls, engulfment, entrapment, hazardous energy sources, hot works, extreme temperatures, noise, falling objects, slick/wet surfaces, electrical hazards;
 - e) the provision of first aid, evacuation, rescue, or other emergency response service is compromised

B. Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics:

1. Contains or has the potential to contain a hazardous atmosphere; or
2. Contains a material that has the potential for engulfing an entrant; or
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.

Note: Entry into a confined space is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Note: All Confined spaces at Calhoun Operations will be considered Permit-Required Confined Spaces, unless otherwise designated, as a downgraded confined space, on the entry permit. See Addendum II and III for procedure to downgrade permit required confined spaces to downgraded confined spaces.

- C. Downgraded Confined Space** means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm. These spaces must be pre-identified and a signed hazard assessment completed before downgrading from a Permit Required Space. These spaces must have a sign posted at the entrances identifying them as a “Downgraded Confined Space”. These spaces are identified in a document titled “Downgraded Confined Spaces” and can be found on the Resolutefp Calhoun intranet site in the Safety Policy Folder, Confined Space Folder.

Downgraded Confined Spaces pertain primarily to work within our facilities such as elevator pits, winder equipment, hydraulic equipment, etc. This work shall be performed in accordance with OSHA Standards 1910.146 paragraph(c) or Canadian provincial regulatory.

- D. Complicated Confined Space** is one that must meet the minimum requirements for a confined space per OSHA guidelines and company policy and could contain any of the following conditions:
1. An atmosphere that could pose an immediate threat to life, would cause irreversible adverse health effects or would impair an individual’s ability to escape from a dangerous atmosphere. (i.e. *any space that requires the use of SCBA to make entry and perform work in that space.*)
 2. A space which has a configuration that would significantly impede extrication in the event of injury or medical emergency. (i.e. *heart attack, seizure, etc.*)
A list of current Complicated Confined Spaces can be found in the confined space policy folder. However this list may change from time to time. Please contact the Safety Department for most up to date list. Also, if you are dealing with a potential complicated confined space that may meet these definitions, please contact the safety department for clarification and assistance.
- E. Entry Coordinator** means the person (must be an employee of the Operating Department OR competent person authorized by the employer) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry, overseeing entry operations, and for terminating entry as required by this policy.
- F. Hazardous atmosphere** means an atmosphere that may expose a person to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:
1. Flammable gas, vapor, or mist in excess of 10 percent of its Lower Explosion Limit (LEL); or
 2. Airborne combustible dust at a concentration that meets or exceeds its LEL (**NOTE:** This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less); or
 3. Atmospheric oxygen concentration below 19.5 percent or above 23 percent; or
 4. Atmospheric concentration of any substance for which a dose or a permissible exposure limit as per Canadian Provincial OH&S Regulation or published in Subpart Z, Toxic and Hazardous Substances of OSHA’s permit-required confined space regulations, which could result in human occupancy exposure in excess of its dose or permissible exposure (PEL) Occupational Exposure Limits: or
 5. Any other atmospheric condition that is immediately dangerous to life or health (IDLH.)

- G. **Debrief** – reviewing the confined space entry with all persons involved (including contractors) at the conclusion of the entry, regarding the permitted space program, along with any hazards confronted or created in permitted space during entry operations. This shall be documented on the permit in the space provided.
- H. **Immediately dangerous to life or health (IDLH)** means any condition that poses an immediate or delayed threat to life, would cause irreversible adverse health effects, or would interfere with an individual's ability to escape unaided from a permit space.
- I. **Testing** means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.
- J. **Acceptable entry conditions** means the conditions that must exist in all permit required, to allow entry and to ensure that persons involved with a confined space entry can safely enter into and work within the space.
- K. **Attendant** means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all the attendant duties assigned in this policy. *The CS attendant cannot perform any other tasks not related to his function.*
- L. **Authorized entrant** means a person who is authorized by the Entry Coordinator to enter a permitted space.
- M. **Isolation** means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout of all sources of energy; or blocking or disconnecting all mechanical linkages.
 - a. **Blanking** – the installation of a metal blank in the flanges of the piping going to and from the confined space to be entered.
 - b. **Spool Removal** – removal of piping section or ducting to separate the process piping from the confined space being entered.
 - c. **Double Block & Bleed valves** – *a set of hand valves used to isolate the process from the confined space that has a drain valve between the two hand valves left in the open position to indicate if a valve(s) are not holding the contents in the piping. These valves must be physically inspected on a determined frequency to ensure integrity of this isolation method.*
- N. **Qualified Tester** is an individual who has been trained in the operation of the mill-owned portable gas monitors, the Confined Space Policy, and the hazards associated with confined space entry.
- O. **Emergency Response Team (ERT)** is a group of specially trained and designated persons who will respond to a need for emergency rescue of personnel from confined spaces or other process equipment, as needed.

