

EMERGENCY RESPONSE PROCEDURE (ERP)

HOIST RESCUE

The following documents provide a series of template rescue procedures for a situation where a lone Personnel Hoist Operator is incapacitated or otherwise unable to operate a functioning Hoist Car. These procedures are intended to provide safe hoist car access instructions to the rescue team to operate the hoist car to a safe location for the First Aid Attendant to provide treatment.

Employers may use these procedures as a foundation for their site-specific ERP, expanding or modifying the procedures as necessary and where appropriate. It will be the responsibility of the employer to ensure that the rescue team is trained and knowledgeable regarding their site-specific ERP.

BACKGROUNDER

There have been incidents where a lone hoist operator became incapacitated, and the prime contractor and employers did not have a written plan to gain access to the hoist car in a timely fashion to render assistance. The Prime Contractors Technical Advisory Committee (PCTAC) collaborated with industry experts and WorkSafeBC to create the following ERP procedures for various scenarios and instructions for the safe rescue of a lone & incapacitated hoist operator.

Under the OHS Regulations pertaining to First Aid, one of the duties of the employer and Prime Contractor will be to assess a project to determine whether or not it is a "less-accessible workplace" (see [Schedule 3-A](#) for criteria). As per WorkSafeBC [Guideline G3.16](#), provided the employer has developed provisions like this ERP to safely rescue workers from hazardous areas then the overall workplace may not need to be assessed as less-accessible.

Since a lone & incapacitated hoist-operator situation could be considered a less-accessible work location, the purpose of this plan will be to gain access to the hoist car and lower the hoist car to the awaiting first aid attendants or BC Emergency Health Services (EHS).

ASSUMPTIONS

These procedures were developed with the following assumptions.

- The Personnel Hoist Operator is the sole occupant of a Hoist Car.
- The Hoist Car and the entire Personnel Hoist System remains fully operational.

RESCUE TEAM MEMBERS

Incident Commander - This is the person who will initiate this Main Procedure, its supporting procedures, and ensure that all specialized equipment required is available in the workplace. Generally, this will be a representative of the prime contractor. This person may also fill the role of External Communication Lead.

Rescue Operator - this is the individual that will be conducting the primary actions to gain access to the Hoist Car and lower the hoist car to the awaiting First Aid Attendant or EHS services.

External Communication Lead - the Lead will be responsible to contact Emergency Health Services (911) and the Hoist Supplier Emergency Contact.

Modified Lockout Lead and Secondary - these are the members who will be perform the Modified Lockout Procedure at the request of the Rescue Operator.



Rescue Team Member/s - these are the supporting members who will perform various activities to support the Rescue Operator to gain access to the hoist car.

First Aid Attendant – This individual will be responsible for providing the initial first aid treatment to the hoist operator once the rescue is complete.

SPECIALIZED RESCUE EQUIPMENT REQUIRED

The following is a list of specialized equipment that the Prime Contractor and Employer will have available for the duration of the hoist activities. The equipment will be accessible and available to the rescue team. The storage of the equipment must be made known to the rescue team.

- Floor Hoist Gate Key or Tool
- Personal Fall protection equipment & anchorage
- Tower Crane & DEP
- Straight Ladder
- Method of communication (site radio, mobile phone)
- Other specified equipment identified by each procedure
- Lockout kit
- Fall protection Twin-leg lanyards
- Other equipment:

SPECIFIC HAZARDS

The following are specific hazards related to accessing the hoist to assist the operator. Projects are to conduct their own hazard assessment to determine if other hazards are present and address them as required.

- Ladder use
- Pinch Point
- High Voltage
- Falls from Elevation
- Caught by moving part
- Inadvertent movement
- Slip/Trip
- Miscommunication

PREPARATION & ERP DRILLS

The Prime Contractor, Employer and the Incident Commander will be required to ensure the appropriate rescue equipment is immediately available, and the rescue crews conduct a drill to ensure rescue competency. The various rescue plans increase in complexity and risk.

ERP Drills – the purpose of conducting ERP drills is to verify that the rescue team is competent to carry out the ERP. It would be recommended to invite the hoist supplier supervisor to observe the drill and provide feedback. **Rescue Drill Template**

Training the **Rescue Operator** in the basic operation of the Personnel Hoist Car for the purpose of Rescue/ Recovery. This will include:

- Hoist Car interlocks and their function
- Limit switches, specifically those for descent
- How to operate to lower the Hoist Car to the Hoist Deck

Modified Hoist Lockout team members practice implementing and coordinating the Modified Hoist Lockout procedure.