IV. POLICY & PROCEDURES

- A. All confined spaces must be drained and/or cleaned properly to remove contents before entry operations occur. This may require flushing with water or purging with steam and/or air.
- B. Lockout Procedure – All energy sources (i.e. electrical, pneumatic, thermal, hydraulic, mechanical, kinetic, and radiation) must be locked out and in a zero energy state as defined in the Lockout Procedure.
 - 1. A lockbox system must be used for any confined space that requires more than one lock to isolate. (See Lockout Procedure)

2. All valves on pipelines connected to the confined space must be closed and locked out, or blanked as necessary to ensure that no process materials can be introduced into the space.
 3. Chains or locking valve covers must be used with the locks to positively secure the valves. If a valve cannot be positively locked out, a blank must be inserted in the line to prevent any material from flowing through the line. Specifically, pneumatically and hydraulically operated valves must be disconnected by a method that prevents any unexpected change. If blanks cannot be used, the Entry Coordinator must be informed, before doing the job, to ensure that the job will be done safely.
The “operating” devices on electrically or pneumatically operated valves must be disconnected and locked out to prevent accidental operations .
 4. All employees entering a confined space must put their personal safety lock(s) on the lockbox, or the single energy source if no lockbox is used.
- C. Mechanical exhaust ventilation equipment (fans, blowers, etc.) must be used continuously unless there is an adequate natural draft. This ventilation should move air continuously through the space to remove any hazardous atmosphere that may be introduced or created in the space and when necessary to cool the space.
- D. Complicated Confined Space Pre-Planning. Operations Manager, Safety, and ERT representatives will conduct a pre-planning meeting to discuss hazards and requirements to address the rescue of personnel from that space. ERT manpower, and equipment requirements will be agreed upon in this meeting.
- A JSA must be completed as part of this preplanning meeting.
 - ERT will be notified prior to and made available to perform a rescue if so determined in the pre-planning meeting. Appropriate management and ERT personnel will be notified when and where this event is taking place. (Proper communication is a must.)
 - All personnel must be satisfied that the pre-plan for the complicated confined space is the safest way to perform the task. All concerns must be mitigated before the entry can proceed.

Atmospheric Testing

All Permit-Required Confined Spaces must be tested with a calibrated direct-reading instrument for oxygen content, flammable gases and vapors, and for potential toxic air contaminants (in that order) by a Qualified Tester, after the space has been cleaned and locked out and just prior to the entry. Anyone associated with the work to be done may observe this testing and view the results displayed on the monitor.

1. The results of the atmospheric testing must be entered onto the Confined Space Entry Permit by the Qualified Tester and will include the initials of the Qualified Tester, date, time and monitor number.
 2. These tests are valid for the duration of the confined space entry as long as at least one entrant wears a multi gas monitor for the specific hazards (i.e. Cl, ClO₂, H₂S, SO₂, CO etc.) that may be present in the space and the space is continuously occupied. Continuously occupied means that there is no more than a one hour span when someone is not in the confined space. The atmosphere in the confined space will also be retested if there is an emergency, conditions change (where a hazardous atmosphere might develop), at the request of an entrant, or if more than one hour has passed since the space was last occupied.
- E. An Attendant must be assigned. All employees involved shall be informed of any potential hazards associated with the permit space to be entered and must be trained in this Confined Space Procedure.

F. Confined Space Entry Permit When Resolute personnel are entering into the confined space

1. The Permit must be completed and signed by the Resolute Entry Coordinator and conspicuously displayed at the designated entrance to the confined space at all times when work is being performed in the space. The Permit should be protected placed in a protective bag, or similar item, to avoid water damage. If the permit is damaged by moisture or becomes unreadable, the Entry Coordinator must replace the permit.
2. Where there is more than one entrance into the confined space, a copy of the permit must be posted at each designated entry point.
3. The Attendant must sign the Permit and all entrants must sign on each entry and exit.
4. The Permit is good for the duration of the job.
5. When the job is complete, the Attendant and Entry Coordinator must account for all authorized entrants to ensure they have all exited the space and:
 - a. The Entry Coordinator will sign the termination section of the Permit, and
 - b. Send the Permit to the Safety Department for auditing.

G. Confined Space Entry Permit When Contractor personnel are entering into the confined space

1. When Resolute arranges to have employees of a contractor (or those of a subcontractor retained by a contractor) perform work that involves permit space entry, then
 - a. Resolute shall be the Host Employer and shall:
 - i. Ensure the space is safe to enter.
 - ii. Issue a Resolute Confined Space Entry Permit.
 - iii. Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this Resolute Confined Space Entry Policy.
 - iv. Apprise the contractor of the elements that make the space in question a permit space, including the hazards identified and Resolute's experience with the space.
 - v. Apprise the contractor of any precautions or procedures that Resolute has implemented for the protection of employees in or near permit spaces where contractor personnel (or any subcontractor personnel retained by contractor) will be working.
 - vi. Obtain a debrief from the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.
 - b. The Contractor shall be the employer for purposes of the Confined Space regulations, 29 CFR 1910.146, and shall strictly comply with all the requirements set forth in the regulations as well as those required of Resolute in this policy if Resolute were the employer of those entering into the confined space. This includes without limitation:
 - i. having a written confined space program that is in compliance with the regulations for confined space entry as an employer, as set forth at 29 CFR 1910.146;

- ii. issuing their own company's specific Confined Space Entry Permit prior to entering into the confined space and providing Resolute with a copy of the Entry Permit prior to conducting operations in the confined space;
 - iii. ensuring that all employees or subcontract employees who are to enter or attend to the space are properly experienced in confined space entry and properly trained in confined space entry;
 - iv. either verifying that all equipment has been properly isolated prior to conducting any work in any confined space and signing the Resolute Confined Space Permit acknowledging verification or that an opportunity to verify the proper isolation was provided by Resolute but was waived by the Contractor.
 - v. verifying any and all employees or subcontractors of the Contractor who enter into a confined space or serve as an attendant for a confined space are able to verbally clearly communicate changes and conditions within the confined space, to ensure the ability to promptly and clearly communicate in an emergency and ensure the safety of themselves and others around them;
 - vi. providing any and all Personal Protective Equipment ("PPE") and monitoring equipment that is required to be worn or used or is otherwise necessary to ensure the safety of the contractor's or subcontractor's employees while working at Resolute;
 - vii. ensuring that each of its employees or subcontract employees who are entering or attending to a confined space have been properly fit tested and trained in the proper use and wearing of such PPE and/or monitoring equipment;
 - viii. providing and properly installing prior to entering into any confined space any rescue equipment necessary for work in the space;
 - ix. arranging for emergency responders prior to conducting any work in the space; if Resolute is to provide this service such must be noted on the Confined Space Permit issued by the contractor and signed by an authorized agent of Resolute; and
 - x. promptly supplying Resolute with a copy of any and all completed confined space entry permits upon completion of the work.
2. The Contractor will provide any emergency rescue equipment required by law or otherwise necessary to ensure the safety of its employees while conducting the work at the Mill and ensure that all of its employees are properly trained in the use of such emergency rescue equipment prior to conducting any work at the Mill.
3. When Resolute employees as well as contractor personnel will be working in permit spaces, Resolute shall coordinate entry operations with the contractor and Resolute shall issue the Confined Space Entry Permit. The contractor shall still be solely responsible for ensuring compliance with paragraph (b)(ii) through (b)(vi) above for its employees and subcontract employees.

V. SPECIAL REQUIREMENTS

Resolute FP will now classify by levels the required isolation method of their confined spaces for entry purposes. There are 3 types of isolation as identified by OSHA in 29CFR1910.146 for separating a confined space from its process material and atmosphere:

1. Separation by removal of piping or duct
2. Installation of a metal blank or blind flange
3. Double Block & Bleed valve arrangement

Classification levels are as follows:

- **Level I** – shall be isolated from the process piping by “spool removal or installing a metal pipe blank” method only. Hand valves cannot be used for separating the confined space from the process piping.
- **Level II** - shall be isolated from the process by “spool removal or installing a piping flange blank”. Hand valves can be used only if the arrangement is set up as Double Block & Bleed used for separating the confined space from the process piping. Field verification for complete isolation of the process content from the confined space to be entered shall be performed before entering the space.
- **Level III** - shall be isolated from the process by hand valves only if the arrangement is set up as Double Block & Bleed for separating the confined space from the process piping. Field verification for complete isolation of the process content from the confined space to be entered shall be performed before entering the space.