ERP DRILL SITUATION

A Personnel Hoist Operator is alone in a Hoist Car and becomes incapacitated or otherwise unable to operate the Hoist Car. The Incident Commander will identify the position of the hoist car, determine which procedure to follow, and enact the ERP.

MODIFIED HOIST LOCKOUT PROCEDURE

The complexity of the hoist operator rescue procedure, a "traditional" lockout-tagout procedure will not work. The Rescue Operator must be at the physical location of the floor hoist gate to access the hoist cab, and it would be impracticable to physically remove their own lock upon gaining entry.

This modified lockout procedure was reviewed with industry stakeholders and Worksafebc as responsible option.

The hoist's main power disconnect switch is located at the base of the hoist and is intended to isolate power to the hoist system in the event of an emergency or during servicing to protect workers. This modified lockout procedure outlines the necessary steps to allow the Rescue Operator to safely gain access to the hoist car and lower the hoist car to the ground floor.



OVERVIEW

Once the need for the rescue of an incapacitated hoist operator is identified, the emergency response plan consisting of rescue of the lone operator should be initialized.

#	POSITION	PERSONAL LOCK APPLIED
1.	Rescue Operator	NO
2.	Modified Lockout Lead	YES
3.	Modified Lockout Secondary	YES

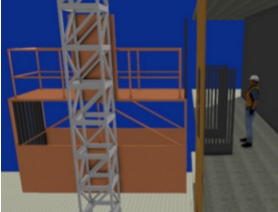


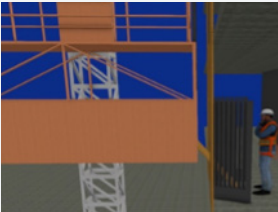


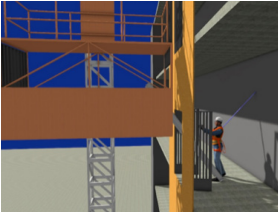





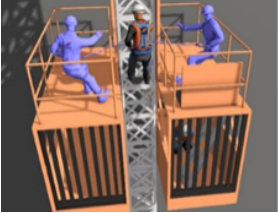







Location of an Emergency-Use Lockout/Tagout (LOTO) kit

It is recommended that the Lockout kit be accessible and stored in a location that is reasonably close to the hoist and is accessible to the emergency response team. The kit should be routinely inspected.

HOIST CAR ACCESS PLANS - CONSIDERATIONS

The project team will be responsible for determining their specific hoist configurations and determining which of the hoist operator rescue plans are applicable. There is no requirement to choose all – only choose the hoist positions that may be relevant to your project.

PROJECT SPECIFIC: HOIST CAR POSITION-BASED ACCESS PLANS		HAZARD/RISK HIERARCHY	COMPLEXITY OF RESCUE
<input type="checkbox"/>		 MINIMAL	 SIMPLE
<input type="checkbox"/>		 LOW	 ROUTINE
<input type="checkbox"/>		 MODERATE	 VARIABLE
<input type="checkbox"/>		 HIGH	 CHALLENGING
<input type="checkbox"/>		 HIGH	 CHALLENGING
<input type="checkbox"/>		 EXTREME	 CRITICAL

EXAMPLE FULL ERP FOR A HOIST OPERATOR RESCUE

1. General Alarm - Hoist Operator is found incapacitated and requires rescue - **Incident Commander** will assemble the necessary Rescue Team.
2. **Incident Commander & Rescue Operator**, based on the location of the Hoist Car, determine which Access Plan will be used.
3. **Incident Commander** initiates the Emergency Communication Plan
4. **External Communication Lead** contacts **911** & the Hoist Equipment Supplier Contact and provides them with the details of the incident and the Access Plan to be used.