A. Classification of Confined Spaces for Isolation Purposes

Definitions of Terms:

- **Level I Confined Spaces** – the vessel must be separated from the process piping by piping spool removal or installing a pipe blank between the flanges of the inlet and outlet process piping. This is the only isolation method to be used for entering the confined spaces.
- **Level II Confined Spaces** – the vessel must be separated from the process piping by piping spool removal or installing a pipe blank between the flanges of the inlet and outlet process piping. Hand valves can only be used if the configuration is in the Double Block & Bleed arrangement. Verification of the isolation ability of the valves being used must be performed. Should the valving arrangement not meet these requirements, the space must be isolated by blanking or spool removal from the process piping. The valves must be inspected for seat wear and stem packing integrity on a periodic frequency.
- **Level III Confined Spaces** - Hand valves can only be used if the configuration is in the Double Block & Bleed arrangement. The valves must be inspected for seat wear and stem packing integrity periodically. Prior to being put in service for confined space isolation a verification of the isolation ability of the valves being used must be performed. Should the valving arrangement not meet these requirements, the space must be isolated by blanking or spool removal from the process piping.
- **Level I Confined Spaces (Blanking or Spool Removal Only)**
 - Stripper Columns
 - Off – Gas Reboilers
 - Off - Gas Condensers
 - Foul Condensate Storage tanks
 - Turpentine Process tanks and exchangers

- Chlorine Dioxide Process tanks and exchangers
- Incineration Systems
- Acid/Caustic Tanks
- Continuous Digester & Associated Vessels
- Batch Digesters & Blow Tanks

- **Level II Confined Spaces (Blanking or DBB Valving or Spool Removal)**
 - Power Boilers
 - Recovery Boilers
 - Causticizing Process tanks
 - Liquor Storage tanks
 - Hot water tanks
 - Black Liquor Evaporator Units
 - Clean Steam Condensers

- **Level III Confined Spaces (DBB Valving or Blanking or Spool Removal)**
 - Stock Chest
 - Tile Chest Stock and Water for Storage
 - Enclosed Chip Bins/Hoppers
 - Open Pits
 - Dryer Cans

B. Personal Protective and Emergency Equipment (See Personal Protective Equipment Policy)

1. All employees working inside the space must wear a safety harness with a lifeline attached to a fixed point outside of the space. Occasionally, there may be instances when an exception to the provision regarding lifelines must be made. These exceptions are if:
 - a. A lifeline would not aid in the rescue of the entrant, or
 - b. A lifeline would cause an entangle hazard. (if Attendant tried to pull an Entrant to the opening the Entrant would be entangled on piping or equipment In such cases:
 - i) The Entry Coordinator must evaluate the situation to determine if the use of lifelines poses a safety hazard.
 - ii) The Entry Coordinator will note on the Entry Permit that lifelines are not required.
 - iii) The Entry Coordinator will ensure that proper precautions are taken so that the tasks can be performed safely.
 - iv) Even when the use of lifelines is not required, all entrants must still wear a full body harness or wristlets (exceptions are dryer cans, economizer, boiler mud and steam drums).

2. A multi gas monitor (that has been calibrated and tested) for the appropriate hazards (Cl, ClO₂, H₂S, SO₂, CO etc.) must be worn by at least one member of the crew working in a confined space. Should the monitors alarm while being used, all employees must exit the confined space immediately and notify the Entry Coordinator. The Entry Coordinator shall have the confined space ventilated and re-tested by a Qualified Tester.

3. Portable lights and electrical tools – When possible, low voltage portable lighting (12 volts) should be used inside a confined space. If the confined space has the potential for explosive or flammable atmospheres, low voltage lighting is mandatory. A GFCI must be used anytime electrical equipment is being used inside a Confine Space.

C. Rescue Equipment and Emergency Services

1. Rescue Equipment - rescue equipment consisting of SCBA's or supplied air units, full body harnesses and lifelines shall be available at designated locations in each department. This equipment is only to be used by qualified rescue personnel. A mechanical retrieval device must be available to retrieve employees from vertical spaces more than 5 feet deep. The Entry Coordinator must inform the Attendant of the exact location of this equipment. The Attendant will be responsible for communicating this information to Rescue personnel during an emergency.
2. Retrieval systems or methods to facilitate non-entry rescue must be available whenever an Authorized Entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.
 - Each Authorized Entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level.
 - Wristlets may be used in lieu of the chest or full body harness if the site can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative
 - The other end of the retrieval line shall be attached to a non-mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet

- D. Communications** – A radio with access to Mill Channel #3 shall be provided to the Attendant to notify EMS/Security before an entry is made. EMS/Security will summon the Rescue Team if an emergency arises by broadcasting on our Gai-Tronics Emergency Alarm System and over our Mill Radio Channels. . .)

NOTE: If the Emergency Response Team (ERT) is activated, the Attendant(s) will make sure that everyone inside a confined space anywhere in the mill is evacuated until the ERT Team is deactivated and available for other emergencies.

In instances where a complicated confined space standby is being performed, additional manpower and communications will be made available and a clear plan in place in the event that another emergency arise while this standby takes place.

- E. Termination of Permit** – After all work in the space has been completed (or if a condition that is not allowed under the Permit arises in or near the Permit space), the Entry Coordinator in the order listed shall:
1. Ensure that all employees are out of the space and accounted for.
 2. Ensure that all equipment, tools, spare parts and debris have been removed from the space.
 3. Ensure that the entry way into the space is closed, secured and ready for production activities.

4. Debrief employees and/or contractors to determine if there were any discrepancies or unexpected problems with the entry. This debrief must be documented on the permit in the space provided.
5. Terminate the Permit, sign the Permit and return it to the Safety Department.

VI. RESPONSIBILITIES

A. Entry Coordinator - Each Entry Coordinator shall:

1. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
2. Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
3. Terminate the entry and cancel the permit as required by this policy;
4. Verify that rescue services are available and that the means for summoning them are operable;
5. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and
6. Determine, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.
7. Initiate and fill out the Confined Space Entry Permit. (For both Permit Required and Non-Permit Confined Spaces.
8. Ensure that the space is locked out in compliance with the Lockout Procedure.
9. Assure that the space has been properly cleaned, drained, and ventilated.
10. Either the Entry Coordinator or a designated, qualified employee who works in the operating department will accompany a representative of any Contractor who are to enter the confined space, in order to locate and identify all the electrical switches and valves to be locked out. A list of all equipment to be isolated by the lockbox must be attached to the lockbox and readable to those locking the box. (see Lockout Procedure for more details).
11. Test to verify that the space has been properly isolated (i.e. start/stop buttons, whether automatic valves will operate, etc.).
12. Ensure that all valves feeding the confined space are in the position specified on the lockout list for the space and are locked accordingly.
13. Ensure that the space has been thoroughly purged and, if needed, continuously ventilated with mechanical equipment.
14. Make arrangements to have Permit Required Spaces tested by a Qualified Tester for a hazardous atmosphere and verify that testing was completed. The Entry Coordinator must be present during the atmospheric testing of the space.
15. Complete the Confined Space Entry Permit, then authorize entry after the Qualified Tester completes their Atmospheric Tests and enters the test data on the permit.
16. Brief the Attendant and the entrants on any known and/or potential hazards associated with the space.
17. Ensure that the entrants are equipped with the proper personal protective equipment for entering the space (i.e. body harness, lifeline, SCBA's, multi gas monitors, etc.).
18. Ensure that the Attendant has the specified communications equipment and knows the location of emergency rescue equipment (i.e. body harness, lifelines, SCBA's, etc.).
19. Monitor the job periodically and be available to entrants /Attendant in case emergencies or problems arise.
20. When a shift change occurs, the Entry Coordinator must remain in the area of the confined space until relieved by a designated, on-coming Entry Coordinator in order to communicate all necessary information on the work going on in the confined space.
21. Terminating the Confined Space Permit after all work in the space has been completed:
22. Ensure that all employees are out of the space and accounted for.
23. Ensure that all equipment, tools, spare parts and debris have been removed from the space.

24. Ensure that the entry way into the space is closed, secured and ready for production activities,
25. Debrief employees and/or contractors to determine if there were any discrepancies or unexpected problems with the entry. This debrief must be documented on the permit in the space provided.

B. Attendant - Every Attendant shall:

1. Be responsible for understanding and following the requirements of this policy, and know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of exposure.
2. Be aware of possible behavioral effects of hazard exposure in Authorized Entrants;
3. Continuously maintain an accurate count of Authorized Entrants in the Permit Space and ensure that the means used to identify Authorized Entrants accurately identify who is in the Permit Space;
4. Remain at the designated entrance outside of the Permit Space, unless relieved by another qualified attendant who has been given necessary information regarding the confined space.
5. Sign the Confined Space Entry Permit in the designated space.
6. Not do anything that would take him/her away from the entrance to the confined space or otherwise interfere with his/her duties.
7. Notify the Emergency Response Team before authorized entrants enter a confined space and after the last entrant exits the confined space.
8. Determine whether a visual line of site is a requirement for the confined space, and, if so, ensure that additional attendants/entrants are required inside the space if baffles, walls, corners, or other barriers exist.
9. Ensure that all Authorized Entrants are accounted for at all times.
10. Communicate with Authorized Entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space;
11. Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and order the Authorized Entrants to evacuate the Permit Space immediately if:
 - a. The Attendant detects a prohibited condition;
 - b. The Attendant detects the behavioral effects of hazard exposure in an Authorized Entrant;
 - c. The Attendant detects a situation outside the space that could endanger the Authorized Entrants;
 - d. The Attendant cannot effectively and safely perform all the duties required of him/her.
12. Summon the Rescue Team if an emergency situation develops.
13. **NOT** bodily or fully enter the confined space during an emergency. Only trained members of the ERT may enter a confined space during an emergency and to attempt a rescue.
14. Perform non-entry rescues as specified by this policy.
15. Take the following actions when unauthorized person approach or enter a Permit Space while entry is underway:
 - a. Warn the unauthorized persons that they must stay away from the Permit Space;
 - b. Advise the unauthorized persons that they must exit immediately if they have entered the Permit Space;
 - c. Inform the Authorized Entrants and the Entry Coordinator if unauthorized entrants have entered the Permit Space