"A Hoist Operator needs to be rescued. The Hoist Car is still operational. We are implementing the Hoist below floor Access Plan"

5. **Rescue Operator** and **Assistant** collect the Special Equipment Required for this Access Plan and proceed to the necessary location.
6. **Critical Step** - Once at the closest Hoist Building Gate to the Hoist Car **Rescue Operator** will call to will contact the Modified Lockout Lead to request Lockout of the Hoist System.
7. **Modified Lockout Lead** and **Modified Lockout Secondary** will meet at the ground floor hoist deck, will throw the disconnect switch to the OFF position - apply the group lockout hasp - apply 2 individual locks from each member to secure the disconnect switch in the OFF position.
8. **Modified Lockout Lead** and **Modified Lockout Secondary** will verify disconnect switch is secured in the OFF position.
9. **Modified Lockout Lead** will then communicate to Rescue Operator that Lockout has been applied.
10. **Rescue Operator** will then proceed to open the Hoist Building Gate using the Hoist Building Gate key or tool.
11. **Rescue Operator** will then proceed to open the Hoist Car Gate and enter the Hoist Car
 - a. If the Hoist Car floor is more than 0.6 m (24") below the Hoist Gate level **Rescue Operator** will place the Rescue Access Ladder for access.
 - b. Once the Rescue Operator has both feet securely on the floor of the Hoist Car **Assistant** will remove the Rescue Access Ladder.
12. **Assistant** will then close the Hoist Building Gate.
13. **Rescue Operator** will then close the Hoist Car Gate.
14. **Rescue Operator** will verbally confirm with the Assistant that the respective Hoist Gates have been closed.
 - a. Is the Hoist Building Gate closed? Yes or No.
 - b. Is the Hoist Car Gate closed? Yes or No.
15. **Critical Step** - Upon verbal confirmation of the above, **Rescue Operator** will contact the Modified Lockout Lead to Remove the Lockout.
16. **Modified Lockout Lead** will confirm with **Rescue Operator** that Gates and Hatches are shut and that the Rescue Operator is safely in position inside the Hoist Car.
17. **Modified Lockout Lead** and **Modified Lockout Secondary** will then remove their respective locks, remove the lockout hasp, and energize the Hoist System by returning the switch to the ON position.
18. Once Lockout is removed and the Hoist System is energized, **Modified Lockout Lead** will then communicate to Rescue Operator that Lockout has been removed.
19. **Rescue Operator** will operate the Hoist Car to the main Hoist Loading Deck.
20. **Rescue Operator** will open the Hoist Gate at the Hoist Deck to allow for the entry of First Aid personnel.



REFERENCE PROCEDURES

Supporting Documentation

- Main Procedure
- Emergency Communication Plan
- Modified Hoist Lockout
- Primary Emergency Rescue Plan
- Access Plans:
 - » Hoist below floor
 - » Hoist 0.5 to 1m (20"-40") above Level – Plywood Option
 - » Hoist 0.5 m (20") or more above Level – Ladder Option
 - » Hoist Roof Access
 - » Traversing via Dual Hoist
 - » Accessing Hoist via DEP & tower crane
- Lone Hoist Operator Rescue Drill Template

Rescue Team Review & Signoff

Ensure identified rescue team members have reviewed, practiced and are competent in these procedures and signed off on the specific rescue procedure.

As new rescue members are assigned to the team, it will be the responsibility of the prime contractor to verify the new rescue has received training.

NAME	RESCUE POSITION	REVIEWED RESCUE PLANS	DATE	SIGNATURE
	Choose from the dropdown list above	<input type="checkbox"/> Main Procedure <input type="checkbox"/> Modified Hoist Lockout <input type="checkbox"/> Emergency Communication Plan <input type="checkbox"/> Hoist Below <input type="checkbox"/> Hoist Above - Plywood <input type="checkbox"/> Hoist Above - Ladder <input type="checkbox"/> Hoist Roof Access <input type="checkbox"/> Dual Hoist <input type="checkbox"/> Access via DEP	Click or tap to enter a date	
	Choose from the dropdown list above	<input type="checkbox"/> Main Procedure <input type="checkbox"/> Modified Hoist Lockout <input type="checkbox"/> Emergency Communication Plan <input type="checkbox"/> Hoist Below <input type="checkbox"/> Hoist Above - Plywood <input type="checkbox"/> Hoist Above - Ladder <input type="checkbox"/> Hoist Roof Access <input type="checkbox"/> Dual Hoist <input type="checkbox"/> Access via DEP	Click or tap to enter a date	
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