C. Authorized Entrants Entering the Confined Space: Each Authorized Entrant shall:

1. Ensure that a properly completed and valid Confined Space Entry Permit has been completed and prominently displayed.
2. Print their name on the Confined Space Entry Permit each time before entering and after exiting the confined space.
3. Apply personal locks to the lockbox as defined in the Lockout Procedure.
4. Understand the nature of any known or potential hazards the space might contain, including information on the mode, signs or symptoms, and consequences of any exposure.

5. Wear and properly use the required personal protective equipment as outlined on the Confined Space Entry Permit.
6. Inform the Entry Coordinator of any changes within the space that might affect the safety of those in the space, including any warning sign or symptom of exposure to a dangerous situation, and/or the detection of a prohibited condition.
7. Communicate with the Attendant as necessary to enable the Attendant to monitor entrant status and to enable the Attendant to alert entrants of the need to evacuate the space
8. Exit the Permit Space as quickly as possible whenever:
 - An order to evacuate is given by the Attendant or Entry Coordinator, or
 - The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
 - The entrant detects a prohibited condition, or
 - Any time the Emergency Response Team has been activated. This information will be broadcast on our Gai Tronics Emergency Alarm system and on all Mill Radio Channels..

D. Operating Departments

1. Ensure that the Entry Coordinator, Attendant, and Entrants have been trained in and understand all the requirements of this policy.
2. Ensure that a completed process lockout isolation list and lockbox are available to the Entry Coordinator.
3. Ensure appropriate PPE is available and that employees have been trained in the proper use of the PPE.

E. Safety and Health Department

1. Ensure that Qualified Testers are trained.
2. Audit the Entry Permits and reviews this policy annually.
3. Ensure the Emergency Response Team is properly trained for Confined Space Rescue.
4. Maintain, calibrate, conduct function checks, and document results for all gas monitors.

F. Contractors

1. Ensure that all contractor and/or subcontractor employees are trained on the Confined Space Policy at least once per year or when there have been changes.
2. Communicate with Resolute FP to determine if the contract work requires Confined Space Entry, and verify that entry into these permit spaces is only allowed by following the guidelines in this procedure.
3. If Contractor's employees or subcontract employees will enter into or attend to confined spaces, comply with the requirements of Paragraph IV(G) above.
4. Communicate with the Resolute Entry Coordinator to learn of any potential or known hazards, and be advised of the contents of the confined space, the material that was previously in the space, and any previous experiences with the confined space.
5. Communicate any known or potential hazards to their employees and/or any subcontractor employees.

6. Require that contractor and/or subcontractor employees wear appropriate PPE.
7. Debrief Resolute Entry Coordinator at termination of job of any hazards encountered during the job.

G. Qualified Testers

1. Responsible for testing the Confined Space for toxic or hazardous gases, oxygen content, flammable gases or vapors, and combustible dusts as follows:
 - a. Oxygen deficiency – must be greater than 19.5% and less than 23.5% for entry.
 - b. Flammable gases – must be less than 10% LFL
 - c. Toxic gases – If all toxic gas levels are not at 0 ppm but are less than the PEL an assessment must be conducted by Safety and the operating department to determine if it is safe to enter. If this cannot be achieved, then entrants must be briefed on the hazard levels and supplied with the appropriate PPE. (see the Personal Protective Equipment Policy and the Respiratory Policy)
 - d. Combustible dusts – must be less than LFL for entry. (This may be approximated as a condition when the dust does not obscure vision at a distance of 5 feet.)
 - e. Ensure that the confined space is safe for entry, from an atmospheric standpoint.
 - f. Document the test results on the Entry Permit.
 - g. Notify the Entry Coordinator of any hazardous atmosphere found in (or around) the confined space.
 - h. Allow employees (and contractors) to view the testing.

H. Welding and Burning

1. Employees welding in confined spaces must know the types of toxic fumes emitted when using various welding methods (electric arc/gas) and the kind of metal being welded (composition/alloy). A Hot Work Permit must also be obtained.
2. Fresh air is to be supplied and fumes and gases are to be exhausted at the point where the welding is done. If this is not possible, appropriate personal protective equipment must be used.
3. Welding equipment used in tanks shall be provided with quick shutoff valves and/or switches under the control of the Attendant.
4. Welding and burning equipment that must be taken into a Confined Space will be taken in immediately prior to use and then removed immediately after use is completed.

VII. TRAINING

Training programs must be provided to meet the training requirements that follow of this policy. Training is mandatory and refresher training must occur at least every year thereafter; or whenever there are deviations or process changes that present a new hazard.

VIII. DOCUMENTATION/RECORDS

All permits (including canceled permits) must be maintained on file for at least three years.



David Glass
General Manager (Interim)



Keith Cathey
Health & Safety Manager

Addendum I

Utilities Department Boiler Entry – Confined Space Downgrades

All Confined Spaces in the Utilities Department will be entered according to Mill's Confined Space Policy.

Exceptions for Boiler Entries:

For a long duration inspection, repair, rebuild, etc., where many contractors, inspectors and other employees are inside the boiler on a continuous basis, the following will apply:

- A.** Initially the boiler must be treated as a Permit Required Confined Space and all requirements of the Confined Space Policy must be adhered to.
- B.** Once scaffolding is in place and all fall hazards have been abated, the boiler proper (fire side and water side) will be downgraded. The Entry Coordinator will mark the Downgraded Confined Space box on the Confined Space Permit. At this time no harness and lifelines will be required, no Attendant will be required and no employee sign in will be required. Note: The BFB may not require scaffolding if work on the bed is being done.
- C.** This downgrade applies only to the water side and fire side of the boiler. All other confined spaces associated with the boiler will be considered a Permit Required Space and all requirements of the Confined Space Policy will apply.
- D.** Atmospheric checks will be made and Permits posted only at designated locations. The locations will generally be:
 - 1. Lower furnace, or bottom ash hopper door
 - 2. Upper furnace door and
 - 3. A location at the rear of the boiler flue gas system.
- E.** Entrants into the boiler must use the "buddy system". No single person will enter the boiler without a buddy inside, or an Attendant at the point of entry.

Addendum II

Downgrading Confined Spaces -Procedure

Procedure to downgrade a permit required confined space to a downgraded confined space.

1. The space meets the definition of a downgraded confined space which is as follows:

A space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

2. A confined space assessment document has been completed and signed by both a department and safety representative. Addendum III.
3. Appropriate monitoring data must exist to include a minimum of 10 different tests on different dates for LEL, O₂ and toxins. This data will be included on the confined space assessment document.
4. The space has signage affixed designating the space as a "Downgraded Confined Space".

Note: There will be cases where a piece of equipment may have two different entry issues such as a decker. The first issue would be changing showerheads, this would not be considered a confined space under normal conditions, and will be designated as such on the confined space permit. The second issue would be an entry into the decker, which could not be downgraded.

Note: For downgraded confined spaces a confined space entry permit must still be completed. The requirement for atmospheric testing and rescue equipment at the space is waved.

Addendum III – Assessment Form

I. Department:

II. Description of Space:

III. Product or Material normally in space:

IV. Is this a Confined Space?: Does this space meet the Resolute Calhoun Operations, Confined Space Policy, and OSHA 29 CFR 1910.146 definition of a Confined Space?

Yes No (If No, further assessment is not needed)

V. Hazard Assessment:

A. Hazardous Atmospheres:

1. Flammable Atmosphere – In this process are there any known, or potential flammable atmospheres that could arise?

- enriched oxygen atmospheres – Yes No
- vaporization of flammable liquids – Yes No
- byproducts of work - Yes No
- chemical reactions – Yes No
- concentrations of combustible dusts – Yes No
- desorption of chemical from inner surfaces of the confined space – Yes No

2. Toxic Atmospheres Yes No (if yes list all)

List:

3. Irritant (Corrosive) Atmospheres Yes No (if yes list all)

List:

4. Asphyxiating Atmospheres Yes No (if yes list all)

List:

B. General Safety Hazards

1. Mechanical –
 - Moving Equipment – List:
 - Engulfment – List:
2. Communications – List:

3. Entry and Exit – List:
4. Thermal Effects – List:
5. Noise – List:
6. Vibration – List:
7. General/Physical – List:

Hazard Abatement

For each hazard listed above in section IV, document how the hazard can be abated from outside the space:

Hazards to be abated: List:

Required Atmospheric Monitoring – Before any Confined Space can be downgraded to a Downgraded Confined Space the atmosphere must be tested for: oxygen content, lower explosive limit of flammable gases, and potential toxic gases. These tests must be conducted a minimum of ten times and on different dates. This monitoring must document the absence of atmospheric hazards or the space can not be downgraded.

Date of Test	Time of Test	Tester's Name	O ₂ Content	LEL Reading	H ₂ S Reading	Cl ₂ Reading	ClO ₂ Reading	Other Toxic

Conclusion: **This Confined Space can be downgraded to a Downgraded Confined Space.**

Yes No

Date Assessment Completed:

Department Representative

Safety

Addendum IV – Confined Space Entry Permit (page 2)

Resolute Forest Products - CONFINED SPACE ENTRY PERMIT - Page 2

5 Atmospheric Testing (before entry, if unoccupied for 1 hour, if conditions change)

Date:																				
Atmospheric Tester:																				
Monitor #:																				
Condition	Acceptable Level (PEL)	<i>If Toxic/Combustible Gases Are Greater Than 0 But Less Than The PEL - A Separate Assessment Must Be Conducted And Operations And Safety Must Agree It Is Safe Before Allowing Entry</i>																		
Oxygen (O ₂)	19.5-23.5%																			
Combustible (LEL)	< 10%																			
Carbon Monoxide (CO)	< 35 ppm																			
Hydrogen Sulfide (H ₂ S)	< 10 ppm																			
Sulfur Dioxide (SO ₂)	< 2 ppm																			
Chlorine (Cl)	< 1 ppm																			
Chlorine Dioxide (ClO ₂)	< .1 ppm																			

6 Resolute Entry Coordinator

All hazards have been reviewed with employees and required precautions have been taken with the necessary equipment provided for safe entry and work in this confined space.

Resolute ENTRY Coordinator Authorizing Entry: _____ (Print Name Legibly) _____ (Date Authorized)

Resolute Relieving ENTRY Coordinator: _____ (Print Name Legibly) _____ (Date Authorized)

Resolute Relieving ENTRY Coordinator: _____ (Print Name Legibly) _____ (Date Authorized)

Resolute Relieving ENTRY Coordinator: _____ (Print Name Legibly) _____ (Date Authorized)

CONFINED SPACE to be ENTERED BY: Resolute Employees Resolute Employees & Contractors Contractors Only (Go To: Contractor Confined Space Entry Permit)

RESOLUTE ENTRY Coordinator TRANSFERRING CONFINED SPACE ENTRY PERMIT to CONTRACTOR _____ (Print Name Legibly) _____ (Date) _____ (Contractor)

7 Resolute Attendant

RESOLUTE ATTENDANT

Resolute Attendant _____ (Print Name Legibly) _____ (Date/Time)

Resolute Relieving Attendant: _____ (Print Name Legibly) _____ (Date/Time)

Resolute Relieving Attendant: _____ (Print Name Legibly) _____ (Date/Time)

Resolute Relieving Attendant: _____ (Print Name Legibly) _____ (Date/Time)

DEBRIEF COMMENTS:

Entrants Sign In/Out on Page 3

8 Confined Space Entry Permit Terminated

ENTRY Coordinator Terminating Permit: _____ (Print Name Legibly) _____ (Date Terminated by Entry Coordinator)

Addendum IV – Confined Space Entry Permit (page 4)

Resolute Forest Products – CONFINED SPACE PERMIT – Page 4

10 Isolation Verification

Contractor Lockout/Isolation Verification

Please indicate that you verified the isolation or were offered the opportunity and chose not to verify the isolation.

<p>Confined Space Being Entered</p>	<p>Lockset #: _____</p>
<p>Department – Area</p>	<p>Seal #: _____</p>

Contractor/Sub-Contractor (Company Name): _____

Select One	<input type="checkbox"/> Lockout Verified	Print Name:	_____
	<input type="checkbox"/> Verification Waved	Date:	_____
		Signature:	_____
		Contact Info (Phone):	_____

Contractor/Sub-Contractor (Company Name): _____

Select One	<input type="checkbox"/> Lockout Verified	Print Name:	_____
	<input type="checkbox"/> Verification Waved	Date:	_____
		Signature:	_____
		Contact Info (Phone):	_____

Contractor/Sub-Contractor (Company Name): _____

Select One	<input type="checkbox"/> Lockout Verified	Print Name:	_____
	<input type="checkbox"/> Verification Waved	Date:	_____
		Signature:	_____
		Contact Info (Phone):	_____